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SYMPOSIUM: INTELLECTUAL PROPERTY AND CONTRACT LAW IN THE INFORMATION AGE: THE IMPACT OF ARTICLE 2B OF THE UNIFORM COMMERCIAL CODE ON THE FUTURE OF TRANSACTIONS IN INFORMATION AND ELECTRONIC COMMERCE

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FOREWORD

By Pamela Samuelson †

Intellectual property and contract laws have a long history of working in concert to regulate commercial transactions in information-rich works.[1] Yet, as both bodies of law have expanded their horizons to respond to the considerable challenges posed by digital technologies, the relationship between these two laws has shifted.[2] Some view the vulnerability of digital information to unauthorized and commercially harmful replication and distribution as a reason to propose a far broader role for contract than for intellectual property in the information age.[3] This view underlies a recently proposed model law that aspires to provide a standard set of default rules to regulate transactions in information, known as Article 2B of the Uniform Commercial Code (U.C.C.).[4] The drafters of this model law hope to accomplish for the information economy what Articles 2 and 2A of the U.C.C.—which regulate respectively sales and leases of goods—have suc-

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† Professor of Law and of Information Management, University of California, Berkeley. Most of the Articles and Comments contained in this Symposium were presented at a conference entitled "Intellectual Property and Contract Law for the Information Age: The Impact of Article 2B of the Uniform Commercial Code on the Future of Information and Commerce." The Conference was convened by the Berkeley Center for Law & Technology, and it took place at the University of California, Berkeley on April 23-25, 1998. I wish to give special thanks to Laurel Jamtgaard, Mark A. Lemley, and Pat Murphy for their critically important roles in organizing the Conference. I am also deeply grateful both to the John and Mary R. Markle Foundation and to Wilson Sonsini Goodrich & Rosati for their generous support of the Conference; to the speakers at the Conference who provided so much food for thought; to the volunteers who did so much to get out information about the Conference and otherwise make the event go smoothly; and to the editors of the *California Law Review* and the *Berkeley Technology Law Journal* for their cooperation and support of the Conference, and for making the written Symposium a product of which we can all be proud.

1. *See, e.g.*, David Nimmer et al., *The Metamorphosis of Contract into Expand*, 87 CALIF. L. REV. 17 (forthcoming 1999).

2. *See, e.g.*, Maureen O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms*, 45 DUKE L.J. 479, 480-81 (1995).

3. *See, e.g.*, Raymond T. Nimmer, *Breaking Barriers: The Relation Between Contract and Intellectual Property Law*, 13 BERKELEY TECH. L.J. 827 (1998).

4. As of this writing, the most recent draft of Article 2B is dated August 1, 1998. All versions of Article 2B are available on the Internet. *See* National Conference of Commissioners on Uniform State Laws, *Drafts of Uniform and Model Acts Official Site* (last modified Nov. 20, 1998) <http://www.law.upenn.edu/library/ulc/ulc.htm>.

cessfully done to promote commerce in the manufacturing economy.[5] Proponents not only hope that Article 2B will be adopted by state legislatures in the near future,[6] but also that it will serve as a model for regulating commerce in information on a global scale.[7]

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5. The Preface to Article 2B begins with the following epigraph:

> The UCC has given parties in traditional sales of goods a well-understood legal framework to establish contract formation, terms, and enforcement rights. It is timely now to adapt this framework to the digital era and to the new information products and services that will increasingly drive Global Electronic Commerce .... Article 2B can be a strong first step toward a common legal framework for digital information and software licenses.

U.C.C. Article 2B, Preface at 1 (Aug. 1, 1998 Draft) (quoting letter from CSPP, a coalition of eleven major manufacturing companies (Nov. 19, 1997)) (alteration in original). *See generally* U.C.C. Article 2 (1995) (providing a standard set of commercial law rules). Article 2 of the U.C.C. has promoted the growth of larger and more national markets for the manufacturing economy. *See* Fred H. Miller, *The Uniform Commercial Code: Will the Experiment Continue?*, 43 MERCER L. REV. 799, 808 (1992) (noting the U.C.C.'s "substantive excellence" and discussing its success in promoting national uniformity). In doing so, Article 2 has been supplemented by Article 2A, which sets forth rules for leases of goods. *See generally* U.C.C. Article 2A (1995) (providing standardized rules for leases of goods).

6. As of this writing, neither the National Conference of Commissioners on Uniform State Laws (NCCUSL) nor the American Law Institute (ALI) has formally approved a draft of Article 2B. As of March 26, 1998, the ALI Ad Hoc Committee on U.C.C. Article 2B considered that the text of the Article needed "significant revision." *See* Letter from Geoffrey C. Hazard to Gene N. Lebrun, President, NCCUSL, and Charles Alan Wright, President, ALI (Mar. 26, 1998) (memorializing discussion of March 18, 1998 among the ALI Ad Hoc Committee on Article 2B) *available at* <http://www.2Bguide.com/docs/ghmar98.html> (visited Nov. 23, 1998). The ALI has tentative plans to submit a final draft to a vote by its membership on May 19, 1999, and NCCUSL will consider a final draft at its Annual Meeting in the summer of 1999. According to a joint press release, the two organizations "are committed to working together toward its completion so that U.C.C. Article 2B will be available for introductions and adoptions in state legislatures in 2000." *NCCUSL and ALI Announce Schedule for Completion of Uniform Commerical Code Article 2B: Licensing* (June 26, 1998), *available at* <http://www.law.upenn.edu/library/ulc/ucc2b/2breleas.htm>. However, on September 10, 1998, Jack Valenti on behalf of the Motion Picture Association of America, along with presidents and CEOs of five other copyright industry organizations, wrote a letter urging the ALI to table the Article 2B project, characterizing the draft as "fatally flawed in its fundamental premise that all transactions in 'information' may be governed by a single set of contractual rules." Letter from Jack Valenti, President and CEO, Motion Picture Association of America, et al. to Carlyle C. Ring, Jr., Chairman, NCCUSL Article 2B Drafting Committee, and Geoffrey Hazard, Jr., Director, The American Law Institute 1 (Sept. 10, 1998) (on file with author). At the November 1998 drafting committee meeting, the scope of Article 2B was curtailed to include only "computer information transactions." *See* Carlyle C. Ring, Jr., *Summary of Actions at Article 2B Meeting, Nov. 12-15,*

To explore the implications of Article 2B and its intersection with intellectual property law, the Berkeley Center for Law and Technology convened a symposium on "Intellectual Property and Contract Law in the Information Age."[8] The program included intellectual property and commercial law scholars, as well as economists, technologists, government policy officials, representatives of various information industries, and lawyers specializing in information licensing.[9] To enable the insights from this symposium to be shared with a wider audience, the *Berkeley Technology Law Journal* and the *California Law Review* agreed to publish symposium issues featuring papers presented at the live symposium.[10] The main focus of the *California Law Review* symposium volume is on the extent to which federal intellectual property law and policy should "preempt" or

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1998 (visited Nov. 21, 1998) <http://www.2bguide.com/docs/cr1198sum.html>. It remains to be seen if this will satisfy the copyright industry groups that sought to table the Article 2B project.

7. *See* WILLIAM J. CLINTON & ALBERT GORE, JR., A FRAMEWORK FOR GLOBAL ELECTRONIC COMMERCE § 3 (1997), *available at* <http://www.iitf.nist.gov/eleccomm/ecomm.htm> (visited Sept. 19, 1998) (discussing the need for a set of globally recognized commercial law rules). The President's announcement of the release of this report appears in Memorandum on Electronic Commerce, 33 WKLY. COMP. PRES. DOC. 1006 (July 7, 1997).

8. The official name of the Conference is "Intellectual Property and Contract Law for the Information Age: The Impact of Article 2B of the Uniform Commercial Code on the Future of Information and Commerce." The following organizations were cosponsors of the Conference: The American Law Institute; the Information Technology Association of America; Continuing Legal Education of the Bar of California; the Business and Law Section of the California State Bar Association; the School of Information Management and Systems at the University of California, Berkeley; the Institute of Management, Innovation, and Organization of the Haas School of Business at the University of California, Berkeley; and the Fisher Center for Management and Information Technology of the Haas School of Business at the University of California, Berkeley.

9. The Conference has an Internet site. *See* Berkeley Center for Law & Technology, *Intellectual Property and Contract Law for the Information Age: The Impact of Article 2B of the Uniform Commercial Code on the Future of Information and Commerce* (visited Sept. 19, 1998) <http://www.sims.berkeley.edu/bclt/events/ucc2b/>. For a complete listing of speakers and their affiliations, see *Conference Participants* (visited Sept. 19, 1998) <http://www.sims.berkeley.edu/bclt/events/ucc2b/bio.html>.

10. Last spring, editors from both the *California Law Review* and the *Berkeley Technology Law Journal* met to discuss how to allocate the papers between the two journals. The principal criteria for allocation were thematic congruence and the degree of completion of the papers (the *California Law Review* has a more time-intensive publication process and had to complete several stages of its process by May). I am deeply grateful to the editorial boards of both journals and to the authors of the articles and comments for their dedication to making the written Symposium as great a success as the live Symposium.

otherwise limit enforcement of Article 2B contracts.[11] The papers in this symposium issue of the *Berkeley Technology Law Journal* take a broader look at Article 2B. They probe its underlying rationale, its implications for specific industry sectors, its intersection with other federal and state laws (for example, those regulating competition and digital signatures), and its consistency with existing and emerging societal norms and commercial practices.

I. THE SYMPOSIUM ARTICLES

The *BTLJ* symposium issue begins, as the live symposium did, with a presentation by Professor Raymond T. Nimmer, who is the Reporter for the Article 2B project.[12] His article, *Breaking Barriers: The Relation Between Contract and Intellectual Property Law*, perceives a growing importance for contract law in the new information environment because "[i]n the new world of digital information," intellectual property constructs do not match up very well with new forms of commercial exploitation of digital information, such as those involving "transmission, extraction, and access."[13] Licensing, he explains, enables the emergence of these new information markets. Nimmer characterizes as "reactionary" the view that publishers must sell copies of information even they prefer to license copies.[14] Freedom of contract principles suggest that the decision to license information should be respected.

Also contributing to the growth of information licensing is uncertainty about potential liability for dissemination of defective information. Professor Nimmer explains that "Article 2B adopts a strong policy encouraging public distribution [of information] by limiting, and in some contexts, eliminating the liability risk in a manner consistent with caselaw on print media unless a different risk is expressly assumed by the information provider in its contract."[15] Nimmer perceives no "impending big bang" between intellectual property and contract laws, although he predicts that

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11. *See* Symposium, *Intellectual Property and Contract Law for the Information Age: The Impact of Article 2B of the Uniform Commercial Code on the Future of Information and Commerce*, 87 CALIF. L. REV. 1 (forthcoming 1999). For a synopsis of the articles and comments in that issue, including those that discuss preemption issues, *see* Pamela Samuelson, *Intellectual Property and Contract Law for the Information Age: Foreword to a Symposium*, 87 CALIF. L. REV. 1 (forthcoming 1999).

12. Nimmer, *supra* note 3.

13. *Id.* at 829.

14. *Id.* at 843.

15. *Id.* at 839.

intellectual property law will recede in importance.[16] Contract and intellectual property laws "have always co-existed, not only peacefully, but in an aggressive interaction between ordinarily consistent and mutually supportive fields."[17] Occasional abuses can and will be dealt with on a case-by-case basis.[18]

A similarly positive attitude about Article 2B's licensing rules—particularly its provisions validating mass market licenses of information—can be found in Robert Gomulkiewicz's contribution to the *BTLJ* symposium issue.[19] Gomulkiewicz not only views such licenses as an accurate reflection of commercial practice, but he also goes on to suggest that the software industry has been thriving in recent years "because of what mass-market licenses enable: a diversity of innovative products provided to end users at attractive prices."[20] Explaining why he titled his comment "The License Is the Product," Gomulkiewicz states that the program code may "provide[] functionality to the user, but the license delivers the use rights."[21] Gomulkiewicz asserts that there is considerable diversity in mass market software licenses, and that users are far from shy about using the Internet to complain if a software developer puts unreasonable terms in its licenses.[22] He opposes proposals to regulate mass market licenses simply because a few of them contain objectionable terms.[23] Indeed, he thinks that end users should cheer Article 2B because of its consumer protection provisions.[24] His principal complaint about Article 2B is that the drafters have been "too wedded to ill-fitting rules found in Article 2" relating to merchantability and noninfringement warranty responsibilities which Gomulkiewicz insists run counter to commercial practices and expectations in the software industry.[25]

In stark contrast to Professor Nimmer and Robert Gomulkiewicz, Professor Jessica Litman characterizes as "dubious" the notion that current

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16. *Id.* at 828.
17. *Id.* at 829.
18. *Id.* at 851.
19. See generally Robert Gomulkiewicz, *The License Is the Product: Comments on the Promise of Article 2B For Software and Information Licensing*, 13 BERKELEY TECH. L.J. 891 (1998).
20. *Id.* at 896.
21. *Id.* at 896.
22. *Id.* at 898.
23. *Id.* at 891.
24. *Id.* at 904.
25. *Id.* at 905. *But see* Peter A. Alces, *W(h)ither Warranty: The B(l)oom of Products Liability Theory in Cases of Deficient Software Design*, 87 CALIF. L. REV. 271 (forthcoming 1999) (critical of Article 2B's warranty provisions for too low standard).

law enables publishers to make a transaction into a license by so designating it.[26] In her view, Article 2B would make new law, even though its drafters deny this.[27] Litman asserts that *The Tales That Article 2B Tells* about its relationship to copyright law are at best confusing and at worst disingenuous.[28] Confusion arises because, although Article 2B sometimes incorporates language from the copyright statute into its definitions, Article 2B uses those terms in a manner different from and sometimes inconsistent with how they are used in copyright.[29] She finds further confusion, as well as disingenuousness, in Article 2B's assertions about the property law foundations on which Article 2B licenses are supposedly based.[30] The authority to license information is said to arise from "informational property rights" that the provider has in the information.[31] Article 2B defines this term to include intellectual property rights, such as copyrights and patents, but it also posits the existence of other sources of property rights in information besides those deriving from intellectual property law without clearly identifying their source.[32] This is important, for example, in determining the authority of an information provider to license a CD-ROM directory of telephone white pages listings which the U.S. Supreme Court has said cannot be protected by copyright law.[33] Litman finds Article 2B's veiled explanation of non-intellectual property sources of rights to be circular. She concludes that "whether from confusion or design, the tales that Article 2B tells us about its relationship with copyright law are

26. Jessica Litman, *The Tales That Article 2B Tells*, 13 BERKELEY TECH. L.J. 931, 938 (1998).

27. *Id.* at 941.

28. *Id.* at 931.

29. *Id.* at 935. Litman also objects to Article 2B because it "portrays copyright owners' rights as required and the limitations and exclusions ... as precatory." *Id.* at 941. On disputed issues in copyright, such as whether temporary reproductions of works in the random access memory of a computer are controllable, Article 2B resolves the ambiguity in favor of the rightsholders. *Id.* at 942.

30. *Id.* at 937-48.

31. *See* U.C.C. Article 2B, Preface. *See also* U.C.C. § 2B-102(a)(27) (Aug. 1, 1998 Draft). Until the August 1998 version of Article 2B, the draft used the term "informational property rights." *See, e.g.*, U.C.C. § 2B-102(a)(26) (Apr. 15, 1998 Draft). However, the August 1998 draft speaks of "informational rights," although defining the term in the same way as previous drafts.

32. See U.C.C. § 2B-102(a)(27) (Aug. 1, 1998 Draft).

33. Feist Publications, Inc.. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991) (holding that white page listings of telephone directories lack sufficient originality in the selection and arrangement of data elements to qualify for federal copyright protection).

an unreliable guide to what that relationship is likely, or is intended, to be."[34]

Professor Jane C. Ginsburg shares some of Professor Litman's discomfort with the "anomalous nomenclature" of Article 2B as it intersects with copyright parlance.[35] She is, however, more sympathetic with Article 2B insofar as it favors the interests of licensors. Consistent with her pro-author positions on copyright matters, Ginsburg is mainly concerned with the implications of Article 2B for an often vulnerable class of licensors, namely, individual author-creators, hence her title: *Authors as "Licensors" of "Informational Rights" Under U.C.C. Article 2B.*[36] Professor Ginsburg reports that there is both good and bad news in Article 2B of the UCC for authors, "depending on the level of detail that informs their agreements."[37] The principal good news is that the licensor's terms generally prevail if the conduct of the parties indicates that a contract has been formed.[38] In addition, Ginsburg sees some benefits for authors in Article 2B's implied license provision, although less so than under an earlier version of the same provision.[39] The principal bad news is that "Article 2B's provisions governing the formation of enforceable agreements can be detrimental to authors who may end up assenting all too easily to detailed exploiter-written [agreements]."[40] She demonstrates the good and bad news by working through hypotheticals to show how Article 2B's default rules would affect various permutations.[41] Ginsburg also worries that Article 2B will make it too easy for authors to release important rights without realizing they have done so.[42] She offers a number of suggestions for refinement of Article 2B to confer greater protection to authors, and suggests that authors should become more involved in the Article 2B drafting process in order to promote pro-author provisions.[43]

Authors and their publishers have, however, sometimes sought to become less involved with Article 2B by urging the drafters to exclude "up-

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34. Litman, *supra* note 26, at 943.

35. Jane C. Ginsburg, *Authors as "Licensors" of "Informational Rights" under U.C.C. Article 2B*, 13 BERKELEY TECH. L.J. 945, [3-4] (1998).

36. *Id.* at 945. *See also* Jane C. Ginsburg, *Putting Cars on the "Information Superhighway": Authors, Exploiters, and Copyright in Cyberspace*, 95 COLUM. L. REV. 1466 (1995) (offering a pro-author perspective on digital copyright law).

37. Ginsburg, *supra* note 35, at 947.

38. *Id.* at 967-68

39. *Id.* at 962-66.

40. *Id.* at 947.

41. *Id.* at 946-47.

42. *Id.* at 969.

43. *Id.* at 973-74.

stream licenses," such as those routinely entered into by writers and publishers, from the scope of Article 2B, as Laura Hutcheson reveals in *The Exclusion of Embedded Software and Merely Incidental Information From the Scope of Article 2B.*[44] Although author-publisher upstream licenses remained within the scope of Article 2B until the November 1998 drafting committee meeting, other groups have successfully sought or been given exclusions from Article 2B.[45] Indeed, defining a proper scope for Article 2B has been among the most persistently vexing problems with which the drafters have had to contend.[46] At first, the Article 2B project was focused on software licenses and development contracts.[47] Some years ago, it expanded to encompass transactions in digital information, and then to all transactions in information (except certain ones specifically excluded).[48] While the scope of Article 2B has recently contracted to "computer information transactions,"[49] there are still several categories of specific exclusions from the scope of Article 2B, including one for "embedded systems" (e.g., software that controls operations of a toaster or microwave oven).[50] Ms. Hutcheson probes some ambiguities in this exclusion[51] and in 2B's proposed rules for determining what law will apply when a transaction has a hybrid character (e.g., a computer game that comes with a joystick).[52] She offers proposals to clarify Article 2B's rules on exclusions and on hybrid transactions.[53] She concludes that the anticipated benefits of Article 2B "will only occur if [it] is drafted with default rules that reflect actual practices and expectations in the commercial world, and if the scope of Article 2B is clear."[54]

Concern about a lack of clarity in Article 2B rules also emerges in Michele C. Kane's article *When Is a Computer Program Not a Computer*

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44. Laura Hutcheson, *The Exclusion of Embedded Software and Merely Incidental Information From the Scope of Article 2B*, 13 BERKELEY TECH. L.J. 977 (1998)

45. *See* U.C.C Article 2B, Preface (Aug. 1, 1998 Draft) (explaining Article 2B's exclusion of most patent and associated knowhow licenses, trademark and trade dress licenses, and financial information transactions because of different assumptions and practices in these industries).

46. *See, e.g.*, Hazard, *supra* note 6.

47. *See* Hutcheson, *supra* note 44, at 979.

48. *See id.*

49. *See* Ring, *supra* note 6.

50. *See* U.C.C. § 2B-104 (Aug. 1, 1998 Draft).

51. *See* Hutcheson, *supra* note 44, at 981-1003.

52. *See id.* at 1003-12.

53. *See id.* at 999-1000, 1011.

54. *See id.* at 1011.

Program?[55] Kane asserts that Article 2B "adds needless complexity to computer industry transactions" because it employs the term "computer program" in a manner quite different from the term's use in common parlance or in copyright law.[56] Article 2B creates a new distinction between a "computer program" and "informational content" arising from or in the program.[57] Under Article 2B, the functionality of a program falls within the definition of a "computer program."[58] However, its user interface or displays, for example, generally do not. In addition, Article 2B distinguishes "informational content" and "published informational content,"[59] although neither term is a well-established concept in commercial practice. Article 2B nevertheless confers great importance on all three concepts, for each comes with a different level of warranty responsibility.[60] Ms. Kane uses several examples to illustrate that Article 2B's distinctions are unclear, unnecessary, and harmful to consumers of software products who will often be unable to discern the source of a flaw and may, therefore, be without a workable remedy when software does not perform to reasonable commercial standards.[61]

Consumer protection issues are also of concern to Michael Froomkin in *Article 2B As Legal Software For Electronic Contracting—Operating System or Trojan Horse?*, which focuses on Article 2B's rules about digital signatures and authentication procedures.[62] Froomkin finds "ample reason to doubt that Article 2B is compatible with the emerging model of digital signature-based e-commerce,"[63] but he is also critical of consumer protection dimensions of Article 2B's digital signature rules.[64] Indeed, after a detailed examination of several provisions, Froomkin concludes that "Article 2B undermines the consumer law requirements it seeks to modernize and risks leaving consumers particularly vulnerable to more modern

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55. Michele C. Kane, *When Is a Computer Program Not A Computer Program?*, 13 BERKELEY TECH. L.J. 1013 (1998).

56. *Id.* at 1013.

57. *Compare* U.C.C. § 2B-102(a)(6) (Aug. 1, 1998 Draft) ("computer program") *with id.* § 2B-102(a)(26) ("informational content"). *See also* U.C.C. Article 2B, Preface (Aug. 1, 1998 Draft).

58. U.C.C. § 2B-102(a)(6) (Aug. 1, 1998 Draft).

59. *Compare id.* § 2B-102(a)(26) ("informational content") *with id.* § 2B-102(a)(35) ("published informational content").

60. Kane, *supra* note 55, at 1017.

61. *Id.* at 1017.

62. *See* Michael Froomkin, *Article 2B as Legal Software for Electronic Contracting—Operating System or Trojan Horse?*, 13 BERKELEY TECH. L.J. 1023 (1998).

63. *Id.* at 1027.

64. *See id.* at 1048-58, 1062.

threats caused by hacked software and rogue electronic agents."[65] It would, for example, enforce contracts made by the exchange of messages between "reasonably configured" electronic agents.[66] Yet, as Froomkin points out, there are as yet no standards by which to judge whether an electronic agent has been reasonably configured.[67] It is, moreover, curious that "Article 2B is more solicitous about the limited capabilities of agents than of people ...."[68] Froomkin also questions the wisdom of having one set of electronic contracting rules for transactions in information (as Article 2B would provide) and another set of rules for other transactions (as the separate model law project to draft an Electronic Transactions Act would provide), especially given that many transactions may have a hybrid character.[69] Although finding Article 2B to be "a praiseworthy attempt to identify problems and solve them early,"[70] Froomkin likens Article 2B to a "beta version of a large and complex operating system," and warns that substantial unwanted and unintended consequences would result from Article 2B's "over-ambitious reach."[71]

Also questioning how well Article 2B meshes with emerging models of information-based commerce is Professor Peter Lyman in *The Article 2B Debate and the Sociology of the Information Age*.[72] Drawing upon the work of social science scholars, such as Manuel Castells, who have studied global information flows and the impact of digital networks on commerce and society,[73] Lyman asks: "Is the economic value of information that of a commodity, ... or is it better understood as a raw material?"[74] In the industrial age, information may have been treated as a commodity, but in the network age, Lyman suggests that allowing a freer flow of informa-

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65. *Id.* at 1048.

66. *See* U.C.C. §§ 2B-112(a)(2), -204 (Aug. 1, 1998 Draft). Article 2B defines "electronic agent" as "a computer program or other automated means used by a person to independently initiate or respond to electronic messages or performances on behalf of that person without review by an individual." *Id.* § 2B-102(a)(19). Such contracts would be enforceable "if the interaction results in the electronic agents' engaging in operations that confirm or indicate the existence of a contract." *Id.* § 2B-204(1). This rule would apply "even if no individual was aware of or reviewed the agent's actions or their results." *Id.* § 2B-204(4).

67. *See* Froomkin, *supra* note 62, at 1047.

68. *Id.* at 1055.

69. *See id.* at 1026.

70. *Id.* at 1061.

71. *Id.* at 1061-62.

72. Peter Lyman, *The Article 2B Debate and the Sociology of the Information Age*, 13 BERKELEY TECH. L.J. 1063 (1998).

73. *See, e.g.*, MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY (1996).

74. Lyman, *supra* note 72, at 1069.

tion and value-added uses may be more conducive to economic growth than the older industrial model.[75] "While Article 2B imagines a scarcity-based marketplace tightly controlled by information owners, [some] network entrepreneurs imagine the consumer living in an information rich environment in which vendors must compete to provide community services in order to sell products."[76] This model law also seems to assume that the network economy is mainly about using the Internet as a channel of distribution for software and digital publications.[77] However, many others believe that the digital economy is still being invented and has dimensions that Article 2B may not capture.[78] Lyman also explores some social dimensions of digital networks, in particular, the "social discipline" that technology "imposes on its users."[79] He views digital networks as carefully constructed governance systems that closely regulate the activities of users "as they conform to the community of social relations that the technology makes available."[80]

A clear manifestation of the governance capabilities of digital information systems can be found in the "self-enforcing digital contracts" on which Professor Julie Cohen focuses in her article *Copyright and the Jurisprudence of Self-Help*.[81] The "self help" concept originated in common law rules, and more recently in Article 9 of the UCC, to enable secured creditors to repossess collateral upon a debtor's default if this can be accomplished without breaching the peace (e.g., by seizing a debtor's car when parked on a public street).[82] Drawing upon and extending this concept, the drafters of Article 2B contemplate that licensors will engage in "self-help" by, for example, disabling use of licensed software if a licensee has not paid the next quarter's royalty fee or has otherwise materially breached a license for that information.[83] There should, of course, be some safeguards to protect against abuse of such technical self-help, for example, requiring that licensees be informed of the self-enforcing nature of the digital information they are acquiring.[84] Most of the debate about the self-

75. *See id.* at 1076-77.

76. *Id.* at 1080.

77. *See id.* at 1079-80.

78. *See id.*

79. *Id.* at 1072.

80. *Id.* at 1071 (citation omitted).

81. Julie E. Cohen, *Copyright and the Jurisprudence of Self-Help*, 13 BERKELEY TECH. L.J. 1089 (1998).

82. *See* U.C.C. § 9-503 (1972).

83. *See* U.C.C. § 2B-716 (Apr. 15, 1998 Draft). This section was added back to Article 2B at the November 1998 drafting committee meeting. *See* Ring, *supra* note 6.

84. *See* Ring, *supra* note 6.

help provision of Article 2B has concerned the extent of these safeguards.[85] While not denying the importance of these process concerns, Professor Cohen directly challenges self-help features of digital information products insofar as they attempt to thwart public policy limitations on rightsholders embodied in copyright law and other federal policies.[86] She asserts that "Article 2B is not merely a neutral background for private bilateral agreements, but a public act of social ordering that is flatly inconsistent with copyright and First Amendment principles."[87] She goes further to assert the affirmative right of licensees to engage in a little self-help of their own, for example, bypassing a technical protection system to engage in fair use "when necessary to preserve the balance that the Copyright Act is intended to establish."[88]

Technologist James Davis's comment questions whether the "right to hack" for which Cohen argues would really be meaningful to the average person, even if it were adopted, given "the relative advantage of those creating and using software security over those that would hack them."[89] Hacking is both technically demanding and expensive, and may not be worthwhile merely to enable an occasional act of fair use.[90] In a playful but serious reflection on self-enforcing digital contracts, Davis mentions a number of other things that "intelligent products" might do besides disabling themselves for nonpayment of fees.[91] They might, for example, monitor types of uses, forbidding some or adjusting the price based on usage patterns.[92] Imagine, he suggests, what an intelligent sofa might demand if it knows you have a hot date on Friday night.[93] Davis also worries that adopting a rule that would not enforce terms to which an electronic agent could not react, as Article 2B currently proposes, might create the wrong kinds of incentives to those who are developing electronic agents.[94] In particular, he worries that "a vendor may cut corners by building a sys-

85. *See, e.g.*, Letter from Susan H. Nycum to the Uniform Commercial Code Article 2B Reporter and Drafting Committee (Jan. 27, 1997), *available at* <http://www.2bguide.com/docs/nycshelp.html>; Letter from Elaine McDonald & Randy Roth, The Principal Financial Group, to UCC-2B Drafting Committee (Nov. 25, 1997), *available at* <http://www.2bguide.com/docs/em.html>.

86. *See* Cohen, *supra* note 81, at 1129-33.

87. *Id.* at 1092.

88. *Id.* at 1092, 1118-28.

89. James R. Davis, *On Self-Enforcing Contracts, The Right to Hack, and Willfully Ignorant Agents*, 13 BERKELEY TECH. L.J. 1145, 1147 (1998).

90. *See id.* at 1147.

91. *See id.* at 1146.

92. *See id.*

93. *See id.* at 1147.

94. *See id.* at 1148.

tem that would not be able to react appropriately."[95] Davis draws upon user interface design principles to ensure that electronic agents will offer appropriate information to users.[96]

While recognizing that a number of technical and other difficulties need to be overcome before technical enforcement of information licenses can be widely adopted, Professor David Friedman is far more sanguine about self-enforcing digital contracts than is Professor Cohen in his comment *In Defense of Private Orderings*.[97] Technology, he says, "has the potential to provide, for at least some forms of intellectual property, self-protection greatly superior in effectiveness and flexibility to the protection now provided by copyright law—and considerably less costly to enforce."[98] If the goal of intellectual property law is to promote access to a wide variety of works, Friedman argues that private ordering by means of licensing and technical protection will best accomplish this goal.[99] Copyright law may have once been necessary to ensure the existence of adequate incentives for creating and disseminating works of authorship, but with the aid of technology and licenses, it may no longer be needed.[100] Insofar as information providers look to technology and licenses to protect their works and do not rely on copyright, Friedman sees no reason why they should be subject to fair use rules which, after all, were crafted to limit rights under copyright law.[101] Friedman does not argue that the market will produce perfect results, for obviously some abuses will occur, but only that "it is less imperfect than the alternatives."[102] In general, he asserts, "a rational seller will design an efficient contract—a contract that maximizes the net gain to buyer and seller combined."[103] Friedman suggests that technical protection systems may even help resolve distributional concerns raised by Cohen and others by permitting price discrimination among different classes of users.[104]

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95. *Id.* at 1149.

96. *See id.* at 1148.

97. David Friedman, *In Defense of Private Orderings*, 13 BERKELEY TECH. L.J. 1151 (1998). Friedman distinguishes among three types of technical protections: those that disable performance, those that monitor use, and those that enforce contracts directly. *Id.* at 1152-54. The privacy issues that Professor Cohen raises, he points out, really only arise in the context of monitoring technology. *Id.* at 1164-67.

98. *Id.* at 1154.

99. *See id.* at 1153.

100. *See id.* at 1169.

101. *See id.* at 1159.

102. *Id.* at 1171.

103. *Id.* at 1157.

104. *See id.* at 1171.

Confidence in the market's general ability to achieve a satisfactory equilibrium is also evident in Professor David McGowan's article *Free Contracting, Fair Competition, and Article 2B.*[105] He observes that "Article 2B's preference for freedom of contract, with its underlying assumption that parties whose interests are at stake in a negotiation are better judges of markets and the effects of contracts than are courts, should be given substantial weight."[106] Although Article 2B does not explain its rationale for endorsing freedom of contract principles, McGowan suggests that Article 2B should be understood as seeking "to benefit society by allowing resources to flow to their most-valued use through exchanges falling within the domain of commercial contract law."[107] If so, it has in common with competition law that it seeks to increase social welfare by enhancing allocative efficiency.[108] Yet he also observes that the draft distances itself from competition policy, and seems to base its superstructure on property rights.[109]

On the much-contested issue concerning the stance Article 2B should take toward federal law and policy, McGowan regards as "sensible" the neutral stance Article 2B announces.[110] While noting that "[e]ach iteration of Article 2B has to one degree or another reflected the drafters' apparent determination that the free contracting principle [is to] control up to the point where it is decisively truncated by a federal rule,"[111] McGowan also observes an "apparent trend ... toward an iteration of section 2B-105 that states more explicitly its deference to federal policy and that identifies federal policies that presently pose a risk of conflict."[112] To explore the intersection of federal intellectual property and competition policy, on the one hand, and contract rule choices embodied in Article 2B, on the other hand, McGowan considers the issue of reverse engineering of computer programs. At present, Article 2B seems to regard anti-decompilation clauses in negotiated software contracts as enforceable, although it suggests that similar clauses in mass market licenses might be viewed differ-

105. David F. McGowan, *Free Contracting, Fair Competition, and Article 2B: Some Reflections on Federal Competition Policy, Information Transactions, and "Aggressive Neutrality,"* 13 BERKELEY TECH. L.J. 1173 (1998).

106. *Id.* at 1185.

107. *Id.* at 1188.

108. *See id.*

109. *See id.*

110. *Id.* at 1184.

111. *Id.* at 1194. *See also* Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239 (1995) (discussing earlier versions of Article 2B as it pertained to anti-decompilation clauses).

112. McGowan, *supra* note 105, at 1193-94.

ently, in part because of federal policy concerns.[113] McGowan questions this distinction between mass market licenses and negotiated contracts as regards enforceability of anti-decompilation terms, given the external effects of such clauses on competitive development of programs regardless of whether the term has been negotiated.[114] McGowan's main concern is to persuade courts not to look to the "sledgehammer" of antitrust law when analyzing the enforceability of questionable contract terms when an examination of contract or intellectual property principles, including the doctrine of misuse, might adequately do the job.[115]

Reverse engineering and competition policy concerns are also evident in Professor David A. Rice's article *License with Contract and Precedent: Publisher-Licensor Protection Consequences and the Rationale Offered for the Nontransferability of Licenses Under UCC Article 2B.*[116] Rice believes that the effect of Article 2B's transfer-of-rights rules is to override long-standing rules of trade secrecy law in a manner that would have negative impacts on reverse engineering.[117] Transfers of licensing rights might occur in a number of situations.[118] Article 2B anticipates that a licensor's permission will be needed to validate any transfer of license rights if the license contains a "no transfer" provision, as so many of them do.[119] In the absence of that permission, a transfer is not only a breach of the license; it is also ineffective, opening the transferee to a lawsuit for trade secret misappropriation and copyright infringement.[120] This not only represents a change from traditional principles of trade secrecy law, but it

113. *See id.* at 1196-99.

114. *See id.* at 1208.

115. *Id.* at 1237. *See, e.g.*, Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CALIF. L. REV. 111 (forthcoming 1999) (discussing misuse).

116. David A. Rice, *License with Contract and Precedent: Publisher-Licensor Protection Consequences and the Rationale Offered for the Nontransferability of Licenses Under Article 2B*, 13 BERKELEY TECH. L.J. 1239 (1998).

117. *See id.* at 1246-51. *See also* Rochelle Cooper Dreyfuss, *Do You Want to Know a Trade Secret? How Article 2B Will Make Licensing Trade Secrets Easier (But Innovation More Difficult)*, 87 CALIF. L. REV. 191 (forthcoming 1999) (discussing implications of Article 2B for trade secrecy licensing).

118. A firm might, for example, sell its used computers, including computer programs loaded on them, to another firm when going out of business. Or in the course of a merger between two firms, both might transfer their previously separate assets, including licensed software, to the new merged entity.

119. *See* Rice, *supra* note 116, at 1246-47.

120. *See id.* at 1246-51.

also runs counter to the normal expectations of ordinary people.[121] If two start-up companies merged, for example, they would expect that their new combined firm could continue to use licensed software on a particular computer. If reverse-engineering of that software would have been lawful if done by the original licensee, the merged firm would likely think that it should be able to reverse-engineer it also. However, Rice argues that the effect of Article 2B's transfer rules would make illegal both continued use of the software and any subsequent reverse engineering.[122] Rice objects to empowering "any software developer or information publisher ... to act as a toll collector on wholly unrelated business transactions."[123] Rice also questions whether Article 2B's transfer rules should be permitted to override "the venerable first sale doctrine" of copyright law.[124] Here, as elsewhere, Rice suggests not.[125]

Although no equivalent to Article 2B exists in Japan, the issues with which it deals, especially as they concern the enforceability of mass market licenses, are of considerable interest in Japan, as Professor Tsuneo Matsumoto explains in his comment *Article 2B and Mass Market License Contracts: A Japanese Perspective.*[126] He indicates that Japanese intellectual property professionals have been learning about the Article 2B project and about U.S. thinking about the relationship between intellectual property and contract law in part by inviting U.S. speakers to Japanese conferences.[127] Professor Matsumoto explains why he believes that Japanese law would not enforce some mass market licenses, but might enforce others.[128] Because Japan does not have a federal-state system, there is no direct equivalent in Japanese law to the preemption issues that are much

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121. *See id.* The ordinary good faith buyer of used computers would, for example, likely regard them as readily transferable as used chairs and desks.

122. *See id.* at 1250-55.

123. *Id.* at 1254.

124. *Id.* at 1267. *See* 17 U.S.C. § 109(c) (first sale rule). *See also* Litman, *supra* note 26, at 939 (noting that some copyright caselaw has refused to enforce mass market licenses of copyrighted works). Rice's frustration with the anti-transfer bias of Article 2B surely derives in part from his many years of service on the Article 2B drafting committee and from his lack of success in persuading his fellow committee members that the transfer issues he raises should be resolved differently.

125. Rice, *supra* note 116, at 1267. *See also* David A. Rice, *Licensing the Use of Computer Program Copies and the Copyright Act First Sale Doctrine*, 30 JURIMETRICS J. 157 (1990).

126. Tsuneo Matsumoto, *Article 2B and Mass Market Contracts—A Japanese Perspective*, 13 BERKELEY TECH. L.J. 1283 (1998).

127. *See id.* at 1284.

128. *See id.* at 1284-85.

discussed in the U.S.[129] However, there are some mandatory rules in Japan that cannot be overridden by contract, although there is no caselaw in Japan on whether copyright rules have a mandatory character.[130] Professor Matsumoto also discusses the potential implications for mass market licensing of software and other information products of a proposed Japanese consumer protection law that would decline to enforce terms that are unreasonably unfavorable to consumers.[131]

II. CONCLUSION

Undertaking to draft a model law to regulate transactions in information for the information age is an almost unimaginably daunting task. Given the wide range of affected industries, the complex policy decisions such a law must necessarily embody, and the immaturity of certain technologies and markets the law aims to encompass, it is perhaps unsurprising that Article 2B would generate the considerable debate reflected in this symposium. To guide it through the *Sturm und Drang*, the drafters of Article 2B have sought to follow Grant Gilmore's advice that model commercial laws should be "accurate, not original."[132] Articles in this symposium reveal that Article 2B has been best received in certain sectors, such as the software industry, where it is perceived to abide by that maxim. Where Article 2B has veered in the direction of originality, as for example, in proposing to regulate author-publisher contracts, it has been less welcome, or at least its welcome has been contingent on its responding better to the concerns of that sector. Accuracy is all the more difficult to achieve given that Article 2B does not write on a blank slate. There are so many other laws and policies, some state and some federal, around which licensing practices have arisen, and Article 2B must successfully intermesh with all of them. Much of the resistance with which Article 2B has met in this symposium derives from a perceived mismatch between Article 2B concepts and some concepts from those other laws. Where Article 2B has been most original—for example, in proposing to regulate contracts made by electronic agents—it has also been criticized, but its rationale for these rules has been that they are necessary to enable the emergence of new markets. By attempting to make Article 2B technology-neutral,[133] its

129. *See id.* at 1285.

130. *See id.*

131. *See id.* at 1286.

132. Grant Gilmore, *On the Difficulties of Codifying Commercial Law*, 57 YALE L.J. 1341 (1951). *See also* U.C.C. Article 2B, Preface at Part 2: Basic Themes (Aug. 1, 1998 Draft) (adopting the "accurate, not original" goal for Article 2B).

133. *See* U.C.C. Article 2B Preface at 10 (Aug. 1, 1998 Draft).

drafters have sought to provide flexible, adaptable rules for commerce in information. Nevertheless, there is reason to believe that electronic commerce will enable forms of transactions that simply cannot be imagined at this time. To borrow a phrase from a recent Dilbert cartoon, Article 2B seems to be "paradigm-shifting without a clutch."[134]

No written or live symposium can hope to resolve all of the complex questions raised by such an ambitious proposal as Article 2B. This symposium has sought to illuminate the areas most in need of clarification and refinement so that the principal goal of the Article 2B project—to promote robust commerce in information—can be achieved. On behalf of the Berkeley Center for Law and Technology, I offer thanks to the contributors to this and the companion *California Law Review* issue for sharing their insights in support of this larger goal. At times it may seem a Sisyphean burden to carry on with the Article 2B project. However, the prosperity of the information economy is at stake, and we must all lend a shoulder if the rock is going to have a chance to make it up the hill.

134. Scott Adams, *Dilbert* (Sept. 29, 1998).

BREAKING BARRIERS: THE RELATION BETWEEN CONTRACT AND INTELLECTUAL PROPERTY LAW

By Raymond T. Nimmer[†]

ABSTRACT

This Article examines the symbiotic relationship between copyright and contract law. The intellectual property bargain, or the delicate balance that allegedly exists in current intellectual property law, cannot be seen merely as a matter of a balance stated in property law rules. An interaction between intellectual property and contract rules has always been a primary characteristic of intellectual property distributed in the open market and that interaction is central to whatever balance has been achieved. When one speaks about an existing balance in the property rights sector, it is futile to focus solely on the statutory provisions of the copyright, patent or trademark laws. One must, of necessity, understand and incorporate the fact that the policy choice has always assumed that property rights are routinely transferred, waived, released, and licensed. Only the most naive observer, or one with a clear political agenda, can look at the intellectual property laws and their history and suggest that policy in the property sphere trumps or precludes the influence of contract.

In contractual relationships, underlying property rights are often relatively unimportant. They provide "default rules" that state a legal position that exists between the contracting parties unless the parties otherwise agree. Contract law provides other default rules. In the digital world, the contract rather than the underlying property law defines the product. This being said, however, there are some settings in which contract law, intellectual property, or competition law place limits on the ability to enforce some contract terms. This Article explores some of these areas and describes their limited role in modern commerce.

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I. INTRODUCTION

As I read some of the commentary about the future of copyright in the information industries on the Internet, it often appears as if some believe that we are facing an impending big bang as the fields of copyright and contract head toward some unclearly defined, but cataclysmic conflict.[1] It

1. *Compare* Jerome Reichman, Privately Legislated Intellectual Property Rights: The Limits of Article 2B of the U.C.C. (Apr. 4, 1998) (unpublished manuscript) *and* David Nimmer et al., *The Metamorphosis of Contract into Expand*, 87 CALIF. L. REV. 19 (forthcoming 1999), *with* Maureen A. O'Rourke, *Rethinking Remedies at the Intersection of Intellectual Property and Contract: Toward a Unified Body of Law*, 82 IOWA L. REV. 1137 (1997).

is argued, for political effect, that by bringing contract to the context of information transactions, contracts will be used to stifle free speech and comment or to block access to materials that are otherwise in the public domain. Nothing could be further from the truth and, indeed, the fundamental premise is flawed. Contract and intellectual property law have always co-existed, not only peacefully, but in an aggressive interaction between mutually supportive fields. Modern efforts to tailor contract themes to fit the digital information era and the commerce it yields follow that tradition. The fields will continue to co-exist, although changes in distribution and accessibility caused by Internet-related technologies will transform copyright law and expand the role of contracting. In the new world of digital information, especially on-line digital information, contract law and contracting practice play a dominant role. Traditional copyright law will recede in importance because many aspects of the on-line distribution methodology are not suited to property right constructs centered on the making and distributing of *copies* as the main property right.[2] Instead, intellectual property law grounded in trademark and other competition or product identification principles will have increasing importance. New property interests, dealing with transmission, extraction, and access, will be created.[3]

Article 2B neither creates nor expands contract law in relationship to intellectual property. Rather, it works within a context in which contract themes already exist and apply to transactions in information. In that environment, it attempts to move some common law into a commercial code and to restructure the focus of some of the law already found in the commercial code to better reflect the informational subject matter. The goal is to clarify contract law premises and to facilitate electronic and other digital-based commerce. Article 2B, therefore, is not a threat to intellectual property law concepts or to the established political and social importance

2. The copyright paradigm is both over-inclusive and under-inclusive in the on-line world. It is hugely over-inclusive in that because technology operates the on-line world, virtually every action taken with respect to information in that context entails the making of copies and most information placed into the on-line world is copyrightable. Thus, the anomaly is that copyright might be said to give exclusive rights to the copyright owner over every action taken on-line with respect to its information. It is under-inclusive because many of the critical rights that might define value on-line, such as the right to allow or deny access to an information repository, are not covered directly under the copyright regime.

3. *See, e.g.*, Digital Millenium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998). *See generally* Raymond T. Nimmer & Patricia A. Krauthaus, *Information as Property: Databases and Commercial Property*, 1 INT'L J.L. & INFO. TECH. 3 (1990).

of information in our culture. In fact, it supports and promotes those concepts in a new field of commerce.

In this paper, I explore two elements of the interaction between contract and intellectual property. The first element deals with the core relationship. This exploration clearly shows it is a symbiotic conjunction of two important fields of law—contract and property. The symbiosis causes intermittent problems, but more commonly the two areas of law function in comfortable tandem. The intellectual property bargain or the delicate balance that allegedly exists in current intellectual property law cannot be referred to as if these were matters merely of a balance stated in *property* law rules. This clearly misrepresents the circumstances. An interaction between intellectual property and contract rules has always been a primary characteristic of intellectual property rights as distributed in the open market, and this interaction is central to whatever balance has been achieved. When one speaks about an existing balance in the property rights sector, it is futile to focus solely on the statutory provisions of the copyright, patent or trademark laws. One must, of necessity, understand and incorporate into the analysis the fact that the policy choice has always assumed that property rights are routinely transferred, waived, released, and licensed. Contracts provide the means for the development and commercial exploitation of information assets. Only the most naive observer, or one with a clear political agenda, can look at the intellectual property laws and their history and suggest that policy in the property sphere trumps or precludes the influence of contract.

In many contractual relationships that exist with respect to information assets, the transactions are shaped by market factors and considerations of liability risk or other commercial concerns. The underlying property rights are often relatively unimportant in the bargaining process. Indeed, they tend to be treated as "default rules;" those rules that state a legal position that exists between the contracting parties unless the parties otherwise agree. Contract law provides other default rules that function in a similar manner. In this context, the contract defines the product, both in terms of what rights are granted (or withheld) and what assurances or other commitments are made.

The second element deals with an exploration of several of the policy themes that place restrictions on some contract terms in some cases. These limitations on contract come from both contract law theory and from general public policy, including some policies that derive from copyright or other intellectual property law. The contract-based restrictions tend to focus on policing limited circumstances in which the character of a transaction or a particular term of a contract reflect a breakdown of the contract-

ing process, yielding an unconscionable result. The restrictions emanating from intellectual property doctrines and other related policies tend to focus on eliminating unfair competition restraints that may derive from protecting individual autonomy. In each context, however, the basic insight is that existing general doctrines of law, which are largely retained under Article 2B, provide various and effective means to correct or eliminate cases of true abuse without disrupting the basic market-shaping effects of general contract law. The assumption is that parties can shape their own transactions, rather than have their terms dictated by law.

Among the arguments based on the unfounded fear that contract will eliminate important facets of information policy is one that intellectual property law preempts contract law, precluding contracts that are inconsistent with the property rights created (or denied) under copyright law. There is virtually no support for this proposition nor should there be any acceptance of the argument. As shown in this article, copyright and contract law interact; with the one establishing property law principles and the other enabling parties to contract and commercialize their property or other assets. The two areas of law deal with different issues. Here, we see that the claim, if any still make it, that contracts cannot alter the effect of copyright (or patent) rights has never been true or even pursued by any court. Clearly, contracts cannot alter property rights, but property law seldom, if ever, precludes the property holder from contracting to transfer its rights in whole or in part.

Similarly, the argument that the relationship is characterized by preemption simply misstates how the relationship between the fields has historically been managed. When intermittent abuses are identified and courts act to prevent or minimize their effect, the methodology consists of developing and applying themes created in common law, in contract statutes, and in competition law (such as antitrust and misuse doctrines) that restrict enforcement of particular contract clauses in particular contracts. These principles indicate simply and correctly that, to the extent of abuse, the traditional solutions lie in particularized adjudication, rather than in generalized invalidation of the right to make contracts.

Finally, this article examines the claim that copyright concepts of fair use and first sale should preclude contracts that are inconsistent with these premises. The claim that first sale rights control is, as we shall see, a matter of turning the relationship between contract and copyright on its head. The first sale doctrine states default law principles that essentially set out limited principles of copyright law which apply *if* the parties choose to sell and buy a copy but elect to make no further terms in their contract.

II. The Core Relationship

Historically, there have always been two different methods through which information and information assets are created and distributed through our culture, open forum and contract. A fear that drives some of the dispute about the relative roles of contract and intellectual property in the information world lies in the unstated belief that circumstances, mostly economic and technological in nature, will shrink the importance of intellectual property law and enhance the importance of contract law. This fear, however, is unfounded because, as discussed below, contract and intellectual property laws regarding the creation and/or dissemination of informational assets while different are symbiotic.

A. Open Forum and Commercial Uses

The first method for the creation or distribution of information in society involves a case in which a creator or holder of information conditions the transfer of that information to another on receipt of some form of consideration from the other person. We can describe this as *commercialization* of information. Commercialization has always been central to how our system handles the distribution of information. It is, indeed, an inherent feature of the so-called "intellectual property" bargain that some attempt to describe in static terms independent of contracts.[4] *All of the relationships and distribution choices* involved in commercialization of information assets involve contracts. The contracts range in detail and focus, but they all entail the exchange of value that underlies the very basis of contract law.

The second method through which information and information assets are created and exploited involves situations in which the information is given away and any rights in it relinquished in whole or in part. This we can describe as an *open forum* use of information. Open forum uses are also common and integral to the information culture. They are found on the city streets, in public speeches, political newsletters, and in portions of the Internet. The Internet, in fact, has either increased the scope of open forum uses of information or, at least, drawn together in one "space" a larger number of such open forum uses than heretofore was possible. Given the proliferation of open forum uses in the Internet, it is difficult to understand the fear that their role is diminishing. Indeed, it seems to me

4. *See generally* Nimmer, *supra* note 1. That view, as we see here, of course, ignores the dynamic interaction that has always existed with respect to property law, contract law and technology. That interaction, changing over time, in any event is an inevitable consequence of the intellectual property rights system placed in a dynamic market economy.

that quite the opposite is true. Yet, even here, copyright rules create a latent, but potentially explosive issue in reference to open forum uses; the issue is quite independent of contract law. Under copyright law, although potentially an open forum use, all Internet postings are shrouded under copyright *property* protection given to the person creating the message, image or the like.[5] The *property* law question of whether the copyright owner relinquishes all rights by placing text on an Internet open forum is unanswered. If the copyright owner does not relinquish all rights, another person using the text may engage in an infringing act.

By and large, open forum uses of information are non-contractual. They involve giving away information and a willingness not to assert rights, at least to some extent and under some conditions. While a future court might decide to use an "implied license" analysis to resolve the copyright issue mentioned above, that analysis would not hinge on contract law, but on theories of estoppel, release and waiver. The classic phrase "Take my wife—please" is one way of characterizing what an Internet user means when it posts to a list-serve or erects a website without placing contract-based restrictions on access to or use of the site. "Take my information—please."

The difference between open forum and commercialization uses of information lies primarily in choices made by the person holding the information. It is fair to say that, outside the scope of patent law and perhaps trademark law, concepts of independent creation place limits on that choice, especially with respect to materials that are widely distributed. Nevertheless, as to obtaining information known to or held by a person *from that person*, the difference between open forum and commercialization lies in the choice made by the individual about how (or if) to distribute its information. The Federal Circuit Court of Appeals recently confirmed an obvious principle in this regard.[6] The principle being that, even if public policy favors movement of information into public arenas, this

5. *See, e.g.*, Playboy Enter., Inc. v. Webbworld, Inc., 968 F. Supp. 1171, 1175-77 (N.D. Tex. 1997) (holding that an operator of an Internet web-site was directly liable to a magazine publisher for infringement when it provided its subscribers with copyrighted adult images that were stored on its computers. Operator obtained material from adult news groups and had no control over the persons posting the infringing images to those news groups; it only had control over the images it chose to sell on its Web site.); Micro Star v. Formgen, Inc., 942 F. Supp. 1312, 1317-18 (S.D. Cal. 1996) (holding that author of a computer game did not waive copyright protection by allowing users to trade scenes and create new levels in game and to upload them to other users on the Internet. No implied license where game file contained restrictive license).

6. *See* Leatherman Tool Group, Inc. v. Cooper Indus., Inc., 131 F.3d 1011, 1014-15 (Fed. Cir. 1997).

does not create a public right of *access* to information held by a private person. While I keep the only manuscript of my most recent book in my house, absent rights associated with litigation, you cannot compel me to allow you to read the manuscript or to enter my house to view it. The ultimate choice to distribute and how to do so lies in my hands, although you are of course entirely free to write an identical book as your own creation.[7] If I choose to allow you only to scan the copy for five minutes, rather than to make a copy for your personal pleasure, that too is my choice.

The choice does not hinge on the existence or non-existence of property rights *in the information*. But the choice exists today and has always existed. Indeed, allowing this choice provides a central feature of how our contract-based economic system functions and how the supposed incentives in intellectual property law work. An argument that either Article 2B or the digital information world shifts the balance between open forum and commercialization use is empirically unfounded. The facts actually suggest the converse. Merely saying that a person can contract for the distribution of information (a premise that is true today) says nothing about when or whether the person will elect to do so.

Recognizing the distinction between open forum and commercialization uses of information places the discussion of contracts in an appropriate focus. Contracts relate to many, but not all distributions of information. However, for the transactions to which contracts relate, the idea of contract is in no sense outside the contemplation of intellectual property theory; it is, instead, fully contemplated by and integral to this type of *property* law. Indeed, there can be no other conclusion unless one assumes that the theory of copyright law is that all information is to be made freely available for all uses.

B. Contracting for Information

Contracts are a common, integral part of the dissemination of information and information assets in our economy. Yet, in discussing these contracts, in principle and in practice, it is essential to avoid the fallacy that the primary focus of the transaction is typically on the intellectual property rights involved. That fallacy stems from the traditional separation of intellectual property and commercial law issues. In some cases, the in-

7. This right not to distribute, of course, is part of the so-called intellectual property bargain and, indeed, a fundamental element of the right of free speech. *See* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 149 (1989).

tellectual property rights issues may dominate in a contract, but in many contracts for transfer of information, distribution of intellectual property rights or permissions is neither the sole, nor even the dominant subject of the contractual terms. Some who view this context solely from an intellectual property law perspective may believe that rights issues always dominate. A commercial lawyer would never make that same assumption.

1. Nature of an Information Contract

To understand the scope of an information contract, it is useful to define the issues associated with such a contract. There are many ways to make distinctions among the issues in an information contract. This is because the issues differ not only depending on the type of information involved, but also based on the method of distribution chosen. A three-part classification, however, highlights the basic theme. The three categories are:

> Product Issues: Defining the subject matter of the transaction, what rights are transferred or withheld, and what fee, royalty, or price is charged for that product.
>
> Liability Issues: Defining the allocation of risk for errors, defects, third party claims for libel, defamation or the like, associated with the informational subject matter.
>
> Performance Issues: Defining how the transaction will be performed, when it will be completed, what laws apply and other issues associated with establishing the relationship between the parties.

As this indicates, the point is not that issues of intellectual property rights are unimportant. Indeed, in many respects, contract terms related to these rights are the product itself. But rather, that other issues not involving intellectual property rights are also part of the contract.

No sustainable logic suggests that copyright or other intellectual property law should control liability or performance issues in any respect or that copyright preempts or otherwise precludes contracts dealing with those issues. Copyright does not, by and large, deal with questions in these categories. Just as not all distributions of information involve contracts, so too most contracts relating to information assets deal with a vastly broader array of issues than simply spelling out the rights granted or withheld. Yet, in any given transaction, these issues are likely to be the most important ones addressed by the contract. Digital and Internet distribution methods

heighten, rather than limit, the extent to which these non-rights-related issues move toward the forefront. Equally important, technology and market circumstances are increasing the importance of these issues.

To illustrate, consider the case of a publisher of a non-fiction magazine (or book). Under traditional paper distribution systems, the publisher contracts with a distributor for distribution of the work in a given market. The contract will deal with geographic scope and allowed method of distribution, but also with rights to return copies, quality of the copies delivered, advertising obligations of the parties, and indemnification for third party claims. When the magazines are eventually distributed by retail contracts to members of the general public, however, the contracts in traditional hard copy distribution are typically devoid of any terms other than price and perhaps policy on returns.

When that same publisher elects to distribute the same information through the Internet, a far different contractual emphasis occurs. The middle man or distribution contract may not exist, but if it does, there will be a license between the information provider and an on-line distribution service. A more important difference lies in the relationship with the "end user" or customer who is a member of the general public. Here, in a commercial use, it is almost certain that the information will be made available only subject to contractual terms. The contracts are likely to deal with price and with the customer's right to make and retain additional copies. But they also deal with questions such as the time availability of the on-line service, choice of what law governs, assurance or disclaimer of accuracy or quality of the information, representations about or limitations on commercial or non-commercial use, indemnities, and other issues.

There are many reasons for the shift in the contractual relationship between the end user and the person with whom it deals. Some are grounded in informational property concerns, heightened by the character of digital information copies as compared to print copies. Many, perhaps most, of the reasons for the difference lie outside rights-related issues.

2. *Liability as an Illustration of an Issue Beyond Rights Distribution*

To focus the question we can concentrate on liability issues. The question is: why does a magazine retailer not concern itself with warranties, while an on-line provider does? The answer lies in part in the traditions of the book and magazine industry. More importantly, however, it can be traced to a potentially important difference in law.

The magazine (or book) retail seller is protected by a consistent, national body of law disallowing liability claims against it for errors in the

informational content that it purveys. The same is true for the publisher, who has *no contractual* relationship to the end user (buyer). Although it concerned a tort claim, the language of the Ninth Circuit Court of Appeals encompasses the tone and essence of the applicable body of law within which the magazine and book sellers function since, in fact, the cases do generally focus on tort liability concepts:

> Although there is always some appeal to the involuntary spreading of costs of injuries in any area, the costs in any comprehensive cost/benefit analysis would be quite different were strict liability concepts applied to words and ideas. We place a high priority on the unfettered exchange of ideas. We accept the risk that words and ideas have wings we cannot clip and which carry them we know not where. The threat of liability without fault (financial responsibility for our words and ideas in the absence of fault or a special undertaking or responsibility) could seriously inhibit those who wish to share thoughts and theories. As a New York court commented, with the specter of strict liability, "[w]ould any author wish to be exposed ... for writing on a topic which might result in physical injury? e.g., How to cut trees; How to keep bees?" One might add: "Would anyone undertake to guide by ideas expressed in words either a discrete group, a nation, or humanity in general?"[8]

In this context, the decision simply to sell without contractual provisions about liability for errors is grounded in supportive law. The fact that case law is so well-established in this country means that the decision as to method and terms of contract are not constantly re-evaluated and, if they were, marketplace expectations would sharply limit what retail contract would be acceptable.

The circumstance in the on-line distribution is far less clear. In this case, the publisher *does* have a direct contractual relationship to the end user of the information. In some states, that relationship might fall within general case law which imposes on a service provider a general obligation of exercising reasonable care in is contractual performance. Alternatively, that relationship may be within Restatement (Second) of Torts section 552 on negligent misrepresentation, which deals with a quasi-tort, quasi-contract form of liability. It provides that a person who supplies *information* to another for purposes of guiding that other person's business activi-

8. Winter v. G.P. Putnam's Sons, 938 F.2d 1033, 1035 (9th Cir. 1991) (citation omitted).

ties has an obligation to ensure that there are no errors in the information *caused* by the provider's failure to exercise reasonable care.[9]

One New York state trial court addressed the liability issue in a manner favorable to sustaining public distribution of information. In *Daniel v. Dow Jones & Co., Inc.*,[10] the court rejected an on-line subscriber's claim against the information provider based on an alleged error in the presentation of information concerning the price of a reported commercial transaction.[11] The court stated:

> The relationship between the parties here is the same as between any subscriber and a news service; it is functionally identical to that of a purchaser of a newspaper. The advances of technology bring the defendant's service into the home or office of more than 200,000 persons; indeed even non-subscribers may receive defendant's service through computerized linkages with other database enterprises. There is no functional difference between defendant's service and the distribution of a moderate circulation newspaper or subscription newsletter. The instantaneous, interactive, computerized delivery of defendant's service does not alter the facts: plaintiff purchased defendant's news reports as did thousands of others. The "special relationship" required to allow an action for negligent misstatements must be greater than that between the ordinary buyer and seller. Technological advances must continually be evaluated and their relation to legal rules determined so that antiquated rules are not misapplied in modern settings. "[W]ith new conditions there must be new rules." Yet, if the substance of a transaction has not changed, new technology does not require a new legal rule merely because of its novelty.[12]

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9. *See* RESTATEMENT (SECOND) OF TORTS § 552 (1977) ("One who ... supplies false information for the guidance of others in their business transactions, is subject to liability for pecuniary loss caused to them by their justifiable reliance on the information, if he fails to exercise reasonable care or competence in obtaining or communicating the information.").

10. 520 N.Y.S.2d 334 (N.Y. Civ. Ct. 1987).

11. *See id.* at 337-38. On a related issue, a federal district court similarly insulated the on-line provider in reference to liability for defamatory material made available through its service: "Technology is rapidly transforming the information industry. A computerized database is the functional equivalent of a more traditional news vendor, and the inconsistent application of a lower standard [enabling] liability [for] an electronic news distributor ... than that which is applied to a public library, book store, or newsstand would impose an undue burden on the free flow of information." Cubby, Inc. v. CompuServe, Inc., 776 F. Supp. 135, 140 (S.D.N.Y. 1991).

12. *Daniel*, 520 N.Y.S.2d at 337-38 (citation omitted).

In contrast to the approach in *Daniel*, an Illinois appellate court expressly recognized the potential liability of an information provider in a contractual context. *Rosenstein v. Standard & Poor's Corp.*[13] dealt with the provider of a stock index which, in addition to being made generally available, was provided to be used as the basis for trading on the Chicago commodities exchange.[14] On one occasion, the provider made an erroneous calculation of the index, causing economic loss to many who traded based on the false number.[15] The Illinois court held that the doctrine of negligent misrepresentation created potential liability (to all users of the index as a trading measure), but that in this case the liability was disclaimed by the *contract*.[16] A subsequent Illinois court, dealing with different parties, but the same underlying event, also held that there was no liability, but based this conclusion on its belief that the contract merely called for providing *the index* figure, not an *accurate* index figure.[17]

There are more nuances to the law here, but the fundamental point is important. When a publisher shifts from indirect distribution of books or magazines in printed copies to on-line distribution through access to digital databases of the same information, it moves into a world of different or at least unknown liability risk. Under current law, a distributor of information on-line has a risk that courts will conclude that it has contract (or tort) liability to its customers for errors in the information provided. This risk is especially true for information that may be used by the end user for guidance in its business affairs. For a provider of information that emphasizes low cost per unit of information and rapid access to a changing world of information, the exposure may threaten the economic foundation of the distribution system because of litigation and liability costs. In any event, the existence of the liability risk creates an incentive to contract in more detail in this context than in indirect sales to the general public. Not surprisingly, the contract terms are likely to deal with limitations to non-commercial use of the information, disclaimers or limitations on assurances of the accuracy of the information, and limitations on damages that can be claimed in the event of breach.

As presented in Article 2B, this issue contains important overtones of how law goes about promoting widespread and unencumbered availability of information. In answering this question, Article 2B adopts a strong

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13. 636 N.E.2d 665 (Ill. App. Ct. 1993).
14. *See id.* at 666.
15. *See id.*.
16. *See id.* at 672.
17. *See* Lockwood v. Standard & Poor's Corp., 682 N.E.2d 131, 135 (Ill. App. Ct. 1997).

policy encouraging public distribution by limiting and, in some contexts, eliminating the liability risk in a manner consistent with case law on print media unless a different risk is expressly assumed by the information provider in its contract. Thus, section 2B-404 adapts the terms of the negligent misrepresentation tort as a basis for contract obligations relating to informational content, but excludes any *implied* warranty of accuracy for *published informational content.*[18]

3. *Incentives to Contract: In General*

The on-line world into which we are heading contains many such illustrations of where United States (and international) law creates a significant incentive to contract on terms that go beyond simple definition of price and quantity. These include questions about what state law governs a contractual relationship entered into and performed on-line and whether an on-line provider is subject to suit in any and all fifty states and two hundred countries in this world. The answers to either question are unclear and create a risk of potentially costly litigation. When one views this as a transactional issue, however, these uncertainties and risks create a strong reason to make contractual choices and place contractual limitations on the risk.

We can describe all of these as *incentives to contract* so long as we recognize that the issue is not whether to *commercialize* or instead to release into a *open forum*, nor is it an issue of whether or not to make a contract in connection with a *commercialization*. Rather, the issue and the incentives to which this phrase refers focus on how elaborately or narrowly the contract terms should reach. An incentive to contract here means an incentive to seek contract terms beyond mere price and quantity.

Incentives to contract in this sense exist in the commercial on-line world, but they also exist in digital information distributed on tangible copies. In this *copy-based* world, however, a number of courts have held that computer programs distributed in the mass market are governed by existing Article 2 as to *liability* issues such as warranties and damages risk, and as to a limited number of *performance* issues.[19] While the case

18. *See* U.C.C. § 2B-404(b) (Apr. 15, 1998 Draft).

19. Many court decisions place software licensing in Article 2 even though software is licensed and not sold and even though the focus of the transaction centers not on the acquisition of tangible property, but on transfer of capability and rights intangibles. *See* Advent Sys. Ltd. v. Unisys Corp., 925 F.2d 670, 676 (3d Cir. 1991); RRX Indus., Inc. v. Lab-Con, Inc., 772 F.2d 543, 546-47 (9th Cir. 1985); Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737, 741 (2d Cir. 1979). *But see* Data Processing Servs., Inc. v. LH Smith Oil Corp., 492 N.E.2d 314, 318 (Ind. Ct. App. 1986); Micro-Managers, Inc. v. Gregory, 147 Wis. 2d 500, 509 (Ct. App. 1988).

law is not uniform, it creates an incentive to contract. The same incentives exist in automobile sales and leasing, and in manufacturer's warranties for other types of goods. The incentive is not limited to, but is actually more relevant in transactions outside the mass retail market. The issue for information assets, however, takes on a somewhat different tone when one considers the newer products in the information marketplace. For example, is a multi-media interactive encyclopedia subject to an implied warranty of merchantability because it is a computer program? If so, does that warranty entail an assurance that the informational content of the encyclopedia is free from errors?

4. *Incentives to Contract: Contract as Product*

An additionally potent "incentive to contract" in the world of digital information stems from the relationship between the contract terms and the product. In licensing, the contractual rights terms are in effect the product itself. That has long been true in the upstream segments of information industries in which the focus is on creation of a work, development of software, or arrangements for commercial distribution. The development of digital information products and on-line distribution has brought this same principle into the end user marketplace.

In the world of goods, contract terms define the product being sold (or leased), but different descriptions typically require delivery of a different tangible item. In the world of information, especially digital information products, different contract terms describe different products. The differing terms, however, do not necessarily require delivery of a different tangible item (copy). Consider the following contract term:

> A right to publicly perform "James Bond 1998" in Houston from June 1 through July 1.

There is no doubt that the contract term defines and describes the product being transferred. While the *tangible* subject matter of the contract is most likely to involve delivery of a copy of the motion picture "James Bond 1998," the product is not the copy, but the rights granted in use of the content contained on the copy. If that point is not clear, compare the value of the contract term stated above to the value of the product in a contract in which the contract term provides the transferee with "exclusive rights throughout the United States" to publicly perform or display "James Bond 1998." Yet, both contracts are satisfied by delivery of the same copy of the motion picture. The contract, not merely the copy, is the product.

The reality that contract terms are the product also create an "incentive to contract" in the sense that the contract terms are used and useful to dif-

ferentiate markets and pricing. This has always been true in upstream licensing, but digital products make it useful and commercially important in end user markets. In these contexts, the provider may elect to provide a product solely for consumer use or one that can be used for either consumer or commercial purposes, reflecting the different value in the pricing, but in essence controlling the difference in the products solely through the terms of the license.[20] Similarly, a software vendor may contractually allow use by a single user of a copy of "Windows NT" and, in a separate transaction, deliver a copy of "Windows NT" under a license allowing the licensee to use the software in a 10,000 site network or allowing it to make 20,000 additional copies for commercial distribution. In the latter case, the provider, in effect, transferred 20,000 copies in the single tangible copy.[21] In each case, the product is the license and the value of the product is substantially different.

This provides another simple insight into the interaction of copyright and contract. Granting a proprietor of informational property rights the ability to contractually differentiate among the rights granted or withheld, and uses permitted or precluded, contributes to the establishment of an active and heterogeneous market in which "products" can be tailored to actual demand, distribution of information optimized, and pricing tailored to marketplace value.

If the proprietor of an information asset is not permitted to contractually distinguish what rights it grants or withholds, that proprietor has only one asset available for transfer and with respect to which it can contract only one time. That rule obviously does not exist in modern law and is not consistent with basic property or contract law. The ability to contractually define and isolate what rights are and are not transferred is critical to commercialization of informational assets. Any proposals to restrict or restrain that right, in general, need to be carefully and critically examined. Such proposals would contradict not only the basic contract law principle of party choice, but also alter the fundamental role of commercial uses in implementing the basic "intellectual property bargain" and, to borrow a

20. *See, e.g.*, ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1455 (7th Cir. 1996) (holding that license was limited to consumer use); Storm Impact, Inc. v. Software of the Month Club, 13 F. Supp. 2d 782, 791 (N.D. Ill. 1998) (holding that an on-line shareware license allowed copying and distribution except for resale).

21. *See* Microsoft Corp. v. DAK Indus., Inc., 66 F.3d 1091, 1095 (9th Cir. 1995) (concluding that a distribution agreement involving a lump sum payment and delivery of a master disk is more like a sale of the right to make the stated number of copies, than an executory license for purposes of characterizing claims under bankruptcy law).

phrase, alter the "delicate balance" that has been established in which commercialization is an important part of the intellectual property right.

While few, if any, writers advocate the blanket proposition that no contractual rights or limitations are permitted in any distribution of information except for the terms of the Copyright Act,[22] it can be argued that a distribution of copies of a work cannot contractually establish a package of contractual rights or limitations that differ from the copyright default rules pertaining to a first sale of a copy. This argument assumes that, since this is the way we (publishers, retailer, and end users of *print* copies) have done business in the past, the law should prohibit any change in doing business in the future. This premise appeals to instincts of many that prefer to continue on comfortable and predictable paths without being buffeted by change.

> Of course, it is never possible to legislate the *absence* of change.
> Of course, it is never possible to bar the effects of technological, social and economic revolution.
> Change is reality in our revolutionary era.

This reactionary posture is neither correct nor simple. It superficially masks a proposed fundamental change in the relationship between commercialization and intellectual property rights policy. To understand this, we need only to ask a single question: assuming that a copyright owner has the *exclusive* right to distribute (or not distribute) copies of its work, what rule of law can adequately ensure that a retail vendor must only *sell* copies without restriction to end users? Most retail vendors do not own copyright in the works they distribute. Thus, the only feasible answer lies far up the distribution chain; it must reach to the point at which the copyright owner *first* chooses to make its work available to others.[23] To ensure that, at the end point of the distribution of copies, nothing other than a first sale to an end user can occur, law would of necessity have to provide that

22. 17 U.S.C. § 101 et. seq. (1994 & Supp. II 1996).

23. In establishing a distribution system for the mass market, an informational property rights owner may elect to establish a transaction in which it gives its distributors either (1) ownership of a copy and a right to sell copies of its work to others, or (2) a license (permission) to license copies to others. Copyright and other intellectual property law supports either choice. It also provides that, if a license is created and the distributor exceeds the license, the eventual transferee (even if in good faith) is not protected under bona fide purchaser concepts. *See* Microsoft Corp. v. Harmony Computers & Electronics, Inc., 846 F. Supp. 208, 214 (E.D.N.Y. 1994); Major League Baseball Promotion v. Colour-Tex, 729 F. Supp. 1035, 1040 (D.N.J. 1990); Microsoft Corp. v. Grey Computer, 910 F. Supp. 1077, 1084 (D. Md. 1995); Marshall v. New Kids on the Block, 780 F. Supp. 1005, 1008-9 (S.D.N.Y. 1991).

the copyright owner that elects to distribute its work has no choice about how or under what conditions that distribution *to the first distributor* can occur. Any other rule would mean that the retailer is forced to infringe the exclusive right of distribution in any case where the copyright owner elects to preclude or restrict sales of copies of its works, supplanting that old methodology with a contract-based distribution.

That proposition must be rejected from both the contract and the property rights perspective. It is totally inconsistent with the premise that intellectual property law should encourage and support the creation and distribution of works.

C. Contract and Informational Property Rights Co-Exist

If one narrowly focuses on contract terms associated with rights distribution, it is clear that not only is there not a conflict between intellectual property concepts and contract, but that each is an inherent and essential part of the policy scheme of the other. As we have seen, commercialization use (e.g., contracting for) informational assets is one of two primary means by which information is distributed. It represents that portion of the matrix that yields financial and similar incentives for the creation of new, and the distribution of existing, information assets. In that sense, the so-called intellectual property bargain does not exist in the absence of contract law and practice.

Even more fundamentally, throughout United States law, it is clear that one primary attribute of a "property interest" is that the property can be transferred in whole or in part. The decision to do so ordinarily lies with the property right owner. It is anomalous, if not a flat out contradiction, to speak about a property right that *cannot be transferred,* even temporarily. In a market economy, an assumption of non-transferability would strip the property right of most of its personal value.

We come then to the question of how these laws (contract and property) interrelate, not whether they conflict. To focus on that question, I will make three points:

- First, the two bodies of law differ in how they regulate a party's conduct.
- Second, the impact of a property right in a marketplace shaped by contractual relationships is most often indirect, with the rules of property being filtered and adapted through contractual and other relationships.
- Third, in this marketplace setting, intellectual property law provides "default rules" for contractual relationships. These are default rules in

that, by their own terms, the effect of the rule can ordinarily be altered by contract.

1. The Nature of Law in the Two Fields

Contract law is a party *choice* regime, emphasizing with few exceptions the ability of the parties to define their own relationship. In contrast, intellectual property law (with the possible exception of trade secret law) is a vested *rights* regime. It defines the relationship of persons to an identified corpus of information in the absence of a contractual relationship altering that established or vested right.

a) Contract Law and Party Choice

Because it reflects an assumption of party autonomy or choice, the rules formulated within a contract law regime, whether in common law or in a uniform codification, are subservient to the actual choices of the parties. In general, the law of contract does not mandate outcomes in a contract relationship. Instead, in this setting, contract *law* has three primary functions. First, it establishes when a agreement becomes enforceable in law between the parties (e.g., when an "agreement" becomes a "contract").[24] Second, contract law provides "background" or default rules which indicate what the terms of the relationship are in the event that the parties do not otherwise agree.[25] Third, in limited situations, contract law provides that particular terms may be unenforceable on the grounds, for example, that the term is *unconscionable*.[26]

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24. Contract formation, of course, is a major issue in contract law. When it was first adopted, Article 2 of the U.C.C. was viewed as establishing highly permissive rules enabling the early formation of contracts despite the lack of precise agreement as to all specific terms. The "open term" or "layered" contract model is found in several provisions in Article 2. *See, e.g.*, U.C.C. § 2-204 (1996) (allowing formation in any manner); *id.* § 2-207 (allowing formation even though offer and acceptance have varying terms); *id.* § 2-311 (permitting formation with open terms even though one party retains the right to particularize the details of performance after the fact).

25. In most cases, these "default" rules are subject to contrary agreement. Article 2B, for example, provides expressly that with specified exceptions, the provisions of the statute are applicable only if the agreement of the parties does not otherwise so indicate. It lists a total of 13 provisions that are not subject to this general rule of contract choice. *See* U.C.C. § 2B-106 (Apr. 15, 1998 Draft).

26. This particular limitation was originated in the development of the original Article 2 of the U.C.C. *See* U.C.C. § 2-302 (1962). It has subsequently been incorporated into the common law of many states as applicable to contracts outside the U.C.C., but this adoption has not been universal. Article 2B adopts the literal language of existing Article 2 on the issue of unconscionable contracts or clauses. *See* U.C.C. § 2B-110 (Aug. 1, 1998 Draft). This, of course, would uniformly extend this concept to all contracts within the new scope of the U.C.C.

If we put aside contract formation rules for the moment, the use of background or default rules in a contract law regime means that the black letter of contract law must be understood differently than its counterpart in a vested rights regime. The contract rule *presumes* that a contractual relationship exists; the rule would not otherwise apply. It then indicates what the nature of the relationship is *if* the parties do not otherwise agree. While there has been some debate in the literature about what should be the source and logic of those background rules, in a commercial statute, in contrast to common law, the most common reference point centers on ordinary commercial or other transactional practice suited to the context.[27] This is, after all, a party choice regime. As Grant Gilmore observed, the purpose of the drafter of a commercial statute is to ensure that transactions when undertaken by the parties have the effect in law that was anticipated in practice.[28]

Contract law relies on the premise that *parties*, rather than laws, create (or decline to create) a relationship. The parties do so by exercising personal choices. However, the ideas of choice and agreement conveys a romantic view of contracts, i.e., that the choices must follow actual negotiation between parties of equal bargaining power. Negotiation over terms seldom occurs in either a mass market or a commercial marketplace. Our economy, and the mass market in particular, is not, and never was, a bazaar economy characterized by recurrently dickered terms shaped to each transaction. Nor can it ever be so. Economics and efficiency concerns preclude it.[29] One party (the vendor or the purchaser) proposes terms and the other party assents or refuses. In some cases, the proposed terms relate solely to price and quantity, while in others they are more extensive because there are important "incentives to contract."[30]

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27. *See* Randy E. Barnett, *The Sound of Silence: Default Rules and Contractual Consent*, 78 VA. L. REV. 821 (1992); Ian Ayres & Robert Gertner, *Strategic Contractual Inefficiency and the Optimal Choice of Legal Rules*, 101 YALE L.J. 729, 734 (1992); Charles J. Goetz & Robert E. Scott, *The Limits of Expanded Choice: An Analysis of the Interaction Between Express and Implied Contract Terms*, 73 CALIF. L. REV. 261, 266 (1985).

28. *See* Grant Gilmore, *On the Difficulties of Codifying Commercial Law*, 57 YALE L.J. 1341, 1341 (1957).

29. *See, e.g.*, W. David Slawson, *Standard Form Contracts and Democratic Control of Lawmaking Power*, 84 HARV. L. REV. 529, 529-30 (1971) (stating that standard form contracts "account for more than ninety-nine percent of all the contracts now made" and that their "predominance ... is the best evidence of their necessity").

30. See *supra* section II(B)(3) for discussion of incentives to contract. There are incentives to do more in a contract than simply specify price and quantity.

Under contract law, formation of a contract and definition of its terms do not require sophisticated or equally leveraged parties, nor parties with incentive to devote time, effort, and cost to negotiate. Standard terms, leverage, and adherence to pre-set terms characterize all commerce. Most importantly, it has never been considered to be the role of contract law to generally reshape the balance created by market conditions. If DuPont offers a cleaning fluid for sale to a consumer or a janitorial company, but only at a specific price coupled with a rigid disclaimer of warranties, transactions that result in buyers willing to purchase the product under the stated terms are fully enforceable.[31] With very few exceptions, standard form contract terms are enforceable. The ability of parties to standardize and control the terms under which a product or information is marketed gives an important element of efficiency in transactional environments.

The decision in law to enforce standard form contracts is fully consistent with contract theory. While the party with the lesser leverage may view its position as not involving any choices, there are choices at work throughout this form of distribution. The choices begin with the decision to market (or offer to purchase) a product only under stated terms. In the consumer market, that choice is the vendor's. In other settings, the purchaser is dominant. In the seller-dominant scenario, the buyer chooses to accept the product and terms or to reject them and purchase a different product or no product at all. If enough potential purchasers decline the product and terms, the provider will change the price or terms, or leave the market. With the advent of the Internet, the ability of purchasers to discuss products and terms creates the likelihood that they will have an increasingly powerful influence.

The phrase most commonly associated with standard form contracts is "contract of adhesion." Actually, modern courts use that phrase only if the adhering party had virtually no other choice in the market because no other providers offered the same or equivalent product or service and there are other indicia of non-disclosure, unbalanced sophistication or the like in the transaction.[32] The idea of an adhesion contract does not mean simply that I insist on my terms and have the power to do so.

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31. Of course, tort products liability may override liability limitations in cases to which they apply. As a general rule, however, tort claims arise only in the event of personal injury or property damage. Contract law, including Article 2B, does not alter the range of product liability law.

32. *See, e.g.*, Klos v. Polskie Linie Lotnicze, 133 F.3d 164, 169 (2d Cir. 1997) (holding that round trip air tickets were not contracts of adhesion); Fireman's Fund Ins. Co. v. M.V. DSR Atl., 131 F.3d 1336, 1339 (9th Cir. 1998) (finding forum selection clause in bill of lading enforceable and the fact that the contact was a contract of adhesion

Contracts of adhesion are routinely enforced. A contract of adhesion analysis typically indicates that a court enforces the contract, but scrutinizes its terms more closely for terms that are procedurally or substantively unconscionable.[33] Article 2B follows that principle but requires application of procedures that protect the party adhering to the contract terms.

It might be argued that rights-related terms can only be adopted by contract if the contract conforms to a romantic view of contract law that the only true contract is a fully dickered agreement between parties of equal leverage. That romantic view of contract actually proposes that courts should affirmatively reshape economic imbalance and redefine agreements. Instead, modern contract law does not purport to restructure the economic system, but assumes that deals are enforceable while acknowledging that courts should police and alter terms of agreement when needed to avoid oppressive results and unfair surprise in cases of extreme unbalance.

The romantic view also assumes that assent to a contract requires formality of execution and proof of subjective agreement. That has never been true. Contracts range from formally negotiated agreements drafted by batteries of lawyers to informal agreements between individuals who contract without formally making an express offer or an express acceptance. In the Restatement (Second) of Contracts a contract exists if the parties

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was irrelevant); C.H.I., Inc. v. Marcus Bros. Textile, 930 F.2d 762, 763-64 (9th Cir. 1991) (holding that a standard form confirmation was not an adhesion contract); Aviall, Inc. v. Ryder Sys., Inc., 913 F. Supp. 826, 831 (S.D.N.Y. 1996) (finding adhesion only when the party seeking to rescind the contract establishes that the other party used "high pressure tactics," or "deceptive language," or that the contract is unconscionable).

33. *See, e.g.*, *Klos*, 133 F.3d at 168-69 ("The concept of adhesion contracts introduces the serpent of uncertainty into the Eden of contract enforcement. At the very least, it represents a serious challenge to orthodox contract law that a contract is to be interpreted in accordance with the objective manifestation of the parties' intent .... It may not be invoked to trump the clear language of the agreement unless there is a disturbing showing of unfairness, undue oppression, or unconscionability."); *Fireman's Fund Ins.Co.*, 131 F.3d at 1339; Chan v. Society Expedition, Inc., 123 F.3d 1287, 1292 (9th Cir. 1997); Dillard v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 961 F.2d 1148, 1154-55 (5th Cir. 1992); Riggs Nat'l Bank of Washington D.C. v. Dist. of Columbia, 581 A.2d 1229, 1251 (D.C. Ct. App. 1990); American Bankers Mortgage Corp. v. Federal Home Loan Mortgage Corp., 75 F.3d 1401 (9th Cir. 1996) (contract of adhesion fully enforceable in the absence of showing of unconscionability); E.H. Ashley & Co. v. Wells Fargo Alarm Serv., 907 F.2d 1274, 1279 (1st Cir. 1990); Graham v. Scissor-Tail, Inc., 623 P.2d 165, 172 (1981). *Compare* Todd D. Rakoff, *Contracts of Adhesion: An Essay in Reconstruction*, 96 HARV. L. REV. 1173 (1983).

manifest assent to an agreement by their overt actions.[34] A party can manifest assent by an offer or an acceptance, but it can also do so by conduct, without the formalities.[35]

Article 2B builds on these theories, but it creates enhanced protections for the assenting party. There are procedural limits on when manifesting assent can occur. There are rules requiring refund opportunities associated with when assent occurs. There are rules that preserve expressly agreed terms notwithstanding use of a standard form. With those concepts built around the idea of manifesting assent, all of which benefit the licensee, Article 2B then adopts the basics of the assent concept found in all commerce, modern or ancient.

b) Property Law

A common, although not completely accurate, image of property or vested rights law is that the rules define a party's relationship to a corpus (the "property") in terms independent of any relationship between the rights owner and a third party.[36] From a transactional viewpoint, these form, in effect, a starting point for fashioning the transaction. One court described property rights as involving "rights good against the world," while contract rights are rights good against the other contracting party.[37] This is true in the sense that true property rights do not hinge on the creation of a voluntary relationship, while contract rights depend on the existence of that relationship.

The policy decision to create or deny property rights occurs in the context of a focus on rights defined by law in relationship to a particular corpus (property). The property right exists in the absence of a contractual relationship between parties with respect to that property. Thus, for example, the fact that I own my Mercedes means that, in the abstract, I have certain exclusive rights of possession and use; these rights are enforced in law against persons who infringe them without my permission. It does not mean that I cannot lend the car to you. Similarly, the fact that I own the copyright to my recent book gives me certain exclusive rights enforced by law against persons who infringe them without my permission.

This is the underlying premise and thrust of the most significant Supreme Court rulings on the scope of intellectual property *rights*. Thus, for

34. *See* RESTATEMENT (SECOND) OF CONTRACTS § 19 (1981).

35. *Id.*

36. As I discuss below, copyright law does not fully conform to this property law structure in that many of the rules it promulgates are stated as "default rules" which apply in the case of a transactional relationship between the parties or their transferees.

37. ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996).

example, the Court in *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*[38] invalidated a state law on grounds of preemption. The law purported to grant the distributor of boats a right to prevent others from duplicating the design of the boat hull through use of a particular technology.[39] The Court argued that this state law purported to create rights that federal copyright and patent law denied.[40] Those rights contradicted the "intellectual property bargain" established in property law by federal legislation.[41] The underlying factual premise was that there was no contractual or other relationship between the original designer-manufacturer and the person duplicating the hull design. In effect, the state law created enforceable rights in the absence of a relationship that federal law denied. That type of right states the domain of property rights law.

2. *Property Rights in a Marketplace Transaction*

The impact of a property right in a marketplace shaped by contractual relationships is most often indirect, with the rules of property being filtered and adapted through contractual and other relationships. This does not mean that there is no effect.

Whether a party has a property right in the information it offers, plays a role in defining the terms of the transaction. This is true even though some would argue to the contrary, treating the policy decision to allocate property rights as irrelevant to the ultimate distribution of value in any transaction. That theory, however, applies only to an abstract and friction-free world that does not exist.[42] In a real world, the situation is more complex. Deciding which party (if either) has a property right in the transactional subject matter does affect the terms of a transaction.[43] However, the effect is not always direct or linear in relationship to the policy decision that creates or denies a property right; often, the effect of the choice in property law doctrine cannot be predicted in the transactional world. A property right does not translate automatically or directly into a transactional advantage. Rather, it yields a transactional effect only through negotiation, marketplace, and other influences on the transaction.

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38. 489 U.S. 141 (1989).

39. *See id.* at 144-45.

40. *See id.* at 168.

41. *See id.* at 157.

42. *See generally* Herbert Hovenkamp, *Marginal Utility and the Coase Theorem*, 75 CORNELL L. REV. 783 (1990); Jules L. Coleman, *Efficiency, Exchange, and Auction: Philosophic Aspects of the Economic Approach to Law*, 68 CALIF. L. REV. 221 (1980).

43. *See* Daniel Farber, *Parody Lost/Pragmatism Regained: The Ironic History of the Coase Theorem*, 83 VA. L. REV. 397, 406 (1997).

This limited role of property interests in determining the contours of contractual relationships should play an important role in debates on any issue relating to the creation (or denial) of property rights in information or in any other asset. Any assumption that property rights equates directly into an ability to control or determine value in a modern marketplace is often not true. Rather, control and value relate to many other transactional elements, and the information that brings the most value in a transaction may be information in which there are no recognized property rights.

a) Marketplace Effects on Property Transactions

Property rights provide *one* point around which terms of a transaction are established, but only one point. Transactions occur in a marketplace. That marketplace shapes and determines the character of transactional terms. The marketplace influences are ordinarily far more relevant than are the scope and character of the property rights involved.

For example, assume that I own a Zenith television and that you desire a television of that type. The amount that you are willing to pay and the terms you will accept depends in part on whether other acceptable televisions are available from other sources and whether I have a right to prevent you from taking my television without paying for it. Property rights affect this last element since they allow me to retain my own television against your attempts to forcibly take it. Those rights, however, do not routinely influence the first element: the availability of substitutes, including the alternative of going without a television.

The transactional value of the property right depends on the strength of the demand for the particular information, the availability of alternatives to it, and the existence or absence of exclusivity rights in the information. Thus, while I may desire to transfer my television for $1,000 and only on the condition that you return it after a single use, my capability to insist on those terms requires your assent. My *desire* for those terms has no meaning unless someone is willing to transact under those terms or unless I am willing to forego all transactions unless the terms are met. You will not assent to those terms unless the cost and the limits are acceptable in light of alternatives and your need or desire for the television.

Contract law assumes that markets normalize and regulate transactional behavior and ultimately prevent over-reaching in most cases.[44] Given that assumption, the need for regulatory restrictions seldom arises.

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44. *See, e.g.*, RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 89-96 (4th ed. 1991); Richard Epstein, *Unconscionability: A Critical Reappraisal*, 28 J.L. & ECON. 293 (1975).

The model is a marketplace that accommodates choices. If market dysfunction, fraud, or abuse wrongfully distorts that context, the abuses are dealt with on a case by case basis to eliminate or regulate them.[45]

There are many illustrations of this market-based theme in intellectual property law. Indeed, many copyright law rules presume a transactional context and define default rules relevant to that context. These include:

- a first *sale* gives some presumptive rights to the buyer of a copy
- *transfer* of a copy does not transfer the copyright
- *contribution* of a work to a collective work gives the collective author a right to use the work in revisions of the original
- an *owner* of a copy of a computer program can make a copy of the program
- employment *contracts* give ownership of some works to the employer

Indeed, one can make a reasoned argument that *all* property rules are default rules when they are made operational in a market defined by transactions and economic demand. In the context of that market, debate over proposals to expand or contract *property* rights in information often miss the salient point that the change in rights (if adopted or rejected) may have little or no effect on the transactions that actually occur.[46]

b) Value and Terms in an Information Transaction Often Do Not Depend on the Intellectual Property Rights

A fundamental fallacy in this context often emerges from those whose experience or interest focuses solely on intellectual property law. That

45. This, of course, is the function of rules such as the doctrines of unconscionability (*See* U.C.C. § 2-302 (1994)), concepts of duress, fraud and related doctrines. *See, e.g.*, Brower v. Gateway 2000, Inc., 676 N.Y.S.2d 569, 574 (App. Div. 1998) (holding that arbitration clause in standard form contract that was otherwise enforceable is unconscionable because it effectively deprived a computer buyer, through excessive costs, of the ability to pursue a claim); Intergraph Corp. v. Intel Corp., 3 F. Supp. 2d 1255, 1286 (N.D. Ala. 1998) (concluding provision in technology contract permitting termination on little or no notice held unreasonable as a matter of law).

46. Under current law, for example, a "first sale" of a copy of a computer program does not give the owner of the copy a right of public display or public performance or a right to rent the copy to third persons. The first two rights reflect traditional limitations on the copyright doctrine of first sale. The third was added more recently to respond to unique risks involved in digital technology and digital copies. When it was adopted, the transactional leverage of a vendor of copies of works offered for sale was altered. The impact of that change on actual transactions, however, filters through the various market factors and demand issues that shape transactions. If I do not desire to rent my copy to others, the fact that buying ownership of a copy does not give me that right is immaterial. If I desperately desire a right to rent the copy, the change increases what I may be willing to pay or agree to in any particular transaction.

fallacy assumes that the sole or primary value in a transaction involving information lies in the *intellectual property rights.* This has never been true universally true.[47] It is even less true in modern commerce as other sources of rights and value play an increasingly major role.

Consider the following: I own the sole copy of a national directory of e-mail addresses that I personally compiled. You desire to use the addresses to promote a new product. The list is not copyrightable.[48] Nevertheless, I may have a valuable asset (or not) and you may be willing to pay for it and accept contractual conditions that I demand. There can be no doubt that the list can serve as a basis for a contract. You, obviously, could independently compile the same list, but you may lack the money, time, or inclination to do so. The transactional value here lies, in part, in my right to use the list on your behalf (or not) or to transfer a copy to you (or not). These rights are absolute without regard to the fact that copyright law gives no protection to this list. The copyright rule that places compiled facts into the public domain does not give you an affirmative right to force access to the information. You cannot enter my house, my office, or my computer without my permission, which I have chosen to condition on your assent to a contract.[49]

The basis of the transaction is premised in part on an evaluation of (i) the value of obtaining data from me as contrasted to (ii) a willingness to either forego use of the data or to obtain it elsewhere. The value can be quite high or quite low. Whatever that value, it provides a structure around which a contract can be formed. What terms will become part of the contract cannot be answered here because it depends on the choice of the parties and their bargaining leverage. However, the terms are likely to go beyond intellectual property rights issues and might include:

(1) there are no warranties about the completeness of the list;

(2) Illinois law applies to all disputes about performance of the contract;

(3) privacy rights and consents have [have not] been fully cleared by licensor;

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47. Often, the least complex examples are the most telling. When you purchased the newspaper today, did the price you paid depend on your judgment about whether or not you could make multiple copies of the newspaper for distribution to your commercial clients? I think not.

48. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 362-64 (1991).

49. The copyright doctrine works on a different premise. It assumes that information is placed into the public and rejects the existence, under copyright, of any exclusive or preclusive property right that can be asserted against parties in the absence of contract.

(4) the list can be used only for one "mailing" and any additional use is a breach of contract;

(5) all copies of the list are to be returned to the licensor after the one authorized use;

(6) the list will be delivered in object code only and compatible with UNIX;

(7) purchaser will pay $— for one use of the list; and

(8) vendor will [will not] provide assistance in use of the list.

This transaction, of course, is representative of transactions that occur with respect to non-copyrightable lists of e-mail addresses, telephone numbers, and residential home addresses every day, forming the basis for a lucrative and growing commerce in information.

The copyright *property* law principle that denies copyright protection to "facts" does not state the only *property* right applicable to such transactions, let alone the only basis for a commercially valuable transaction.[50] It is neither essential to, nor decisive about, the parameters of commercialization of the information involved.

3. *Property Law Creates Transactional Default Rule*

In transactional relationships, property rights (including intellectual property rights) may furnish background or default rules that govern the transaction unless otherwise agreed. From a contract *law* standpoint (as compared to contracting practice), setting out background principles is the primary function of intellectual property law. More generally, the essence of any property right is that the owner can transfer or withhold transfer of its property. Transfers, to be effective, implicate contract law as the basis for defining the value received and the interests conveyed.

Perhaps more than in any other property rights regime, the statutory rules of copyright law (and, to a lesser extent, patent law) support and ex-

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50. Modern law establishes that property rights in information come from an increasingly wide array of sources. Property rights related to information are characterized by a two-part equation: 1) the presence of specified conditions or circumstances that 2) yield particular rights in reference to identifiable information. *See* RAYMOND T. NIMMER, INFORMATION LAW 2-14 - 2-28 (1996). The rights come from criminal law, privacy law, and other sources. Writing with reference to this issue, the Ninth Circuit Court of Appeals noted that for a property right to exist in any situation, "first, there must be an interest capable of precise definition; second, it must be capable of exclusive possession or control; and third, the putative owner must have established a legitimate claim to exclusivity." G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., 958 F.2d 896, 903 (9th Cir. 1992). The potential rights recognized in modern law include rights recognized under copyright law and patent law and also rights of commercialization, non-disclosure, control of access, and to prevent or authorize destruction of the information.

plicitly relate to this role in reference to contractual relationships. This is due to the central role that contracting has in achieving the basic goals of the copyright. The so-called intellectual property bargain, arguably struck in the political choices made by statute in federal patent, copyright, and trademark law, presumes the transfer and transferability of the information and rights created by these laws.

The Copyright Act enumerates the rights of copyright holders in Title 17 of the United States Code. The range of rights associated with the five fundamental rights enumerated in 17 U.S.C. §106(1-5) have dramatically grown since the promulgation of the 1976 Act.[51] The Copyright Act recognizes that the copyright owner can separately transfer (or withhold) any of the exclusive rights. As a result, a contract ("license") that gives the grantee the right to reproduce and distribute copies does not give the grantee a license to use the other exclusive rights held by the copyright owner (e.g., the rights of public performance or display, the right to make "derivative works" from the original).[52]

There are many illustrations of this type of interaction.

a) Revision Right

One economically significant illustration arose in the case of *Tasini v. New York Times*.[53] That case dealt with the rights of the freelance authors of magazine articles in reference to on-line reproductions of the magazines by the magazine publishers.[54] Nominally, the case turned on a *property* law issue: does on-line reproduction fall within the "revision right" granted to authors of collective works.[55] Actually, the case involved the creation and interpretation of a contract default or background rule with great significance in the convergence of information industries.

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51. *See, e.g.*, 17 U.S.C. §§ 901-914 (1994) (semiconductor maskwork rights); *id.* at § 104A (1994 & Supp. II 1996) (restored works); *id.* at § 106(6) (1994 & Supp. II 1996) (digital audio rights); *id.* at § 106A (1994) (providing special rights in works of visual art); *id.* at § 1101 (1994) (fixation of live performance); Digital Millenium Copyright Act, H.R. 2281, 105th Cong. (1998). Some might view this expansion unwarranted, but regardless of the characterization, these developments clearly indicate an on-going policy judgment that the contours of the digital information era will be shaped, at least in part, by an expanded and different set of rights in information than existed during the industrial era. The pattern of expansion in the United States has international parallels. *See generally* NIMMER, *supra* note 50.

52. Cases suggest that interpretations of the scope of a license should be designed to protect the licensor's retention of rights. *See generally* SOS, Inc. v. Payday, Inc., 886 F.2d 1081 (9th Cir. 1989).

53. 972 F. Supp. 804 (S.D.N.Y.), *reh'g denied*, 981 F. Supp. 841 (S.D.N.Y. 1997).

54. *See id.* at 806.

55. *See* 17 U.S.C. § 201(c) (1994).

The district court held that the electronic version was a revision of the original work, rather than a new work.[56] As a revision, it fell within the rights of the author of the collective work under the Copyright Act.[57] The ruling on whether the electronic version was a mere revision can be debated as a matter of copyright law. But for understanding the relationship of property law with contract law, we can put that issue aside and assume for purposes of argument that the court was correct.

The most important issue for our purpose then concerns the court's treatment of the agreement under which the articles were submitted. Predictably, these were not elaborate written documents. While not fully clear, it is doubtful that they were negotiated by parties of equal bargaining leverage.[58]

One contract granted a right of first publication in the magazine.[59] The court held that this language did not cover a later electronic publication because, by its own terms, it covered only the "first publication."[60] An electronic publication, while in the court's view satisfied the statutory reference to a revision, was clearly not the same as the original magazine.[61] This, however, did not completely vitiate the publisher's right to make an electronic revision because other general language in the contract referred to a right to "republish the Story or any portions thereof in or in connection with the Magazine."[62] This language could cover revisions.

Faced with these arguably conflicting interpretations in the language of the contract, the court reverted to the section 201 presumption. The court's comments are telling:

> Just as it is a publisher's burden to demonstrate that it has acquired rights greater than the presumed [statutory] privileges, it is an author's burden to demonstrate that any agreement between the parties limits a publisher to fewer than those privileges. [This] is a burden that plaintiffs failed to meet .... Section 201(c) [suggests] that the specified privileges represent a floor: i.e., a

56. *See Tasini*, 972 F. Supp. at 827.
57. *See id.* at 814.
58. *See id.* at 807.
59. *See id.*
60. *See id.* at 812.
61. The court observed: "[The electronic publication] strips away many of the elements present in the publishers' hard copy periodicals [and] carries a revised version of that magazine." *Id.* at 846.
62. *Id.* at 807.

> minimum level of protection which, if unenhanced by express agreement, publishers are generally presumed to possess.[63]

This places the copyright rule in a proper context equivalent to a default rule in contract law. The court recognized that the rights in the statute can be waived, restricted, or enhanced between the parties by contract. In a transactional setting, that means simply that the revision right states a default rule. This rule indicates that, unless otherwise agreed, the author of the collective work controls the initial version and any revision or new edition. The rule applies in the absence of other contractual treatment. Indeed, the so-called revision right only applies when a contract exists. It only creates a right when and if a submission occurs under circumstances in which the submitting party allows the other to reproduce its work. In short, the rule applies to licenses. It is a default rule against which bargains are structured.

b) Transferability of Licenses

Under established federal case law, a licensee's rights under a nonexclusive license are not transferable without the consent of the licensor.[64] This rule flows from the fact that a nonexclusive license is a personal, non-assignable privilege, representing less than a property interest, and conveying less extensive rights to the licensee than other forms of transfer. Also, as described by the Ninth Circuit, allowing "free assignability ... would undermine the reward that encourages invention because a party seeking to use the patented invention could either seek a license from the patent holder or seek an assignment of an existing patent license from a licensee."[65]

The rule preempts contrary state *law*. But, as with the revision right, it is a default rule. It proscribes the effect of an over-riding intellectual property right in a transaction, but allows for a contrary agreement (consent). Express contractual terms on transferability supplant the default rule.

c) Author's Termination Right

The Copyright Act provides that a license of indefinite duration can be terminated by the copyright owner during an interval thirty-five years into

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63. *Id.* at 845.

64. *See* Everex Systems, Inc. v. Cadtrak Corp., 89 F.3d 673, 679 (9th Cir. 1996); Unarco Indus., Inc. v. Kelley Co., Inc., 465 F.2d 1303, 1335 (7th Cir. 1972); Harris v. Emus Records Corp., 734 F.2d 1329, 1333 (9th Cir. 1984); *In re* Alltech Plastics, Inc., 71 B.R. 686, 689 (Bankr. W. D. Tenn. 1987).

65. *Everex Systems*, 89 F.3d at 679.

the contract.[66] One court has held that this rule precludes application to copyright licenses of the common law (and UCC) default rule which makes indefinite term contracts subject to termination at will.[67] The decision was couched in terms of federal preemption of the underlying common law default.[68]

Importantly, however, the copyright rule only applies where the parties have not contracted for a specific termination date, and at least one court has held that a "perpetual" license is enforceable where evidence establishes an intent to convey renewal rights in the copyrighted work notwithstanding the federal rule.[69] The rule thus establishes a property law default rule applicable to particular contracts (copyright license of indefinite duration) in the absence of contrary contract terms (e.g., an express choice on the term of the license). The express terms obviate the default rule.

d) First Sale and Copy Ownership

Another default rule exists in reference to the parallel themes of "first sale," "exhaustion of patent," and "ownership of a copy" of a computer program.[70] These doctrines hold that the "sale" or other transfer of ownership of a copy (goods) gives the copy owner a right to take some actions that would otherwise be precluded by the intellectual property rights of the rights holder. Not all rights pass to the copy owner. The Copyright Act expressly provides that the mere transfer of ownership of a copy does not transfer the entire copyright.[71] Thus, the copy owner does not obtain the right to publicly display or perform the work, nor the right to make additional copies for commercial purposes.

State or common law determines when or whether a sale or transfer of ownership occurs.[72] Under current law, since copies are typically treated as goods, the determination of when a transfer of ownership occurs will

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66. *See* 17 U.S.C. § 203(3) (1994).

67. *See* Rano v. Sipa Press, Inc., 987 F.2d 580, 586 (9th Cir. 1993) (holding that copyright law preempts state law regarding contracts (licenses) that are terminable at will because they contain no duration clause; applying 17 U.S.C. § 203(a) (1994)).

68. *See id.* at 583.

69. *See* P.C. Films Corp. v. MGM/UA Home Video, Inc., 138 F.3d 453, 457 (2d Cir. 1998) (holding that "perpetual" license is enforceable during term of the copyright, but not deciding if it is enforceable after the term expires).

70. *See, e.g.*, 17 U.S.C. § 117 (1994).

71. *See id.* at § 202 ("Ownership of a copyright ... is distinct from ownership of any material object in which the work is embodied."). Copy ownership is distinct from questions of whether the transaction creates a license. *See, e.g.*, Applied Information Management, Inc. v. Icart, 976 F. Supp. 149, 153 (N.D.N.Y. 1997); DSC Communications Corp. v. Pulse Communications, Inc., 976 F. Supp. 359, 362 (E.D. Va. 1997).

72. *See* U.C.C. § 2-401 (1994); *Icart*, 976 F. Supp. at 154.

typically be under Article 2 and Article 2A of the U.C.C.[73] Under contract law, a sale consists of a contractual transaction that transfers title to goods for a price.[74] If title does not transfer, the "first sale" rights do not arise. The contract determines when and whether this occurs, but in the event the contract is silent, title to a copy that is sold passes on delivery of the copy.[75]

More generally, it is clear that a rights owner can refuse to "sell" a copy. Even if a copy is sold, contract terms are not excluded from defining the rights of the parties under contract law, shaping or eliminating the statutory, presumptive allocation of rights.[76] The statutory rights are a template that can be altered by contract, either expanding or contracting on what the transferee receives. In modern practice, many contracts expand on the statutory allocation for the transferee, granting rights of public display, multiple copying, and other enhanced uses. Some contracts restrict the purchaser's rights below first sale allocations. This is especially true in commercial transactions that license information, but do not clearly dispose of rights of ownership of the copy used to enable use of the information rights that were granted. In either case, the contract commercializes the right by fitting it to the particular deal.

e) Contract Term Interpretation

In any area of contract, there are inevitable questions of interpreting the meaning and effect of the contract terms. Some courts discern a special interface between contract interpretation and copyright policy. Thus, the court in *SOS, Inc. v. Payday, Inc.*[77] suggested that a general copyright law policy of protecting the rights holder overrides contract interpretation rules when the issue is the scope of the grant.[78] Because of that policy overlay, the court indicated that the grant should be strictly construed *against* the *grantee* even though the grantor drafted the contract.[79] In essence, the rule is that the contract withholds all rights not expressly granted. Not all courts follow this view; most use ordinary contract interpretation and ex-

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73. *See, e.g.*, Advent Sys. Ltd. v. Unisys Corp., 925 F.2d 670, 675-76 (3d Cir. 1991). *Compare* RRX Indus., Inc. v. Lab-Con, Inc., 772 F.2d 543, 547-48 (9th Cir. 1985) (holding that the determination of whether a software system is a good rather than a service should be decided on a case by case basis).

74. *See* U.C.C. §§ 2-106, 2-401 (1994).

75. Article 2 provides that, unless there is contrary agreement, title to a good passes when physical delivery occurs. *See id.* § 2-401.

76. *See, e.g.*, *DSC Communications Corp.* 976 F. Supp. at 359.

77. 886 F.2d 1081 (9th Cir. 1989).

78. *See id.* at 1087-88.

79. *See id.*

amine the entire commercial context to discern the intended meaning of the grant.[80] Article 2B adopts that commercial principle which, at least in contrast to *SOS*, gives far more flexible protection to a licensee that the supposed federal rule.

Both the restrictive analysis and the commercial analysis, of course, recognize that express terms of a contract control; the analyses deal only with ambiguity when a court must interpret intent and legal effect. That nicely defines the interaction of contract and intellectual property. The exclusive rights provide a context against which contract terms and effect are gauged.

III. Limits on Contract

As we have seen, contracts and contract law are inherent to any realistic appraisal of how and why intellectual property law impacts commercial uses of information assets. Contract law implements a party choice regime that interacts with the default positions set out in intellectual property law. This does not mean, of course, that all contracts and all contract terms are per se good or that policy restrictions from contract, intellectual property, or competition law should not place some limits on contract. It does confirm, however, that no claim of general preclusion of contract is sensible as a matter of intellectual property law policy since that policy must be viewed as incorporating commercialization uses of information which entail contracting at various levels. Any change in such position would be a fundamental change of intellectual property policy and a fundamental recharacterization of any balance that has existed.

As a matter of principle, in a market economy system dominated by contractual relationships and an intellectual property rights regime that relies on the ability of parties to contract, rules that preclude contract terms in any situation should be carefully and sharply limited. The norm must be that contracts are enforceable. The exceptions lie in cases where the nature of the competing public interest has sufficient strength and clarity to preclude the exercise of transactional choice by the parties. In fact, this is exactly how modern law approaches the issue of limitations on contract.

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80. *See, e.g.*, Bourne v. Walt Disney Co., 68 F.3d 621, 626 (2d Cir. 1995). Proposed Article 2B adopts, to the extent permitted by federal law, this commercial interpretation rule and provides some assumptions about the attributes of an affirmative grant that assure that a licensee receives the capability to enjoy use of the expressly granted rights. *See* U.C.C. § 2B-307(a) (Aug. 1, 1998 Draft).

At this point, we turn to what limits on contract and contracting do, or should, exist. In this, it is important to define the terms of our focus. This portion of the paper does not discuss the default rules of copyright, patent and other intellectual property law which can routinely be, in effect, waived or modified for purposes of a given transaction through the agreement of the parties. Rather, in discussing limits on contract, we refer to rules or policies that preclude or invalidate contracts or contract terms. In effect, the theme here asks what rules of preclusion allow a court to deny enforcement of a particular term of a contract.

The following subsections discuss limitations on contract terms from three different perspectives: intellectual property oriented concepts of preemption or misuse, contract law exclusions of terms that over-reach, and a new argument that theories of fair use or first sale themselves directly restrict a party's right to contract.

A. Preemption of Contracts

One possible source of limits on contract comes from the idea of federal preemption of contracts or contract terms. The difficulty of applying this theme to the task of limiting contracts is that it entails an explicit mismatch of concepts. Federal preemption focuses on disallowing state laws or regulations that conflict with federal law or, in some limited cases, federal policy. It operates on state laws. Contracts, on the other hand, while they occur within a general framework of supportive law, involve transactional choices made by private parties and enforce those choices. Most courts immediately recognize and rely on this mismatch of concepts to reject alleged preemption. Thus, preemption of private behavior is seldom a tenable issue.

1. Preemption Based on the Copyright Act

In the intellectual property field, two sources of potential preemption claims are most commonly cited in reference to contract and intellectual property law issues.[81] The first comes from the Copyright Act section 301 which provides that:

> [All] legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright ... are governed exclusively by this title. [No] person is entitled to any

81. Of course, nothing precludes Congress from enacting a third type of preemptive rule within the scope of its legislative competence: an express preclusion of particular terms of a contract. *See* Rano v. Sipa Press, Inc., 987 F.2d 580, 585-86 (9th Cir. 1993) (invalidating state rule on termination at will based on conclusion that it was preempted by express copyright statutory provision).

> such right or equivalent right in any such work under the common law or statute of any State.[82]

The jurisprudence of section 301(a) has become formidable because its preemption concept entails potentially breath-taking scope when applied to an economy increasingly dependent on handling information as a source of significant value.

Yet, the cases fall into a relatively stable pattern for purposes of our analysis. There have been no cases in which section 301 preemption was used successfully to challenge and invalidate a contract term that was enforceable as a matter of general state contract law.[83] However, there have been a few decisions that preclude particular types of claims brought under the guise of a contract cause of action, but which, in fact, state claims that parallel claims of infringement.[84]

The fact that contracts or contract terms are not subject to section 301(a) preemption reflects, in part, that the very idea of preemption does not readily apply to private conduct or transactional choices. Equally significant, section 301(a) refers to the preclusion of rights that are equivalent to the exclusive rights of copyright law.[85] The test that has developed under this language holds that state law is not preempted if it requires an "extra element" to establish the cause of action. This was described by a leading treatise in the following terms:

> [If] under state law the act of reproduction [etc.] ... will in itself infringe the state-created right, then such right is preempted. But if qualitatively other elements are required, instead of or in addition to, the acts of reproduction [etc.] in order to constitute a state-created cause of action, then the right does not lie "within the general scope of copyright," and there is no preemption.[86]

Under this characterization, successful preemption claims are typically limited to cases where there was no contractual or otherwise special rela-

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82. 17 U.S.C. § 301(a) (1994).

83. The case to come closest to this result was the lower court decision in *ProCD v. Zeidenberg*, 908 F. Supp. 640, 657-59 (W.D. Wis. 1996). The District Court opinion, however, was expressly over-ruled on this point by the Seventh Circuit Court of Appeals. *ProCD*, 86 F.3d at 1447.

84. *See, e.g.*, Benjamin Capital Investors v. Cossey, 867 P.2d 1388, 1391 (Or. App. 1994) (concluding damage claim as formulated was preempted by copyright).

85. 17 U.S.C. § 301(a) (1994).

86. M. NIMMER & D. NIMMER, NIMMER ON COPYRIGHT 1.01[B] (1994).

tionship between the parties,[87] while contract, trade secret and similar relational claims are not within the broad scope of section 301(a).[88] In reference to the relationship-based claims, the extra element consists of proof of the relationship, its terms, and the conduct that violates those terms as applicable to the particular parties.

Contracts do not involve the same basic scope or impact as do property rights established directly by operation of common law or state statute. This point was made in *ProCD, Inc. v. Zeidenberg.*[89] Among other issues, that case involved the claim that a contractual restriction on the use of an uncopyrighted database was preempted because the subject matter of the transaction was unprotectable under copyright law.[90] The court correctly rejected this argument. It drew an explicit distinction between a property right (potentially preempted) and a contract right. "A copyright is a right against the world. Contracts, by contrast, generally affect only their parties; strangers may do as they please, so contracts do not create 'exclusive rights.'"[91] This reflects the transactional base of a contract and draws an important, relatively explicit line for purposes of preemption claims. Enforcing a contract between two parties leaves the subject matter of the contract (whether copyrighted or not) entirely unencumbered by any contract issue as to others not party to the transaction. Property rights and contract rights are simply not equivalent.[92]

This analysis, of course, depends on there being an actual contract between the parties. If there is no enforceable contract, but state law nevertheless imposes terms on a parties, the law creating those imposed terms is subject to preemption. The limitation on this principle, of course, is that the rules of contract law typically operate only within a relationship estab-

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87. *See generally* National Basketball Ass'n v. Motorola, Inc., 105 F.3d 841 (2d Cir. 1997); United States *ex. rel.* Berge v. Board of Trustees of the Univ. of Alabama, 104 F.3d 1453 (4th Cir. 1997).

88. *See, e.g.*, Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 721 (2d Cir. 1992) (trade secret); National Car Rental Sys., Inc. v. Computer Assocs. Int'l, Inc., 991 F.2d 426, 431 (8th Cir. 1993) (contract); Data General Corp. v. Grumman Sys. Corp., 36 F.3d 1147, 1165 (1st Cir. 1994) (trade secret); *ProCD*, 86 F.3d at 1455 (contract).

89. 86 F.3d 1447 (7th Cir. 1996).

90. *See id.* at 1453-55.

91. *Id.* at 1454.

92. It can be argued that this might change if, in effect, no third party can avoid being bound by the contract terms in order to use the information. How or why this would affect a preemption analysis as compared to a misuse or antitrust claim is not clear. The fundamental fact is that the restrictions (whatever they might be) are grounded in a separately viable contractual relationship. If there is no such contractual relationship, of course, the issue is not one of preemption, but simply a question of how copyright affects the party's right to use the information.

lished by an agreement and, thus, most often the absence of an enforceable agreement vitiates any application of the contract principle.

Vault Corp. v. Quaid Software Ltd.[93] dealt with a rule imposed by a state statute in the absence of a valid contract. The Fifth Circuit in *Vault* invalidated part of a state statute that expressly validated a list of specific terms in a shrink-wrap license.[94] This decision was premised on a ruling by the trial court that the underlying relationship was *not* an enforceable contract.[95] Given that there was no contract, the statute in effect imposed terms on persons in the absence of contract that included explicit limitations on a purchaser's right to adapt and make back-up copies of the software. According to the Fifth Circuit, these statutory restrictions conflicted with section 117 of the Copyright Act.[96] Thus, according to the appellate court, the statute improperly "touched on" a matter dealt with by copyright and was preempted.[97]

Regardless of whether *Vault* was correctly decided at either the district court or the appellate level, the eventual preemption analysis was a pure *property* law analysis that proceeded on the assumption that *no enforceable contract* existed between the parties. Given this assumption, the analysis was straightforward: state law set out rules creating a property right that did not depend on contract and the right thus created was precluded by section 301. The case did not have reason to address the idea that copyright might preempt the very contract law on which it often depends. Had it been required to do so, one can expect that it would have followed the consistent line of authority that holds that contracts are not preempted by copyright law.

2. *Preemption Based on the Supremacy Clause*

The theme followed in *ProCD* and *Vault* focuses preemption theory on state laws that limit or restrict a person's use of information independent of any relationship between the person seeking to enforce those limits and the person against whom they operate. This focus captures the concept and

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93. 655 F. Supp. 750, *aff'd*, 847 F.2d 255 (5th Cir. 1988). The lower court had held that the underlying contract would have been invalid as a contract of adhesion under Louisiana law. *See id.* at 761. This result was reached with little or no analysis and represents one of the very few reported decisions relying on a theory of adhesion to invalidate a contract. *See id.* The more normal analysis of an adhesion contract is that, if the court encounters one, it more closely scrutinizes the terms of the agreement under standards of unconscionability and other contract law doctrines to protect the adhering party.

94. *See Vault*, 847 F.2d at 268-69.

95. *See id.* at 269.

96. *See id.*

97. *See id.*

tone of property rights in general and carries over to a second form of potential preemption emanating from intellectual property law. This is a more general preemption argument based on the Supremacy Clause of the U.S. Constitution[98] and its role in precluding any state laws that conflict with expressed federal policy in fields where the federal government has exercised substantial control and involvement.

The earliest cases dealing with this type of preemption were a cluster of decisions by the United States Supreme Court. In two controversial decisions, the court invalidated aspects of state unfair competition law as applied to claims that a defendant had wrongfully copied devices marketed by other companies.[99] In both cases, the Court held that state law could not be invoked to bar copying in a context in which federal patent law left the copied article unprotected.[100]

Importantly, the defendants in these cases were not in breach of any contractual or confidentiality obligation created between them and the plaintiffs. A decade later, the Supreme Court confirmed that this was significant. In *Kewanee Oil Co. v. Bicron Corp.*[101] the Court held that there was no federal policy preemption bar to enforcing an injunction under trade secrecy law against former employees with respect to technology that was not patented.[102] The Court indicated that preemption occurs only if the state law erects an obstacle to the accomplishment of the objective of Congress.[103] This was not true of trade secret law which has at its core the enforcement of standards of commercial ethics and encouraging invention through enforcing agreed to or otherwise established confidentiality restrictions.[104]

The Court returned to its fundamental preemption theme in *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*[105] It there invalidated a state law

98. U.S. CONST. art. VI, cl. 2.

99. *See* Sears, Roebuck & Co. v. Stiffel, 376 U.S. 225, 231 (1964); Compco Corp. v. Day-Brite Lighting, Inc., 376 U.S. 234, 237-38 (1964). During this period, the Court expressed in its decisions a hostility to intellectual property rights and their commercialization that it has seldom returned to since. *See also* Lear, Inc. v. Adkins, 395 U.S. 653, 674 (1969) (invalidating state common law doctrine of licensee estoppel based on conflict with alleged federal patent policy encouraging challenges to the validity of a patent). *Compare* Aaronson v. Quick Point Pencil Co., 440 U.S. 257, 265-66 (1979).

100. *See Sears, Roebuck & Co.*, 376 U.S. at 231-232; *Compco Corp.*, 376 U.S. at 238.

101. 416 U.S. 470 (1974).

102. *See id.* at 498-99.

103. *See id.* at 479.

104. *See id.* at 492-93.

105. 489 U.S. 141 (1989).

that restricted duplication of vessel hulls or component parts by means of any "direct molding process."[106] The state law was obviously designed to protect vessel developers against a particular form of competition that was apparently cost effective. The Court properly recognized that the statute created a property right because the rights created applied to third parties regardless of there being any relationship between the right owner and any third party desiring to copy the hull design.[107] This right applied to designs that, under patent law, were unprotected.[108] Because the state law conflicted with a federal policy that public domain material that is, in fact, distributed to the general public may be reproduced through any means, the state law was preempted.[109]

The Court in *Bonito* indicated that the decision in patent law not to grant rights to unpatented technology was an important facet of what it described as the intellectual property law "bargain."[110] In essence, this hypothetical bargain entails creating rights good against the world in general, even for publicly distributed products. However, those rights are limited to selected inventions while the public's right of use for non-patented products are preserved. This, according to the Court, preserves an incentive to obtain a patent which, in turn, involves a public disclosure of the basic technology.[111] According to *Bonito*, the attractiveness of patent rules to inventors depends on a background of free competition in unpatented goods and technology that have been distributed to the public.[112] This competition presumably creates an incentive to develop patentable technology and obtain patents for that technology. Guided by this pop art characterization of commercial and creative incentives, the Court indicated that the state law attempted to create rights for the hull designer that were good "against the world" and similar to patent rights.[113] The state law was preempted because it improperly "prohibits the entire public from engaging in a form of reverse engineering of a product in the public domain."[114]

Of course, however, *Bonito* by its very terms does not state a principle that pertains to state laws that enable parties to enforce relationships they

106. *See id.* at 143.
107. *See id.* at 159-62.
108. *See id.* at 162-64.
109. *See id.* at 160-61.
110. *See id.* at 150-51.
111. *See id.*
112. *See id.* at 151.
113. *See id.* at 142.
114. *Id.* at 160.

have created. Trade secret law, contract law, and similar relational contexts fall well outside the parameters of the decision in *Bonito*.

B. Intellectual Property Misuse and Related Doctrines

A second, more directly applicable, body of law affecting contract practice involves the idea of intellectual property misuse. Unlike preemption law, the doctrine of misuse focuses on contract or relational terms. It provides a basis with respect to some terms in some contexts to impose severe sanctions on the rights owner because of its imposition of particular terms on a transferee.[115] As with preemption rules, this doctrine stems from federal law and, thus, cannot be altered by a state contract law rule. Article 2B expressly recognizes this and points out that, to the extent a term is precluded under misuse or similar theories, Article 2B does not alter that result.[116]

In formal terms, "misuse" doctrine is a defensive doctrine, rather than an affirmative cause of action. It precludes enforcement of a patent or copyright against any party until the misuse has been corrected (purged). There are, however, some closely related doctrines that have different impacts. Thus, for example, some decisions hold that an express or implied contract term that improperly extends a patent's influence beyond the patent term is invalid.[117] Similarly, under antitrust law, some uses of patent or copyright leverage to attain extraneous, anti-competitive results leads to potential liability for violation of antitrust law.[118]

The common theme that joins these bodies of law is that there was improper use of the leverage created by an intellectual property right and the use of a judicial sanction to eliminate the effect or to deter such conduct. This is clearly the case with misuse law, which focuses squarely and almost exclusively, on prohibiting the use of leverage to extend intellectual

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115. *See* DSC Communications Corp. v. DGI Techs., Inc., 81 F.3d 597, 601 (5th Cir. 1996) (dictum) (discussing the possible availability of a copyright misuse defense in forthcoming trial in decision on preliminary injunction issue); Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 979 (4th Cir. 1990) (holding anticompetitive language in software licensing agreement to be a copyright misuse).

116. *See* U.C.C. § 2B-105 Reporter's Note 2 (Apr. 15, 1998 Draft).

117. *See* Brulette v. Thys Co., 379 U.S. 29, 33-34 (1964). *Compare Aaronson*, 440 U.S. at 265-66.

118. *See, e.g.*, Digidyne Corp. v. Data Gen. Corp., 734 F.2d 1336, 1344 (9th Cir. 1984) ("requisite economic power[, necessary to establish one element of an illegal per se tying claim,] is presumed when the tying product is patented or copyrighted"); *cf.* A.I. Root Co. v. Computer/Dynamics, Inc., 806 F.2d 673, 676 (6th Cir. 1987) (stating "we find the pronouncement in [*United States v.*] *Loew's* to be overbroad and inapposite to the instant case. Accordingly, we reject any absolute presumption of market power for copyright or patented product [sic].").

property rights to control unrelated products or services.[119] The policy interest is closely allied with antitrust tying doctrines and permits the rights owner use of its intellectual property rights so long as it does not reach out with those rights to control other markets.

1. *Origins of the Misuse Doctrine*

The origins of misuse law lie in the area of patent licensing. The doctrine flourished during an era in which judicial hostility characterized the approach of courts to the commercialization of intellectual property. The leading and first patent case was decided by the Supreme Court in *Morton Salt Co. v. GS Suppiger Co.*[120] In *Morton Salt*, the licensee of a patented salt tablet dispenser was contractually bound to purchase all of its salt tablets from the licensor.[121] The tablets were not patented.[122] The licensee refused to comply with this part of the license and was sued for infringement based on its continued use of the patented dispenser technology.[123] Although the case presented an antitrust tying issue (patented technology license tied to acceptance of another product), the Supreme Court elected to deny enforcement of the patent on equitable grounds relating to what it perceived as a misuse of the patent rights.[124] It held that the patent rights had been misused by conditioning the license on acceptance of an obligation to acquire unpatented, generally available items from the patent holder.[125]

The doctrine of patent misuse flourished during a period in which the Department of Justice also seemed anxious to deploy antitrust theories to restrict intellectual property licensing practices.[126] In 1988, however, the doctrine's scope was legislatively truncated by enactment of a rule providing that no patent misuse occurs simply because a patent owner conditions a license for a patent or a sale of a product on the buyer's purchase of another product or technology.[127] Rather, such practices only constitute

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119. A recent illustration of this theme, although grounded entirely in antitrust law, comes in the appellate court ruling in the Kodak case. *See generally* Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451 (1992).

120. 314 U.S. 488 (1945).

121. *See id.* at 489.

122. *See id.* at 491.

123. *See id.* at 489.

124. *See id.*

125. *See id.* at 493-94.

126. *See* Roger B. Andewelt, *Department of Justice Antitrust Policy*, 1 DOMESTIC AND FOREIGN TECH. LICENSING L. 401 (1982). *Compare* U.S. DEPARTMENT OF JUSTICE, ANTITRUST GUIDELINES FOR THE LICENSING AND ACQUISITION OF INTELLECTUAL PROPERTY (1994).

127. 35 U.S.C. § 271(d)(5) (1994).

misuse if "the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned."[128] This statute did not alter other patent policy positions that prohibit some contract terms. It simply placed misuse law squarely in the context from which much of the doctrine arose: as an adjunct and kindred spirit of antitrust law, whose doctrines limit liability for linking products to cases where the provider has actual market power to force the other party to comply with the linkage.

2. Copyright Misuse.

The leading case on copyright misuse is *Lasercomb America, Inc. v. Reynolds.*[129] In *Lasercomb,* the "abuse" sprung from a computer program license that contained terms that restricted the licensee from writing, developing, or producing computer-assisted die-making products for a period of ninety-nine years.[130] The copyright owner brought an action for infringement against a third party who was not subject to the allegedly abusive license agreement.[131] Even though this third party was not subject to the license, the court created a theory of copyright misuse that allowed it to prevent the copyright owner from enforcing its right.[132] The court held that copyright misuse is on the same footing as patent misuse (although it did not adopt the patent misuse statutory rule) and that efforts to extend contract terms beyond the limited grant of copyright could be barred.[133] In this court's view, the license terms went too far to control competition in fields beyond the scope of the copyright.[134]

The role of copyright misuse theory in modern law is suspect.[135] Importantly, however, the clearest focus of the doctrine is on leveraging a property right to control a different product or service in commerce. The clearest illustration of this occurred in the Fifth Circuit in *DSC Communi-*

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128. *Id.*

129. 911 F.2d 970 (4th Cir. 1990).

130. *See id.* at 973.

131. *See id.*

132. *See id.* at 979.

133. *See id.* at 976.

134. *See id.* at 979.

135. *See generally* Reliability Research, Inc. v. Computer Assocs., Int'l, Inc., 793 F. Supp. 68, 69 (E.D.N.Y. 1992) (mem.) (denying copyright holder's pre-discovery motion to strike licensee's affirmative defense of misuse as issue is a disputed issue of law); Broadcast Music, Inc. v. Hearst/ABC Viacom Entertainment Servs., 746 F. Supp. 320, 328 (S.D.N.Y. 1990). In most reported cases in which the doctrine is raised, its application is rejected. *See generally* James A.D. White, *Misuse or Fair Use: That is the Software Copyright Question,* 12 BERKELEY TECH. L.J. 251 (1997).

cations Corp. v. DGI Technologies, Inc.[136] The court there relied on the *possibility* of a misuse defense to affirm the lower court's denial of a preliminary injunction where there seemed to be an extension of leverage from a copyrighted product to a second product market.[137] The vendor of a communications switching system also licensed software for the system.[138] The software licenses precluded use of the software in anything other than processors supplied by the licensor.[139] The alleged infringement occurred when a competitor, attempting to develop a compatible processor, tested its product by downloading the software onto its own product.[140] The competitor had acquired copies of the software from a licensee in violation of the license.[141] The Fifth Circuit concluded that:

> DGI may well prevail on the defense of copyright misuse, because DSC seems to be attempting to use its copyright to obtain a patent-like monopoly over unpatented microprocessor cards. Any competing microprocessor card developed for use on DSC phone switches must be compatible with DSC's copyrighted operating system software. In order to ensure that its card is compatible, a competitor such as DGI must test the card on a DSC phone switch. Such a test necessarily involves making a copy of DSC's copyrighted operating system.[142]

Because of the nature of the marketplace, potential competitors could not compete with the unprotected product without at least temporarily copying the copyrighted software.[143]

Although the congressional action on misuse law focused on patent misuse, the principle enacted there should also apply to claims of copyright misuse.[144] That is, a claim of misuse does not arise simply because of the existence of an intellectual property right, but requires the presence and exercise of market power in the relevant market for the patent or the patented product on which the license or sale is conditioned.[145] The prin-

136. 81 F.3d 597 (5th Cir. 1996).

137. *See id.* at 601.

138. *See id.* at 599.

139. *See id.*

140. *See id.*

141. *See id.*

142. *Id* at 601.

143. *See id.* at 599.

144. The patent misuse statute was enacted in the 1980s, before the doctrine of misuse was first applied to copyright claims in the *Lasercomb* decision, thus explaining the omission of a copyright misuse statute.

145. *See, e.g.*, *In re* Independent Serv. Org. Antitrust Litig., 989 F. Supp. 1131, 1135 (D. Kan. 1997).

ciple of misuse does not lie in constraining contractual choices to a narrow band confined by the terms of the Copyright Act, but on giving courts a tool to prevent over-reaching by the use of leverage to achieve anti-competitive results.

3. Direct Policy Restraints.

Misuse law, while grounded in equity theory,[146] focuses on competition law themes. It does not set out a principled basis to restrain contracting practices beyond the applicable limits of competition law.

There does exist, however, some federal case law analogous to misuse concepts that apparently places direct restraints on some terms of patent licenses. This case law developed during a period in the 1960's when courts were clearly hostile to intellectual property rights and their commercialization. The decisions have not been broadly applied or extended. Indeed, most (maybe all) of the competition related law principles on which this hostility was erected and that were articulated during this period have subsequently been reversed by Court decision or legislation.

The primary case for this variation of misuse theory is *Lear, Inc. v. Adkins.*[147] *Lear* held that a state common law contract principle creating a theory of licensee estoppel was invalidated because of an alleged federal policy of encouraging challenges to the validity of a patent.[148] The estoppel theory, which was followed in some, but not all state contract law systems, held that a licensee could not simultaneously accept the benefits of a patent license and challenge the validity of the underlying patent.[149] The Court concluded that the primary goal of federal intellectual property policy was to encourage the dedication (by choice or by law) of even highly inventive technologies to the public domain.[150] Based on that premise, it held that a licensee could not be estopped from contesting the validity of the patent that it had licensed.[151] Such estoppel would frustrate the federal policy that patents should be invalidated if possible.[152]

During that same era, the Court held that a patent license could not create an obligation to make royalty payments that extend beyond the term

146. *See, e.g.*, Atari Games Corp. v. Nintendo of Am., Inc., 975 F.2d 832, 846 (Fed. Cir. 1992) (holding that defense not available where defendant had unclean hands because of fraud on Copyright Office).

147. 395 U.S. 653 (1969).

148. *See id.* at 673-74.

149. *See id.* at 662-68.

150. *See id.* at 673.

151. *See id.*

152. *See id.*

of the relevant patent.[153] The rationale was that the prolongation of royalty obligations effectively extended the patent term.[154] Of course, that could not be true, except with respect to the contracting parties. For them, this could only be the case because this was part of the agreed consideration for the license.

One decade after *Lear*, and fifteen years after the royalty case, a differently comprised Supreme Court held that there was no similar restriction in a trade secret license with respect to the obligation to pay royalties.[155] In this latter context, the Court suggested, the contractual consideration arose on disclosure of the information, and there was no right to reverse a contractual commitment simply because the disclosed information had become public knowledge.[156]

This branch of misuse theory, which erupted in the 1960's and was truncated a decade later, would, if pursued, place courts in the position of restraining contractual choices based on their own assessment of what, in the current context, represents appropriate intellectual property theory. We can debate in theory why the Court in the 1960's focused on estoppel and the extension of royalties in *patent* licenses and whether these same rulings should extend to *copyright* or *software* licenses. We can debate whether a software, multimedia, database or similar contract is more like the patent license in *Lear* or the trade secret license in *Aaronson*. We could do all of this, but that would be beside the point for our present discussion. The basic fact is that theories that allow courts to apply their version of pop art or pop culture to invalidate party's contract choices can never be acceptable. Beyond their many other faults, they contradict the basic theme of intellectual property law: society benefits by the commercialization use of information and that use is undermined by allowing a court to render the contract choices invalid after the fact based on its view of what proper policy should be.

C. Contract Law Limits

Contract doctrine presumes the dominance of, and facilitates the exercise of, the choices of the transacting parties. Given that premise, the limitations it imposes focus on over-reaching and circumstances where the basics of choice, interpreted in light of the recognized existence of standard form practice, are over-ridden to an objectionable degree. As a result, contract-law restrictions on enforceability have a flavor and focus that is

153. *See* Brulette v. Thys Co., 379 U.S. 29, 33-34 (1964).
154. *See id.* at 31.
155. *See* Aaronson v. Quick Point Pencil Co., 440 U.S. 257, 265-66 (1979).
156. *See id.* at 266.

not present in property rights or regulatory law. In general, they focus on rectifying extreme dysfunctions in the transactional process. The core contract law principle remains stable: even though most parties neither read nor negotiate most terms of most contracts, they are bound by the contract terms. Secondary themes hold that this core principle should be discarded in the occasional case in which the contract term in context is abusive.

1. Unconscionability.

The most widely used restrictive theme holds that a court may invalidate a contract term or an entire contract if the court finds that the contract term was unconscionable.[157] When first adopted in U.C.C. Article 2, this was a revolutionary principle. It is now a common doctrine. Outside of Article 2, the concept has not been universally adopted.

Unconscionability as a theory lacks substantive or thematic focus. As initially promulgated, it centered on building an important organizing principle that established the right of courts to "police" against what they regarded to be abusive contract terms.[158] The theory thus sets out a limited right of a court to rewrite contracts. As unconscionability doctrine evolved, it came to focus on the right of a court to exclude contractual clauses that reflect a combination of procedural unconscionability (adhesion contracts) and substantive unconscionability (oppressive terms).[159] As the comments to the Article 2 provision that innovated the concept indicate, the "basic test is whether, in light of the general commercial background and the commercial needs of the particular trade or case, the clauses involved are so one-sided as to be unconscionable under the circumstances existing at the time of the making of the contract."[160] We could spend many hours discussing the scope and application of unconscionability as a contract law theme without ever placing firm limits on the scope of the doctrine. It is, in fact, a general overview standard within which courts can police contracting practice to avoid extreme abuses. Within that over-all standard, the fundamental case law pattern that has developed invalidates a term of a contract only if based on a conjunction of procedural problems and substantive abuses.

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157. U.C.C. § 2-302 (1962).

158. *Id.* at § 2-302, cmt. 1.

159. *See generally* Arthur Leff, *Unconscionability and the Code—The Emperor's New Clause*, 115 U. PA. L. REV. 485 (1967) (setting out ideas of procedural and substantive unconscionability);

160. U.C.C. § 2-302, cmt. 1 (1962).

Because of the focus of the doctrine, the majority of reported decisions use it to invalidate contracts dealing with consumer transactions or other cases in which there are extreme imbalances in bargaining leverage and sophistication in commercial contracting. The goal and the effect is to preclude cases of abuse resulting from breakdowns in the contracting process.

2. *Restatement Section 211.*

The Restatement (Second) of Contracts sets out a standard that substantially overlaps with unconscionability doctrine, but does so in different terms and under different language. The basic Restatement principle focuses on the treatment of standard forms and was initially set out in section 211 of the Restatement (Second) of Contracts.[161] While the standard was first stated in the 1970s, it has been adopted in fewer than ten states in cases outside the area of insurance contracts.[162]

The Restatement "rule" proposes that a person who manifests assent to a standard form is bound by the terms of that form, except with respect to terms that the party proposing the form has reason to believe would cause the other party to reject the writing if it knew that the egregious term were present.[163]

In form, this "refusal term" concept extends beyond the idea of unconscionability by creating an *additional* basis for avoiding some terms in a contract. It proposes that those terms can be avoided by a court even if the term itself is not unconscionable. While the letter of the Restatement refers to "refusal terms," some courts in the few states that adopt the theory go further and allow a court to avoid any term that the judge believes is outside the "reasonable expectations" of the other party, whether or not that other party is a consumer or a business.[164] The comments to the Restatement mention this phrase, but focus more on other issues. They state in relevant part:

> Although customers typically adhere to standardized agreements and are bound by them without even appearing to know the standard terms in detail, they are not bound to *unknown* terms which are beyond the range of reasonable expectations. ... Reason to believe may be inferred from the fact that the term is bizarre or oppressive, from the fact that is eviscerates the non-standard

161. *See* RESTATEMENT (SECOND) OF CONTRACTS § 211 (1981).

162. *See* James J. White, *Form Contracts Under Revised Article 2*, 75 WASH. U. L.Q. 315, 324 n.17 (1997).

163. *See* RESTATEMENT (SECOND) OF CONTRACTS § 211 (1981).

164. *See generally* White, *supra* note 162.

> terms explicitly agreed to, or from the fact that it eliminates the dominant purpose of the transaction.[165]

The interest that is being protected here is associated with the bargaining process itself. The Restatement recognizes, as any contract law must, that parties agree to and are bound by standard forms every day. This is central to modern commerce. The section goes beyond the idea of unconscionability, however, to deal with further concerns about the risk of unfair surprise. Basically, the goal seems to be to give a party an opportunity to convince a court that the term was not known to it and that the other party should have known that the adhering party would refuse the contract had the term been disclosed.

Few states adopt the basic premise of the Restatement. In those states, there is a significant difference in the two views of how the rule is defined. The black letter of the Restatement invalidates only "refusal" terms—that is, terms that were unknown to the party and that would have caused it to refuse the contract if they had been made known.[166] Furthermore, the rule examines this issue from the perspective of the person proposing the form and examines whether it had reason to believe that the clause would cause refusal of the contract. This limits the scope of the doctrine to seriously over-reaching terms, creating at least the inference that the doctrine very much overlaps unconscionability doctrine to the point of being indistinguishable. On the other hand, the Restatement comment quoted above refers to terms "which are beyond the range of reasonable expectations."[167] This is a far looser standard and more aggressive standard of avoidance and focuses on the perspective of the person receiving the form. It has been adopted by some courts.[168]

3. *Article 2B and Unconscionability Limitations.*

Both the Restatement rule and the doctrine of unconscionability give courts tools to correct serious breakdowns in the contracting process and resulting over-reaching. Each has had an impact on the development of Article 2B.

Initially, Article 2B follows U.C.C. traditions and adopts the doctrine of unconscionability as applicable to all contracts within its scope.[169] Additionally, the concept is expressly mentioned with respect to mass market licenses. The comments to the relevant section note:

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165. RESTATEMENT (SECOND) OF CONTRACTS § 211, cmt. f (1981).
166. *Id.*
167. *Id.*
168. *See generally* White, *supra* note 162.
169. *See* U.C.C. § 2B-110 (Aug. 1, 1998 Draft).

> The doctrine invalidates terms that are bizarre and oppressive and hidden in boilerplate language. For example, a term in a mass market license that default [sic] on the mass market contract for $50 software [sic] cross defaults on all other licenses between two companies may be unconscionable if there was no reason to expect the linkage of the small and larger licenses. Similarly, a clause abrogating all responsibility for intentional wrongful acts buried in a license form violates public policy and, in addition to being unenforceable on that basis, might also be unconscionable.[170]

The Restatement concept was experimented with in early drafts of Article 2B with respect to mass market-licenses.[171] Neither consumer nor business interests supported the concept. This reflects, in turn, the view from commercial law practitioners that the concept went too far toward broadly jeopardizing the enforceability of contracts, and the view from consumer interests that the concept did not go far enough.[172] A similar, but more expansive concept was suggested in proposed draft revisions of U.C.C. Article 2, though limited solely to consumer contracts.[173] The Article 2B concept of mass market, in contrast, applies to purchases in the retail market, whether made by a consumer or a business purchaser.[174] The Article 2 version has since been refocused.[175] What, if any language will eventually survive is not clear.[176]

One fundamental flaw with the Restatement approach is that it is a *disclosure* rule that fails to give any guidance on what is to be disclosed. As a result, all terms of every contract are at risk. It is a disclosure rule in the first instance because it focuses on cases of unfair surprise. As the comments indicate, the desire to avoid unfair surprise focuses the rule on invalidating some terms that were *unknown* to the party at the time of contract, even though they are contained in a form to which the party as-

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170. *Id.* § 2B-208, cmt. 3(b).

171. *See, e.g.*, U.C.C § 2B-208 (Nov. 1, 1997 Draft).

172. *See* Comments of various parties on this issue posted on <http://www.2bguide.com> (visited Nov. 15, 1998).

173. *See* U.C.C. § 2-206 (July 25-Aug. 1, 1997 Draft).

174. *See* U.C.C. § 2B-102 (Aug. 1, 1998 Draft).

175. *See* U.C.C. § 2-206 (Mar. 1998 Draft).

176. In Article 2B, a subcommittee of the American Bar Association recommended that the concept be deleted and replaced with a refund right applicable to mass market transactions where terms are proposed after the initial payment. The Drafting Committee adopted that proposal, but added express language about the relationship between negotiated terms and terms of the standard form that responds to the policy issue underlying the Restatement rule. *See* U.C.C. § 2B-208(a) (Aug. 1, 1998 Draft).

sented.[177] For a lawyer planning a transaction or a transactional framework under the "guidance" of this rule, this means that the risk of term avoidance can be eliminated only by disclosure. Under the Restatement standard, what terms should be disclosed explicitly to the other party in order to preclude their invalidation? No reasonable answer was ever developed to that question (obviously, one cannot disclose every clause in any effective way since that is what in fact occurs in simply presenting the form). The issue is especially important in information contracts since, as we have seen, terms relating to scope of use are critical to defining the product being transferred but would, under this standard, be subject to invalidation based on claims of "unfair surprise" concerning a "refusal term."

The risk of unfair surprise in fact does exist in commerce, of course. Article 2B deals with this in two ways. First, section 2B-208 expressly recognizes that a court can invalidate terms here (as in other contexts) if the terms are unconscionable. This responds to the idea of excluding a "bizarre or oppressive" term as described in the Restatement comments.[178] Second, section 2B-208 provides that, subject to the parol evidence rule, a mass market license cannot contradict terms to which the parties expressly agreed.[179] This latter premise, which benefits licensees, deals with the concern that the term of a standard form not eviscerate the actual deal of the parties.[180]

4. Invalidation on Public Policy Grounds.

As the foregoing illustrations suggest, general contract law restrictions on the scope of a bargain focus on breakdowns in the bargaining process that cause grossly unfair terms to be putatively adopted by the adhering party. This in general is the approach of contract law to curtailing abuse. It flows from a general recognition of the validity of contracts and the desirability of not permitting courts to review and remake the terms of transactions agreed to by the parties. As should be clear, in any case where a court invalidates a contract term but leaves the remaining agreement in place, the court in effect rewrites the contract for the parties. That, under contract law, should seldom occur.

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177. The theory invalidates only terms that the party has reason to believe would make the contract unacceptable if they were known to the adhering party. Obviously, one way to defeat a claim of reason to know of the adverse impact of a term is to make the party aware of it and rely on the fact that it, in fact, did not refuse the contract.

178. *See* RESTATEMENT (SECOND) OF CONTRACTS § 211, cmt. b (1981).

179. *See* U.C.C. § 2B-208 (Aug. 1, 1998 Draft).

180. *See* RESTATEMENT (SECOND) OF CONTRACTS § 211, cmt. f (1981).

There are cases, however, where under the guidance of specific regulatory statutes or through the application of otherwise clearly expressed public policy, courts may invalidate a contract or a term on grounds that it violates fundamental public policy of a state. Often, this comes in the context of specifically applicable regulatory statutes that preclude agreements that contain specified terms. These include, for example, bankruptcy prohibitions on enforcement of certain types of termination clauses.[181] Regulation of specific terms, however, does not typically occur in the U.C.C. or in the general common law of contracts because of the fundamental policy favoring party autonomy and freedom of contract. When it occurs, it flows from narrowly crafted and specifically identified policy interests that override the general contract law premise of contract autonomy.

In the general area of intellectual property practice, lawyers are most familiar with contract case law that in many states restricts enforcement of contract terms dealing with non-disclosure, non-competition and similar contract clauses. The policy here emanates from competition law, concepts against undue restraints on trade and, in the employment setting, the basic fairness notion that a person should not ordinarily be denied the ability to practice her trade or profession using the general knowledge and skill that has been acquired.[182] The cases on these issues are as diverse as they are voluminous.

An infrequently used section of the Restatement places this case law in a contract law context. It states:

> A promise or other term of an agreement is unenforceable on grounds of public policy if legislation provides that it is unenforceable or the interest in its enforcement is *clearly outweighed* in the circumstances by a public policy against enforcement of such terms. (emphasis decided)[183]

The Restatement refers to established policies regarding *restraint of trade* and long-standing policies protecting particular identified interests, such as the policy against contracting to permit a tort, inducing a violation of fiduciary duty, and the like.[184]

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181. *See, e.g.*, 11 U.S.C. § 365(c) (1994).

182. *See generally* MELVIN F. JAGER, TRADE SECRET LAW (1997); GALE PETERSON, TRADE SECRET PROTECTION IN THE INFORMATION AGE (1997).

183. RESTATEMENT (SECOND) OF CONTRACTS § 178 (1981).

184. *See id.* §§ 179, 186-88, 192-96 (1981).

Fundamental state policies are most commonly stated by the legislature.[185] In the absence of legislation specifically invalidating a term, courts ordinarily are reluctant to override a contract term and do so infrequently on the basis of general public policy. A decision as to enforceability is reached only after a careful balancing, in light of all the circumstances, of the interest in the enforcement of the particular contract against the policy against enforcement of such terms. The strength of the public policy against enforcement is a critical factor in the balancing process. Enforcement is denied only if the factors that argue against enforcement clearly outweigh the law's traditional interest in protecting the expectations of the parties, its abhorrence of any unjust enrichment, and any public interest in the enforcement of the particular term.[186]

This Restatement formulation, although not generally or widely adopted as a principle, identifies two very explicit concepts about how contract themes approach this issue. The first is that the balancing test proposed here requires that the counterveiling interest in non-enforcement clearly outweigh the interest in enforcement that generates from the common base of contract law. This recognizes the acceptance of the fundamental policy that, in general, contracts govern the relationship of parties according to their own terms. Secondly, the concept applies to particular cases, rather than to broadly phrased bans on particular clauses. In that regard, it clearly parallels the general approach used throughout general, non-regulatory contract law and deviates from any concept of a statutory or regulated mandated exclusion of the enforceability of terms in all cases.

The fundamental public policy theme is a general principle of law. Under Article 1 of the U.C.C., the provisions of its articles are supplemented by general common law and equity concepts unless expressly displaced.[187] Article 2 does not deal with this issue (although under current law, books and software are considered to be goods). Article 2B expressly brings forward and refers to, without altering, the background law that invalidates some contract terms on such public policy grounds.[188] The comments to the relevant section emphasize both the limited role it plays, but also its importance in avoiding enforcement of some contract clauses that purport to restrict rights of fair comment and the like.

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185. *See, e.g.*, Application Group, Inc. v. Hunter Group, Inc., 61 Cal. App. 4th 881, 908 (1998) (invalidating contract choice of law because of conflict with fundamental California policy on non-competition clauses expressed in state statute).

186. *See* RESTATEMENT (SECOND) OF CONTRACTS, § 178, cmt. b (1981).

187. *See* U.C.C. § 1-103(b) (1994).

188. *See* U.C.C. § 2B-105(a)(b) (Aug. 1, 1998 Draft).

D. Fair Use and First Sale Policies.

We come now to a final point in the public debate about the relationship of contract and intellectual property law and about the role of proposed Article 2B in defining that relationship. This lies in the argument that, despite the interaction described in this article, copyright policies associated with fair use and first sale should control and preclude contracting that conflicts with the property law policies they represent.

1. Fair Use, First Sale and Preemption

Although they include some detailed copyright law provisions concerning library uses, the fundamental references used to make arguments to restrict the enforcement of contracts based on copyright policy focus on four provisions of the Copyright Act. These are the exclusion of copyright for facts or ideas,[189] the first sale doctrine,[190] the treatment of owners of copies of computer programs,[191] and the concept of fair use.[192] Taken together, these doctrines state that, as a matter of property law, it is not an *infringement* to:

- make copies or other uses of facts or ideas
- distribute a copy one owns as a result of a first sale of the copy
- transfer, or make modifications, back-ups or essential copies of, a copy of a computer program that you own
- engage in uses of the expression of a work that, on balance, constitutes a "fair use"

These are clearly important doctrines that balance, as a matter of property law, interests of property ownership against interests of third party use. That being said, however, the basic argument in our setting is that, as drafted, these principles preclude contrary contractual arrangements. This is clearly not true as a general matter.

For example, an entire, major industry in this country exists based on licensing of customer lists for limited periods of use for a specific fee. A customer list, of course, is a collection of mere facts (names, addresses)

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189. *See* 17 U.S.C. § 102(b) (1994). The only case squarely dealing with the issue has held that this statutory exclusion does not bar the creation of contracts regarding such subject matter, a conclusion that is a relatively obvious inference from the fact that such contracts have been used commercially for generations under the realm of trade secret law and from the general right of a person to not disclose information that it holds unless it receives adequate contractual support for the disclosure. *See* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).

190. *See* 17 U.S.C. § 109 (1994).

191. *See id.* § 117.

192. *See* 17 U.S.C. § 107.

that is unlikely to qualify for copyright protection. Copyright law, however, does not prevent licenses that grant a restricted right of use of the list. Yet, the creation of licenses with respect to use of these lists is common. Similar observations can be made about other types of data-based industries. The copyright law proposition that "facts" cannot be copyrighted means simply and only that: no copyright protection attaches to pure facts not organized in a creative manner. It does not say that facts are not subject to contractual or other forms of control. There is no basis to claim the property principle preempts the contract practice.

Similarly, the ideas of a sale or ownership of a copy creating first sale or other exclusions from a claim of infringement both focus on a particular type of transaction in the absence of other contract provisions. They do not speak to transactions where no sale or transfer of ownership occurs. They do not say that one cannot couple a sale of a copy with a restriction on its use.[193] More importantly, they do not *require* a copyright owner to sell copies, but merely state a default rule that applies in the absence of contrary agreement if there is a decision to sell. The language of the two sections, in fact, gives no indication that an inalienable right is being created in the transferee. They simply state that it is not an infringement for the owner of a copy to do the stated acts. Contractual restrictions on doing those acts cannot turn them into infringement, but the property law theme does not foreclose the contract practice.

Finally, the idea of fair use is based on equity concepts and sets out important protections for certain type of uses of copyrighted works that on balance do not harm the copyright owner sufficiently to allow an infringement claim. This doctrine does not encompass a right to force the other person to allow that use, but an ability to avoid liability for infringement if, on balance, the use is fair.

As we have discussed, section 301 of the Copyright Act provides that the Act does not annul or limit any activity "violating legal or equitable rights that are not equivalent to any of the exclusive rights within the general scope of copyright."[194] It is clear that, when they desire to do so, legislators in Washington know how to draft a statute that precludes contrary activity and that preempts contract practice. These sections do not do so. That being the case, the clearly correct interpretation is that contracts, which do not involve rights equivalent to the property rights of copyright law, are not preempted by it.

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193. *See* Applied Info. Management, Inc. v. Icart, 976 F. Supp. 149, 152-53 (E.D.N.Y. 1997).

194. 17 U.S.C. § 301(b) (1994).

A general, contrary reading would annul wide ranges of modern and traditional contracting practice including, essentially, all trade secret licensing (very few secrets are any longer conveyed purely in oral form; most are delivered in digital or written form). There is little doubt that no one would argue for this scope of the copyright doctrines. What in fact the argument typically focuses on is that these rules preempt contract *in some limited subset* of the cases where contracts are used. That, of course, stretches the statutory analysis even thinner.

On the other hand, there may be a kernel of an important theme embedded in these sections used for these discussions. These sections (other than section 102) state that it is *not an infringement* to engage in fair use, distribute an owned copy, or make a back-up of an owned copy of a computer program. Consider the language: it is not an infringement. Contract cannot alter that result with respect to intellectual property law. The protected activity is not an infringement, regardless of whether the contract permits or precludes it. On the other hand, the conduct may be a breach of the contract if it is inconsistent with the contract terms.

2. *First Sale and Fair Use as Over Riding Policy.*

The more refined argument is that the policies incorporated in the sections mentioned above involve a sufficiently strong public policy interest that *should* override contrary contract terms. Before discussing this proposition, it is important to focus on exactly what this means if viewed in full context and what policies result. If one looks at the issue from the perspective of placing restraints on a rights owner, the proposition that the copyright policies should over-ride contract terms might appear to be premised on a policy of preventing abuse by the rights owner. The nature and extent of the projected abuse lie in determining 1) the likelihood that there will be an effort, accepted in the marketplace, to over-ride the copyright policies, and 2) the likelihood that the benefit of preventing that abuse will offset the disruption that the rule would create in the basic balance achieved through traditional reliance on commercialization, as well as open forum uses of information.

I believe that this balance leans in favor of not prohibiting contract terms. But there is also an important insight if we look at the effect of the proposed policy rule on the end user recipient of the information. The proposed rule would in effect create a right (property?) in the holder of a copy *that cannot be the subject of contract or be waived.* This creates, of course, a very unusual right since non-transferability vitiates much of the value of the right for the person who owns it and entirely contradicts the notion that a person with a right can use that right in a manner it chooses

so long as the use does not injure a third party. It proposes that the end user *cannot* bargain away an aspect of a first sale right in return for a price or other concession. The reason to do so lies not in protecting the end user, but in seeking a purported social goal independent of the individual's interest.

The overall argument makes little sense if applied to *all* transfers of information. Rather, it focuses (or should focus) on a limited subset of transactions, presumably those that place copies of information in the hands of the general public. The argument is that, as a matter of policy, when this occurs, contract terms that conflict with the four stated sections should be made inoperative as a matter of federal policy.

At one level, this cannot be true. As I mentioned earlier, the "first sale" policy assumes that I have a right to transfer a copy that I own. Does or should that policy prevent a person from transferring copies to the general public on other than an ownership basis? Clearly not, since the video rental business depends on that type of distribution and, I would think, is not under attack in this forum. If that is true, then it is true that not all distributions to the general public are sales invoking the "first sale" right under copyright law. But, of course, that means that a person who owns the copyright can elect different modes of distribution to the general public based on how it chooses to market its copies. It makes those commercialization choices through contract.

It does not work to focus the proposed restraint on "mass markets." The video illustration shows that much. More importantly, to implement that focus, the rule would be required to reach further up the chain. Suppose that I own the copyright in a very valuable work. To distribute that work to the public, I contract with ABC Distributorship. I could sell copies to ABC, but instead I prefer to license ABC to make copies and only distribute them under conditions that I specify. ABC, which has great bargaining strength, nonetheless agrees. It makes the copies and provides them by license to the general public under an agreement that allows the end user to display the digital work on a computer. This includes display to general commercial audiences, but not modification of the images or transfer of the copy to any other person. This is a fairly common form of digital product licensing in the modern marketplace and characterizes many "clip art" licenses.

Now let us apply the "first sale" argument to the foregoing transaction. If copyright (or contract) precludes anything other than a sale of copy in the mass market, what is the effect on the end user or on ABC, the distributor? Clearly, the end user cannot be prevented from distributing the copy it owns (a right created under first sale and under section 117). On

the other hand, can the end user make a public display of the work? That is not, of course, a first sale privilege. If contract cannot alter first sale rights, the public performance or display is an infringement. There is, of course, no sense to that result. From the vantage point of the end user, a rule which states that the applicable property rights cannot be altered in the mass market means that the purchaser *cannot*, as a matter of law, waive its "right" to transfer the copy in return for a grant of a particular price or a grant of a right to make a public display of the work. Why? Clearly, the answer is not, as is normal in restrictive rules applicable to contract, any desire to protect the end user because its result is just the opposite.

There is a similar, perhaps even more inexplicable effect if we examine the impact of the proposed rule from the perspective of my contract with ABC. Limits on what terms are permitted in a mass market end user transaction in effect limit what contract a copyright owner can make with a publisher, a manufacturer, or a distributor. The copyright owner cannot make and enforce a license agreement with its distributor unless the license agreement authorizes sales of copies in the mass market. In effect, that rule would fundamentally alter the balance of copyright (and all intellectual property law) by indicating that the rights owner cannot make certain choices in how (if it so chooses) it will commercialize the information in a purely commercial transaction. Rather than preserving the status quo, the theory radically alters it.

The argument essentially urges that copyright owners (or other information holders) are, or should be, by law restricted to traditional means of distributing their works. These means are characterized by sales of copies to distributors who then distribute the work by sales of copies to the general public. This argument states an impossibility and also misrepresents the status quo. The impossibility lies in the fact that digital distribution systems that do not involve tangible copies are already in place and widely used; access contracts are an increasingly common mode of distribution. Congress cannot legislate them away. The misstatement assumes that all information was yesterday distributed to the public in copies that are sold to the public. My most recent visit to Blockbuster video belies that idea. They would be surprised to learn that I own and can resell the copy of "Florida Sunset" that I rented yesterday. Westlaw would be equally surprised to learn that I own a copy of its database with rights of fair use when I sign my license with it.

The case for preservation of general ("fair use") rights, rather than for banning specific terms is far stronger. Let us suppose that the idea of fair use means that, for publicly distributed works, I can make a limited, noncompeting quotation from the work that I have acquired access to by a

valid contract. Suppose further that the publisher acting *against its own* economic interests, requires that I agree contractually to not make any quotations from a published work distributed pursuant to contract. Next, suppose that I ignore my agreement and freely quote from the work. What result?

Initially, we need to recognize that this is a law school exam hypothetical; given market and other forces, it is a highly unlikely mass market scenario.[195] Yet, to meet the issue, we can make several simple observations. First, the contract cannot create an infringement claim where none exists under copyright law. If fair use concepts apply, the contract terms do not change that result. Indeed, the belief that a form contract in a mass market can over-ride a fair use policy analysis as to infringement issues seems superficially wrong. The point of fair use analyses is to allow a court to look at all the factors of an alleged infringement. To assume that, from the copyright framework, a court presented with that statutory mandate will necessarily look only at one factor (the contract) strains mightily against what we know of how judges function.[196]

Second, if violation of the contract terms is asserted as the basis for a breach of contract claim, there are ample general themes of contract law that permit a court to review whether the particular clause over-reached and should, therefore, be precluded in context.[197] If there are overriding public policies that favor the ability to quote and otherwise use aspects of a copyrighted work distributed in a public market, those policies can be brought to bear on a particular contract claim. Those theories are present in general contract law and are preserved by Article 2B.[198]

Third, if no contractually cognizable limitation applies and quoting from a work is treated as a breach of an enforceable contract term, what are the damages for the breach? Without delving deeply into the facts, my

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195. That being said, at least one commercial publisher has for years attempted to place quasi-contractual restrictions on the right to quote from a published source. The Consumers Union magazine contains a statement, arguably binding, that the user of the magazine is not allowed to quote data or rankings for commercial purposes without written consent. The enforceability of the clause is suspect on both contractual grounds (there is no effort to call it to the attention of the magazine buyer) and First Amendment grounds. *See* Consumers Union v. General Signal Corp., 724 F.2d 1044, 1046 (1983).

196. Indeed, after this was written, the point was seemingly confirmed in the court's discussion of infringement of free shareware in *Storm Impact, Inc. v. Software of the Month Club*, 13 F. Supp. 2d 782, 787-91 (N.D. Ill. 1998), where despite an enforceable term that precluded commercial use, the court engaged in a full fair use analysis on the infringement (as compared to contract breach) claim.

197. See discussion at notes 154 to 163.

198. *See* U.C.C. § 2B-105(b) (Aug. 1, 1998 Draft).

prediction in most cases is that they would be next to nothing so long as there was no proof of resulting and *foreseeable* loss of profits or other cognizable damages from the *fair* comment. In a trade secret or other license of confidential material, of course, damages may be easily proven based on loss of the confidential nature of the material because of the licensee's breach. In mass market transactions, no such confidential material exists, and the damages would ordinarily be negligible.

This brings me to the final point. The doctrines that underlie the fair use and first sale theories of overriding contract are contextual protections, rather than absolute values. They are more than adequately accommodated by the common law (preserved by Article 2B) and by copyright analyses. If the goal is to retain the flexibility inherent in these doctrines and the flow of information they support, the solution is not to alter the basic formula of the relationship between contract and copyright, but to recognize that the ability to contract exists and has existed for generations. The doctrines co-exist, rather than conflict. The idea of a broadly stated defense to contract based on generalized fair use policy argues for a basic and fundamental change of the relationship and a restructuring of the basic deal. The empirical basis for such drastic change has not been made.

3. *Article 2B and the Fair Use Debate.*

The debate described above about the allegedly mandatory nature of the first sale and fair use doctrines in fact extends beyond issues pertaining to the interaction of contract and intellectual property and has been actively engaged in general copyright legislation and in discussion about the effect of digital distribution systems on traditional intellectual property law principles. It has been engaged in reference to the development of the Article 2B proposal, even though Article 2B properly understood does not affect the issue and has adhered to a neutral position.

There are aspects of the "fair use" debate with which Article 2B could not deal, even were it inclined to do so. For example, the argument that copyright law preempts here, while unfounded, cannot be addressed in state law. If fair use preempts contract, that fact cannot be changed by Article 2B.[199] Of course, as we have seen, fair use and first sale concepts are not preemptive in nature as applied to contractual relationships. An argument that contract terms that limit fair use constitute copyright misuse similarly does not state an issue that can be addressed in a state law contract code. It is a federal policy issue.

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199. In a statement of the obvious, Article 2B expressly acknowledges that preemptive federal law controls over state law. *See* U.C.C. § 2B-105 (Aug. 1, 1998 Draft).

This does not trivialize the issue from the perspective of state contract law. There is a strong social policy, especially in this country, which holds that the flow of information to and from the public should not be stifled. That policy lies at the core of our culture. Within Article 2B, it focuses debate on a conflict of two premises.

> One premise argues that a new state law rule should be created to ban contract terms that either conflict with a stated pattern of rights in the mass market, or conflict with "fair use" or similarly stated general policy. This is an affirmative term avoidance approach.
>
> The alternative premise argues that Article 2B should carefully retain the doctrines that have long been in place under state law to deal with alleged abuses, but take no position regarding the issues in general.

Article 2B adopts the latter of these approaches. In part, this choice is based on contract law traditions within the commercial code. In part, it is based on the premise that state contract law cannot effectively and affirmatively resolve a debate about general copyright issues that is ongoing in Congress and internationally.

To restate the obvious: Article 2B does not create contract law in this field. Contracts already exist and are pervasive. They function well because they are buttressed by an assumption of marketplace adjustments and party choice, bounded by doctrines that allow courts to adjust circumstances to prevent substantial abuse. There are important policy issues here, but they cannot be approached in a blunt-edged manner. The idea that fair comment and other fair uses are politically and socially important does not extend to the idea that the person who holds the information *must* distribute it and *cannot* control the manner of its dissemination. They cannot be approached under the assumption that all rights owners are evil and all copy recipients must be protected against themselves. They cannot be approached on the assumption that law can in some manner legislate the status quo from years ago.[200] They must be approached in a manner that

200. Indeed, there is an ironic twist and internal contradiction in some of the arguments for controls. The fundamental social policy pertaining to free speech may seem to mean, for example, that the soap box speaker in a park whose purpose is to reach and affect the largest possible audience, should not be able to use contract to prevent his listeners from repeating what he said. It may seem to mean that the book publisher whose profits thrive on a book being discussed and cited should not be allowed to use contract or property rights to prevent that from occurring. But of course, these illustrations (and others that readily come to mind) prove the converse point. The risk they assume is that the public speaker who has elected to make an open forum use of information may to-

recognizes the fundamental right to make choices and implement them by contract or not by contract. The role of law should be to monitor against the abuses, if and when they occur.

In my view, the only conceivable approach that state contract law can take with respect to these issues is an approach that emphasizes neutrality. That is exactly the approach that Article 2B has adopted. Any other attitude would ask state law to rewrite the intellectual property law bargain, a large part of which has been traditionally a federal policy issue and a larger part of which has depended on the ability of rights owners to contract to disseminate their property as they choose.

E. Conclusion

Without doubt, the most significant insight that one can take from reviewing the relationship of contract and intellectual property is that, rather than fields in newly-found conflict, these are two areas of law that have long co-existed. At least with respect to copyright, these areas of law depend on each other for support in the goals purportedly at the core of copyright law regime. Copyright and other forms of intellectual property law cannot, and have never been able to, foster active development and distribution of information products in society without relying extensively on contracts. Indeed, as we have seen, commercialization, which depends on contractual relationships, constitutes one of the core mechanisms by which information is developed and distributed. It is a central part of the intellectual property law "bargain" and should be recognized as such.

This is not to say that there are never points of tension or of potential conflict. Yet, those points of tension have always been resolved by contextually nuanced analyses of particular cases and particular claims of abuse. That is as it should be. The idea that property rights law, with its concentration on vested rights and positions stated against third parties, can ever provide an adequate template for the complex and increasingly diverse information economy borders on the absurd and certainly entertains the impossible. One may wish that old distribution systems and older models of how the public receives and uses information would remain intact. But wishing does not stem a vibrant economic and technological revolution that surrounds us all today.

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morrow invoke a format that specifically prevents exactly what the speaker desires (that people will discuss her expression and ideas). The risk is that the publisher whose market values a right to discuss and quote from its published product will elect to market its works in a way that specifically precludes that value from being realized. Neither is likely to occur in an actual, as compared to a law school hypothetical, marketplace.

If one were to wager on the one hand for a fight to preserve the status quo through legislation action or, on the other, for a reliance on markets and sensitive judicial analysis of particular cases, I would place my wager on the side of the markets. Commercialization is an affirmative and positive aspect of the intellectual property regime with which this country has thrived, and commercialization functions on the basis of contractual relationships that tailor to the ever-changing marketplace. The fact that in some limited cases, contracts may be used for improper purposes does not change the importance of their overall role in commerce and intellectual property. The abuses must be dealt with by a sensitive review focused on particular contexts to achieve valid and sustainable balances. Indeed, I can imagine no other viable response to the challenges of the modern era for contract and intellectual property.

THE LICENSE IS THE PRODUCT: COMMENTS ON THE PROMISE OF ARTICLE 2B FOR SOFTWARE AND INFORMATION LICENSING

By Robert W. Gomulkiewicz †

ABSTRACT

Article 2B promises to draw together contract principles for software and information licensing that, at present, are spread among various bodies of law. This Article argues that Article 2B must affirm industry standard licensing practices in order to prove beneficial. For example, Article 2B's affirmation of industry standard mass market licensing is important for both publishers and end users. Article 2B must also provide the flexibility to accommodate new distribution and licensing models that will arise as electronic commerce matures. Any other approach would fundamentally disrupt the software and information industries.

Moreover, this Article urges the drafters of Article 2B to resist remaining too wedded to the hard goods-centric rules of Article 2 in crafting default rules. Article 2B's default rules should be specifically tailored to the software and information industries. The Article 2B drafting committee has achieved varying degrees of success in formulating default rules that *fit* those industries for warranties, duration of contracts, and interpretation of exclusive license grants, at times imposing rules better suited to the sale of goods.

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I. INTRODUCTION

A contract statute like proposed Article 2B of the Uniform Commercial Code holds great promise for software and information licensing. Licensing law can be chaotic for both licensors and licensees. To draft a license agreement for software or an information product, a lawyer must be conversant in numerous areas of law, including the common law of contracts, Uniform Commercial Code Article 2, state and federal intellectual property rules and overlays, bankruptcy law, and competition law, not to mention various electronic commerce, data privacy, and digital signature statutes. Article 2B, which draws from all these areas of law, could clarify licensing law and thereby promote commerce in software and information products. Doing so, however, will be difficult.

Despite its promise, both scholars and practicing lawyers have approached the Article 2B project with a degree of wariness, though for decidedly different reasons. Scholars tend to approach Article 2B with suspicion because it appears to "remake"[1] the contract law they know from reported cases,[2] existing contract statutes,[3] and scholarly writings.[4] For

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1. Mark A. Lemley, *Beyond Preemption: The Federal Law and Policy of Intellectual Property Licensing*, 87 CALIF. L. REV. 113, 114 (forthcoming 1999) ("Proposed Uniform Commercial Code Article 2B will remake the law of software and intellectual property licensing in a radical way."). *See also* Dennis J. Karjala, *Federal Preemption of Shrinkwrap And On-Line Licenses*, 22 U. DAYTON L. REV. 511 (1997) (arguing Article 2B is unconstitutional); David A. Rice, *Digital Information As Property And Product: U.C.C. Article 2B*, 22 U. DAYTON L. REV. 621 (1997); J. Thomas Warlick, *A Wolf In Sheep's Clothing? Information Licensing and De Facto Copyright Legislation in UCC 2B*, J. COPYRIGHT SOC'Y U.S.A. 158, 172 (1997) ("2B appears poised to be the impetus for a deluge of oppressive licenses and litigation against hapless licensees."). Software and information licensing has been around for a long time (Dunn & Bradstreet has been licensing information for over one hundred years) and needs no further impetus, though licensing law could certainly benefit from more clarity. While Article 2B does not represent new licensing law or practice, it *is* different than Article 2. As explained *infra*, therein lies much of the promise of Article 2B.

2. Until *ProCD v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996), no reported case had determined the enforceability of a mass market license agreement between a software publisher and an end user. The cases that touched on mass market licenses involved contracts between a software publisher and a distributor. In those cases, the software publisher tried (without success) to use the end user license to amend or alter the distribution agreement between the parties. *See* Step-Saver Data Sys., Inc. v. Wyse Tech., 939 F.2d 91 (3d Cir. 1991); Arizona Retail Sys., Inc. v. Software Link, Inc., 831 F. Supp. 759 (D. Ariz. 1993). *Arizona Retail*, however, actually anticipates the court's ruling in *ProCD*. In *Arizona Retail*, the distributor, a value-added retailer, initially acquired an evaluation version of the software that was accompanied by an "evaluation license." In this context, the retailer was more like an end user than a distributor of the software. The court held

practitioners, Article 2B is not new[5] law; it broadly accords with the law that is practiced today in the information and software industries. However, practitioners fear that a group of people unfamiliar with the customs and practices of the industry, or those with political and intellectual axes to grind, will create an ill-fitting contract regime.[6] These practitioners would rather live with the un-codified, chaotic body of law they are working with today than have to cope with codified contract rules that do not make sense.

Many challenges stand in the way of creating a uniform law for software and information licensing. One challenge arises from the nature of the law-making process. Putting together a uniform law through the process sponsored by the National Conference of Commissioners on Uniform State Laws ("NCCUSL") and the American Law Institute ("ALI") is a

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that the retailer was bound by the terms of the evaluation license. *See Arizona Retail*, 831 F. Supp. at 766.

3. *But see* Jeffery Dodd, *Art. 2B Offers Jurisprudence for All Forms*, NAT. L.J., Sept. 21, 1998, at B13, B16 (criticizing the "mechanistic approach" to contract formation rules that makes "choreography"—timing and sequence—all-important); Robert B. Mitchell, *Restoring Realism in Software Licensing Law*, MULTIMEDIA & TECH. LICENSING L. REP., Apr. 1996, at 4, 7 (arguing that courts have departed from the "legal realist" roots of the U.C.C. when applying it to software licenses).

4. The *ProCD* ruling may have surprised some scholars because they mistakenly believed that the body of critical commentary on mass market licenses was more compelling than the overwhelming industry practice and the economics that drive the industry. *See* Robert W. Gomulkiewicz & Mary L. Williamson, *A Brief Defense of Mass Market Software License Agreements*, 22 RUTGERS COMPUTER & TECH. L.J. 335 (1996) (describing the importance of mass market licenses for both publishers and users, and citing critical commentary); Wayne D. Bennett, *Legal and Blinding*, CIO MAGAZINE (Oct. 1, 1998) (visited Nov. 23, 1998) <http://www.cio.com/archive/webbusiness/100198_gray_content.html> (criticizing the critics of Article 2B who claim that it represents new legal principles).

5. The goal of uniform law makers should be, as Grant Gilmore put it, "to be accurate and not to be original." Grant Gilmore, *On the Difficulties of Codifying Commercial Law*, 57 YALE L.J. 1341 (1948). The drafters of Article 2B have expressed support for this drafting philosophy. *See* U.C.C. Article 2B, Preface at 9 (Mar. 1998 Draft). Though Article 2B is not new law, it is fair to say it has caused a new focus on software and information licensing.

6. The Article 2B project did not begin at the behest of the software industry. Indeed, software industry trade associations voiced their disapproval of such a project. Once the project began, however, initially as part of the Article 2 re-write and then as a separate U.C.C. article, the software industry as well as other information product industries began to participate in the process. *See* U.C.C. Article 2B, Prefatory Note at 5-7 (July 24-31, 1998 Draft) (describing the history of the Article 2B project); Raymond T. Nimmer et al., *License Contracts Under Article 2 of the Uniform Commercial Code: A Proposal*, 19 RUTGERS COMPUTER & TECH. L.J. 281 (1993); Thom Weidlich, *Commission Plans New U.C.C. Article*, NAT. L.J., Aug. 28, 1995, at B1.

slow moving exercise in consensus building.[7] To further complicate matters, the drafting committee used as its starting point Uniform Commercial Code Article 2, a hard goods-centric, sales-oriented set of rules. Though some observers believe a license for software in packaged-goods-form resembles a sale of goods, these transactions differ in many ways from a sale of goods and represent only a fraction of licenses for software and information products.[8]

Article 2B also faces an additional challenge: digital convergence. While the initial focus of Article 2B was software, the Article 2B drafting committee soon realized that the software, data, fixed media publishing, on-line publishing, motion picture, television, and music industries and their products are converging. These industries are in the midst of convergence, not at the end of it. This means that Article 2B must meld the licensing practices of the different industries, account for their differences, or attempt to deny that convergence is occurring by focusing the statute upon a subset of these industries. Article 2B's attempt to meld and account for various licensing traditions can be viewed either as an important strength or a fatal flaw,[9] or, in software parlance, as either a "feature" or a "bug."

This Article provides a perspective on how the authors of Article 2B have fared in their attempt to create a useful contract code for the licensing of software and information products. To do so, it first discusses mass market licensing, which has been a focal point of Article 2B. It concludes that codification of industry standard mass market licensing practices is the proper approach for Article 2B and that any other approach would fundamentally disrupt the software and information industries. It points out that licensors as varied as the Free Software Foundation (with its

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7. *See generally* Marianne B. Culhane, *The UCC Revision Process: Legislation You Should See in the Making*, 26 CREIGHTON L. REV. 29 (1992).

8. Software licensing is often divided into two general categories: upstream licensing and downstream licensing. Upstream licensing refers to licenses a publisher receives to create its product. Downstream licensing refers to licenses a publisher gives to users or distributors of its product. An example of an upstream license would be a license for spell checking software that a publisher receives to include the spell checking software in the publisher's word processing product. An example of downstream licensing would be an end user license or a license with a computer manufacturer to install and distribute system software on its computers. Article 2B applies to both types of licenses.

9. *See* Brenda Sandburg, *Commercial Code Upgrade May Fall Apart*, THE RECORDER, Sept. 28, 1998, at 1 (describing the qualms of the entertainment and communications industries about a contract statute with one set of rules for all transactions in information).

"copyleft" license),[10] Consumers Union,[11] and the University of California at Berkeley[12] employ mass market licenses. The Article also points out that Article 2B's affirmation of mass market licenses has come at a cost for publishers: namely, the codification of new end user rights.

The Article then evaluates Article 2B's attempt to reshape current Article 2 default rules to fit software and information licensing and to account for different licensing practices among the converging information industries. The Article observes that, while the Article 2B drafting committee has made progress toward reshaping Article 2 default rules, in several fundamental ways Article 2B remains too wedded to Article 2 and thus threatens to *remake* licensing law by forcing hard goods-centric sales rules on software and information licensing. It also observes that Article 2B may need additional changes to accommodate varied licensing practices among the converging information industries.

II. ARTICLE 2B AND MASS MARKET LICENSES

Mass market licensing is not new.[13] Software companies have been using mass market licenses, and legal commentators have been writing

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10. The Free Software Foundation does not make its software "free" by placing it in the public domain. Rather, it does so via mass market licensing. *See* Free Software Foundation, *What is Copyleft?* (visited Nov. 5, 1998) <http://www.fsf.org/copyleft/copyleft.html>. According to the Debian organization, publisher of the Debian GNU/Linux "free software" operating system, "[t]ruly free software is always free. Software that is placed in the public domain can be snapped up and put into non-free programs, and be free no more. To stay free, software must be copyrighted and licensed." Debian GNU/Linux, *What Does Free Mean? or What Do You Mean By Open Software?* (visited Nov. 5, 1998) <http://www.debian.org/intro/free>.

11. *See* Consumer Reports ONLINE, *User Agreement* (visited Nov. 11, 1998) <http://www.consumerreports.org/Functions/Join/tos.html>.

12. *See* U.C. Berkeley Office of Technology Licensing, *Software Copyright Notice and Disclaimer* (visited Nov. 5, 1998) <http://www.socrates.berkeley.edu/~otl/Copnoti.html>.

13. Relatively new, however, are court decisions clearly articulating the value of mass market licensing. *See* Hill v. Gateway 2000, 105 F.3d 1147 (7th Cir. 1997), *cert. denied* 118 S.Ct. 47 (1997) (upholding contract terms presented to the user post-payment in a mixed software and computer hardware transaction); ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996); Hotmail v. Van$ Money Pie, Inc., 47 U.S.P.Q.2d 1020 (N.D. Cal. 1998) (assuming enforceability of mass market license); Arizona Retail Sys. v. Software Link, 831 F. Supp.759, 766 (D. Ariz. 1993) (holding a mass market license enforceable in the initial transaction between a value added reseller and a software publisher, but unenforceable in a subsequent transaction); Brower v. Gateway 2000, 676 N.Y.S.2d 569 (1998) (upholding contract terms presented to the user post-payment in a mixed software and computer hardware transaction).

about them, for decades.[14] The software industry is thriving in large part because of what mass market licenses enable: a diversity of innovative products provided to end users at attractive prices.[15] For most software products, the license *is* the product; the computer program provides functionality to the user, but the license delivers the use rights.[16]

The court's ruling in *ProCD v. Zeidenberg*[17] affirming the enforceability of mass market licenses may have surprised some legal scholars, but a contrary ruling would have devastated the software and electronic information industries. It is far better that the *ProCD* case merely provoked a few critical law review articles[18] than forced a radical change in

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14. Standard form contracts are not an innovation of software publishers. The use of standard form contracts is commonplace in virtually all lines of business. *See* 3 LAWRENCE A. CUNNINGHAM & ARTHUR J. JACOBSON, CORBIN ON CONTRACTS § 559A(B) (rev. ed. Supp. 1998); 1 E. A. Farnsworth, FARNSWORTH ON CONTRACTS § 4.26 (1990). Software publishers have been innovative, however, in the various ways they allow users to manifest assent to the terms. *See* Gomulkiewicz & Williamson, *supra* note 4, at 339-41. Software publishers have also been unique in their efforts to actually draw contract terms to the user's attention and require manifestation of assent. *Id.* at 352.

15. *See id.*

16. *See ProCD*, 86 F.3d at 1453 ("In the end, the terms of the license are conceptually identical to the contents of the package."). The use of mass market licenses enables the publisher to tailor a collection of rights to particular types of uses, so that the license, rather than merely the underlying software, becomes the product acquired by the user. This practice has analogies to other industries, such as the airline industry. An airline ticket is nothing more than a right to ride on a given flight, in a certain class of seat, on a certain day and time, to a certain location. The ticket price and associated rights vary from passenger to passenger, depending on the ticket the passenger acquired. For example, one passenger in coach may have paid twice as much as the passenger sitting across the aisle, but the higher priced ticket may entitle the passenger to a confirmed seat on another flight in case the airline cancels the regularly scheduled flight.

17. 86 F.3d 1447 (7th Cir. 1996).

18. *See, e.g.*, Karjala, *supra* note 1; Apik Minassian, *The Death of Copyright: Enforceability of Shrinkwrap Licensing Agreements*, 45 UCLA L. REV. 567 (1997); Kell Corrigan Mercer, Note, *Consumer Shrink-Wrap Licenses and Public Domain Materials; Copyright Preemption and Uniform Commercial Code Validity in* ProCD v. Zeidenberg, 30 CREIGHTON L. REV. 1287 (1997). Some commentators disparage the *ProCD* decision by saying that it has been severely criticized or that most commentators disagree with the court's opinion. *See, e.g.*, David A. Rice, Memorandum to Article 2B Drafting Committee (Mar. 18, 1998) (on file with author) (Professor Rice is a member of the Article 2B Drafting Committee). This count-up-the-law-review-article method of evaluating *ProCD* is a poor basis to judge the merits of the decision. Most commentators write to critique cases, not to praise them, so seeing more criticism than accolades is normal in legal scholarship. Even at that, one might quarrel with whether particular articles are, on balance, supportive or critical. *See* Maureen A. O'Rourke, *Copyright Preemption After the* ProCD *Case, a Market-Based Approach*, 12 BERKELEY TECH. L.J. 53 (1997) (agreeing with the court on contract grounds, while offering criticism on preemption grounds). An-

the way software and information publishers do business. Without an effective contracting method to license software and electronic information to the mass market, the value and choice of products would have diminished significantly, and some companies would have had no viable products at all.[19] Today, a wide variety of organizations employ standard form contracts to provide software and information to the mass market,[20] including Consumers Union,[21] Consumer Net,[22] University of California at Berkeley,[23] Dartmouth College,[24] Massachusetts Institute of Technology,[25] Texas Classroom Teachers Association,[26] Public Broadcast Service,[27] Free Software Foundation,[28] The Robert Woods Johnson Foundation,[29] The Partnership For Food Safety Education,[30] National Pediatric And Family

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other mode of criticizing *ProCD* is to call it, pejoratively one would suppose, an Easterbrook decision, implying that the court's opinion was the work of one rogue judge. Both *ProCD* and the *Gateway* case that followed, were unanimous opinions of the court, neither of which the 7th Circuit reconsidered *en banc*. *See* Hill v. Gateway 2000, 105 F.3d 1147 (7th Cir. 1997).

19. *See* Joel Rothstein Wolfson, *Contracts and Copyright are not at War: A Reply to "The Metamorphosis of Contract into Expand,"* 87 CALIF. L. REV. 79 (forthcoming 1999).

20. In Article 2B nomenclature, many of these contracts would be called "Access Contracts" rather than "Mass Market Licenses," although they are every bit mass market licenses in the normal sense of the term. Article 2B distinguishes between the two types of contracts so that the statute can apply context-specific rules to access contracts. *Compare* U.C.C. § 2B-102(1) (July 24-31, 1998 Draft), *with* U.C.C. § 2B-102(31) (July 24-31, 1998 Draft) and see U.C.C. § 2B-102, Reporter's Note 28 (July 24-31, 1998 Draft).

21. *See supra* note 11.

22. *See* Consumer Net, *Consumer Net Rules of Operation* (visited Sept. 17, 1998) <http://www.consumernet.org/html/online_rules.html>.

23. *See supra* note 12.

24. *See* Jim Matthews, *BlitzMail* (visited Nov. 5, 1998) <http://www.dartmouth.edu/pages/softdev/blitz.html>; Jim Matthews, *Fetch—Licensing* (visited Nov. 5, 1998) <http://www.dartmouth.edu/pages/softdev/fetch.html>.

25. *See* MIT Information Systems, *MIT Information Systems* (visited Nov. 5, 1998) <http://web.mit.edu/is/help/maczephyr/license.html>.

26. *See* Texas Classroom Teachers Association, *TCTH Internet Site Disclaimer: Terms and Conditions* (visited Sept. 17, 1998) <http://www.tcta.org/disclaimer.htm>.

27. *See* Shop PBS, *Terms and Conditions for Use of Shop PBS* (visited Sept. 17, 1998) <http://www.pbs.org/insidepbs/rules/shop.html>.

28. *See supra* note 10.

29. *See* The Robert Wood Johnson Foundation, *Terms and Conditions of Use* (visited Sept. 17, 1998) <http://www.rwjf.org/trmscon.htm>.

30. *See* The Partnership for Food Safety Education, *Usage Guidelines* (visited Sept. 17, 1998) <http://www.fightbac.org/word/guidelines.html>.

HIV Resource Center,[31] National Institutes of Health Library,[32] National Kidney Foundation,[33] Guggenheim Museum,[34] Wisconsin Bar Association,[35] First Baptist Church (Rochester, MN),[36] and Catholic Online Webmail.[37]

Standard form contracts are not only ubiquitous in modern commerce; they are also regarded as an efficient method of distribution under the RESTATEMENT (SECOND) OF CONTRACTS[38] and universally upheld under Article 2 of the Uniform Commercial Code.[39] There are, to be sure, some important differences between mass market software licenses and standard form contracting in other industries, but those differences benefit licensees. First, licensors have a strong incentive to draw the user's attention to license terms and to get a manifestation of assent. If the user is not aware of the contours of the license or does not feel bound by them, the licensor (who must rely largely on self-policing in the mass market) cannot count on the user to abide by the license. Second, software users are not a docile lot. They are particularly unforgiving of companies that try to license software on unreasonable terms, and the Internet has given them a powerful tool to express their views.[40] Software end users have formed associa-

31. *See* National Pediatric Family HIV Resource Center, *Terms and Conditions of Use: Liability Statement* (visited Sept. 17, 1998) <http://www.pedhivaids.org/disclaimer.html>.

32. *See* National Institutes of Health Library, *Copyright, Disclaimers and Access Restrictions* (visited Sept. 17, 1998) <http://libwww.ncrr.nih.gov/disclaim.html>.

33. *See*, AM. J. KIDNEY DISEASES, *Terms and Conditions of Use* (visited Sept. 17, 1998) <http://www.ajkdjournal.org/terms.html>.

34. *See* Solomon R. Guggenheim Museum, *Internet Legal Page* (visited Sept. 17, 1998) <http://www.guggenheim.org/legal.html>.

35. *See* The State Bar of Wisconsin, *State Bar of Wisconsin Web Site: Terms, Conditions and Disclaimers* (visited Sept. 17, 1998) <http://www.wisbar.org/gendisclaimer.html>.

36. *See* First Baptist Church, *Legal Information* (visited Sept. 17, 1998) <http://www.firstb.org/copyright.html>.

37. *See* Catholic Online, *Catholic Online WebMail/EdgeMail User Agreement* (visited Nov. 5, 1998) <http://webmail.catholic.org/terms.htm>.

38. *See* RESTATEMENT (SECOND) OF CONTRACTS § 211 cmt. A (1981).

39. *See* 3 CUNNINGHAM & JACOBSON, *supra* note 14, § 559A(B).

40. Even publishers of market-leading products are susceptible to the wrath of end users in controversies over mass market license terms. *See* Gomulkiewicz & Williamson, *supra* note 4, at 345 n.40 (user objections to WordPerfect license); Micalyn Harris, *Decloaking Development Contracts*, 16 J. MARSHALL J. OF COMPUTER & INFO. LAW 403, 407 (1997) (user objections to Borland license); DAVID BRIN, THE TRANSPARENT SOCIETY 165-70 (1998) (explaining the potentially valuable effects of "flame mail").

tions to monitor and influence software license terms.[41] Information industry research organizations, such as the Gartner Group,[42] as well as the trade press,[43] keep a watchful eye on licensing practices, sounding the alarm when they see a change that they believe negatively affects end users.

Critics of mass market licensing try to paint a picture of software or information licensing as amounting to nothing more than a collection of me-too forms in which licenses simply mirror a copyright first sale. Nothing could be farther from the truth. Today's mass market licensing is characterized by contract variety and a variety of license terms.[44] It is common for mass market licenses to provide users with more rights than the user would have acquired had the user simply bought a copy of the software, including reproduction, derivative works, and distribution rights. As new products have been developed and brought to market, such as multimedia software, client-server products, and web site "products," contract variety and customer choice have also flourished via mass market licensing.[45]

Innovative mass market licensing practices have played a key role in the success of many popular Internet products. The Netscape Navigator browser achieved early success because it permitted non-commercial users to freely use, copy, and distribute the software. Microsoft licenses free, unlimited copying and distribution of its Internet Explorer browser software. The Apache[46] web server and the Sendmail[47] e-mail router have become Internet standbys, and the Linux operating system has a strong fol-

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41. *See* Lauren Paul, *Tug-of-War—User Groups Leverage Clout to Influence Agreements*, PC WK., Nov. 7, 1994, at 21-24. Librarians have established a website setting out their views on preferred terms and conditions for acquiring information products. *See* International Coalition of Library Consortia, *Statement of Current Perspective and Preferred Practices for the Selection and Purchase of Electronic Information* (visited Sept. 17, 1998) <http://www.library.yale.edu/consortia/statement.html>; Liblicense, *Licensing Digital Information: a Resource for Librarians* (visited Nov. 5, 1998) <www.library.yale.edu/~llicense/index.shtml>.

42. *See* GARTNER GROUP INTERACTIVE (visited Nov. 5, 1998) <http://gartner12.gartnerweb.com/public/static/home/home.html>.

43. *See, e.g.*, Randy Weston, *Microsoft profits from license changes* (visited Nov. 5, 1998) <http://www.news.com/News/Item/0,4,26061,00.html?st.ne.ni.lh>.

44. See the Appendix to this Article, which sets forth a sampling of the rich assortment of license terms being offered today for software and information products.

45. *See* Gomulkiewicz & Williamson, *supra* note 4, at 352-56, 361-65.

46. *See* The Apache Group, *Apache HTTP Server Project* (visited Sept. 17, 1998) <http://www.apache.org>.

47. *See* Sendmail Consortium, *Welcome to Sendmail.org* (visited Sept. 17, 1998) <http://www.sendmail.org>.

lowing,[48] based on "open source" licensing.[49] Open source licensing is the practice of freely licensing the creation of derivative works and, in turn, requiring that the source code for these derivatives also be freely licensed for the creation of further derivatives.[50] Netscape has recently implemented a variant of open source code licensing for its Navigator and Communicator software.

Critics of mass market licenses also argue that such licenses must be regulated because a few mass market licenses contain objectionable terms, and more such terms could, in the future, find their way into mass market licenses.[51] That argument is misguided. It is no more appropriate to judge mass market licenses by their worst clauses than it is to judge all of litera-

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48. *See* Robert Lemos, *Linux maker lands big investors*, ZDNN (visited Nov. 5, 1998) <http://www.msnbc.com/news/200767.asp>; Josh McHugh, *Linux: the making of a global hack*, FORBES (Aug. 10, 1998) <http://www.forbes.com/forbes/98/0810/6209094s1.html>; Glyn Moody, *The Greatest OS that (N)ever Was*, WIRED 5.08 (Aug. 1997) <http://www.wired.com.wired/5.08/linux.html>; Sebastian Rupely, *Linux builds momentum*, PC MAGAZINE (Sept. 15, 1998) <http://www.zdnet.com/zdnn/stories/zdnn_smgraph_display/0,4436,2137588,00.html>; Randy Weston, *Linux gaining respect*, CNET NEWS.COM (visited Nov. 5, 1998) <http://www.news.com/News/Item/0,4,24436,00.html?st.ne.ni.rel>.

49. *See* Eric S. Raymond, *The Cathedral and the Bazaar* (visited Feb. 4, 1998) <http://www.redhat.com/redhat/cathedral-bazaar/>; Eric S. Raymond, *Homesteading the Noosphere* (visited Aug. 15, 1998) <http://www.sagan.earthspace.net/esr/writings/homesteading/>.

50. *See* Josh McHugh, *For the Love of Hacking: A Band of Rebels Think Software Should be as Free as the Air We Breathe*, FORBES, Aug. 10, 1998, at 94; Debian GNU/Linux, *What Does Free Mean? or What Do You Mean By Open Software?* (visited Nov. 5, 1998) <http://www.debian.org/intro/free>.

51. *See generally* Cem Kaner, *A Bad Law For Bad Software* (visited Sept. 10, 1998) <http://lwn.net/980507/a/ucc2b.html> [hereinafter Kaner, *A Bad Law*] (quoting a non-disclosure agreement for a McAfee anti-virus product: "The customers will not publish reviews of the product without prior consent from McAfee."); Cem Kaner, *Bad Software: What to do When Software Fails* (visited Nov. 23, 1998) <http://www.badsoftware.com/uccindex.htm> (highlighting objectionable license terms); Letter from Jean Braucher & Peter Linzer to Members of the American Law Institute (May 5, 1998), *available at* <http://www.ali.org/ali/Braucher.htm> (visited Nov. 22, 1998) (moving ALI to return Article 2B to the drafting committee for fundamental revision). Some license terms seem more reasonable than their critics might suggest when viewed in context, such as the terms for the Microsoft Agent software product. *See* Charles C. Mann, *Who Will Own Your Next Good Idea*, ATLANTIC MONTHLY, Sept. 1998, at 80 (criticizing the license for Microsoft Agent). The Agent software grants the user the right to use certain "cutesy" animated figures, which are copyrighted by Microsoft. These figures are akin to Mickey Mouse or Barney. You can be certain that Disney would never license a third party to use Mickey Mouse in a product in which Mickey says disparaging things about Disney. *Cf.* Deere & Co. v. MTD Prod.s, Inc., 41 F.3d 39 (2d Cir. 1994) (holding that an attempted parody of Deere's deer character constituted trademark dilution).

ture by tabloid journalism or trashy novels. Just as free speech does not deserve to be regulated because some speech is objectionable, so mass market licenses do not deserve to be regulated because some publishers use them as a vehicle for objectionable terms. Mass market licenses should be judged on the basis of the tremendous benefits they provide to software publishers and users,[52] not on the few provisions critics can find to ridicule. The market will punish those who employ harsh terms. Consumer protection laws and doctrines such as unconscionability,[53] construing contract terms against the drafter,[54] and copyright misuse[55] provide powerful checks as well.[56]

Other critics of mass market licenses worry about the theoretical costs of mass market licenses that are attributable to the effects of (to use their misnomer) "private legislation."[57] A critique of the "private legislation" theory is beyond the scope of this Article.[58] Even if such costs really exist,[59] however, they are far outweighed by the extraordinary costs that publishers and users alike could incur if Article 2B eliminates or overly encumbers mass market licensing.

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52. Customer satisfaction with software products is quite high. *See, e.g.*, John Morris, *Readers Rate Software & Support Satisfaction*, PC MAG., July 1997, at 199 ("As in previous years, the results were generally positive. Most respondents give the products they use ratings of 8 or higher on a scale of 1 to 10 for satisfaction, and—with a few exceptions—give vendors solid ratings for technical support as well."); Peggy Watt, *How Happy Are You...Really?*, PC MAG., July 1993, at 311-12 ("Are customers satisfied? You Bet.").

53. *See* U.C.C. § 2-302 (West 1989); U.C.C. § 2B-110 (July 24-31, 1998 Draft); 1 E.A. FARNSWORTH, FARNSWORTH ON CONTRACTS § 4.28 (1990).

54. *See* RESTATEMENT (SECOND) OF CONTRACTS § 206 (1981); 1 FARNSWORTH, *supra* note 53, § 4.24.

55. *See, e.g.*, DSC Communications v. DGI Techs., 81 F.3d 597 (5th Cir. 1996); Lasercomb v. Reynolds, 911 F. 2d 970 (4th Cir. 1990).

56. *See generally* Raymond T. Nimmer, *Breaking Barriers: The Relation Between Contract and Intellectual Property Law* 13 BERKELEY TECH. L.J. 827 (1998).

57. *See, e.g.*, Lemley, *supra* note 1, at 23; David A. Rice, *Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543 (1992).

58. For criticism of the private legislation theory, see Tom W. Bell, *Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine*, 76 N.C. L. REV. 557, 607 n.226 (1998) (criticizing "private legislation" as a metaphor that tends to mislead); Richard Epstein, *Notice and Freedom of Contract in the Law of Servitudes*, 55 S. CAL. L. REV. 1353, 1359 (1982). Contrary to the assumptions underlying the term "private legislation," contract diversity in mass market software licenses is rampant, and software publishers actively attempt to bring terms to the user's attention rather than burying them. *See* Gomulkiewicz & Williamson, *supra* note 4, at 348-50.

59. *See* Bell, *supra* note 58, at 591.

Finally, critics complain that licenses can limit the user's ability to use the licensed software or information. That is, of course, true—indeed, it is the very essence of licensing. But it is overly simplistic, and usually wrong, to think that licenses are merely tools to take away rights.[60] They are necessary to convey many affirmative rights as well.[61]

Critiquing mass market licensing is interesting as an intellectual exercise, but what are the real alternatives for Article 2B? Four alternatives exist: (1) provide that contracts are enforceable only if negotiated and/or signed; (2) force publishers to base their transactions solely on background rules of intellectual property law, such as the first sale doctrine, rather than contract; (3) dictate the specific terms that may or may not be included in standard form contracts; and (4) give courts greater leeway to strike contract terms. These four alternatives are not practicable.

The transaction costs associated with requiring negotiation or a signature would be prohibitively high.[62] For this reason, standard term contracts

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60. *See infra* Appendix of Selected License Terms; Gomulkiewicz & Williamson, *supra* note 4, at 352-56, 361-65. Another objection seems to be to license terms that prohibit reverse engineering or de-compiling software. While some may have philosophical objections to these terms, they have been standard industry practice for many years among companies of all sizes. Article 2B is not the proper place to resolve this debate—Article 2B should not dictate the enforceability of any given contract term, except an unconscionable or otherwise unenforceable one. In some cases, courts have upheld prohibitions on reverse engineering as reasonable, and in others, such as when the user's goal is merely to achieve interoperability, courts have refused to uphold them on various grounds. *See, e.g.*, ProCD v. Zeidenberg, 86 F.3d 1447, 1454-55 (7th Cir. 1996) (enforcing prohibition on reverse engineering); DSC Communications v. DGI Techs., 81 F.3d 597 (5th Cir. 1996) (copyright misuse); Vault Corp. v. Quaid Software, 847 F.2d 255 (9th Cir. 1988) (preemption). In reality, reverse engineering is seldom critical to the innovation necessary to advance the state of the art for personal computer software. *See* Gomulkiewicz & Williamson, *supra* note 4, at 359 n.97. The feature set and other characteristics of a software product are readily ascertainable in the normal use of the product or via publicly available information. The information one can glean from de-compiling is of limited use in any event. *See* Andrew Johnson-Laird, *Software Reverse Engineering in the Real World*, 19 U. DAYTON L. REV. 843, 902 n.4 (1994); Pamela Samuelson et al., *Symposium: A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2336 n.90 (1994).

61. The software publisher holds the exclusive right to copy, create derivatives, distribute, and publicly perform or display its software. The end user can only acquire these rights by license, as users do in numerous mass market licenses. *See infra* Appendix of Selected License Terms.

62. *See Pro CD*, 86 F.3d at 1451 (discussing the inefficiencies of requiring a signature on every contract); RESTATEMENT (SECOND) OF CONTRACTS § 211 cmt. A (1981) (describing the benefits of standard forms); 1 JOSEPH M. PERILLO, CORBIN ON CONTRACTS § 1.4, at 13-15 (rev. ed. 1993) (noting that we could not function as a fast-paced, industrialized nation if every contract had to be negotiated); Gomulkiewicz &

are the norm in today's economy, not the exception,[63] and contract law does not generally require a signature to create a contract. Contracting parties have always had the flexibility to manifest assent in a variety of ways, from nodding their head, to shaking hands, to making an "X," to clicking an "I agree" button.[64]

Background rules of intellectual property, such as copyright's first sale doctrine, provide woefully inadequate transaction models for software and information products. A copyright first sale is, in effect, a one-size-fits-all transaction model. As I have described in detail elsewhere, forcing a software publisher to sell software like a newspaper or book does not permit the publisher to provide various packages of rights desired by end users at attractive price points.[65] If Article 2B constrains mass market software licensing, product prices will increase and product variety and choice will decrease.

If Article 2B dictates the specific terms which may or may not be in standard form software contracts, it will impinge on the important principles of freedom of contract and contract certainty. If Article 2B gives courts greater leeway to strike contract terms, it will likely freeze development of new contract forms, decrease contract certainty, and potentially increase litigation over licenses. Hence, these approaches should be pursued very cautiously. While there is a rightful place for some limits on freedom of contract, the better approach is to start by affirming the value of mass market licensing and then apply any regulation with care and precision. Regulation is always possible so long as those proposing it can convince lawmakers it is good public policy overall.[66]

Williamson, *supra* note 4, at 341-56; Maureen A. O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption on Software License Terms*, 45 DUKE L.J. 479, 495 (1995).

63. 1 FARNSWORTH, *supra* note 53, § 4.26-27, at 478-95 (1990). Literally to require dickering would create the absurd result that in order to have an agreement you would first have to have a disagreement.

64. *See* U.C.C. § 2-204 (West 1989); U.C.C. § 2B-202 (July 24-31, 1998 Draft).

65. *See* Gomulkiewicz & Williamson, *supra* note 4, at 352-56, 361-65.

66. Ralph Nader's Consumer Technology Project has proposed that software "lemon laws" be passed in every state. *See* Consumer Project on Technology, *Protest Page on: Uniform Commercial Code Article 2B* (visited Sept. 17, 1998) <http://www.cptech.org/ucc/ucc/html>; Brian McWilliams, *Venders' Right to Ship Buggy Software Under Fire*, PC WORLD ONLINE (Mar. 25, 1998) (visited Nov. 23, 1998) <http://www.pcworld.com./news/daily/data/0398/980325081609.html>. *But see supra* note 52 (customer satisfaction with software products is quite high). Several bills have been introduced in Congress to invalidate contractual prohibitions on reverse engineering. *See, e.g.*, Digital Era Copyright Enhancement Act, H.R. 3048, 105th Cong. (1997). The European Union has also passed legislation on this issue. *See* Council Directive

What is Article 2B doing about mass market licenses? End users should be cheering.[67] Article 2B contains protections against hidden license terms; it requires an opportunity to review the terms and a manifestation of assent to the terms.[68] Article 2B does not enforce mass market license terms that conflict with expressly agreed terms.[69] Section 2B-208 conditions enforceability of mass market licenses on the giving of a refund when contract terms are presented to the user after payment.[70] It also allows the user to recover any costs associated with returning the software or for harm caused to the user's system in the event the user must install the software in order to view the terms of the mass market license.[71] The addition of 2B-208 and other consumer protections to Article 2B prompted the co-chairs of the American Bar Association's Business Law Subcommittee on Information Licensing to observe: "The current draft of Article 2B affords more protections for consumers than any existing commercial statute."[72] Not only do consumers receive enhanced protections for software and information licensed via standard forms in the mass market, but also Article 2B takes the unprecedented step of applying many of these protections to businesses.[73]

III. MOLDING AND SHAPING ARTICLE 2 RULES IN ARTICLE 2B

Though Article 2B's treatment of mass market licenses has been a focal point of the drafting process, Article 2B primarily addresses other aspects of licensing. Fundamentally, Article 2B should provide sensible, industry standard default rules for day to day licensing transactions. In creating the Article 2B default rules, the drafters of Article 2B began with the default rules of Article 2. The utility of Article 2B will depend in large

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91/250/EEC of 14 May 1991 on the Legal Protection of Computer Programs, art. 6 (permitting reverse engineering in EC countries to obtain information to create interoperable products in certain cases and overriding any contrary contractual provision).

67. *See* Mary Jo Howard Dively & Donald A. Cohn, *Treatment of Consumers Under Proposed U.C.C. Article 2B Licenses*, 16 J. MARSHALL J. COMPUTER & INFO. L. 315, 327-28, 334 (1997). Ms. Dively and Mr. Cohn are co-chairs of the ABA Section of Business Law Subcommittee on Information Licensing.

68. *See* U.C.C. § 2B-111 (July 24-31, 1998 Draft) ("Manifesting Assent"); *id.* § 2B-112 ("Opportunity To Review; Refund").

69. *See id.* § 2B-208(a)(2).

70. *See id.* § 2B-208(b)(1).

71. *See id.* § 2B-208(b)(2)-(3).

72. Dively & Cohn, *supra* note 67, at 334.

73. *See* U.C.C. § 2B-208, Reporter's Note 2 (July 24-31, 1998 Draft) (commenting that U.C.C. § 2B-208 "is not limited to consumer transactions").

part upon how the drafters of Article 2B mold and shape the hard goods-centric rules of Article 2 to fit software and information contracting, and the default rules they add to resolve issues specific to license agreements. To provide a perspective on how Article 2B rates in this regard, I will briefly examine Article 2B's treatment of warranties, duration of contracts, and interpretation of exclusive license grants.

A. Warranties

A major failing of Article 2B to date is that the drafting committee has remained too wedded to ill-fitting rules found in Article 2. In other words, Article 2B actually threatens to *remake* software and information licensing law by imposing contract rules on it that are better suited to sales of goods. A good example of this is Article 2B's treatment of warranties.[74]

Representatives from both software publishers and end user groups have commented that the Article 2 merchantability and non-infringement warranties do not reflect software industry practice.[75] In the case of the implied warranty of merchantability, a representative of consumer interests and this author collaborated on a re-drafted warranty, which was presented to the drafting committee.[76] The drafting committee has yet to adopt this proposal, however, even though it knows that the current Article 2 formulation is flawed by the reckoning of software publishers and users alike.

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74. *See id.* U.C.C. § 2B-401 ("Warranty and Obligation Concerning Quiet Enjoyment and Noninfringement"); *id.* § 2B-403 ("Implied Warranty: Merchantability of Computer Program").

75. *See* Robert W. Gomulkiewicz, *The Implied Warranty of Merchantability in Software Contracts: A Warranty No One Dares to Give and How to Change That*, 16 J. MARSHALL J. COMPUTER & INFO. LAW 393 (1998); Jeffery C. Selman & Christopher S. Chen, *Steering the Titanic Clear of the Iceberg: Saving the Sale of Software from the Perils of Warranties*, 31 U.S.F. L. REV. 531 (1997); Edward G. Durney, Comment, *The Warranty of Merchantability and Computer Software Contracts: A Square Peg Won't Fit in a Round Hole*, 59 WASH. L. REV. 511 (1984).

76. *See* Cem Kaner & Robert W. Gomulkiewicz, *Moving Toward a Usable Warranty of Merchantability*, presented to the Article 2B Drafting Committee (May 31, 1997) (on file with author); Cem Kaner, *Bad Software: What to do When Software Fails* (visited Nov. 23, 1998) <http://www.badsoftware.com/uccindex.htm> ("Bob Gomulkiewicz (Microsoft's lawyer) and I worked together on the warranty of merchantability. Our goal was to write something that consumers could support and that Microsoft would actually be willing to offer. *We succeeded....* The Committee chose not to vote on the proposal, even in the face of repeated advice that if they left the current implied warranty alone, no sane software publisher would provide it. The Committee chose not to vote on that compromise.").

The implied warranty of non-infringement that Article 2B carries over from Article 2 is a far cry from industry practice. Unlike licenses typically used in the software industry, Article 2B places the risk of infringement completely on the licensor. Some argue this is *fair* because the licensor is in the best position to know of and prevent infringement.[77] Anyone who has negotiated a software license has undoubtedly heard this argument.

In practice, of course, this argument seldom carries the day—it is very common in negotiated transactions to allocate infringement risk between licensor and licensee, or for the licensee to assume all risk of infringement. The sheer number of issued patents, the difficulty of conducting patent searches, and the fact that any given patent can be interpreted dozens of ways, makes placing the risk on the licensor inequitable in many cases. Often the licensor cannot obtain insurance or will not receive enough income from the license to offset the risk of providing a non-infringement warranty (in many transactions, the licensee will receive much more income through use of the software than the licensor who supplied it). The smaller the software developer or publisher, the more likely the developer or publisher is to resist shouldering the risk of a full blown non-infringement warranty. Thus, in the case of the non-infringement warranty, the drafters of Article 2B have created a default rule that runs contrary to industry practice and to the expectations of the very parties (small developers and publishers) most likely to be subject to the default rule.

The warranty of non-infringement is also an area in which Article 2B may need to distinguish between the licensing traditions of the software industry and other information industries. Observers from the book publishing industry have informed the drafting committee on several occasions that a full-blown warranty of non-infringement is standard practice in their industry.[78] If that is so, then melding licensing traditions may be the wrong approach. The drafting committee should consider an approach that incorporates different default rules for different industries or creates a mechanism[79] that achieves the same result.

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77. This may be the case with respect to copyright infringement and trade secret misappropriation, but it is less true or simply not true with respect to patent infringement.

78. Paul J. Sleven of St. Martin's Press has made this observation at several drafting committee meetings in response to this author's observations about software industry trade practices concerning the warranty of non-infringement. In the book publishing industry, patents are seldom at issue.

79. Default rules can be varied by usage of trade, but the burdens involved with proving usage of trade in order to overcome a black letter law default rule give pause to the industry whose industry practice is not reflected in the black letter law. *See* U.C.C. §§ 1-201(3), 1-205 (West 1989).

B. Duration of Contracts

In contrast to Article 2B's default rules for warranties, the Article 2B default rule for duration of contracts is a good example of the drafting committee's attempt to recognize the need to craft a different rule for software and information licensing than for traditional sales of goods.[80] However, as described below, the default rule chosen by the Article 2B drafting committee ignores important nuances and, in the end, causes more harm than good.

Under Article 2, if the parties do not specify the duration of their contract, the term is a "reasonable" time in light of the commercial circumstances.[81] The contact may be terminated as to future performances on reasonable notice to the other party. This rule works well for services contracts in the information industries, such as a contract to provide support services or develop software code.

A weakness of the Article 2 default rule in the software and information license agreement context, however, is the implication that certain grants of rights are terminable at will. For most off-the-shelf, mass market software products, the user expects a perpetual license subject only to cancellation for breach. The same expectation is true for licensed informational content that the licensee integrates or combines with other information to create a single product: the licensee does not expect to have to rip the combined product apart at the behest of the licensor. The default rule in section 2B-308 captures and melds these industry practices which are consistent across information industries. So far, so good.

However, in its present form, section 2B-308 does not work well for software source code[82] licensing. Source code often contains highly valuable trade secret information. It is common for software publishers to license proprietary source code to other software companies (including competitors, on occasion), computer hardware manufacturers, customers, and other third parties. These source code licenses are seldom for a perpetual term. Under the present formulation of section 2B-308, if the software publisher neglects to specify a contract duration, the default rule results in a perpetual license grant.[83] This "bug" in section 2B-308 is no

80. *See* U.C.C. § 2B-308 (July 24-31, 1998 Draft).

81. *See* U.C.C. § 2-309 (West 1989).

82. *See* COMPUTER DICTIONARY 324 (1991) ("Source code is human readable program statements written in a high-level or assembly language, as opposed to object code, which is derived from the source code and designed to be machine readable.").

83. U.C.C. § 2B-308 (July 24-31, 1998 Draft).

small matter: it exposes unsophisticated licensors to inadvertent licenses of valuable technology in perpetuity.

C. Interpretation of Exclusive License Grants

One of the most important aspects of Article 2B is its ability to provide contract certainty by resolving license interpretation issues that are ambiguous in current licensing law practice. One basic meddlesome issue is whether an exclusive license grant means the grant is exclusive as to everyone *including* the licensor or simply everyone *but* the licensor.[84] The careful licensing lawyer would take care of this in crafting the language of the license grant,[85] but Article 2B, like Article 2, assumes a lawyer-free transaction. Article 2B resolves the current ambiguous state of the law by taking the position that an exclusive license grant means exclusive as to everyone, including the licensor.[86] Thus, the Article 2B default rule for interpreting exclusive license grants shows how Article 2B can make a positive contribution to bringing order to the current disarray in licensing law.

IV. CONCLUSION

The software and information industries are thriving and fueling significant economic growth, despite the chaotic state of contract law for licensing transactions. A uniform contract law for software and information licensing could provide significant benefits to providers and users of information products. To be truly beneficial, however, the law must affirm the basic principle of freedom of contract, increase contract certainty, be attuned to the unique practices of the affected industries and the coming digital convergence, and allow for innovative products and methods of distribution. A regulatory statute, a statute based on antiquated rules and distribution methods, or a statute which provides even less contract certainty than today's world of licensing law chaos, is probably best left unwritten.

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84. *See, e.g.*, 8 DONALD S. CHISUM, CHISUM ON PATENTS §§ 21-266, 21-267 (1998); MICHAEL EPSTEIN, MODERN INTELLECTUAL PROPERTY § 15-5 (3d ed. 1997); 2 ROGER MILGRIM, MILGRIM ON LICENSING § 15-33 (1998).

85. *See* 1 STEVEN Z. SZCZEPANSKI, ECKSTROM'S LICENSING IN FOREIGN AND DOMESTIC OPERATIONS 3-18 (1998).

86. *See* U.C.C. § 2B-307(f)(2) (July 24-31, 1998 Draft).

V. APPENDIX OF SELECTED LICENSE TERMS[87]

A. 3Com

1. *PalmPilot Pro End User Software License Agreement*

Multiple Copies: "With respect to the PalmPilot Desktop Software, you may reproduce and provide one (1) copy of such Software for each personal computer or PalmPilot product on which such Software is used as permitted hereunder. With respect to the PalmPilot Device Software, you may use such Software only on one (1) PalmPilot product."

B. 3G Graphics, Inc.

1. *Art à la Carte*

Derivative Works; Distribution: "You may use the contents of your 3G Graphics product as illustrative or decorative material that is included as part of a total graphic design for print or multimedia communication, produced for you, your employer, or a client."

C. Adobe Systems, Inc.

1. *Acrobat Reader 3.01 Electronic End-User License Agreement*

Unlimited Copies and Distribution: "You may make and distribute unlimited copies of the Software, including copies for commercial distribution, as long as each copy that you make and distribute contains this Agreement, the Acrobat Reader installer, and the same copyright and other proprietary notices pertaining to this Software that appear in the Software."

Install on Network or Multiple Computers: "You may ... install and use the Software on a file server for use on a network for the purposes of (i) permanent installation onto hard disks or other storage devices or (ii) use of the Software over such network."

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87. The following license terms were collected from the license agreements accompanying various information products. The headings immediately preceding the quotes are provided by the author. Copies of the original license agreements are on file with the author.

2. *PageMaker 6.5 End User License Agreement*

Home Use: "The primary user of each computer on which the Software is installed or used may also install the Software on one home or portable computer. [So long as there is no concurrent use]."

Copying and Distribution Rights for Font Software: Rights include the ability to download the fonts to a printer, take a copy of the fonts to a commercial printer (if the commercial printer also has a license for the fonts), and "convert ... the font software into another format for use in other environments, subject to [additional] conditions." For example, this section would allow TrueType fonts to be converted to Bitmap fonts.

3. *Type on Call Electronic End User License Agreement*

Authorized to Use Unencrypted Software: "Notwithstanding anything else in this Agreement, you acknowledge that although Type On Call contains Software for a number of typefaces and other product(s), you agree that you will use, and that the licenses set forth below apply to, only that Software which has not been encrypted or for which you have received access codes from Adobe."

Choice in Network Configuration: "Provided the Software is configured for network use, [you may] install and use the Software on a single file server for use on a single local area network for either (but not both) of the following purposes:

(1) permanent installation onto a hard disk or other storage device of up to the Permitted Number of Computers; or

(2) use of the Software over such network, provided the number of different computers on which the Software is used does not exceed the Permitted Number of Computers. For example, if there are 100 computers connected to the server, with no more than fifteen computers ever using the Software concurrently, but the Software will be used on 25 different computers at various points in time, the Permitted Number of Computers for which you need a license is 25."

Home Use: "The primary user of each computer on which the Software is installed or used may also install the Software on one home or portable computer. However, the Software may not be used on the secondary computer by another person at the same time the Software on the primary computer is being used."

Copy Fonts to Printer: Licensee may "[d]ownload the font software to the memory (hard disk or RAM) of one output device connected to at least one of the computers on which the font software is installed for the purpose of having such font software remain resident in the output device."

Allows Conversion of Font to Different Format (limited right to create derivative works): Licensee may "[c]onvert and install the font software into another format for use in other environments, subject to the following conditions: A computer on which the converted font software is used or installed shall be considered as one of your Permitted Number of Computers. You agree that use of the font software you have converted shall be pursuant to all the terms and conditions of this Agreement, that such font software may be used only for your own customary internal business or personal use and that such font software may not be distributed or transferred for any purpose, except in accordance with Paragraph 3 below."

D. Apache Group

1. Apache Web Server (Distributed as Freeware)

Unlimited Distribution: "Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: [maintain copyright notice, acknowledge in all advertising that distributed product contains software developed by the Apache group, and not use Apache name]"

E. "Artistic License"[88]

1. *Alternative Free Software License*

Copying and Distribution: "You may make and give away verbatim copies of the source code form of the Standard Version of this Package [collection of software files covered by the license] without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers."

Modification: "You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed the file and provided that you do at least ONE of the following [place modifications in the Public Domain, use the modified Package only within your organization, rename non-standard executables so that they do not conflict, or make other distribution arrangements with the copyright holder]."

F. Asymetrix

1. *Pocketbook License Agreement for Daybook+ for Windows 3.0*

Derivative Works: The agreement allows you too make derivative works if you are a licensed user of "ToolBook." Modifications are only for internal use unless a separate distribution license is obtained.

G. Autodesk, Inc.

1. *General Shrink Wrap License Agreement*

Concurrent Use: "[I]f this Software is being licensed to you for use on a networked system (certain products only), you may operate the Software as a multiple-user installation with either: [the maximum use being one person at one time, or the maximum number of concurrent users being the number of people authorized by additional licenses]."

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88. The Artistic License is a form of "freeware" software license designed to encourage the distribution of source code and maintain the user's ability to modify the code. The most popular product distributed under the Artistic License is the scripting language Perl.

Multiple Versions: "If the software Package contains versions designed for use on more than one operating system, ... you may install all versions of the Software but only on one computer at one location at any one time ...."

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K. Id Software, Inc.

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92. These two licenses, much like the GNU license, grant very broad rights to the user, but also require the user to license any modifications that the user makes under the same terms.

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THE TALES THAT ARTICLE 2B TELLS

By Jessica Litman †

ABSTRACT

Proposed article 2B's description of its own relationship with copyright law is at best confused, and at worst disingenuous. The Preface to Article 2B insists that its purpose is not to create new rights in information or informational works, but only to facilitate transactions in rights deriving from some other source of law. The statutory language, however, contemplates the assertion of rights beyond those provided by any branch of intellectual property law. Ultimately, the Preface appears to contemplate that an enforceable license may be based solely on the fact that the licensor "has control over the source of information that the licensee desires to utilize," without regard to intellectual property rights. Such a rule would be inconsistent with current law, and dubious as a matter of intellectual property and informational policy. It leaves the reader at sea as to which, if any, of the statements in the Preface she should consider reliable.

Perhaps we should call this the age of disingenuousness. The baby boom generation grew up with the idea that advertisers shade the truth to persuade consumers to buy their products.[1] We have learned that politicians sometimes speak with the intent to mislead.[2] Recently, we've seen some proposed laws that fit right into the pattern. Laws ought to be immune from the sins of false advertising; after all, if they aren't clear about what it is they seek to do, how likely is it that they will work? But, wise or not, it is easy to point out laws that purport to accomplish one goal while apparently seeking to achieve a very different one. Perhaps it is not so great a leap, after all, to draft proposed laws and explanatory language that seek to convey a misstatement or two about what it is the law is intended to do.

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† Professor of Law, Wayne State University. B.A. 1974, Reed College. M.F.A., 1976 Southern Methodist University. J.D., 1983, Columbia University. I would like to thank Jon Weinberg and Pamela Samuelson for their helpful comments on an earlier draft.

1. *See generally,* VANCE PACKARD, THE HIDDEN PERSUADERS (1957).

2. *See, e.g., id.* at 155-207; United States v. Nixon, 418 U.S. 683 (1974); U.S. v. Dean, 55 F.3d 640 (D.C. Cir. 1995); Mecham v. Gordon, 156 Ariz. 297 (1988).

In 1988, for example, the United States Congress enacted the Berne Convention Implementation Act.[3] That Act sought to avoid an international treaty obligation to establish authors' "moral rights"[4] by claiming, insincerely, that a pastiche of U.S. federal and state laws already protected authors' moral rights,[5] and then providing expressly that the Act would not give any author enforceable moral rights.[6] Ten years ago, that sleight of hand struck some observers as a scandalous departure from legislative morality.[7] Today, it seems less surprising.

Today, it is not hard to identify a number of apparently disingenuous proposals to improve current law that are making the rounds. The legislative history of the Digital Millennium Copyright Act[8] ("DMCA"), for example, is riddled with that sort of thing.[9] The DMCA began as a gleam in

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3. Pub. L. No 100-568, 102 Stat. 2853 (1988).

4. *See* Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, art. 6 *bis*, *reprinted in* WORLD INTELLECTUAL PROPERTY ORGANIZATION, GUIDE TO THE BERNE CONVENTION FOR THE PROTECTION OF LITERARY AND ARTISTIC WORKS (Paris Act, 1971) 177 (1978).

5. *See* S. REP. NO. 352, 100th Cong. (1988); 134 CONG. REC. H3079, H3082, H3084 (daily ed. May 10, 1988) (remarks of Rep. Kastenmeier and Rep. Berman); *Final Report of the Ad Hoc Working Group on U.S. Adherence to the Berne Convention*, 10 COLUM.-VLA J.L. & ARTS 513 (1986).

6. *See* Berne Convention Implementation Act, 134 CONG. REC. H3079, § 3 (1988); S. REP. NO. 352, Part III.A (1988); 134 CONG. REC. S14549, 14557 (1988) (citing remarks of Senator Hatch). It was not until 1991 that the United States made a feeble and incomplete attempt to comply with its international obligations under the Berne Convention. *See* Visual Artists Rights Act of 1990, 17 U.S.C. § 106A (1994).

7. *See, e.g.*, *Berne Convention Implementation Act of 1987: Hearings on H.R. 1623 Before the Subcomm. On Courts, Civil Liberties and the Administration of Justice of the House Comm. on the Judiciary*, 100th Cong. 408, 519-21 (1988) (testimony of Sidney Pollack, Directors Guild of America and colloquy); Jessica Litman, *Amerika Gasshukoku no Berunu Joyaku Kanyu* (Accession of the United States to the Berne Convention), 16 CHOSAKUKEN KENKYU 1 (1989).

8. Pub. L. No. 105-304 (1998). To review the DMCA's legislative history, see, for example, H.R. REP. NO. 551 (1998) and S. REP. NO. 190 (1998).

9. The most notable example in the DMCA's tortured history is the effort to constrain the exercise of the fair use privilege while insisting that the law would do nothing of the sort. Despite repeated assurances in the legislative history and in the language of the bills themselves that the DMCA does not in any way contract the fair use privilege, the bills' anti-circumvention provisions were intended to narrow fair use. The bill's proponents refused to accept any statutory language that would have provided that users could continue to make fair use of copyrighted works despite those provisions. *Compare, e.g.*, S. REP. NO. 190, 23-24 (1998) ("The bill does not amend section 107 of the Copyright Act, the fair use provision. The Committee determined that no change to section 107 was required because section 107, as written, is technologically neutral, and therefore, the fair use doctrine is fully applicable in the digital world as in the analog world.") *with, e.g.*, H.R. REP. 551, at pt. 2 (1998). *See generally Hearing on H.R. 2281 Before The Tele-*

the eye of the White House Information Infrastructure Task Force, which in the summer of 1994, released a Green Paper draft report[10] that was widely and bitterly criticized for its misleading characterization of extant law.[11] The allegedly minor legal changes that draft recommended have in the intervening four years grown into a 30,000 word neoplasm that appears to have obfuscation as its primary purpose. The kindest thing one can say about such proposed laws is that someone responsible for part of the writing is more than a little confused about the laws' intended effect.

The current version of Article 2B seems to belong to that family, particularly in the relationship it envisions with U.S. federal copyright law. That is, just about the nicest thing I can bring myself to say about Article 2B's apparent relationship with copyright law is that the proposed model law reflects great confusion about just what that relationship is envisioned to be.

The text of the proposed law speaks of copyright only glancingly.[12] The accounts of the interrelationship between Article 2B and the copyright law appear almost entirely in the Preface to Article 2B and the Reporter's Notes.[13] As the Preface would have it, proposed Article 2B will make *no* new law relevant to contracting in works subject to copyright. That law already exists, the Preface tells us, and has been enforced by the courts. (The Preface cites, here, a number of examples in which courts gave effect to contractual terms imposed by copyright owners on end-users, and carefully omits to cite any of the cases in which courts held similar or indistin-

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communications, Trade And Consumer Protection Subcomm. of the House Commerce Comm., 105th Cong. (1998) (testimony of Robert L. Oakley).

10. *See generally* INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: A PRELIMINARY DRAFT OF THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1994).

11. *See, e.g.*, Jessica Litman, *The Exclusive Right to Read*, 13 CARDOZO ARTS & ENTERTAINMENT L.J. 29 (1994); Diane Leenheer Zimmerman, *Copyright in Cyberspace: Don't Throw Out the Public Interest with the Bath Water*, 1994 ANN. SURV. AM. L. 403; James Boyle, *Overregulating the Internet*, WASH. TIMES, Nov. 14, 1995, at A17; Pamela Samuelson, *The Copyright Grab*, WIRED 4.01, Jan. 1996, at 134.

12. Copyright is mentioned expressly in the draft in only three places. *See* U.C.C. §§ 2B-101(27); 2B-101(32)(B); 2B-105(a) (concerning preemption by federal law); 2B-501(c)(2)(B) (Aug. 1, 1998 Draft).

13. *See id.*, Preface at 7-17; Reporters Notes to §§ 2B-103; 2B-104; 2B-105; 2B-107; 2B-111; 2B-112; 2B-201; 2B-206; 2B-208; 2B-307; 2B-308; 2B-310; 2B-401; 2B-501; 2B-502; 2B-503; 2B-506; 2B-507; 2B-615; 2B-617; 2B-618; 2B-702; 2B-708. The details of the accounts have changed with each successive draft, but the bottom line appears to have remained constant.

guishable contractual restrictions unenforceable.[14]) That law arose, it would seem, the first time the owner of an intellectual property right decided to distribute information by means of a restrictive license rather than the sale of copies embodying that information; it has now apparently evolved to the point that merely denominating something a license will permit the attachment of a variety of restrictions, even when a transaction in all other ways seems to be a sale. Thus, rather than making new contract law, Article 2B simply recognizes contract law that is already out there. Or so the Preface would have us believe.

On examination, that claim seems implausible. It appears to derive either from a misapprehension or a mischaracterization of current law. Since Article 2B's relationship with copyright law was among its most controversial features, an impressive variety of experts have suggested repeatedly that the drafters got it wrong.[15] The successive drafts have gone through a variety of important changes in the way extant copyright law is characterized, but the bottom line has remained constant. If confusion is to blame, then, it is confusion of the deepest and most tenacious sort.

At times, Article 2B suggests that its substantive terms have been shaped by the constraints that it perceives applicable copyright decisions impose—although it is highly selective, and sometimes misleading, in the decisions it chooses to deem authoritative.[16] At other points, Article 2B concedes that its choices are intended to "push against explicit federal

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14. One example is the Preface's repeated reference to ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996). *See, e.g.*, U.C.C. Article 2B, Preface at n.18 (Aug. 1, 1998 Draft). *ProCD* is the leading case to enforce a shrink-wrap license, because it is the first case to do so. Before *ProCD*, most courts deemed shrink-wrap licenses unenforceable. *See, e.g.*, Step Saver v. Wyse, 939 F.2d 91 (3d Cir. 1991); Vault Corp. v. Quaid Software, Ltd., 847 F.2d 255 (5th Cir. 1988). Since *ProCD*, the case law has been mixed. *See generally* Mark Lemley, *Beyond Preemption: The Federal Law and Policy of Intellectual Property Licensing*, 87 CALIF. L. REV. 113 (1998); Pamela Samuelson, *Intellectual Property and Contract Law for the Information Age, Forward to a Symposium*, 87 CALIF. L. REV. 1 (1998). The Preface and Reporter's Notes, however, cite none of the cases going the other way.

15. *See, e.g.*, Dennis Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 U. DAYTON L. REV. 511 (1997); David A. Rice, *Digital Information as Property and Product, UCC Article 2B*, 22 U. DAYTON L. REV. 621 (1997); Pamela Samuelson, *Legally Speaking: The Never Ending Struggle for Balance*, 40 COMMUNICATIONS OF THE ACM, May 1997, at 17; Jerome Reichman & Jonathan A. Franklin, Privately Legislated Intellectual Property Rights: The Limits of Article 2B of the UCC (Apr. 4, 1998) (unpublished manuscript, on file with author).

16. *See* Pamela Samuelson, *Legally Speaking: Does Information Really Have to be Licensed?*, 41 COMMUNICATIONS OF THE ACM, Sept. 1998, at 15; sources cited *supra* note 14.

rules insofar as reasonably possible."[17] Perhaps that's the reason that Article 2B sometimes incorporates language from the copyright statute into its own definitions, although, as Professor Ginsburg notes, it uses that language in ways that are different and sometimes inconsistent with its use in Title 17.[18]

Article 2B insists, repeatedly, that its purpose is not to create any new rights in information or informational works, but merely to provide a structure to facilitate transactions in rights that derive from some other sources of law. That, of course, inspires the questions: "what rights?" "derived from what sources?" Article 2B offers a handful of different and sometimes inconsistent answers. The Preface mentions copyright law as one such source, indeed the "dominant" source, but contemplates the assertion of rights over material—ideas, facts, information[19]—that the copyright law provides may not be privately owned. The Preface invokes patent law but, again, imagines itself controlling transactions over matter not within the scope of patent. Indeed, Article 2B as a general matter excludes patent licenses (and licenses of "related know-how") from its coverage.[20] It invokes trademark law, but similarly excludes licenses of trademark rights.[21]

So what is the source of these "informational rights?" Section 2B-102(27) defines them as including:

> all rights in information created under laws governing patents, copyrights, mask works, trade secrets, trademarks, publicity rights, or any other law that permits a person, independently of contract, to control or preclude another person's use or disclosure of information on the basis of the rights holder's interest in the information.[22]

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17. U.C.C. Article 2B, Preface at 10 (Aug. 1, 1998 Draft).

18. *See id.* ("Even though a purchaser acquires a copy of the work, the producer retains rights and control *with respect to various uses of the copy*, including uses that make additional copies or alterations.") (emphasis added); U.C.C. § 2B-102 (Aug. 1, 1998 Draft) (defining "Copy," "License," "Information," "Published Informational Content," and "Termination); Jane C. Ginsburg, *Authors as "Licensors" of "Information Property Rights" under UCC Article 2B*, 13 BERKELEY TECH. L.J. 945 (1998).

19. *See* U.C.C. Article 2B, Preface at 5 (Aug. 1, 1998) ("The terms of a license also typically provide for express grant of rights (or permission) *to use information* and express limitations on use.") (emphasis added); *id.* § 2B-103, Reporter's Note 1 ("The covered transactions involve information and rights to use information.").

20. *See id.* § 2B-104(2).

21. *See id.*

22. *See id.* § 2B-102(27).

We have seen that licenses of trademark rights, patent rights and "related know-how" are excluded by section 2B-103. That suggests that patent and trademark law are unlikely sources for the informational rights intended for licensing under Article 2B. As other papers published as part of *The Impact of Article 2B Symposium*[23] make clear, copyright law creates no property rights in information, as opposed to expression.[24] Indeed, the copyright law dedicates the information embodied in copyright-protected works to the public domain.[25] Clearly, then, the sort of informational rights that Article 2B envisions as its bread and butter subject matter do not derive from the federal copyright, patent and trademark statutes.

What sources of law does that leave? Section 102(27) suggests that the source of informational rights might be found in laws protecting mask works, trade secrets or the right of publicity.[26] All three of these are distinguished legal doctrines, but they are all limited in scope to particular and uncommon cases, too narrowly defined to supply much subject matter for a legal regime that imagines itself governing all online mass market transactions.[27] Indeed, I can't call to mind a single instance in which a consumer was sued for unauthorized exercise or consumption of trade secrets, rights of publicity, or the rights guaranteed by the Semi-Conductor Chip Protection Act.[28]

If patent law, trademark law, copyright law, mask work protection, trade secrecy and the right of publicity all seem to be inapt sources for Article 2B's information property rights, where do those rights come from? The remaining language in the definition in section 2B-102(27) refers to "any other law that permits a party independently of contract to control or preclude another party's use or disclosure of information ...."[29] The definition requires some legal source for informational rights that is independ-

23. *See generally* Ginsburg, *supra* note 18, at 945. David Nimmer et al., *The Metamorphosis of Contract into Expand*, 87 CALIF. L. REV. 17 (1998) (forthcoming 1999).

24. Section 2B-102 evades this point by defining "information" broadly as "data, text, images, sounds, mask works, *or works of authorship*." U.C.C. § 2B-102 (Aug. 1, 1998 Draft) (emphasis added).

25. *See* Feist Publications v. Rural Tel. Serv., 499 U.S. 340 (1991); Baker v. Selden, 101 U.S. 99 (1879).

26. *See* U.C.C. § 2B-102(27) (Aug. 1, 1998 Draft).

27. Trade secrecy seems the most promising of the remaining doctrines, but Article 2B clearly envisions the assertion of rights over material far too widely disseminated to qualify as a trade secret under the law of most states. I assume that the drafters don't intend to rely on the discreditable and largely discredited notion of mass market trade secrecy raised some years ago in support of a trade secrecy justification for shrink wrap licenses. *But see, e.g., id.* § 2B-110, Reporter's Note 4.

28. *See* 17 U.S.C. §§ 901-14 (1984).

29. U.C.C. § 2B-102(27) (Aug. 1, 1998 Draft).

ent of contract. Thus, Article 2B is not itself to be deemed a source of informational rights. The Reporter's Notes to the definition repeat that "[t]his article does not create property rights; the definition references other law to determine when rights exist."[30]

Let's take another look at the Preface. As an alternative for a license predicated on rights supplied (or, as I argue, *not* supplied) by intellectual property law, the Preface to Article 2B appears to contemplate that licenses that do not depend on intellectual property law would be based on "the fact that a licensor has control over the source of information that the licensee desires to utilize."[31] This is, presumably, what I've taken to calling the "my-painting-may-be-in-the-public-domain-but-I-don't-have-to-let-you-into-my-house-to-see-it" property right. If it works with the copyrightable and uncopyrightable stuff in my house, why shouldn't it work with the copyrightable and uncopyrightable stuff on my web site?

Non-lawyers get this wrong all the time, but I would expect the drafters of Article 2B to be more careful. The trouble with control-based rights is that they're circular: they depend for their legitimacy on the existence of some extrinsic legal system that the proponents of control-based rights often assume away. The legal control of the painting in my house, for example, is based on the laws governing real property and chattels, and those

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30. *Id.* § 2B-102 (27), Reporter's Note 25.

31. *Id.*, Preface at 10. The August, 1998 draft talks about a license of these sorts of rights as an "access contract." Section 2B-102(1) defines access contract as "a contract to electronically obtain access to, or information in electronic form from, an information processing system. The term does not include a contract for physical access to a place, such as a theater or building." *Id.* § 2b-102, Reporter's Note 1. The fact that access to information is subject to an access contract does not itself create any informational rights; rather, the established rights to impose conditions on access to information make access contracts enforceable. What is the source of these rights? The Reporter's Notes, somewhat confusingly, tell us that access rights are "fundamental":

> An access contract is a contract that authorizes access to an electronic facility, including a computer or an Internet site, or a contract that authorizes obtaining information from that type of facility... An "access contract" is typified by "on-line" services and Internet transactions. It also includes contracts for remote data processing, third party E-mail systems, and contracts allowing automatic updating from a remote facility to a database held by the licensee....
>
> Access contracts do not depend on intellectual property rights. The owner of a computer system has a fundamental right recognized in criminal law and property law to exclude others from access to its system and to condition the terms on which it permits access to occur. Access contracts may distribute rights on the basis of informational rights, but they also reflect the right to control use and access.

Id.

laws give me an almost unqualified legal entitlement to exclude strangers. The physical control of the painting is based on the solidity of my house, my own personal strength (possibly augmented by the strength of such guards as I can hire), and the effectiveness of stay-away devices—locked doors, burglar alarms, electrified fences, vicious attack dogs—that I may elect to employ in my painting's defense. The only thing preventing strangers from circumventing my physical control, though, are the real and personal property laws I mentioned earlier. Without such laws, there's no reason in the world why people can't break in to see the painting without my permission. This becomes obvious if one imagines that the informational rights I wish to assert are based on my employing a stay-away device (my well-trained attack dog, say) to prevent strangers from viewing some painting I don't own (perhaps the Mona Lisa in the Louvre Museum).

The Preface, nonetheless, insists that the property rights it proposes to cover are not created by the proposed draft, but exist today, are the subject of extant contracts, and are routinely and uncontroversially enforced by courts all over. While unable to identify a legal source, independent of contract, for some of the rights it insists it is not creating, the Reporter's Notes resort to the concept of "a fundamental right recognized in criminal law and property law to exclude others from access to its system,"[32] which, as I've suggested, assumes the existence of the very property interest it seeks to validate.

Despite the Reporter's repeated assurances that the informational rights that are the subject of its licensing regime are extant, well-established, and uncontroversial, the named sources for informational rights do not seem to supply them. Instead, these rights appear to arise (out of nowhere, I would suggest) whenever a would-be proprietor of ideas or information elects to denominate any transaction affecting those rights as a "license", rather than a loan, lease or sale. So long as the transaction is denominated a license, the licensor may attach whatever terms it chooses to the transaction, and those terms will be legally enforceable.[33]

As a characterization of current law, that's pretty dubious. Should I elect to sell books that I publish with a prominent label on the front cover reading:

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32. *See id.* When lawyers term something "fundamental" without citation of authority, it is tempting to conclude that there is no authority to cite.

33. Indeed, the Preface appears to suggest that if a copyright owner elects to distribute its work through licensing, it can thereby avoid any statutory privileges that the copyright statute affords to the public. This seems curious since U.C.C. § 2B-102(27) *excludes* rights created by contract.

> This book is licensed rather than sold; it may not be resold or re-read without my express written permission. Opening this book after reading this notice shall be deemed assent to the terms of this license ...

I would not be able to enforce it. Book publishers, after all, have tried that; that's how we got the first sale doctrine.[34]

The implicit assumption in the Preface seems to be that so long as the work I am selling is in digital form, as software is, such a license should and would be enforced. But case law on that particular question is mixed, at best. Software shrinkwrap licenses have been held to be worthless as often as they have been upheld.[35] Every software license I've ever seen prohibits reverse engineering, but case law tells us that such prohibitions are often unenforceable.[36] The Preface invokes the case of a videotape that is rented or sold subject to a license restricting the tape's public performance.[37] But that's not it at all. The tape is rented or sold. The *public* performance right, which does derive from the copyright law, is entirely separate, and would need to be licensed in any event. If the tape rental or sale purported to prohibit some subset of *private* performances by claiming that the rental or sale transaction was actually a license, I think that that attempt would fail.[38]

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34. *See* Bobbs-Merrill Co. v. Straus, 210 U.S. 339 (1908).

35. The Reporter's Notes cite one case upholding a shrink wrap license, ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996). *See* U.C.C. Article 2B, Preface at n.16 (Aug. 1, 1998 Draft). However, the Notes omit citation of cases holding such licenses unenforceable. *See* Step Saver v. Wyse, 939 F.2d 91 (3d Cir. 1991); Vault Corp. v. Quaid Software Ltd., 847 F.2d 255 (5th Cir. 1988); Mark Lemley, *Intellectual Property and Shrink Wrap Licenses*, 68 S. CAL. L. REV. 1239 (1995).

36. *See generally* Vault Corp. v. Quaid Software, 775 F.2d 638 (5th Cir. 1985); Julie Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of "Lock Out" Technologies*, 68 S. CAL. L. REV. 1091 (1995).

37. *See* U.C.C. Article 2B, Preface at 10 (Aug. 1, 1998 Draft) ("[I]n the consumer market, copies [of motion pictures] are either sold or rented under terms that preclude public performance."). In general, the Reporter's Notes seem to proceed from the erroneous assumption that copyright law gives the copyright owner control over specific *uses of copies* of the work rather than exclusive rights that are independent of the ownership of copies of the work. The distinction isn't trivial. It leads the author of the Reporter's Notes to some characterizations of rights under copyright that are at best peculiar, and in any event confusing. *See, e.g., id.* ("A sale relinquishes some rights *with respect to the copy*. A license tailors what rights are granted.") (emphasis in original).

38. *Accord* Nimmer et al., *supra* note 23, at 26.

I've seen electronic contracts that purport to limit everything from reverse engineering to use.[39] Most people never challenge them; indeed, many never read them. I have heard proponents of Article 2B claim that that fact, without more, demonstrates widespread assent to the validity and enforceability of such terms. That claim, although central to the licensing structure Article 2B tries to ordain, remains unproven. I have also heard arguments that if people are willing to enter into contractual relationships to pay for commodities that they would be legally entitled to take for free, the law should enforce those deals.[40] But the Preface and Reporter's Notes don't appear to rely on those arguments; instead they insist, repeatedly, that the rights subject to license under Article 2B arise completely independently of contracts or of contract law.[41] They simply can't seem to locate them in any plausible legal source.

So, if I'm just looking at the proposed Article 2B that portrays itself as creating no new rights but merely facilitating license transactions in rights already recognized and enforced by the law now on the books, I think I have to conclude either that Article 2B is a little confused, and more than a little confusing, about what it is that it is doing. Either that, or someone has made the marketing decision to airbrush away the law's controversial aspects.

Article 2B takes some pains to insist that it is independent of copyright law; it coexists with but in no way alters the balance that copyright law strikes.[42] According to this story, there are copyrights and there are contracts, and owners of the first have always used the second as a means of exploiting their intangible property. Courts enforce such contracts because they recognize that they don't normally conflict with federal copyright

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39. For example, the Westlaw copyright license insists that even for material over which West has no copyright interest,

> No part of a Westlaw transmission may be copied, downloaded, stored in a retrieval system, further transmitted or otherwise reproduced, stored, disseminated, transferred *or used, in any form or by any means*, except as permitted in the Westlaw Subscriber Agreement or with West's prior written agreement.

WEST GROUP, COVERSHEET FOR WESTLAW COMPUTER PRINTOUT (emphasis added).

40. Entire industries can be based on such customs. Hollywood commonly purchases "life story rights" from individuals whose true stories are envisioned as the basis for a film or television movie. Courts have so far resisted the syllogism that because so many studios purchase such rights, a project "based on a true story" may not legally proceed without them. *See, e.g.*, Seale v. Gramercy Pictures, 964 F. Supp. 918 (E.D. Pa. 1997).

41. *See,* U.C.C Article 2B, Preface at 14-25 and accompanying text (Aug. 1, 1998 Draft).

42. *See id.* at 7-14.

policy.[43] Thus, Article 2B creates no new substantive law whatsoever; it merely supplies a convenient procedure to allow what happens now to happen more expeditiously.

That's a soothing story, but one that doesn't seem to have an analogue in the real world. Courts enforce some contracts for rights in information and refuse to enforce others. The federal copyright statute cuts a wide preemptive swathe through state laws used to make an end-run around the limitations woven into the copyright law, precisely because the policies intrinsic to copyright constrain the ways content owners may legally exploit their works, and must do so in order for the system to work.[44] If Article 2B were truly intended to be neutral on issues of intellectual property policy, as the Preface and Reporter's Notes insist, it might be expected to avoid encouraging contracts whose chief apparent purpose was to evade copyright's restrictions. Instead, at every opportunity, Article 2B appears to encourage prospective licensors to assert control over "informational rights" that they don't own, with the apparent intention that, by making a contract to license those rights, they will by some magic come to own them, and therefore be legally entitled to enforce the license contracts.

One can sympathize with commercial lawyers who would prefer that familiar commercial law rules rather than federal copyright law governed transactions in information, and sought to draft a law that would achieve it. Copyright lawyers, after all, are trying to do a very similar thing in using a copyright template to draft laws governing all transactions on the Internet.[45] But, if one sought to replace copyright policies and rules with their counterparts from commercial law, one would hardly be entitled to claim neutrality on matters of copyright policy.

The vision of copyright law reflected in the draft, further, is distorted in other ways. It portrays copyright owners' rights as required and the limitations and exclusions on copyright owner control as precatory. Article 2B selectively incorporates copyright terms and decisions it likes, while encouraging the abandonment of those it does not. It accomplishes this

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43. *See id.* § 2B-105, Reporter's Note 2.

44. *See* NBA v. Motorola, 105 F.3d 841 (2d Cir. 1997); Rano v. Sipa Press, 987 F.2d 580 (9th Cir. 1993); Baltimore Orioles v. Major League Baseball Players Ass'n, 805 F.2d 663 (7th Cir. 1986), *cert. denied*, 107 S. Ct. 1593 (1987); Harper & Row v. Nation Enters., 723 F.2d 195 (2d Cir. 1983), *rev'd on other grounds*, 471 U.S. 539 (1985). *Cf.* Bonito Boats v. Thundercraft Boats, 489 U.S. 141 (1989) (finding patent preemption of state plug molding laws).

45. I refer here to H.R. 2281, 105th Cong. (1997) as it passed the House of Representatives on August 4, 1998. *See generally* Jessica Litman, Reforming Information Law in Copyright's Image, 22 DAYTON L. REV. 587 (1997).

trick by insisting that some copyright principles are invariable and inviolate, and the provisions of Article 2B must therefore be designed to accommodate them. Other copyright principles would constrain Article 2B licenses only in cases where the license transgresses particular, narrow restrictions imposed by federal law. The Preface assures us that that would be rare.[46]

Finally, a third category of copyright principles seems to reflect ideas that the drafters of Article 2B find attractive, but susceptible of improvement.[47] Instead of defining "copies" the way the copyright law does, for example, as

> material objects, other than phonorecords, in which a work is fixed [that is, "when its embodiment ... is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration"] by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device ...,[48]

Article 2B elects to define them as:

> The medium on which information that is fixed *on a temporary or permanent basis* and in a medium from which the information can be perceived, reproduced, used, or communicated, either directly or with the aid of a device. The term includes a phonorecord.[49]

As the Reporter's Notes explain, the question whether a temporary reproduction is a copy within the meaning of the copyright law has been controversial;[50] Article 2B avoids that problem by defining "copy" to encompass temporary as well as permanent reproductions.[51]

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46. *See* U.C.C. Article 2B, Preface at 13 (Aug. 1, 1998 Draft).
47. *See* Nimmer et al., *supra* note 23, at 29-30.
48. 17 U.S.C. § 101 (1976).
49. U.C.C.§ 2B-102(a)(14) (Aug. 1, 1998 Draft) (emphasis added).
50. *See id.*, Reporter's Note 12.
51. This is another case of assuming the truth of the proposition one is attempting to prove. The controversy alluded to by the Reporter's notes is not whether reproductions that are neither permanent nor stable are fixed copies within the meaning of the statute; everyone would agree that they are not. The controversy is instead over the correctness of decisions that reproductions in computer Random Access Memory are sufficiently permanent and stable to be fixed under the statutory definition. By expanding its definition of copies to encompass even temporary reproductions, the draft of U.C.C. § 2B-102 goes further. That decision conceals another instance of sleight of hand. In the Preface, the

Since a copyright owner has rights over the creation of permanent, stable reproductions of protected material, but no copyright rights over the creation of reproductions that are not "fixed" within the meaning of the copyright statute, the effect of the improvement is to allow licensors to license acts the copyright law does not place within their control.[52]

If a law is advertised using implausible accounts of its purpose and effect, assessing its wisdom is complicated at best. First, of course, there is the problem of deciding what to believe about the law's intended effect. Is the apparent confusion limited to the description of extant law, or does it extend to the proposed law's likely operation? If the law's drafters are genuinely confused about current law, is it likely that their proposed solution to problems real and imagined is legally sound? If the implausibility results not from confusion but from cautious shading of the truth, on the other hand, who is it that the drafters might desire to mislead, and why might they have resolved to do so? And why can't the draft keep its story straight? The one conclusion that seems inescapable is that, whether from confusion or design, the tales that Article 2B tells us about its relationship with copyright law are an unreliable guide to what that relationship is likely, or is intended, to be.

Reporter notes that computer software and electronic databases differ from books because one can read a book without creating a copy, but cannot use a computer program or digital information source without creating a copy or accessing it from a remote site. *See id.* §.2B, Preface at 7. If one uses the definition of copy in U.C.C. § 2B-102, that seems true, but if one instead refers to the definition in the copyright statute at 17 U.S.C. § 101, the question is far from settled.

52. At the same time, the promiscuous use of improved definitions and terms seems calculated to throw established business practices out of whack. When contracts refer to "copies" do they mean "copies" as the copyright statute defines them or as defined by Article 2B? Should we assume that hard copy contracts mean one thing by "copy," while electronic contracts mean the other? Is a contract that arrives as an e-mail attachment or by fax an electronic contract, or a conventional one? Prevailing copyright law has informed and shaped settled trade practice in what Article 2B calls the "copyright and information industries." *Id.* § 2B-103, Reporter's Note 1. How will Article 2B's overlay of sometimes augmented, sometimes improved, and sometimes flatly inconsistent "licensing" provisions change the way that transactions will be interpreted? Perhaps it is for that reason that, in the spring of 1998, the broadcast industry, the cable television industry, the motion picture industry, and the recording industry requested, and were promised, express exclusions from the scope of Article 2B for transactions relating to their core business. *See id.* § 2B-104, Reporter's Note 7.

AUTHORS AS "LICENSORS" OF "INFORMATIONAL RIGHTS" UNDER U.C.C. ARTICLE 2B

By Jane C. Ginsburg †

ABSTRACT

U.C.C. Article 2B of the Uniform Commercial Code was designed primarily to regulate online and mass market transactions, particularly the licensing of computer software. Its effects, however, will extend to authors of works other than computer software. This Article considers the effects Article 2B would have on dealings between those authors and the exploiters of the authors' works. By reducing procedural barriers to the formation of licenses, Article 2B would make it all too easy for an author to assent to contract terms that may heavily favor an exploiter of the author's work. On the other hand, default contract terms contained in Article 2B would provide substantive protections to authors who enter into informal licenses. Authors and their representatives, who have not closely followed the evolution of Article 2B, would do well to contribute their perspectives to the drafting process.

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I. INTRODUCTION

First, a fact proposition: like computer programs, most, if not all, copyrighted works may today be expressed in 1s and 0s. Second, a warning to resist the looming syllogism: if all works can be expressed in 1s and 0s, that does *not* make all copyrighted works computer programs. Some have suggested that proposed Article 2B of the U.C.C., having started with software, but then extended its reach to "the copyright industries" generally,[1] has sunk into that syllogism, and, as a result, may disserve authors, publishers, and other participants in the exploitation and use of copyrighted works other than software.[2] One may wonder whether a commercial code conceived primarily to regulate online and mass market transactions, particularly with respect to information "deliverables"[3] appropriately or sensibly extends to individual authors' grants of incorporeal rights under copyright.

My task is to consider how authors of works other than software fare under the current (August 1998) draft of Article 2B. Do the proposals make a difference to individual authors' dealings with publishers/exploiters? To what extent does Article 2B enhance authors' ability to control the exploitation of their works? To what extent does Article 2B increase authors' vulnerability toward their exploiter/co-contractants? In responding to these questions, Part II inquires whether Article 2B applies to author/exploiter contracts. Part III identifies author-relevant provisions of Article 2B, and their implications. Part IV considers whether Article 2B *should* apply, in light of its impact on authors' contracts.

Aside from Article 2B's effect on contracts between authors and the exploiters of their work, Article 2B presents other issues of concern to authors, particularly to authors who self-publish, as perhaps more and

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1. *See, e.g.*, U.C.C. Article 2B, Preface at 5 (Aug. 1, 1998 Draft); *id.* § 2B-103, Reporter's Note 1; *id.* § 2B-102(a)(26) and accompanying Reporter's Note 23 (defining informational content and distinguishing "information" not meant to be perceived by human beings from "informational content" that is meant so to be perceived; a database of images offers informational content with respect to the images, and information with respect to the computer program that makes the images accessible).

2. *See, e.g.*, Letter from Allan Adler, *Association of American Publishers*, to Article 2B Drafting Committee (Feb. 17, 1997), *available at* <http://www.2Bguide.com/docs/aap.html> (visited Mar. 30, 1998); Letter from Gary L. Griswold, *American Intellectual Property Law Association*, to Article 2B Drafting Committee (Nov. 18, 1997), *available at* <http://www.2Bguide.com/docs/sycaipla.html#aipla> (visited Nov. 23, 1998).

3. *See, e.g.*, Memorandum from Stephen Y. Chow on Avoiding Confusion of Information and Intellectual Property Rights (Feb. 12, 1998), *available at* <http://www.2Bguide.com/docs/chowip.pdf> (visited Nov. 23, 1998).

more authors will do on the Internet. These issues, however, I believe, are not specific to authors as *creators* of copyrighted works; they are relevant to *disseminators* of copyrighted works, be they the works' authors, their publishers, or third-party authorized distributors. Thus, this discussion will not address the impact of Article 2B on the relationship of disseminators of works of authorship and the consuming public. Other contributors will take up that issue, and related controversies.[4]

With respect to the issues that I do cover, I conclude that Article 2B can be both good and bad for authors, depending on the level of detail that informs their agreements. Article 2B can offer some valuable safeguards to authors whose dealings with exploiters are so informal that its default rules would fill in the substance of their agreements. On the other hand, Article 2B's provisions governing the formation of enforceable agreements can be detrimental to authors who may end up assenting all too easily to detailed exploiter-written grants. This leaves me ambivalent about the inclusion of non-software authors within Article 2B's coverage. If these authors are to remain subject to Article 2B, then Article 2B's drafters should consider adopting further substantive and procedural protections. The conclusion of this Article offers some proposals for improvement of the "fit" between Article 2B and the copyright interests of individual authors.

II. DOES ARTICLE 2B APPLY TO AUTHOR-EXPLOITER CONTRACTS?

While Article 2B purports to apply to "the copyright industries," I think it is fair to observe that the copyright law's perspective does not pervade Article 2B's text or notes. Article 2B governs "licenses,"[5] and a license is defined as "a contract that authorizes access to or use of information or of informational rights ...."[6] "Informational rights" are defined to "include all rights in information created under laws governing ... copyrights ...."[7] Finally, "information" means "... works of authorship ...."[8]

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4. *See, e.g.*, Julie E. Cohen, *Copyright and the Jurisprudence of Self-Help*, 13 BERKELEY TECH. L.J. 1089 (1998); Mark A. Lemley, *Beyond Preemption: The Federal Law and Policy of Intellectual Property Licensing*, 87 CALIF. L. REV. 113, 128-31 (forthcoming 1999); David F. McGowan, *Free Contracting, Fair Competition, and Article 2B: Some Reflections on Federal Competition Policy, Information Transactions, and "Aggressive Neutrality,"* 13 BERKELEY TECH. L.J. 1173 (1998).

5. U.C.C. § 2B-103(a)(1) (Aug. 1, 1998 Draft); *id.* at Reporter's Note 1.

6. *Id.* § 2B-102(a)(28).

7. *Id.* § 2B-102(a)(27).

8. *Id.* § 2B-102(a)(24).

From a copyright perspective, Article 2B's nomenclature is anomalous, since copyright does not protect "information;" it protects the "expression" of ideas and facts.[9] Similarly, copyright owners do not license "use" of their works, they grant rights "to do and to authorize" acts enumerated in the statute.[10] Moreover, while copyright addresses incorporeal rights, rather than physical objects,[11] Article 2B's terminology better fits transactions in copies than in copyrights. Despite the breadth of its reach, Article 2B's text seems primarily preoccupied with transfers of copies of software: grants of intellectual property rights are most relevant to the extent that copyright (or other) permission is necessary to allow the transferee to enjoy the copy.[12]

That said, Article 2B's literal coverage of rights in works of authorship beyond software is not inadvertent.[13] The rationale for broad-based coverage relies on the impending "convergence" of modes of communicating and delivering all kinds of copyrighted works.[14] That is, if any kind of copyrighted work can be expressed in 1s and 0s, and thus can be the object of an electronic transaction, then transactions in all copyrighted works require uniform treatment, even if particular works are not in fact in digital form. Suppose, for example, that I license both a digital compilation of text or graphics and the search program that accompanies it. The program comes within the core subject matter of Article 2B; arguably, it does not make sense for one contract regime to govern the program, and another the compilation. Once software-appurtenant digital works are covered, one

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9. *See* 17 U.S.C.A. § 102(b) (West 1998); Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 348 (1991).

10. *See* 17 U.S.C.A. § 106 (West 1998). *See also* Pamela Samuelson, *Allocating Ownership Rights in Computer Generated Works*, 47 U. PITT. L. REV. 1185, 1219 (1986) ("Concerning an exclusive use right, the copyright law differs from the patent law, which does give the owner of the intellectual property interest an exclusive right to use (or authorize use of) the protected work."). Samuelson cites the statement of Dorothy Schrader, general counsel of the U.S. Copyright Office, *Hearings on S. 1201 Before the Subcomm. on Patents, Copyright and Trademark of the Senate Comm. of the Judiciary*, 98th Cong., 1st Sess. 20 (1983). *Id.* at 1219 n.141 ("[T]he new use right ... is a right that, as far as we are aware, has absolutely no equivalent in copyright law ...."). *Cf.* 35 U.S.C.A. § 271 (West 1998) (defining patent infringement: as "whoever without authority makes, *uses*, offers to sell, or sells any patented invention ...") (emphasis added).

11. *See* 17 U.S.C.A. § 202 (West 1998) (distinguishing ownership of copyright from ownership of physical object).

12. *See* Chow, *supra* note 3 (distinguishing "information deliverables" from incorporeal copyright).

13. *See* U.C.C. Article 2B, Preface at 4 (Aug. 1, 1998 Draft).

14. *See, e.g., id.* § 2B-103, *id.* at Reporter's Note 1; Joseph Verdon, *Article 2B: Transactions in Software and 'Information'*, N.Y. L.J., Aug. 13, 1997, at 1.

may as well cover other digitally expressed works, since these are destined for digital distribution, and Article 2B particularly targets online "access contracts."[15] Once digitally expressed works are covered, it may not make sense to make the contract regime turn on media discrimination, with Article 2B reaching transfers of rights in works in digital form, but common law contract rules governing transfers of rights in the same work when it is in analog form.

Thus, given Article 2B's definition of "information" as including "works of authorship,"[16] it would at first appear that Article 2B covers all authors who grant rights in copyrighted works. In fact, however, the current draft of Article 2B specifies significant exclusions from its scope. As a result, Article 2B's coverage of authors and their works is neither comprehensive nor predictable. For example, section 2B-104(5) excludes "a contract for personal or entertainment services by an individual or group." By "personal services," Article 2B appears to mean employment contracts generally.[17] If so, then Article 2B would exclude employee-creators of works made for hire, but these creators are not considered "authors" under the Copyright Act in any event.[18]

What counts as performance of "entertainment services?" Article 2B does not define the term. The concept would appear to exclude from Article 2B's scope contracts for live performances, for example, by musicians or actors. What about agreements to record a performance of a musical composition or dramatic work? Earlier drafts of Article 2B would have included these, because the production of a sound recording would have transferred the performers' informational rights.[19] By contrast, had the recording occurred at the live concert, Article 2B would have covered the recording agreement, but not the agreement to render the entertainment services of performing at the live event at which the recording was made.

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15. U.C.C. § 2B-103(a)(1) (Aug. 1, 1998 Draft); *id.* at Reporter's Note 2b.

16. *Id.* § 2B-102(a)(24).

17. *See id.* § 2B-104(5), *id.* Reporter's Note 6 ("Subsection (5) deals with services contracts."). The exclusion was clearer in the February draft. *See* U.C.C. § 2B-103(c)(4) (Feb. 1998 Draft) (excluding a "contract of employment of an individual other than as an independent contractor ....").

18. *See* 17 U.S.C.A. § 201(b) (West 1998). In addition, unreserved transfers of all rights under copyright are not within 2B's scope. *See* U.C.C. § 2B-102(a)(28) (Aug. 1, 1998 Draft). This would also exclude work for hire contracts. *See* discussion *infra* Part II.

19. The production of the sound recording requires a license from the performers of their rights under 17 U.S.C.A. § 1101 to authorize the fixation of their musical performance. The commercialization of the sound recording requires a license or assignment of the performers' reproduction and distribution rights in their fixed performances.

The August draft excludes contracts both for live and for recorded performances, not only with respect to sound recordings, but, more significantly, with respect to motion pictures. Section 2B-104(8) excludes

> a license of a linear motion picture or sound recording or of information to be included therein, except in connection with providing access to such motion picture or sound recording under an access contract covered by this article.[20]

The current proposal thus removes from Article 2B's scope a broad class of contracts transferring rights to include works of authorship[21] in "linear motion picture[s]" and in sound recordings. With respect to sound recordings, any musical composition subject to the Copyright Act's compulsory license to make and distribute phonograms,[22] is already excluded under section 2B-104(7).[23] Section 2B-104(8) expands the exclusion to cover other works of authorship, whose sound recording rights their copyright owners may freely license, for example, dramatic musical compositions licensed for sound recordings, or literary works licensed for books-on-tape. This means that a contract to publish a novel would be subject to Article 2B with respect to exploitation of the literary work as a text, but not with respect to licenses of derivative work rights to create a recorded version of a reading of the book.[24]

If Article 2B excludes licenses of audio rights in the novel, what about licenses to create audio*visual* exploitations? If the publishing contract grants rights to make a film adaptation of the novel, does this aspect of the contract fall outside Article 2B on the ground that it effects a license to include the novel (or a screenplay based on it) in a "linear motion picture?" The August Article 2B draft does not define that term, but the Reporter's Note to section 2B-104(8) refers to "movies," and states that section 2B-104(8) "excludes traditional licensing in the motion picture ... industr[y] .... The exclusion is limited to *traditional* activities and ... is not an exclusion of the industry. As companies move into on-line systems,

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20. U.C.C. § 2B-104(8) (Aug. 1, 1998 Draft). This text appears in brackets in the Aug. 1998 draft.

21. *See id.* § 2B-102(a)(24) (defining "information" as including "works of authorship").

22. *See* 17 U.S.C.A. § 115 (West 1998) (subjecting nondramatic musical compositions to compulsory license following first authorized sound recording).

23. *See* U.C.C. § 2B-104(7) (Aug. 1, 1998 Draft) (excluding a license that is "a compulsory license under federal or state law").

24. On the other hand, were the resulting sound recording to be offered to consumers on-line, the contract to deliver the sound recording to the consumer would be governed by Article 2B.

software, multi-media, and similar licensing, Article 2B applies."[25] This appears to mean that licensing movie rights in the novel escapes Article 2B, but licensing CD-ROM rights comes within Article 2B. One may wonder whether these divisions make sense. At least, they seem inconsistent with the goal of uniformity of a contracts regime in a world of "converging" modes of expression and communication, because they make application of Article 2B turn on media discrimination.

Thus, with respect to the same author and the same work, Article 2B may apply to some licenses of rights, but not to others. Article 2B marks a further distinction between "licenses" and other grants of rights. The text confines a "license" to a contract that "expressly limits the contractual rights or permissions granted, expressly prohibits, limits, or controls uses, or expressly grants less than all informational rights in the information."[26] Article 2B thus excludes *assignments* of "all right, title and interest in and to the copyright," as well as work made for hire agreements regarding commissioned works. Arguably, an assignment of copyright made in return for percentage royalties might still fall within Article 2B, at least if the transfer is subject to the condition that the grantee continue to pay royalties during the term of the copyright. Nonpayment of royalties would be a material breach, resulting in reversion of the copyright to the author.[27]

How does Article 2B treat lump-sum assignments? These would not contain an express limitation on the contractual rights granted. The 1976 Copyright Act, however, imposes a limitation on all transfers of exclusive rights, including assignments, in all works of authorship other than works made for hire. These grants are subject to the author's right to terminate the transfer during a five-year period beginning thirty-five years from the date of execution of the grant.[28] While the author is not obliged to exercise this right, neither may she contract it away.[29] Does this mean that assignments that are subject to termination are "licenses" under Article 2B? Ar-

25. U.C.C. § 2B-104 (Aug. 1, 1998 Draft); *id.* at Reporter's Note 7.

26. *Id.* § 2B-102(a)(28).

27. *See* MELVILLE B. NIMMER & DAVID NIMMER, 3 NIMMER ON COPYRIGHT §10.15[A], n.20 at 10-124 (1997).

28. *See* 17 U.S.C.A. § 203(a)(3) (West 1998).

29. *See id.* § 203(a)(5) ("Termination of the grant may be effected notwithstanding any agreement to the contrary, including an agreement to make a will or to make any future grant."). Note that 2B-308's provision for the perpetuity of informational property rights licenses conflicts with the author's inalienable right under copyright to terminate exclusive licenses, and therefore would be preempted. *See* U.C.C. § 2B-105 (Aug. 1, 1998 Draft); *id.* at Reporter's Note 2. By contrast, since there is no right under copyright to terminate non-exclusive licenses, section 2B-308 is not incompatible to that extent. *See* discussion *infra* Part III.A.1.

ticle 2B's current language suggests otherwise. It appears that the limitation on the scope of the grant must be expressly set forth in the contract, not merely inherent in the copyright law. If so, Article 2B does not cover lump-sum assignments. Perhaps, however, if the assignment expressly stated that it was "subject to the § 203(b) termination right" (or something to that effect), it would come within Article 2B.

Similarly, a work for hire agreement is not a "license" under Article 2B because it too transfers ownership of all informational rights in the commissioned work. Moreover, grants of rights in works made for hire are not subject to termination.[30] Arguably, a commissioned work for hire agreement transfers not copyright ownership, but authorship status. The commissioned creator of a work made for hire is not a statutory author.[31] If she is not an author, she cannot be an initial copyright owner, so she has no ownership rights to transfer. This reading, however, seems hypertechnical. The effect, after all, of a properly executed work for hire agreement is to vest rights in the non-creator contractant; absent the contract, the creator remains the copyright owner.[32] If a commissioned work for hire agreement is treated as an assignment not subject to termination, it would come within the exclusion from the scope of Article 2B.[33]

Finally, Article 2B treats authors whose contracts it reaches as "merchants." The characterization has significant consequences: if an author is a "merchant," s/he is presumed to warrant that the licensed work does not infringe others' copyrights.[34] "Merchants" are also subject to less stringent formal requirements under Article 2B's statute of frauds.[35]

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30. *See* 17 U.S.C.A. § 203(a) (West 1998).

31. *See* 17 U.S.C.A. §§ 101, 201(b) (West 1998).

32. *See also* NIMMER & NIMMER, *supra* note 27, § 6.03[c][2][A] at 6A-21 (contending that works made for hire should be considered implied assignments of copyright).

33. Practices in certain of the "copyright industries," however, may call for nuancing that conclusion. For example, the ASCAP membership agreement requires that composers and lyricists receive 50% of the performance right royalties, regardless of the work for hire status of the nondramatic musical composition. *See* Susan Stager, *Musical Performing Rights in the Television Industry: Has the Blanket License Finally Seen Its Demise?*, 14 SW. U. L. REV. 569, 585 (1984) (although composers are television producers' employees for hire, the producer's music publishing company distributes the "writer's share" (50%) of the royalties to the composer); ASCAP, *ASCAP membership agreement*, Art. 7 (visited Mar. 30, 1998) <http://www.ascap.com/membership/agreement/agreement.html>.

34. *See* U.C.C. § 2B-401(a) (Aug. 1, 1998 Draft). Section 2B-404(b)(1) makes it clear, however, that the licensor does not warrant the work's "aesthetics, market appeal, or subjective quality." *Id.* § 2B-404(b)(1).

35. *See id.* § 2B-201(d).

What makes an author a "merchant" under Article 2B? The warranty provision concerns merchants "regularly dealing in information or rights of the kind:" this might suggest that veteran authors are merchants for purposes of section 2B-401, but neophytes are not. Article 2B, however, defines a "merchant" as "a person that deals in information or informational rights of the kind or that otherwise by the person's occupation holds itself out as having knowledge or skill peculiar to the practices or information involved in the transaction, whether or not the person previously engaged in such transactions ...."[36] The last phrase in the definition suggests that the drafters are seeking to avoid distinguishing between first-time and seasoned licensors. Moreover, it is clearer than in prior drafts that this provision does target authors. The author will have "knowledge or skill peculiar to the information" because the "information" is the copyrighted work the author created. In addition, an author could be said to "deal in" works of authorship and in "informational rights" (i.e., copyright); indeed, if the author is a professional, those dealings furnish her livelihood.

III. WHAT AUTHOR-RELEVANT MANDATORY OR DEFAULT RULES DOES ARTICLE 2B SET FORTH, AND HOW WOULD THEY APPLY?

Traditionally, the exploitation of works of authorship is contract-intensive, employing highly detailed agreements, particularly in the areas of publishing and performing rights. As a result, Article 2B will make the greatest difference to authors to the extent that its rules are mandatory rather than default. Examination of the current text, however, shows that there are no relevant mandatory substantive rules,[37] although there are relevant rules requiring that any departure from those rules be introduced in an authenticated record.[38] This means that the domain of Article 2B with respect to authors is limited to situations where there is either no written contract at all, or where Article 2B introduces contract rules when the parties had provided none, or where the terms are ambiguous. The domain of Article 2B is further limited by its recognition that federal copy-

36. *Id.* § 2B-102(a)(33).

37. *See id.* § 2B-106.

38. *See* U.C.C. § 2B-106(6) (Aug. 1, 1998 Draft); *id.* § 2B-201. The rules requiring written derogation concern the scope of a transfer, and transfers of non-exclusive rights. Both of these are of considerable interest to authors. See the discussion, *infra* Part III.A.1. For a discussion of authenticated records under Article 2B and "signed writings" under the Copyright Act, see *infra* Part III.A.

right policies prevail over state law provisions.[39] For example, Article 2B's provisions cannot displace the federal copyright requirement of a signed writing to transfer exclusive rights.[40] On the other hand, Article 2B may lend content to the terms "signed" and "writing."

The authors most implicated by Article 2B may be freelance writers, photographers, and artists who contribute to periodicals or other publications whose publishers do not systematically execute detailed contracts with the contributors.[41] But to the extent that informality or imprecision prevail in other areas of the "copyright industries," many authors may be touched by Article 2B's default rules.

A. Default Rules that May Enhance Authors' Control Over Their Works

Section 2B-106 states the basic principle of freedom of contract, but also sets forth certain rules that the parties may not vary.[42] These rules include "the limitations on enforceability in section 2B-201."[43] Section 2B-201 is Article 2B's statute of frauds. It requires, for agreements whose total value requires "payment of $5,000 or more ..." and "is a license for an agreed duration" of one year or more, a record "authenticated"[44] by the party against whom the agreement is to be enforced. Where, however, the

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39. *See* U.C.C. § 2B-105 (Aug. 1, 1998 Draft).

40. *See* 17 U.S.C.A. § 204(a) (subjecting the validity of a transfer of copyright ownership to execution by the grantor of a written and signed "instrument of conveyance or a note or memorandum of the transfer."); U.C.C. § 2B-105 (Aug. 1, 1998 Draft); *id.* at Reporter's Note 2.

41. For example, setting forth the terms of the "agreement" on the back of the freelance author's payment check, thus purporting to equate endorsement of the check with execution of the contract, appears to be a frequent means of dealing with freelance writers, photographers and artists. *See, e.g.*, Playboy Enters. v. Dumas, 53 F.3d 549, 552 (2d Cir. 1995), *cert. denied*, 116 S.Ct. 567 (1995), *on remand*, 960 F. Supp. 710 (S.D.N.Y. 1997); Tasini v. New York Times Co., 981 F. Supp. 841 (S.D.N.Y. 1997).

42. *See* U.C.C. § 2B-106(a)-(b) (Aug. 1, 1998 Draft).

43. *Id.* § 2B-106(b)(6).

44. *Id.* § 2B-201(a)(1)-(2). The August 1998 draft differs significantly from the April 1998 and earlier drafts, in making the dollar value and duration of the agreement cumulative, rather than alternative criteria for application of the authentication requirement. It is not clear that this change is intentional or desirable. The effect of the change is to validate non-authenticated licenses of *any* dollar amount, so long as its duration is less than a year. Not only does this change seem incompatible with consumer protection concerns; but also it is inconsistent with U.C.C. Article 2's statute of frauds, which requires a writing if the price of the goods sold is $500 or more. *See id.* § 2-201(1) (1996). *But see*, RESTATEMENT (SECOND) OF CONTRACTS: CLASSES OF CONTRACTS COVERED § 110(1)(e) (1979) (applying the statute of frauds to contracts "not to be performed within one year from the making").

co-contractants are merchants, as would be the case between an author and a commercial exploiter, subsequent dispatch of a "record in confirmation of the contract and sufficient against the sender is received and the party receiving it has reason to know its contents" will bind the recipient unless she notifies her objection in a record within ten days of receipt of the confirmation.[45] Second, and more significantly, section 2B-201 imposes more stringent formal requirements on variations from a provision of particular concern to authors: section 2B-307 regarding the scope of licensing agreements. What are the consequences of this rule for authors?

1. *Copyright Licenses Whose Value Exceed $5,000 and Which Endure for One Year or More*

Federal copyright law requires that any transfer of exclusive rights must be in writing and signed by the grantor.[46] Article 2B does not purport to detract from that requirement.[47] As a result, a transfer of exclusive rights for $5,000 or less whose duration is for less than one year must still be effected by a signed writing. By contrast, a grant of *non*-exclusive rights under copyright need not be in writing; an oral agreement, or conduct from which an agreement can be inferred, suffice.[48] Hence, as a matter of copyright law, a grant of non-exclusive rights whose value exceeds $5,000, and which endures for at least one year, need not be in writing. Under section 2B-201, however, that grant would be subject to the formal requirement of a record which the party to be charged has authenticated.

Article 2B's statute of frauds provision provokes two questions. First, if Article 2B may not authorize *fewer* formal requirements than the Copyright Act mandates, may it nonetheless impose *greater* formality than the copyright law demands? Second, with respect to grants of non-exclusive licenses, would section 2B-201, in fact, afford more protection to authors than current case law extends?

Another way of posing the first question is to inquire whether federal or state law governs the validity of a grant of non-exclusive rights under copyright. Section 2B-105 recognizes that a provision of Article 2B is not enforceable to the extent that it is preempted by federal law. Thus, where

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45. U.C.C. § 2B-201(d) (Aug. 1, 1998 Draft).

46. *See* 17 U.S.C.A. § 204(a) (West 1998).

47. *See* U.C.C. § 2B-105 and Reporter's Note 2 (Aug. 1, 1998 Draft).

48. *See, e.g.*, I.A.E., Inc. v. Shaver, 74 F.3d 768, 775 (7th Cir. 1996); Avtec Systems, Inc. v. Peiffer, 21 F.3d 568 (4th Cir. 1994); Effects Assocs. v. Cohen, 908 F.2d 555, 556 (9th Cir. 1990), *cert. denied*, 498 U.S. 1103 (1991) (finding that, absent a written agreement, delivery of a special effects video for inclusion in audiovisual work evidences a grant of non-exclusive rights, but not a transfer of exclusive rights).

federal copyright law sets forth specific substantive or formal protections for authors, Article 2B cannot derogate from those guarantees. But where federal law is silent, is there more room for state regulation that would enhance the protection of authors? A grant of non-exclusive rights is not a transfer of copyright *ownership*;[49] given the lesser consequences of granting non-exclusive rights, Congress perhaps determined that authors do not require the copyright law to impose as much protection in the contract process with respect to non-exclusive licenses as authors may need from the copyright law regarding alienating copyright ownership. But it is one thing to infer that federal copyright policy does not *mandate* a formal prerequisite to the validity of a grant of non-exclusive rights, and another to conclude that, therefore, Congress sought to *prohibit* states from according additional protection to the process of licensing lesser rights. It seems more reasonable to conclude instead that federal copyright law does not "occupy the field" of non-exclusive rights licensing, that the state law here at issue is compatible with general federal policies, and that states may therefore attach formal requirements to the validity of non-exclusive grants.[50]

Assuming federal law does not preempt the section 2B-201 formal requirements with respect to non-exclusive licenses worth more than $5,000, and that endure for one year or more, would section 2B-201 in fact make a difference to authors? The one year minimum could be significant, because many non-exclusive licenses may cover a longer period. For example, suppose nothing was said about the license's duration, but the nature of the exploitation inherently exceeds one year. This characterization would apply to many publishing agreements (even agreements to publish in a monthly periodical could be affected, if, for example, the publisher continues to distribute back issues past one year), as well as to performing or exhibition rights agreements. Setting aside one-time uses, which would remain uncovered, Article 2B would, at least at first blush, seem to inject

49. *See* 17 U.S.C.A. § 101 (West 1998) (defining "transfer of copyright ownership" as explicitly excluding non-exclusive licensees).

50. *See, e.g.*, Grappo v. Alitalia Linee Aeree Italiane, S.p.A., 56 F.3d 427 (2d Cir. 1995); Freedman v. Select Info. Systems, Inc., 1983 U.S. Dist. LEXIS 19664, at *11 (N.D. Cal. Jan. 30, 1983) (applying state statute of frauds to non-exclusive license); Myers v. Waverly Fabrics, 475 N.Y.S.2d 860, 861 (N.Y. App. Div. 1984), *aff'd as modified by* 489 N.Y.S.2d 891 (1985) (holding a non-exclusive license incapable of performance within one year statute of frauds). *But see*, NIMMER & NIMMER, *supra* note 27, § 10.03[A][8].

potentially author-protective formality into the process of contracting for many grants of non-exclusive rights.[51]

Now consider the $5,000 floor. Perhaps not many non-exclusive licenses for individual author-owned works other than software are worth more than $5,000; for those that are, perhaps, few authors would be granting such rights without a written contract in any event. But there may be a relevant class of works and authors. Consider the following hypothetical, inspired by a real case. MegaROM Company offers Fred Effex $10,000 to prepare a special effects sequence for inclusion in MegaROM's impending interactive CD-ROM videogame, "It Came From the Titanic."[52] Fred creates the sequence and delivers it to MegaROM. No written agreements have been concluded; like their Hollywood antecedents, CD-ROM producers "do lunch, not contracts."[53] MegaROM takes the sequence and runs; Fred, who has not been fully paid, seeks an injunction and damages against MegaROM's distribution of the videogame, on the ground that it violates Fred's copyright in the incorporated sequence.

As a matter of federal copyright law, MegaROM's first defense, that Fred transferred his reproduction and distribution rights to MegaROM, will fail, because there is no signed writing. On the other hand, MegaROM's second defense, that Fred granted non-exclusive rights, will succeed, because the non-exclusive grant may be manifested by conduct, and Fred's delivery of the sequence to MegaROM evidences his agreement to the sequence's incorporation and distribution. Fred has only a state law claim for breach of contract to recover the unpaid portion of the $10,000.[54]

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51. However, to the extent state statutes of frauds already apply to non-exclusive grants of copyright, Article 2B will represent a net gain to authors only if its version is more protective than most state versions. To the extent that Article 2B's statute of frauds is *less* protective than state versions, Article 2B will, by displacing state statutes of frauds, leave authors worse off. *See* U.C.C. § 2B-105 (Aug. 1, 1998 Draft). For example, by making the duration and dollar amount criteria cumulative, the August 1998 draft will not require authentication of a license costing more than $5000 if its duration is less than a year, where an applicable state statute that turned on price, independently of duration, might otherwise have applied.

52. Because the videogame is interactive, it would not seem to be a "linear motion picture;" a contract to include an interactive video sequence within the game thus would not be covered by the 2B-104(8) exclusion. This would be true even though videogames are considered "audiovisual works" under the Copyright Act. *See, e.g.*, Williams Elecs. v. Arctic Int'l, 685 F.2d 870, 872 (3d Cir. 1982); Stern Elecs. v. Kaufman, 669 F.2d 852, 856 (2d Cir. 1982). The category of "audiovisual works" is broader than that of "motion pictures," see 17 U.S.C.A. § 101 (defining both terms), and *a fortiori* is broader than that of "linear motion pictures" (the latter term does not appear in the Copyright Act).

53. *See* Effects Assocs. v. Cohen, 908 F.2d 555, 556 (9th Cir. 1990).

54. *See id.*

Under section 2B-201 (which applies because MegaROM intends to distribute the game for a period longer than a year, and its agreement with Fred called for payment exceeding $5,000), MegaROM could not allege a grant of non-exclusive rights in defense to Fred's copyright infringement claim, unless there was a "record" that MegaROM "authenticated,"[55] or, if Fred is considered a "merchant," a "record in confirmation" that Fred received from MegaROM "within a reasonable time" of the conclusion of their agreement.[56] Section 2B-102 defines a "record" as "information inscribed on a tangible medium or stored in an electronic or other medium and retrievable in perceivable form."[57] Under the facts of our hypothetical, there is no "record;" MegaROM can only allege Fred's conduct in support of the existence of the agreement. If, absent the record, there would be no enforceable grant, then MegaROM would not be a non-exclusive licensee; it instead would be a copyright infringer, and Fred could enjoin the video game's distribution.[58]

MegaROM, however, is likely to succeed in showing the existence of a non-exclusive license under either of two of Article 2B's exceptions to the requirement of a record. First, an agreement is enforceable "if a performance was tendered or the information was made available by one party and the tender was accepted or accessed by the other ..."[59] Second, no record is required if "the party against which enforcement is sought admits in its pleading or testimony or otherwise in court that a contract has been formed ...."[60] The hypothetical's facts indicate that performance was tendered and accepted, because Fred delivered the commissioned special effects video, and MegaROM incorporated it. This litigation exception may also apply to Fred, because the agreement would be recounted in the pleadings or testimony. The litigation exception appears in somewhat convoluted form in Fred's case, however, because Fred is not seeking enforcement of the contract against MegaROM; he is claiming the contract is invalid, and that he, therefore, has an infringement action. MegaROM would be the party to allege the validity of the contract, in effect seeking

55. U.C.C. § 2B-201(a)(1) (Aug. 1, 1998 Draft).

56. *Id.* § 2B-201(d).

57. *Id.* § 2B-102(a)(39).

58. This construction "favors" authors to the extent that it invalidates the agreement, thus leaving the way open to the author to allege copyright infringement. But if the agreement is unenforceable, the author will not be paid the contract price (unless it becomes the measure of damages in a successful infringement action). On the other hand, an author who can enjoin the exploiter's use is in a stronger bargaining position than one who merely has a claim for contract damages.

59. *Id.* § 2B-201(c)(1)-(2).

60. *Id.*

its enforcement against Fred, to prevent him from enjoining the distribution of the video game.

If either exception overrides the requirement of a record, then Fred may be no better off than before Article 2B intervened. On the other hand, MegaROM's best defense against the infringement claim is to insist on the existence of the contract; in so doing it not only confirms its obligation to pay Fred, but it acknowledges that the content of the contract includes all the default rules associated with an Article 2B agreement. As we will see, some of these rules may favor Fred.

So far, perhaps, so good for authors. To the extent that there is no "record" of the transaction (and the transaction is worth more than $5,000 and the grant endures for at least one year), authors may be better off with Article 2B than without it. But any exploiter who takes a break from lunch to send or acknowledge a record of the deal can easily help himself under section 2B-201. Consider the following variations on the Fred Effex/MegaROM relationship. Suppose Fred sent the interactive video sequence to MegaROM by e-mail, together with a cover note to the effect that the sequence MegaROM commissioned Fred to make for $10,000 is attached. That e-mail would count as a record.[61] MegaROM can authenticate the record in a return response.[62] Or suppose that Fred e-mails the sequence without a cover note (or physically delivers a disk); now no record originates with Fred. But, if Fred is a "merchant," then MegaROM, having taken a reasonable time to wake up from lunch, can send an e-mail (or other tangible medium of communication) to Fred confirming the agreement. If, within ten days, Fred has not sent a record objecting to the contents of MegaROM's confirmation, MegaROM will have rendered its agreement enforceable, and can therefore assert that it is the grantee of non-exclusive rights in Fred's sequence.[63]

2. *Substantive Limitations on the Licensee's Rights*

Let us suppose that Fred and MegaROM have a contract that is enforceable because, despite the absence of a record, performance was tendered and accepted, or because MegaROM's subsequent confirmation satisfied Article 2B's formal requirements. What is the substance of their

61. If the record is not "authenticated," for example, by a digital signature or other form of encryption, then it probably would not be considered a "signed writing" under the Copyright Act; Fred thus will not have transferred exclusive rights.

62. The August draft is more restrictive than the February version, which validated an agreement set forth in a record "to which that party manifested assent." U.C.C. § 2B-201(a)(2) (Feb. 1998 Draft).

63. *See* U.C.C. § 2B-201(d) (Aug. 1, 1998 Draft).

agreement? We know only that the parties agreed on the preparation and delivery of a special effects sequence to be incorporated in the "It Came From the Titanic" videogame for $10,000. For example, the parties specified neither the scope of the agreement, nor its duration, nor whether MegaROM could also transfer the special effects sequence to another producer. The more informal (not to say, sloppy) the parties' dealings, the greater Article 2B's role in supplementing the details of the agreement.[64]

With respect to the scope of an agreement and the transferability of the rights conveyed, Article 2B sets forth default rules which may be varied "only by a record that is: (1) sufficient to indicate that a contract has been made; and (2) authenticated, or prepared and delivered to the other party, by the party against which enforcement is sought."[65] For agreements such as Fred's, where the "record" (to the extent there is one) does not specify its scope, this means that section 2B-307 will define the extent of the rights licensed. Indeed, even where the parties' agreement is sufficiently formal to transfer exclusive rights under copyright, section 2B-307 will still define its scope, unless the parties specify otherwise in an authenticated record. There is no conflict with federal copyright law, because questions going to the scope of a grant of copyright (as opposed to its validity) are considered matters of state contract law.[66] Section 2B-307 provides, *inter alia*, that

> A license contains an implied limitation that the licensee shall not exceed the expressly granted contractual rights or exercise informational rights in the information other than [those "expressly described" or which are "necessary in the ordinary course to exercise the expressly granted contractual rights"]. However, use of the information or informational rights in a manner inconsistent with this implied limitation is not a breach of contract if the use would be permitted under applicable law in the absence of the limitation.[67]

Suppose that Alice Author granted exclusive rights to publish her article in MagnaMagazine, but the written publication contract did not men-

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64. If the agreement was silent as to whether Fred was representing to MegaROM that the sequence did not violate third parties' copyright or related interests, 2B-401 would supply a warranty from Fred, if Fred is a "merchant," that "the information and informational rights shall be delivered free of the rightful claim of any third person by way of infringement or misappropriation ...." *Id.* § 2B-401(a).

65. *Id.* § 2B-201(e)(1)-(2).

66. *See, e.g*, Bartsch v. Metro-Goldwyn-Mayer, Inc., 391 F.2d 150 (2d. Cir. 1968), *cert. denied*, 393 U.S. 826 (1968).

67. U.C.C. § 2B-307(b) (Aug. 1, 1998 Draft).

tion electronic rights. Suppose also that Magna now wishes to publish CD-ROM versions of selections from back issues of the magazine, as well as to license to Noxis Data Corp. the rights to include the article in an online electronic database containing a vast collection of articles from many newspapers and periodicals. Which, if any, of these additional exploitations would be permissible under section 2B-307?

Do CD-ROM and database rights "exceed the expressly granted contractual rights" in Alice's publishing agreement? Arguably, the agreement to publish in a magazine is not medium-specific; at least, Alice's agreement is not expressly limited to print media. If, however, at the time of the agreement, MagnaMagazine existed only in print form, the medium limitation may be implicit in the agreement, and the subsequent electronic version would exceed the rights granted. The rights Magna seeks to exercise or license do not involve a simple medium transposition of the magazine in which the article was published, but, rather, in the case of the CD-ROM, a new compilation of selected, previously published articles, and, in the case of the online database, a compilation of separately accessible articles from multiple sources.

Moreover, it seems unlikely that Magna could successfully claim to exercise or license the electronic rights on the ground that these exploitations are "necessary in the ordinary course to exercise the expressly granted contractual rights."[68] These exploitations involve different uses, not mere medium updates of the magazine issue in which Alice's article appears. While licensing inclusion of magazine articles in electronic databases may be a frequent business practice, it is not "necessary" to publication of the magazine itself. Therefore, CD-ROM exploitation exceeds the scope of the grant. By contrast, as the Reporter's Note suggests, some alteration of the article in order to conform it to the magazine's style or format, may implicate the author's derivative works right, but is reasonably necessary to the specific exploitation that the author permitted.[69]

Section 2B-307 offers a final basis that MagnaMagazine might invoke to justify its CD-ROM and database exploitations. Magna might assert that these exploitations "would be permitted under applicable law in the absence of the [implied] limitation." The Reporter's Note cites reverse engineering of licensed computer software as an example of a use exceeding the scope of the contract, but that might be a fair use under copyright law,

68. *Id.* § 2B-307.

69. *See id.* § 2B-307, at Reporter's Note 1 (citing example of film clip licensed for inclusion in a CD-ROM product; license reasonably includes "right to crop or modify the size of the clip to fit the media ....").

and therefore "authorized" under Article 2B.[70] Would the Copyright Act permit MagnaMagazine to publish its CD-ROM compilation or license database rights to Noxis? The Act grants copyright owners of "collective works," such as encyclopedias and periodicals, a special privilege to reproduce and distribute the contributions to the collective work (whose separate copyrights the collective works proprietor does not own) "as part of that collective work, any revision of that collective work, and any later collective work in the same series."[71] Since the CD-ROM is a new compilation corresponding to none of the individual issues of the magazine, it would not qualify under the "*that* collective work" criterion.[72] By contrast, the question whether licensing the entire contents of magazine issues to a third party database comes within the collective work copyright owner's "privilege" is currently unsettled.[73] Assuming that the Copyright Act neither authorizes the collective work proprietor to license *others* to exploit the contributions, nor characterizes as a "revision" of the proprietor's particular *collective* work a multi-source compilation whose contents consumers may *separately* access, then Article 2B would not permit MagnaMagazine to engage in these exploitations without Alice Author's further accord.

Section 2B-307's "necessary to exercise" standard also compares favorably (for authors) with current case law construing the scope of copyright licenses. Decisions addressing the application of "old licenses" to "new media" when the language of the grant is ambiguous (for example, whether a pre-VCR-era grant of rights to record music onto the soundtrack of a motion picture includes the right to make and distribute videocassettes of the film[74]) do not uniformly attribute the benefits of the new mode of exploitation to grantors or to grantees. While the First and Ninth Circuits appear to presume that authors retain those rights, the Second Circuit has held that grantors who reasonably could have foreseen the new mode of exploitation must bear the burden of reserving rights in related future uses.[75] The section 2B-307 "necessary in the ordinary course to exercise the expressly granted contractual use" standard appears more restrictive

70. *See id.* at Reporter's Note 2.

71. 17 U.S.C.A. § 201(c) (West 1998).

72. *See* Tasini v. New York Times Co., 972 F. Supp. 804, 820 (S.D.N.Y. 1997).

73. *See id.*

74. *See, e.g.*, Boosey & Hawkes v. Disney, 145 F.3d 481 (2d Cir. 1998); Cohen v. Paramount, 845 F. 2d 851 (9th Cir. 1988).

75. *Compare Cohen*, 845 F.2d 851, *and* Rey v. Lafferty, 990 F.2d 1379 (1st Cir. 1993), *cert. denied*, 510 U.S. 828 (1993), *with* Bartsch v. Metro-Goldwyn-Mayer, Inc., 391 F.2d 150 (2d Cir. 1968), *cert. denied*, 393 U.S. 826 (1968), *and* Boosey & Hawkes v. Disney, 145 F.3d 481 (2d Cir. 1998).

than the Second Circuit's approach, because availing oneself of a related new mode of exploitation (for example, videocassettes) is generally not *functionally* "necessary"—as opposed to economically desirable for the licensee—to exercising rights in the old mode of exploitation (theatrical motion picture exhibition). Article 2B thus appears to leave authors in a better position than under the Second Circuit's approach, and in at least as good a position as under the First and Ninth Circuits' analyses. Courts applying section 2B-307 might also look to European copyright contract case law for further guidance: several European Union member countries' copyright laws provide that, in the absence of contractual specification otherwise, the scope of a grant of rights is limited to those exploitations that are necessary to accomplish the purpose of the grant.[76]

Suppose that, instead of acquiring exclusive rights from Alice, MagnaMagazine had received only a non-exclusive license. What then of Magna's ability to exercise CD-ROM and database rights? If exercising these rights requires Magna to sublicense them, section 2B-502 defers to the general copyright principle that a grantee of non-exclusive rights may not transfer them without the licensor's consent.[77] By contrast, if MagnaMagazine sought to exercise these rights itself, section 2B-307's rules should apply; it would be anomalous were the scope of the non-exclusive grant deemed broader than the grant formalized in an authenticated record. Indeed, the broader Magna's non-exclusive rights, the narrower Alice's copyright ownership as a practical matter, since Magna's successful assertion of non-exclusive CD-ROM or database rights, for example, means that any "exclusive" CD-ROM license Alice grants in her article must co-exist with Magna's non-exclusive rights.[78]

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76. *See, e.g.*, P. Bernt Hugenholtz, *Electronic Rights and Wrongs in Germany and the Netherlands*, 22 COLUM.-VLA J.L. & ARTS 151 (Winter 1998) (addressing the application of this principle in German and Dutch copyright law).

77. Section 2B-502(1)(A) makes transfers of non-exclusive rights ineffective "if prohibited under other applicable law." *See* § 2B-502(1)(A) (Aug. 1, 1998 Draft); *id.* at Reporter's Note 1. The Reporter's Notes recognize that under federal copyright policy, the licensee of non-exclusive rights may not sublicense those rights without the licensor's consent. The licensee may pass along her physical copy of a work of authorship, but not together with any copying privileges, unless the licensee effaces or surrenders any additional copies she had made. *Cf.* 17 U.S.C.A. § 117 (West 1998). Section 2B-502(1)(A) does not, however, set forth how the requisite "consent" must be expressed.

For a discussion of non-transferability of non-exclusive copyright licenses, see, for example, In re Patient Educational Media, 210 Bankr. 237, 240 (Bankr. Ct. S.D.N.Y. 1997), and decisions cited therein.

78. Query whether this co-existence is inconsistent with the warranty that author-"merchants" are presumed to extend under section 2B-401(b)(2), that the exclusive rights are indeed exclusive.

Moreover, it appears that this coexistence would endure for the term of the copyright: section 2B-308 provides that when the agreement does not specify its duration,

> the duration of a license is perpetual as to the contractual rights and contractual use restrictions if ... the license authorizes the licensee to integrate the licensed information or informational rights into a product intended for distribution or public performance by the licensee.[79]

Because Alice's agreement authorized MagnaMagazine to incorporate the article into an issue of the magazine that will be publicly distributed, it appears that the non-exclusive license will be perpetual (subject to cancellation for breach, and, implicitly, expiration of the copyright); the perpetuity of Magna's license undermines the value to other potential licensees of Alice's "exclusive" rights in the article.[80]

Finally, Article 2B may modestly help bind publishers to the authors with whom they contract. Section 2B-502 permits the parties to provide for the non-transferability by the licensee of informational rights.[81] This implies, however, that the default position permits publishers to assign their rights and obligations. Thus, for example, Alice Author may have signed with Prestige Publisher, but if their agreement does not prohibit Prestige from assigning its rights, Prestige may hand Alice's manuscript off to Pulp Publisher. On the other hand, section 2B-505 sets a different default: the licensee may not delegate or subcontract if the licensor has a substantial interest in the actual promisor's performance.[82] From the author's point of view, there may be some tension between the free assignability principle on the one hand, and the protection of a party's "substantial interest" in obtaining performance from the original co-contractant. Perhaps section 2B-502 should incorporate the *substantial interest* bar to assignability.

So far, we have considered how Article 2B may help authors when their agreements tend toward the informal. The combination of rules that promote the easy formation of enforceable agreements with Article 2B's substantive default rules can supply some meaningful protections (as well

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79. U.C.C. § 2B-308(2)(B) (Aug. 1, 1998 Draft).

80. By contrast, if the license granted exclusive rights, it would be subject to termination, 35 years following execution of the grant, under section 203(a)(3) of the 1976 Copyright Act. Since 2B-308's provision for perpetuity of the license can conflict with the Copyright Act termination right, the federal right must prevail.

81. *See id.* § 2B-502(2).

82. *See id.* § 2B-505(a)(2).

as some pitfalls). But how do authors fare under Article 2B when the contracts—written by the exploiter party—are highly detailed? Here, the same formation-promoting rules can work to authors' detriment when the contract's contents override the substantive defaults: authors may end up assenting all-too-instantly to disadvantageous terms.

B. Rules that Increase Authors' Vulnerability to Exploiters

Section 201(d) of the Copyright Act confirms the divisibility of rights under copyright; it permits authors to subdivide and transfer any of the exclusive rights. Section 204(a) subjects the validity of a grant of exclusive rights to the signing by the grantor of a "note or memorandum of the transfer." Together, these provisions are intended to ensure that the author does not blindly grant exclusive rights.[83] Compared with the friction that the Copyright Act builds in, does Article 2B make it too easy for authors to license rights in their works?

With respect to non-exclusive rights, Article 2B does, indeed, pose the risk that authors may too easily be bound to onerous terms. Suppose, for example, that a publisher sent an e-mail to an author proposing to disseminate the work, and asking the author to click on the "I agree" box. The terms of the agreement are not included in the e-mail, but the author is referred to the publisher's web page for the content of the terms. Under section 2B-111, the clicking author will be deemed to have "assented" to the contract, whether or not she actually reads the terms.[84] As a result, if the terms provide for a non-exclusive license in all media, now known or later developed, for the duration of the copyright, and any renewals and extensions thereof, the author is bound. Since, however, the Copyright Act does not grace non-exclusive grants with the same paternalistic attention, and limitations, as transfers of exclusive rights, this result, however unfortunate, does not conflict with the copyright law.

The same conclusion applies to "releases" of non-exclusive rights under copyright pursuant to section 2B-206. Suppose, for example, that a publisher announced a contest for the most distinctive food preparation photograph, and set forth as part of the terms of participation, that all

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83. *See, e.g.*, Effects Assocs. v. Cohen, 908 F.2d 555, 557 (9th Cir. 1990); Eden Toys v. Floralee Undergarments, 697 F.2d 27, 36 (2d Cir. 1982); Pamiloff v. Giant Records, 794 F. Supp. 933, 937 (N.D. Cal. 1992) (The purpose of section 204(a) is "to provide protection for the author and creator of copyrighted material against fraudulent claims of transfer. Thus we understand the policy underlying section 204(a) to be tipped somewhat in favor of the original holder of the copyrighted material.").

84. *See* U.C.C. § 2B-111 (Aug. 1, 1998 Draft). According to Reporter's Note 3, Illustration 1, the contract's terms can be in another, hyperlinked, document that the contractant need not in fact read, so long as the party had the opportunity to review the terms.

contestants granted the publisher the right to reproduce, distribute and transmit the images, in all media now known or later developed. Under Article 2B, the act of participating constitutes manifesting assent if the release language was prominent and called the party's attention. No writing or even a click-on is necessary here; sending the work in will suffice.[85]

Holding non-exclusive licenses, however, may not be enough for the exploiter parties, since non-exclusive licensees may not sublicense without consent,[86] nor do they have standing to sue for copyright infringement.[87] Since Article 2B does not specify how formal the consent to sublicensing must be, the exploiter party may well be able to secure that consent through the same click-on assent that validated the non-exclusive license. For example, the hyperlinkable terms of the agreement might include the required consent to sublicense. The standing problem is more intractable: only copyright owners have standing to sue for copyright infringement, and a non-exclusive licensee is not a copyright owner.[88]

Suppose, therefore, that the e-mail's referenced terms are the same, except that the grant is of exclusive rights; will a click-on assent or an act of participating suffice? Not unless the clicking or participating constituted a "signature" under copyright law.[89] Under Article 2B's own terms, more than merely clicking is required: Article 2B equates a "signature" not with mere "assent" but with an "authentication." "'Authenticate' means to sign, or otherwise to execute or adopt a symbol or sound, or encrypt or similarly process a record in whole or part, with intent of the authenticating person to ... adopt or accept the terms or a particular term of a record that includes or is logically associated or linked with the authentication or to which a record containing the authentication refers ..."[90] According to the Reporter's Notes, an authentication "expands on the traditional idea and general effect of a signature .... Adoption or execution of electronic or other text or a symbol with intent [to] authenticate a

85. *See* U.C.C. § 2B-206(a)(1) (Aug. 1, 1998 Draft); *id.* at Reporter's Note 2. The illustration in the Note concerns participation in a chat room, and the participants' release to the chat-room operator of the right to publish their comments. But if no consideration is offered for the license, then, as a matter of copyright law, the license is revocable.

86. *See id.* § 2B-502.

87. *See, e.g.*, I.A.E. v. Shaver, 74 F.3d 768, 775, 776 n.10 (7th Cir. 1996); PAUL GOLDSTEIN, COPYRIGHT § 4.4.1.1 (2d ed. 1998).

88. *See* 17 U.S.C.A. § 501(a) (West 1998) (identifying an infringer as "[a]nyone who violates any of the *exclusive rights* of the *copyright owner* ...") (emphasis added). The section 101 definition of "transfer of copyright ownership" excludes non-exclusive licenses. *Id.* § 101.

89. *See id.* § 204(a).

90. U.C.C. § 2B-102(a)(3) (Aug. 1, 1998 Draft).

record that would be a signature under prior law is an authentication under Article 2B. This includes use with requisite intent of identifiers such as a PIN number."[91] The emphasis on intent suggests that Article 2B was not designed to facilitate authors' inadvertent transfers of copyright ownership. But is there nonetheless a significant risk that an author might "authenticate" a record that she would not "sign?"[92]

If authentication may be made more easily than a traditional "signature," is there a conflict between the copyright law and Article 2B, so that the copyright law should preempt Article 2B with respect to exclusive licenses? Put another way, which law, federal copyright law or state contract law, defines what a "signature" is? Does the Copyright Act give any indication that the term "signature" has independent federal content distinct from the term's meaning at state law?

The case law on these issues is sparse, but those few courts that have addressed the issue perceive independent federal content to the section 204(a) requirements, rather than a *renvoi* to state law standards; courts have held, for example, that the standard for a "note or memorandum" under section 204(a) was more stringent than that imposed by the state statute of frauds.[93] Arguably, any appearance of a term in the Copyright Act that the Act does not itself define calls for development of a federal common law definition, rather than an interstitial resort to state law norms.[94] Thus, for example, in *CCNV v. Reid*, the U.S. Supreme Court articulated a federal law definition of "employee" for purposes of determining whether a commissioned work created by a hired party is an "employee"-created

91. *Id.* § 2B-102, at Reporter's Note 3.

92. There may also be a danger that authors, as "merchants," could be bound without authenticating an agreement: 2B-201(d) provides that the authentication requirement may be met, between merchants, if one party sends a record to the other, and the recipient does not timely object to the record's contents. Applied to author contracts, this could mean that the publisher could convert a non-exclusive license into an exclusive license if the publisher sent the author a record characterizing the license as exclusive, and if the author failed to object. Even if that result might be possible under Article 2B, however, it is inconsistent with the Copyright Act's formal requirements: an unresponded-to "confirmation" from the grantee is not a "writing" "signed by the owner of the rights conveyed," 17 U.S.C.A. § 204(a) (West 1998).

93. *See* Konigsberg Int'l., Inc. v. Rice, 16 F.3d 355, 357 (9th Cir. 1993); Pamiloff v. Giant Records, 794 F. Supp. 933, 936 (N.D. Cal. 1992).

94. Under the 1909 Act, one test of whether a contract claim "arose under" the federal copyright law, thereby justifying the development of a "federal common law" of contracts, was whether the controversy "presents a case where a distinctive policy of the Act requires that federal principles control the disposition of the claim." Harms v. Eliscu, 339 F.2d 823, 828 (2d Cir. 1964) (Friendly, J.). If that analysis still applies to the 1976 Act, the question remains whether section 204(a) implicates distinctive federal policies.

work made for hire.[95] The Court looked to state common law sources (the Restatement of Agency) to devise the federal standard, but it is clear that the court was applying newly-stated federal criteria to the statute's interstices, rather than perceiving a Congressional delegation to state law to complete the statutory scheme.[96] But even if courts agreed that federal common law supplies the meaning of the terms "signature" and "note or memorandum of the transfer," we still do not know if federal courts would end up adopting the standards of Article 2B as part of the federal common law, as the Supreme Court adopted the standards of the Restatement of Agency.

Adopting Article 2B's standards would arguably be consistent with the technology-neutrality that characterizes much of the Copyright Act. For example, the Act specifies that "[c]opyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, *now known or later developed* ...."[97] The provisions on transfers of copyright, however, may not anticipate the technology of digital signatures or transitory digital "records." The most revealing provision is section 205(a) on recordation of transfers, which provides:

> Any transfer of copyright ownership or other document pertaining to a copyright may be recorded in the Copyright Office if the document filed for recordation bears the *actual signature* of the person who executed it, or if it is accompanied by a sworn or other official certification that is a true copy of the original, signed document.[98]

Given the "actual signature" requirement of 205(a), the same quality of signature is implicit in 204(a)'s requirement that the note or memorandum of the transfer be "in writing and signed." That is, it seems unlikely that the signature necessary to *effect* a transfer of copyright ownership should be less "actual" than the signature necessary to *record* the effected transfer.

The Copyright Act's signature requirements thus are not technology-neutral; a photocopy of a handwritten signature will not suffice.[99] Autopen

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95. 490 U.S. 730, 751-52 (1989).

96. *Compare* DeSylva v. Ballentine, 351 U.S. 570, 580 (1956) (looking to state law to complete definition of "children" under 1909 Act).

97. 17 U.S.C.A. § 102(a) (West 1998) (emphasis added).

98. U.C.C. § 205(a) (Aug. 1, 1998 Draft) (emphasis supplied).

99. The photocopied signature may be accepted for recordation, if it is properly certified, but the certification requires that the recorded document be a "true copy of the original, signed document;" that implies that the original document bore an original, not a

and similar mechanical facsimile signing devices probably are also excluded. But these exclusions are not necessarily inconsistent with Article 2B. The concept of "actual signature" may mean handwriting, or it may mean reliable evidence that the copyright owner herself executed the document.[100] Handwriting is a proxy for the latter concept, but may not be the exclusive means of ensuring and proving that the copyright owner agreed to the transfer. Article 2B's authentication provisions strive to achieve the same result.[101]

If an "authentication" is as reliable as a traditional signature, Article 2B's electronic substitutes would meet copyright norms, unless one interprets the Copyright Act's signed writing standard to require not only that the author herself execute the transfer, but also that the author reflect on the consequence of entering into the contract. While I believe the latter proposition underlies section 204(a) to some extent, I must acknowledge that if the Act is occasionally paternalistic, it does not assume full custody of all authors' alienations. For example, there would be no section 204(a) challenge to a transfer effected by an author who physically signed the document without reading it.

Might Article 2B yield to the Copyright Act's other formal prerequisite to the validity of a transfer of exclusive rights? Where copyright law requires "an instrument of conveyance or a note or memorandum of the transfer," Article 2B demands a "record." The Reporter's Note to section 2B-102(a)(39) tells us that a "record" "does not require permanent storage or anything beyond temporary recordation."[102] For Article 2B, a "record" corresponds to the Copyright Law concept of a "copy;"[103] "copies" in copyright are "material objects in which a work is fixed ...;" a fixation need only be "sufficiently permanent or stable to permit [the work] to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration."[104] But saying that a "record" is a "fixation," does

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photocopied, signature. In the Article 2B context, query what would be a "true copy" of the "authenticated record"?

100. *See, e.g.*, Valente-Kritzer Video v. Pickney, 881 F.2d 772 (9th Cir. 1989), *cert. denied*, 493 U.S. 1062 (1990) (rejecting document executed by author's lawyer; even if lawyer intended to memorialize production agreement, author's own signature or express authorization still required).

101. *See* U.C.C. §§ 2B-102(a)(3), 2B-113, 2B-116, 2B-119 (Aug. 1, 1998 Draft).

102. *Id.* § 2B-102, at Reporter's Note 34.

103. *See id.* (explaining that the definition of "record" "broadens the traditional reference to 'writing,' and incorporates electronic records. It does not require permanent storage or anything beyond temporary recordation. Fixation can be fleeting and perception can be either directly or indirectly with the aid of a machine.").

104. 17 U.S.C.A. § 101 (West 1998).

not resolve the question whether, as a matter of copyright law, "an instrument of conveyance or a note or memorandum of the transfer" need be merely a fixation, or whether the Copyright Act requires a more permanent attestation. Certainly, the recordation provisions of section 205 anticipate more than a temporary fixation, but recordation is not a prerequisite to validity of the transfer. So perhaps recordability of the transfer document is not a prerequisite to validity either. On the other hand, one might infer from the absence of the words "copy" or "fixed" in section 204(a), that the drafters expected that the signed writing would be in a medium that was not only tangible, but also persistent.[105] To that extent, Article 2B may be more liberal than the Copyright Act, in which case, the more stringent standard of the Copyright Act should prevail.[106]

1. Two Test Cases

To assess Article 2B's potential to promote or to compromise authors' interests, let us consider two test cases. In the first, the editor of NEW GREED FINANCIAL NEWS magazine calls Frances Freelance to ask her to write a 2500-word article on off-shore gambling for the next issue of the magazine; he tells her NEW GREED will pay her $1500. Frances researches and writes the article, which she e-mails to NEW GREED with a note: "As requested, here it is; you owe me $1500." NEW GREED e-mails back to confirm its receipt of the article and to inform Frances that if she wants her check to be processed, she must click her assent to an agreement that the article is a work for hire; or, failing that, a total assignment, or, failing that, an exclusive license for all print and electronic media.

Article 2B would not, in fact, cover the first two purported grants, since these are not "licenses," but rather grants of all informational rights.[107] Because there is no "signature," there would be no valid transfer as a matter of copyright law.[108] As for the third term in NEW GREED's response, Article 2B would apply, but would also require an authentication; the click-on would not of itself suffice.[109] If Frances refused to click her assent, what would be the terms of her agreement? If one refers to the e-mails, Frances' "record" does not disclose very much detail, apart from

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105. The contrast in terminology between § 201(d)(1), which states "the ownership of copyright may be transferred ... *by any means of conveyance*" (emphasis supplied), and section 204(a)'s "instrument of conveyance" does not aid resolution of the question whether the memorialization of the transfer need be more stable than a temporary fixation.

106. *See* U.C.C. § 2B-105, Reporter's Note 5 (Aug. 1, 1998 Draft).

107. *See* discussion, *supra* Part II.

108. *See* 17 U.S.C.A. § 204(a) (West 1998).

109. *See* U.C.C. § 2B-102(a)(3) (Aug. 1, 1998 Draft).

the price term. It would be necessary to refer back to NEW GREED's phone call.[110] The terms of the oral communication referred only to publication of the article in the next issue. Under section 2B-307's approach, one may argue that non-print media are not "necessary" to the use specified, and therefore should not be deemed included. Thus, even if Frances, fearing she would never be paid, did click on her agreement to NEW GREED's subsequent terms, NEW GREED would in fact only receive a one-time non-exclusive, non-assignable right to publish her article in the next issue of the print magazine.[111] In this instance, Article 2B appears to work in the author's favor.

In the second case, suppose an online bookstore, Hypolita.com, sponsors a short story writing contest. The winner will receive fame, fortune, and hardcopy publication; all participants, whether or not selected as winners, are asked to click assent to the following terms (if they do not assent, their submission will not be considered):

> By participating in this contest, you grant Hypolita and its successors the right to use your short story, including, but not limited to, its characters, as revised or edited by Hypolita in its sole discretion and under its name, in any medium.[112]

According to section 2B-206, this is a valid release of the authors' "informational rights," not only with respect to the winner, who receives the consideration of the announced prize, but with respect to the losers, since section 2B-206 specifies that "a release in whole or in part is effective *without consideration* if it is in a record to which the releasing party agrees, by manifesting assent or otherwise, and which identifies the infor-

110. Necessary recourse to oral communications to fill in essential terms of the agreement should not make it vulnerable under 2B-201, since the payment is less than $5,000, and the duration is less than one year (at least, if one understands the license to grant only one-time print publication rights). *See* U.C.C. § 2B-201 (Aug. 1, 1998 Draft).

111. As for whether NEW GREED could obtain its objective by sending a check with language on the back proclaiming that Frances' endorsement constituted an execution of a work made for hire agreement, or an assignment, or an exclusive license, the copyright cases are somewhat inconsistent. *Compare* Schiller & Schmidt, Inc. v. Nordisco Corp., 969 F.2d 410 (7th Cir. 1992) (holding that a work for hire agreement must be executed *before* the work is completed), *with* Playboy Enters. v. Dumas, 53 F.3d 549 (2d Cir. 1995), *cert. denied*, 116 S.Ct. 567 (1995), *on remand*, 960 F. Supp. 710 (S.D.N.Y. 1997) (holding that a work for hire agreement may be executed after delivery of the work, so long as oral agreement on work for hire status preceded the work's creation.) Note that these standards would not assist NEW GREED, since the work for hire "agreement" was not proposed, orally or otherwise, until after delivery of the work.

112. This example is inspired by U.C.C. § 2B-206, Reporter's Note 2, Illustration 1 (Aug. 1, 1998 Draft).

mational rights released."[113] What "informational rights" are implicated? "Use" (assuming that means "reproduction" and "distribution"), "revis[ion]" and "edit[ing]" all involve rights under copyright,[114] but since the "release" grants only non-exclusive rights, it is valid as a matter of federal copyright law. On the other hand, lack of consideration for the release also makes it revocable as a matter of copyright law.[115] Because the copyright norm should override, then, not withstanding their release, the participants should be able to recall the non-exclusive grant of reproduction, adaptation, and distribution rights.

State law intellectual property rights may also be at issue here. With respect to character rights, for example, some ambiguity persists, at least in the Ninth Circuit, as to whether literary characters are copyrightable.[116] In *Warner v. CBS* (the "Maltese Falcon" case),[117] the Ninth Circuit suggested that literary characters might not be copyrightable (unless they constituted the "story being told"), and that a transfer of copyright in a novel therefore would not convey sequel rights in the characters. If character rights are outside copyright, then, in releasing character rights to Hypolita, the participants have surrendered control over the characters, and may not be able to revoke the release. Revocation may not be possible because section 2B-105 appears to override *state*-based (as opposed to federally-based) intellectual property rights. That provision preserves certain state statutes that conflict with Article 2B, but character rights are not among them.[118] Indeed, the beneficiaries of these exceptions are not authors, but consumers.[119] Thus, even if the Ninth Circuit had found, as a matter of California law, that a grant of character rights requires consideration separate from the consideration for the transfer of copyright, section 2B-206 eliminates the need for consideration for a "release."[120] This result would compromise the author's efforts to license the literary work; it suggests

113. U.C.C. § 2B-206(a)(1)(A) (Aug. 1, 1998 Draft) (emphasis added). Reporter's Note 1 characterizes a "release" as a "form of a license." *Id.* at Reporter's Note 1.

114. *See* 17 U.S.C.A. § 106(1)-(3) (West 1998).

115. *See, e.g.*, I.A.E. Inc. v. Shaver, 74 F.3d 768, 772, 776 n.10 (7th Cir. 1996); Avtec-Sys. Inc. v. Peiffer, 21 F.3d 568, 571 n.12 (4th Cir. 1994); MacLean Assocs., Inc. v. Wm. Mercer-Meidinger-Hansen, Inc., 952 F.2d 769, 778-79 (3d Cir. 1991); NIMMER & NIMMER, *supra* note 27, §§ 10.01[C][5], 10.02[B][5].

116. *See, e.g.*, RICHARD WINCOR, THE ART OF CHARACTER LICENSING, 19-25, 238-48 (1996).

117. Warner Bros. Pictures, Inc. v. Columbia Broad., 216 F.2d 945 (9th Cir. 1954), *cert. denied*, 348 U.S. 971 (1955).

118. *See* U.C.C. § 2B-105(d) (Aug. 1, 1998 Draft).

119. *See id.* § 2B-105(d) (explaining that in case of conflict between Article 2B and state consumer protection measure, the latter prevails).

120. *See id.* § 2B-206(a)(1).

that state-based rights in the content of copyrighted works (to the extent any survive copyright preemption)[121], should benefit from the same overrides of Article 2B as copyright.[122]

Other state-based rights that may come within this category are moral rights to the integrity of the work, and to attribution of authorship.[123] In granting Hypolita sole discretion to revise or edit the story, and to disseminate the results under its own name, the participants also are surrendering whatever moral rights to the integrity of the work and to attribution that they may enjoy under state laws. Here again, however, even if a state law moral rights waiver would require consideration, section 2B-105 may prevail.[124] It seems, therefore, to the extent that state law may afford authors additional protections, licensees may too easily avoid their application by resort to releases under section 2B-206.

IV. *SHOULD* ARTICLE 2B COVER INDIVIDUAL AUTHOR-EXPLOITER CONTRACTS?

If the "fit" between non-software authors and Article 2B is highly imperfect, would authors be better off in or out of Article 2B? We have seen that Article 2B can create anomalous or undesirable situations for authors, although it can also supply helpful default rules that control when rampant informality characterizes the author-exploiter relationship. Significantly, while many potentially affected industries have participated intensively in the Article 2B drafting process, it appears that authors or their representatives have not closely followed Article 2B's evolution.[125] (If anything, it may be a surprise to many traditional authors that Article 2B would cover

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121. *See* 17 U.S.C.A. § 301 (West 1998).

122. This result also suggests that this aspect of the "Maltese Falcon" decision, if it ever was good law, no longer should be.

123. State-based moral rights of integrity may, however, be held preempted under section 301 of the Copyright Act, on the ground that the moral right to preserve the work against alteration or distortion is "equivalent" to the exclusive right under copyright to derivative works. The moral right to attribution, by contrast, has no copyright law analogue, aside from the specific provisions of 17 U.S.C. § 106A, the Visual Artist's Rights Act, which protects only "works of visual art" (physical originals, or limited editions signed and numbered up to 200, of the art works).

124. *See, e.g.*, JANE C. GINSBURG, JESSICA LITMAN ET AL., TRADEMARK AND UNFAIR COMPETITION LAW Chapter 9A, "Authors' and Performers' Rights of Attribution" (2d ed. 1996) (discussing the extent to which section 43(a) of the Lanham Federal Trademarks Act protects authors' attribution interests). Query whether a 2B-206 "release" is consistent with that protection.

125. *See* Interview with Jonathan Tasini, President, the National Writer's Union (Mar. 6, 1998).

them.) Yet, if authors are to be covered, it would be best if the drafters could, with authors' assistance, work through in detail how Article 2B's provisions would apply, and how those provisions might be changed as a result. (This paper has attempted to raise some issues and questions, but undoubtedly there are many more instances of concern to traditional authors whose analysis would instruct Article 2B's drafters.)

If authors (or their representatives) were to participate in the drafting process (if it is not too late), there may be good reason to maintain Article 2B's coverage. As some commentators have observed or feared, non-Article 2B contracts may be affected by judicial reasoning by analogy from Article 2B.[126] If authors are to end up covered by Article 2B through the back door, maybe it would be better for authors to come in through the front entrance, and to endeavor to improve the "fit."

How might Article 2B be amended to authors' advantage? For those copyright-related areas that remain within the purview of state law, such as the scope of copyright grants and at least certain moral rights, Article 2B could include author-protective rules, for example, a default (if not mandatory) obligation to credit the author as the creator (or, in the case of joint works or adaptations, a creator) of the work. Article 2B might also provide a default rule that the exploiter will disseminate the work as the author created it, although the parties may specifically contract to permit the exploiter to modify the work. (Any such agreement should be subject to the author's "authentication," and not merely to her "assent.")

In some other respects, however, current Article 2B presents too many "traps for the unwary" author because of the ease with which non-exclusive rights may be conferred. One possible response to this danger would be to subject non-exclusive licenses and releases of rights under copyright to an authentication requirement. Section 2B-206 should also specify that when the "release" is of informational property rights in works of authorship, and there has been no consideration, the author is always free to revoke.

Finally, one might return to the question of Article 2B's scope: should Article 2B address only licenses, and not assignments, or, most significantly, work-for-hire agreements? It may seem anomalous that techniques that Article 2B would validate for a transfer of an exclusive license would not also apply to more drastic reductions of the authors' rights. But that may also be just as well. The November 5, 1996 comments of "the Enter-

126. *See, e.g.*, Letter from Gary L. Griswold, *American Intellectual Property Law Association*, to Article 2B Drafting Committee (Nov. 18, 1997), *available at* <http://www.2Bguide.com/docs/sycaipla.html#aipla> (visited Nov. 23, 1998).

tainment Industry" perceived Article 2B as an opportunity to facilitate the conclusion of work for hire agreements;[127] Article 2B's drafters have so far declined the invitation. May they continue to do so.

127. The document can be found on the software industry web site, but appears to have no credited author. *See Article 2B—More than Software* (visited Nov. 4, 1998) <http://www.2BGuide.com/docs/eIposition.pdf>.

THE EXCLUSION OF EMBEDDED SOFTWARE AND MERELY INCIDENTAL INFORMATION FROM THE SCOPE OF ARTICLE 2B: PROPOSALS FOR NEW LANGUAGE BASED ON POLICY AND INTERPRETATION

By Laura McNeill Hutcheson †

ABSTRACT

This Article explores the scope of the proposed draft of Article 2B of the Uniform Commercial Code. In particular, it examines the exclusion of embedded software from the scope of Article 2B, and the treatment of hybrid transactions under Article 2B. This Article also suggests that the language of Article 2B describing the exclusion of embedded software and the treatment of hybrid transactions is ambiguous and could lead to inconsistent applications of Article 2B. After considering the history of the language and the policies behind the exclusion of embedded software and the treatment of hybrid transactions, new language for Article 2B is suggested.

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I. INTRODUCTION

Article 2B, a proposed addition to the Uniform Commercial Code,[1] addresses issues of formation, modification, warranty, disclaimer, transfer of rights, licensing, and remedy as they pertain to the sale and licensing of software, and the electronic formation of contracts.[2] The scope of Article 2B encompasses "licenses and software contracts" and "agreements to provide support for, maintain, or modify software related to a software contract that is included in this article."[3] Article 2B governs the sale of copies of software, but not the sale of copies of books or other printed material, although both software and books are protected by copyright and seem to fit within the same category.[4] Article 2B distinguishes the sale of copies of software from books because the use of software is expressly conditional, while conditions on copyrighted books or other printed materials are implied.[5] Software is also distinguished from books because the nature of software (easily copied and transferred) makes it particularly susceptible to copyright infringement.[6] Because software is so easily copied and transferred, licensing and distribution agreements are easily broken. Article 2B will go well beyond the common law in providing a legal framework to establish remedies and guidelines for the governance of commercial software transactions.[7]

Basically, a contract only fits within the scope of Article 2B if it is a licensing agreement that expressly conditions the use of information or if it is a contract which is related to a licensing agreement and which maintains, modifies, or supports software.[8]

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1. *See The National Conference of Commissioners on Uniform State Laws* (visited Nov. 9, 1998) <http://www.law.upenn.edu/library/ulc/ulc.htm>.
2. *See generally* U.C.C. § 2B (Feb. 1998 Draft).
3. U.C.C. § 2B-103(a)(2) (Mar. 1998 Draft).
4. *See* U.C.C. § 2B-103, Reporter's Note 2 (Feb. 1998 Draft).
5. *See id.*; *see also infra* Part IV.A.
6. *See* U.C.C. § 2B-103, Reporter's Note 5 (Feb. 1998 Draft).
7. *See* U.C.C. Article 2B, Preface at 8-9 (Sept. 25, 1997 Draft) (stating that "limitations [on the use of software] are commercially important because the technology makes copying, modification and other uses easier to achieve in forms that can yield commercially harmful results ... Article 2B reflects ... the need for a focused body of law applicable to these products ... [N]o common law exists on many of the important questions ....").
8. *See* U.C.C. § 2B-103(a) & Reporter's Note 5 (Feb. 1998 Draft). In addition, contracts involving services not within Article 2B's scope may fall under Article 2B's contract formation rules if Article 2B's subject matter is the predominant purpose of the contract. *See* U.C.C. § 2B-103(c)(2) (Mar. 1998 Draft) (using language that limits the scope of Article 2B's rules of contract formation to contracts predominantly related to subject matter or services within the scope of Article 2B except where the parties agree to

The scope of Article 2B is intentionally ambiguous. The drafters intended to leave the general question of the types of licensed information within Article 2B's scope indefinite because the "long term viability" of Article 2B might suffer if the general scope were limited to a certain subject matter, such as digital information.[9] Instead, the drafters focused on a *type* of transaction—licensing.[10] The indefinite nature of the general scope of Article 2B is understandable because of the unpredictable evolution of technology in the information age.

Article 2B also has named exclusions which are imprecise: licenses and software contracts or agreements otherwise within the scope of Article 2B are excluded from the scope if one of several conditions exist. The scope of Article 2B excludes software embedded in goods,[11] licenses or software contracts merely incidental to a larger transaction that would not otherwise fall within the scope of Article 2B,[12] printed materials,[13] some patents,[14] entertainment contracts,[15] employment contracts,[16] and banking or monetary transactions.[17]

This Article explores the exclusions to the scope of Article 2B. Although Article 2B is still in the drafting process, this Article tries to identify possible sources of uncertainty and confusion in the language of the exclusions to the scope of Article 2B. By hypothesizing situations which are not clearly within the exclusions to Article 2B, this Article demonstrates the need for more carefully defined exclusions to the scope of Article 2B. Unless remedied in the drafting process, the imprecise exclusions to the scope of Article 2B might lead to less uniformity and guidance than the drafters had hoped to achieve.

Although the imprecision of Article 2B's general scope is necessary to allow Article 2B to change along with evolving technology, exclusions to the scope of Article 2B should not be so imprecise. Unlike the general

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be bound by the terms of Article 2B); U.C.C. § 2B-103, Reporter's Note 9 (Feb. 1998 Draft) (asserting that the scope of Article 2B's rules of contract formation is not limited to contracts involving only services and subject matter within Article 2B's scope).

9. *See* U.C.C. § 2B-103, Reporter's Note 5 (Feb. 1998 Draft).

10. *See id.*

11. *See* U.C.C. § 2B-103(b)(2)(C) (Mar. 1998 Draft). This exclusion for embedded software does not apply if the embedded software is in a disk, computer, or other information processing system. *See id.*

12. *See id.* § 2B-103(b)(2)(A).

13. *See* U.C.C. § 2B-103, Reporter's Note 2 (Feb. 1998 Draft).

14. *See* U.C.C. § 2B-103(b)(2)(B) (Mar. 1998 Draft).

15. *See id.* § 2B-103(b)(2)(E).

16. *See id.*

17. *See id.* §§ 2B-103(b)(1), 2B-103(b)(2)(D).

scope of Article 2B and its concern with general technology, the exclusions concern a type of information which is not considered to be a part of the evolving technology. The exclusions to Article 2B—embedded software and merely incidental information—should be well-defined because they involve the end use of the technology, whether that end use includes chips, CD-ROMs, or the next form of technology. Because the form of the technology will not change the end use, there is no reason to be imprecise in the language describing the exclusion. If the drafters of Article 2B are imprecise in their definition of technology or information within the scope of Article 2B, and, therefore, hope to keep the scope of Article 2B as expansive as possible, then the exclusions to the scope of Article 2B should be as limited and narrow as possible.

Part II of this Article explores the exclusion of embedded software from Article 2B's scope. This section addresses two potential sources of ambiguity in the exclusion provision: the definition of embedded software and the condition that embedded software excluded under the provision cannot have been "developed specifically for the transaction." Part II.A explains the exclusion and defines embedded software using the language of Article 2B and the Reporter's Notes. Part II.A next suggests four factors which may help determine whether software embedded in goods falls within the exclusion, and applies these four factors to goods containing embedded software which do not clearly fall within the exclusion. The application of these factors indicates the insufficiency of the exclusion for embedded software. Part II.B discusses the meaning and consequences of the condition that the embedded software is only excluded if it was not developed specifically for the transaction. Part II.B also uses an example to illustrate the potential difficulties encountered when applying this condition. Finally, Part II.C proposes new language for a more specific exclusion of embedded goods from Article 2B.

Part III of this Article explores Article 2B's treatment of hybrid transactions which involve goods traditionally governed by Article 2 or services governed by other law, as well as information and software that will be governed by Article 2B. First, this Part explains the three tests used by Article 2B to determine whether the information or software is within its scope. Parts III.A and III.B focus on the newest exclusion to Article 2B created by the "merely incidental" test. Part III.A focuses on the first type of exclusion under the test: the exclusion of licensed information which is incidental to services. Part III.A explores the background of the exclusion, the conflicting past and present policies underlying the exclusion, the possible inequities in the application of the exclusion, and suggests a solution to the problems inherent in the exclusion as it now stands. Part III.B fo-

cuses on the second type of exclusion under the merely incidental test: the exclusion of licensing and software contracts that are only a minor part of the transaction. Part III.B discusses the competing policies of the "gravaman of the action" test used for hybrid transactions versus the new merely incidental test. Finally, Part III.B proposes changes to make the merely incidental test more consistent with the results and purposes of the other two tests the drafters use to structure the scope of Article 2B.

II. THE EXCLUSION OF EMBEDDED SOFTWARE

Article 2B limits the scope of its application by excluding embedded computer programs. Examples of embedded software include navigational system software used in airplanes,[18] and computer programs which control automobile braking systems.[19] Two examples of non-embedded software include software contained on a disk,[20] and software stored in a computer.[21]

Whether the software is within the general scope of Article 2B or within the section 103 exclusion affects the available remedies to the consumer or buyer of the software. If the only remedy lies within the U.C.C., Article 2 protects the consumer more than Article 2B. Therefore, if the embedded software falls within the exclusion to Article 2B, but is covered by Article 2, the consumer will benefit from the greater protection of Article 2's remedial provisions. The remedy available in an Article 2B suit for the failure of the software could be limited by contract. While Article 2 contains a presumption that a limitation on personal injury loss recovery is prima facie unconscionable in consumer contracts,[22] Article 2B contains no such presumption. The two articles contain similar statutes of limitations,[23] with one potential difference: in Article 2B, sellers are not pre-

18. *See* U.C.C. § 2B-103, Reporter's Note 8(b) (Feb. 1998 Draft).
19. *See id.*
20. *See id.* § 2B-103(c)(2)(A).
21. *Id.*
22. *See* U.C.C. § 2-719(3) (1994).
23. Both articles contain a four-year statute of limitations that begins to run when the breach occurs (upon tender of delivery). *See id.* § 2-725(2); U.C.C. § 2B-705(a) (Feb. 1998 Draft); *cf.* Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737, 744 (2d Cir. 1979) (agreeing that the statute of limitations begins tolling upon the occurrence of the negligent act, but that, in this case, the negligent act was the failure to deliver a working computer system, not the negligence that resulted in the inability to deliver a working computer system). Article 2B also has an alternate statute of limitations that runs for one year after the harm is or should have been discovered. *See* U.C.C. § 2B-705(a) (Feb. 1998 Draft). A recent draft of revised Article 2 would conform to Article 2B's ad-

cluded from shortening this period by contract, while a recent draft of the revised Article 2 precludes limitation in consumer contracts.[24] A contractual limitation on the starting point for the running of the statute of limitations could reduce the consumer's ability to recover for losses.

Although the drafters have gradually limited the general scope of Article 2B since the original draft in 1996,[25] the specific exclusion of embedded software has been present since the early drafts of Article 2B.[26] In the February 1998 draft, the scope of Article 2B excluded computer programs which are embedded in goods and which are sold or leased as a unit with the goods in which they are embedded.[27] This embedded software is gov-

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ditional one-year statute of limitations period. *See* U.C.C. § 2-814(a) & Reporter's Note 1 (Mar. 1, 1998 Draft).

24. *See id.*.

25. *See* U.C.C. Article 2B, Preface at 9 (Feb. 1998 Draft). Originally, the drafters intended the scope of the new Article to cover all transfers of information, whether in software, print, or other media format. *See* U.C.C. § 2B-103(a) (Feb. 2, 1996 Draft) (providing that Article 2B "applies to transactions in information, including licenses, access contracts, unrestricted transfers of information, sales of copies of information and software contracts, and to agreements to support, maintain, develop, or modify information"). In fact, the Reporter's Notes to the early draft express concern about restricting the scope. *See* U.C.C § 2B-103, Reporter's Note 1 (Apr. 2, 1996 Draft) (stating that focusing the scope of Article 2B on one type of information, such as digital information, was "too narrow and too closely linked to a particular technology"). But later drafts limit the scope of Article 2B to "licenses of information and software contracts" and the contracts for the information or software maintenance or modification. *See* U.C.C. § 2B-103(a) (Sept. 25, 1997 Draft).

26. *See* U.C.C. § 2B-103(d)(4) (Sept. 25, 1997 Draft); U.C.C. § 2B-103(d)(3) (1997 Annual Meeting Draft); U.C.C. § 2B-103(d)(3) (May 5, 1997 Draft); U.C.C. § 2B-103(d)(3) (Mar. 21, 1997 Draft); U.C.C. § 2B-103(d)(3) (Jan. 20, 1997 Draft); U.C.C. § 2B-103(d)(3) (Dec. 12, 1996 Draft); U.C.C. § 2B-103(d)(3) (Nov. 10, 1996 Draft); U.C.C. § 2B-103(d)(3) (Sept. 4, 1996 Draft); U.C.C. § 2B-103(d)(3) (July 12-19, 1996 Annual Meeting Draft); U.C.C. § 2B-103(d)(6) (May 3, 1996 Draft); U.C.C.. at § 2B-103(d)(6) (Apr. 2, 1996 Draft); U.C.C. § 2B-103(d)(6) (Feb. 2, 1996 Draft). The wording of the exclusion of embedded computer programs remained substantially the same until later drafts of Article 2B.

27. *See* U.C.C. § 2B-103(c)(2) (Feb. 1998 Draft). The text of the February 1998 draft of the exclusion reads:

> (c) Except as otherwise provided in this section, this article does not apply to the extent that an agreement is ...
>
> (2) a sale or lease of a computer program embedded in goods and sold or leased as part of the goods, unless
>
> (A) the goods are merely a copy of the program or are an information processing system in which the program is to operate,
>
> (B) the program was developed specifically for the transaction, or

erned instead by the body of law which applies to the good containing the embedded software.[28]

In the February 1998 draft, even embedded software did not fall within the exclusion if the buyer of the goods had specifically licensed it,[29] or if the embedded software was "developed specifically for the transaction."[30]

There are at least two difficulties that emerge when determining whether software falls within this exclusion of embedded software. First, the exclusion does not clearly define embedded software. Second, the condition that embedded software cannot be within the exclusion if it has been "developed specifically for the transaction" [31] is ambiguous because of varying interpretations of the term "developed."

A. Definition of Embedded Software

There is no existing caselaw which defines "embedded software." The only explanation is supplied by two examples of embedded software listed by the reporter,[32] and two examples *non-embedded* software.[33] While two

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> (C) the program was subject to a separate license with the transferee of the goods ....

Id. Most of this Article reflects analysis of this draft. Another recent draft has changed the language to exclude:

> a sale or a lease of a product that has a computer program embedded in it, but this article applies if the product is:
> (i) merely a copy of the program;
> (ii) a computer;
> (iii) another information processing system and a primary purpose of the transaction is to give access to or use of the program.

U.C.C. § 2B-103(b)(2)(C) (Mar. 1998 Draft).

28. *See* U.C.C. § 2B-103(c)(2), Reporter's Note 8(b) (Feb. 1998 Draft); *see also id.* § 2B-103(b) ("If another article of [the U.C.C.] applies to a transaction, this article does not apply to the subject matter or related rights and remedies governed by the other article except as provided in this section ....").

29. *See id.* § 2B-103(c)(2)(C).

30. *Id.* § 2B-103(c)(2)(B). In at least one case, it was the degree to which software was developed specifically for a transaction that caused courts to label a software contract as one for services. *See* Micro-Managers, Inc. v. Gregory, 434 N.W.2d 97, 100 (Wis. Ct. App. 1988).

31. U.C.C. § 2B-103(c)(2)(B) (Feb. 1998 Draft).

32. *See id.* § 2B-103, Reporter's Note 8(b) (listing navigation software in airplanes and software in automobile braking systems as two examples of embedded software that fall within the exclusion).

33. *See id.* § 2B-103(c)(2)(A) (excluding software embedded in copies of a program, such as disks, or "information processing systems," such as computers). Note also that the reporter has drawn attention to the difficulty of determining the scope of the embedded software exclusion. *See* U.C.C. Article 2B, Preface at 17 (Sept. 25, 1997 Draft) ("Defining the scope of this exclusion has been difficult").

of the examples of software do not fit within the exclusion, all four examples of software are "embedded" in goods in the literal sense. Therefore, "embedded software" is a term of art within the context of the section 2B-103 exclusion. Courts and practitioners should not use a literal interpretation or dictionary definition of embedded software to determine whether embedded software will be within the exclusion to Article 2B.

Instead, the practitioner or court should infer the meaning of embedded software from consideration of the embedded software examples in the Reporter's Notes and the language of Article 2B. The two examples of embedded software given in the Reporter's Notes are navigation software embedded in airplanes,[34] and computer programs embedded in automobile braking systems.[35] The two examples of non-embedded software are software stored on a disk,[36] and software on a computer.[37] Two underlying policies of Article 2B which should be considered in conjunction with the exclusion of the embedded software include the intention of the drafters to encompass all information which is particularly susceptible to unauthorized copying or transferring,[38] and the attempt of the drafters to mirror expectations and practices already present in the commercial world.[39]

The scope of the embedded software exclusion should be informed by a comparison of the four examples of embedded or non-embedded software, along with consideration of the underlying policies of Article 2B. The author contends that four factors should influence the exclusion or inclusion of embedded software within Article 2B: 1) the purpose of owning the good; 2) the buyer's awareness of the software as a separately functioning part of the good; 3) the ability to copy or transfer the software; and 4) the risk associated with the malfunction of the software.

The first factor, the purpose of owning the good which contains the embedded software, is drawn from a distinction between software embedded in computers or disks and software embedded in automobile braking systems or navigation programs. In a good such as a computer or disk, the software embedded in the computer or disk is the central purpose of owning the good. In the airplane or automobile, the software is important to the functioning of the good, but is not the main purpose for owning the

34. *See* U.C.C. § 2B-103, Reporter's Note 8(b) (Feb. 1998 Draft).
35. *See id.*
36. *See id.* § 2B-103(c)(2)(A).
37. *Id.*
38. *See id.* § 2B-103, Reporter's Note 5.
39. *See* U.C.C. Article 2B, Preface at 15 (Feb. 1998 Draft).

plane or the automobile.[40] This distinction suggests that if the main use of the good is solely to employ the software program, then the embedded software is within the scope of Article 2B. A common example would be the sale of a disk—a good—that contains an embedded software program, like a daily planner or a word processing system. Although the good (the disk) is important, the main purpose of the sale is to use the software program embedded in the disk. One test of whether the main purpose of the product is for the good or the software is whether the buyer would be satisfied with the software if it were embedded within another form of good, like a compact disk or a tape.[41] Correspondingly, the distinction also suggests that if the purpose of the good is not for the use of the software within it, then the software is embedded and is not governed by Article 2B. This factor applies regardless of the importance of the software to the function of the good. For example, the software embedded in a car may be so important that a dealer would not be able to sell a car without it, but the main purpose of owning the good is still to obtain the services performed by the good, not just the software. Unlike the example of the daily planner software program above, the buyer would not be satisfied with the software if it were embedded in another good.

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40. Since it remains important to the good, the software in an airplane or car is not "merely incidental." If the software was "merely incidental to subject matter not governed by this article," then the law governing the main transaction would also govern the incidental licensed material or software. U.C.C. § 2B-103(a) (Feb. 1998 Draft); *see also id.* § 2B-103, Reporter's Note 4. If the embedded software were within the "merely incidental" exception to Article 2B, then the specific exclusion for embedded software would be superfluous.

41. I do not use the predominant purpose test to determine whether the purpose of owning the product is for the service of the good or the software because of the very nature of embedded software. The predominant purpose test is usually employed to determine whether the services or goods aspect of a transaction predominates. *See* Advent Sys. Ltd. v. Unisys Corp., 925 F.2d 670, 676 (3d Cir. 1991). The test uses such factors as cost and structure of agreement. *See id.* Relative cost and the structure of the agreement are not helpful factors when determining whether goods or embedded software is the main purpose because the two are usually sold as a package, without any proportional distribution of sale price between the two. If the good and its embedded software were priced separately, it would seem that the software would not be within the exclusion because it was not "sold or leased as part of the goods," as required by the provision. U.C.C. § 2B-103(c)(2) (Feb. 1998 Draft). In addition, I do not list the cumbersome application of two laws to one transaction as one of the possible policies underlying the exclusion of embedded software. This would not seem to be an underlying policy of Article 2B because Article 2B explicitly rejects the predominant purpose test in hybrid transaction situations despite the awkwardness of applying more than one law. *See id.* § 2B-103, Reporter's Note 6.

The second factor, the buyer's awareness of the embedded software as a separately functioning part of the good, is supported by the cited examples, and is drawn from the policy of the drafters to be accurate, not original.[42] Software embedded on a computer is clearly separate from the computer hardware itself. Although hardware has occasionally been the source of computer miscalculation, if someone using a computer to compute their federal tax liability noticed that the amount of taxes figured was incorrect, then the user may determine that the computer is the cause of the malfunction. The user would identify the embedded software as the source of the malfunction, and would probably expect that the program would not be covered under the same warranty covering the computer, even if that program was embedded in the computer at the time the user purchased the computer. Since the reasonable user in the buyer's shoes would have been aware of the program and the manner in which it functioned separately from the hardware, it is appropriate to govern that software under a separate set of warranties and liabilities than the hardware (the computer) which is a good covered under Article 2.[43]

Software embedded in a car, however, is not clearly a separate feature of the car. If a car will not stop, then the driver probably would not know whether to blame the brake failure on the embedded software or the mechanical brake hardware. The driver would probably view the software operating the brakes and the brake hardware as two parts of a single whole and would reasonably expect the same warranty to cover both. Therefore, if the buyer is aware of the separate status of the software, then the software is governed by Article 2B. But if the good operates with the software as a whole, and the buyer reasonably expects that the software and the hardware operate as a single unit covered by the same warranties, then the software is not governed by Article 2B.[44] In the case of the car with mal-

42. *See* U.C.C. Article 2B, Preface at 14 (Feb. 1998 Draft).

43. Article 2 employs a gravaman of the action test; however, the information component of this transaction escapes such treatment because it would fall within the scope of Article 2B. *See* U.C.C. § 2B-103(d) (Feb. 1998 Draft); *see also* U.C.C. § 2B-103, Reporter's Note 4 (Sept. 25, 1997 Draft). It is not clear whether a disk is considered a good under Article 2 or information under Article 2B. According to the language of Article 2B, "media that contains the information" is within its scope. *See* U.C.C. § 2B-103(d)(1) (Feb. 1998 Draft). However, neither Article 2B nor the Reporter's Notes define media. If the exclusion of embedded software does not encompass goods that "are merely a copy of the program" (i.e. disks), then it would seem superfluous to also specifically include disks in the scope of Article 2B under Section 2B-103(d)(1).

44. Ironically, in an early case applying Article 2 to software, the court relied on the fact that the software was sold with hardware as a single unit—basically, that the software was embedded in the purchased goods and that the defendant did not intend or expect that the software would be part of a separate contract outside Article 2. *See* Neilson

functioning brakes, the buyer would not expect to have to sue under two different Articles or two different theories for an injury caused by both hardware and software failure. Instead, the buyer would probably expect the same warranties and remedies to be available for the failure as a whole.

In contrast, a buyer explicitly aware of the independent function of the embedded software may be unusually informed, and may enjoy greater bargaining power, thereby negating the need for the increased protections available under Article 2.[45] Thus, the buyer's awareness of the software is a factor used in determining the appropriate level of protection under Article 2. Therefore, the buyer's awareness should also be a factor used in determining whether the software falls within the embedded software exclusion.

The third factor, the ability to transfer or copy the embedded software, is based on the drafters' policy to include all information susceptible to copyright infringement within the scope of Article 2B.[46] This factor also matches a comparison of the Reporter's examples and the examples in the provision. Programs embedded in computers or disks are easily transferred or copied, while programs embedded in automobiles or airplanes are not. Therefore, it is appropriate that programs embedded in computers or disks should be governed by Article 2B. The programs embedded in cars or planes would receive unnecessary protection if they were governed by Article 2B because they are not as susceptible to copyright infringement. For example, car owners generally do not and cannot make copies of the information contained on the chip which controls their automobile braking systems.

This third factor also corresponds to the first factor (the purpose of the good) because consumers usually buy goods which include software that is easily copied and transferred for the purpose of using the software. Analogously, goods sold for the purpose of using the good do not usually contain embedded software in a format which is easily copied or transferred.

The fourth factor, the risk associated with the malfunction of software, is a result of the distinction drawn between software embedded in a computer or disk and software embedded in an airplane or automobile. Hypo-

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Bus. Equip. Ctr., Inc. v. Italo V. Monteleone, M.D., P.A., 524 A.2d 1172, 1174-75 (Del. 1987).

45. *See supra* text accompanying notes 22-24 (discussing the remedies available under Article 2).

46. *See* U.C.C. § 2B-103, Reporter's Note 5 (Feb. 1998 Draft).

thetically, the physical and economic risks of malfunction of the software in a computer are much lower than the risk of malfunction of the software in an airplane or automobile. This difference in the examples suggests that one policy underlying the drafters' decision to exclude embedded software from the scope of Article 2B might be to protect consumers in situations in which the risk of harm due to malfunction is great. By placing embedded software outside the scope of Article 2B, the drafters insured that a plaintiff would not be limited to the remedies provided by Article 2B, but could rely on the remedies provided by Article 2. This exclusion tells courts that this type of software is not really software at all—it is part of a good which falls within the scope of state consumer protection laws, Article 2, and product liability laws.[47]

Because Article 2, which would usually govern the product or good in which the software is embedded, provides more available remedies to the consumer than Article 2B,[48] the protection of consumers may be one reason for excluding embedded software from the scope of Article 2B. If the protection of consumers motivates this exclusion, then the risk of harm posed by the good containing the embedded software is an appropriate factor to consider in determining whether the software should be excluded.[49] Two underlying policies should be considered: the intent of the

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47. Article 2B contains language which allows consumer protection laws to supersede Article 2B, but only if these laws existed prior to the adoption of Article 2B. *See* U.C.C. § 2B-104(a) (Feb. 1998 Draft). This fact does not necessarily preclude the necessity of excluding embedded software in order to increase consumer remedies. Excluding the embedded software emphasizes the application of consumer protection laws in certain situations. In addition, consumer protection laws may not apply to software. *See* Margie Wylie, *Perspectives: Shrink-Wrapping the Social Contract* (visited November 8, 1998) <http://www.news.com/Perspectives/mw/mw4_23_97a.html> (stating that only goods are protected by state consumer protection laws, and that software may not be considered a good under these laws).

48. *See supra* text accompanying notes 22-24.

49. There is little information available pertaining to the frequency of physical injury or substantial economic harms suffered by consumers as a result of software malfunction. *See* Complaints from Consumers to the New York Better Business Bureau (1996-97) (on file with author) (detailing eight complaints about software malfunction, incompatibility, and poor performance in which 7 of the 8 consumers requested only a refund of the purchase price to settle their complaint); Letter from Anne O'Grady, Information and Investigations Specialist, New York Better Business Bureau, to the author (received Mar. 10, 1998) (on file with author) (stating that most computer complaints deal with sales or repair); Telephone Interview with Jennifer Borio, Pittsburgh Better Business Bureau (Mar. 5, 1998) (on file with author) (stating that most computer complaints are about hardware capabilities such as compatibility or RAM expansion, and that no consumers have complained of defective software); The vice president and counsel for the Software Publishers Association in 1997, Mark Nebergall, does not know of any sub-

drafters to include all information particularly susceptible to unauthorized copying or transferring,[50] and their intent to formulate Article 2B according to the expectations and practices already present in the commercial world.[51]

We should consider these four factors when determining whether embedded software should be excluded from Article 2B. But problems arise when one or two of the factors indicate that the software should fall within the exclusion, while one or two indicate that the software should fall outside the exclusion. Such in-between cases highlight the weaknesses inherent in an imprecise definition of embedded software.

Some examples of goods for which the factors discussed *supra* indicate both exclusion and inclusion within the scope of Article 2B are: computerized surgical equipment; automated teller machines; robotics in factories; and advanced home appliances, such as coffee machines and bread machines.

Computerized surgical equipment is an innovation which combines computer software, a monitor, the actual surgical instrument, and a doctor's physical motions. This new technology operates endoscopes,[52] and may soon become available to perform heart bypass surgery,[53] and other

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stantial harm that has occurred because of software defects, either. *See* Brian McWilliams, *The End of Software Licenses?*, PC WORLD ONLINE (visited November 8, 1998) <http://www.pcworld.com/cgi-bin/database/body.pl?ID=970307181430> (quoting Mr. Nebergall). In addition, several Westlaw searches failed to yield any cases involving physical harm due to software malfunction. But this fruitless search does not necessarily indicate a lack of injuries due to software malfunction. Most physical harm caused by software malfunction probably occurs in non-consumer settings. *See* Maria Stephens, *Hit and Run at Honda* (April, 1996) (visited November 8, 1998) <http://www.uaw.org/solidarity/9604/honda.html> (reporting a case of robot malfunction at a Marysville, Ohio, Honda plant in which the robot threw an employee against a pole, resulting in five years of continual catastrophic nerve damage, blackouts, and pain). Thus, consumer protection laws may not apply in practice to cases involving harm due to malfunction of embedded software.

50. *See* U.C.C. § 2B-103, Reporter's Note 5 (Feb. 1998 Draft).

51. *See id.* Article 2B, Preface at 15 (Feb. 1998 Draft).

52. A computerized, robotic endoscope is an optical tube, or laparoscope, that feeds images to a video screen and may be threaded inside the body during minimally invasive procedures. The Automated Endoscopic System for Optimal Positioning (the AESOP) is an endoscope available from Computer Motion in both a regular model and a voice activated model. *See Computer Motion homepage* (visited Mar. 3, 1998) <http://www.computermotion.com>.

53. Computer Motion presented a computerized surgical system designed to perform heart bypasses at a symposium in January of 1998, and plans to apply for FDA approval in 1998. *See Heart Bypass Surgery Feasible Through Chest Incisions Smaller than the Diameter of a Pencil* (visited Mar. 3, 1998) <http://www.computermotion.com/

technically demanding surgeries.[54] For computerized surgical equipment, the consumer awareness factor and ease of copying factor indicate inclusion under Article 2B, while the risk factor and the purpose factor indicate exclusion from Article 2B.

The doctor or hospital purchasing the equipment will probably be aware that the software functions separately from the hardware (the surgical equipment itself). If the laser operated by the software consistently performs at a lower frequency than the one set by the doctor, then the doctor knows to repair the laser itself. But if the laser travels left when directed to travel right, then the doctor knows that the software programming is faulty. This characteristic makes the computerized surgical equipment appear to be more like the software embedded in a computer. Further, the software, if run through an actual computer hard drive, might be easily copied. Thus, the ease of copying factor also indicates that computerized surgical equipment falls within Article 2B.

However, the risk and purpose factors suggest that computerized surgical equipment should be excluded from the scope of Article 2B. A mistake in the programming of the software embedded in the equipment could lead to severe physical injuries. As the risk level of the product is high, it might be better governed by Article 2 or the common law. In addition, the purpose factor favors exclusion. The software is not the main purpose of owning the good. The main purpose of owning the good is to obtain the services performed by the surgical equipment, not the operation of the software alone. Since the possible factors which indicate exclusion or inclusion within Article 2B are evenly split, the language of the exclusion is not adequately precise. The language of the exclusion or the Reporter's

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pressr25.htm>. The machine, named "ZEUS," has three robotic arms: one uses an endoscope, while the other two use surgical instruments. *See id.* The press release states:

> [w]hile seated at the console, the surgeon's macro movements are input into the System through handles which resemble conventional surgical instruments. These inputs are scaled and filtered through a computer and translated via the robotic arms into precise micro movements at the operative site. For example, the surgeon might move the surgical instrument handle at the console 1 inch while the corresponding robotic instrument tip moves only 1/10 of an inch.

Id.

54. The Jet Propulsion Laboratory, under contract with the National Aeronautics and Space Administration, and in conjunction with MicroDexterity Systems, Inc., has developed and performed simulated testing of a two-armed robot-assisted microsurgeries workstation (RAMS) for eye, brain, ear, nose, throat, face, and hand operations. *See Robot Assisted Microsurgery* (visited Mar. 3, 1998) <http://robotics.jpl.nasa.gov/tasks/rams/homepage.html>.

Notes should clarify which of the four factors, if any, should sway the exclusion or inclusion of goods such as surgical equipment.

An automated teller machine (ATM) combines software and a computer-like appearance (keypad and screen) with the physical function of dispensing cash or accepting deposits. Like the surgical equipment, the factors are evenly split between exclusion and inclusion. But, unlike the surgical equipment, the risk and awareness factors favor inclusion, while the ease of copying and purpose factors favor exclusion. The ATM has a low level of physical risk, making the extra protection of Article 2's consumer-friendly laws unnecessary (as well as superfluous because ATMs are not truly consumer items—the banks would probably pay their customers for the economic consequences of ATM malfunctions). In addition, excluding these software programs from Article 2B would needlessly interfere with the transaction between the parties, forcing the buyer to pay for a good (insurance against the risk of software failure) which the buyer would rather not purchase. The bank which contracted for the development or installation of the ATM is probably aware of the software component of the machine. The machine developer probably asked the bank for its preferences in order to program the software accordingly (i.e., the cash limit on a single withdrawal; the number of transactions available to the consumer). Because the bank is aware that the software is a separately functioning part of the ATM, the bank does not have a reasonable expectation that the software is governed by the same laws and warranties as the mechanical parts of the ATM. Therefore, ATMs may easily fall within Article 2B.

But the remaining two factors place ATMs within the exclusion. The ability to copy or transfer the software is low because, although the ATM operates like a computer and may run from a central computer which processes information, the machine itself is not equipped with the loading or copying features of personal computers. If ATM-embedded software fell within the scope of Article 2B, then the goal of Article 2B to group together information which is susceptible to copyright infringement would not be served.

In addition, the purpose of owning the ATM is tied more to the function and service provided by the ATM as a whole than the operation and services provided by the software alone. The owner of the machine may be aware that the software functions separately from the good, but would neither want to own the software separately from the machine itself, nor be satisfied with the software if it were embedded in a different good. The software would be useless without the good in which it is embedded.

Thus, applying the purpose factor to ATMs results in ATMs being excluded from Article 2B coverage.

Again, the application of these four factors to the ATM produces varying results, demonstrating the inherent difficulty in determining Article 2B's scope. The global goal of promoting uniformity in the law will be defeated if one court includes ATM software within the scope of Article 2B, while other courts exclude it.

Machinery used in factories, such as robotic arms, has both mechanical elements and embedded software. When the buyer awareness factor is considered, it seems that the machinery should fall within Article 2B. When the other three factors (the risk factor, the purpose factor, and the ease of copying factor) are considered, however, it seems that the machinery should be excluded from Article 2B. The factory manager who purchased the machinery or robot is probably aware of the software and may have even hired software programmers to modify the software to fit a specific application within the factory. This awareness of the software as a separate element of the machinery suggests that the manager would have a reasonable expectation that the software would be governed by law separate from the mechanical elements of the machinery. Despite being aware of the software as a separately functioning element, the manager or purchaser of the machinery may still think of the robot or machinery as a unit, because the purpose of the machinery is to obtain the services of the whole machine, and not to use the software, alone. The software would not be adequate if it were contained in a different medium. In addition, in some circumstances there is a high risk of physical harm to factory workers, creating a need to regulate this type of software under a law or Article more sensitive to remedies for physical harm than are provided by Article 2B. Because the software that is embedded in machinery is not easily copied or transferred, there is no need for Article 2B's protection, which is intended for easily infringed software.

Three of the factors suggest that the embedded software in factory machinery falls within Article 2B's exclusion. But the opposite result is reached when the buyer's awareness that the software is a separately functioning product and the buyer's reasonable expectation that the software should be governed by another Article are considered. The buyer's awareness is important because the buyer of the product, the factory owner, could have enough bargaining power and money to demand a higher quality product; alternately, the buyer could refuse to pay a high price for the software by requesting the elimination of costly debugging processes. An informed buyer with bargaining power may not need Article

2's extra protection, most of which applies only to consumers.[55] Perhaps the buyer is the cheapest cost-avoider; if the buyer is willing to pay a high price for a perfect product, the buyer can avoid software malfunction and resulting harm.

In the case of factory machinery, three of the factors seem to clearly favor the exclusion of the embedded software. Yet, the awareness and bargaining power of the machinery buyer in this particular fact situation undermine the confidence with which the machinery can be excluded. A clearer articulation of the most important principles underlying Article 2B's exclusion of embedded software may help answer whether Article 2B should be applied to factory machinery.

Home items such as coffee machines and bread machines also contain embedded software to help direct the mechanical elements of the product. As with the above examples, it is unclear whether such items fall within the scope of Article 2B. The awareness factor could place home items within Article 2B depending on the savvy of the consumer or the court's determination of what constitutes a reasonable consumer. The risk factor indicates inclusion, but the purpose and ease of copying factors both indicate exclusion.

The consumer may or may not be aware of the embedded software as a separately functioning element of the product. In coffee and bread machines, the computerized element of the product is highly visible: the exterior of the product usually contains a character display and a keyboard or buttons through which the user can enter information to direct the product. But computerized apparatuses have become so commonplace in household products that it is questionable whether the consumer has an appreciation of the software as a separately functioning element of the product. An uneducated consumer may use coffee or bread machines without questioning how the machine processes information entered through the keyboard or buttons. And whether or not the consumer is actually aware of the software as a separately functioning element of the product, the consumer may still have a reasonable expectation that the software is governed by the same laws as the mechanical elements of the product.

But the risk factor of home items such as coffee and bread machines is low, making consumer protections in addition to those provided by Article 2B unnecessary. If a serious injury did result from the malfunction of software in a bread machine, reasonable consumers might not expect differing awards for injuries caused by mechanical failure or failure of the embedded software.

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55. *See supra* notes 22-22 and accompanying text.

The main purpose of owning such home items as coffee and bread machines is to obtain the services provided by these goods, not the services provided by the software by itself—this indicates that such home items are excluded from Article 2B's scope. Finally, including these kinds of software within the scope of Article 2B does not further the drafters' intention to regulate information susceptible to copyright infringement because there is little likelihood that the software would be copied or transferred.

Many of these ambiguities surrounding Article 2B's exclusion of embedded software may disappear if buyers of items such as factory machinery, ATMs, or surgical equipment form contracts which circumvent the default provisions of Article 2 or Article 2B, through such means as clauses specifying the law which will govern the contract, or clauses specifying warranties or licenses. But the need for detailed contracts only highlights the fact that Article 2B does not reflect the expectations of contractors. As we have seen, the application of these four policy considerations highlights the ambiguity and uncertainty surrounding Article 2B's scope.

B. Software Developed Specifically for the Transaction

The Section above explains why embedded software is excluded from Article 2B. However, the February 1998 draft explains that not *all* embedded software is excluded. The transaction is covered by Article 2B,[56] even though it is "embedded," if it was *developed specifically for the transaction.*[57] Including software developed specifically for the transaction within the scope of Article 2B reflects one of the factors explored in Part II.A. of this Article: buyer awareness. Because such software is developed specifically for the transaction, the buyer is presumably aware that the software is a separately functioning element of the whole. Therefore, the reasonable buyer would expect the software to be covered by a set of warranties and remedies separate from those that cover the hardware. In addition, the buyer who has software developed specifically for a transaction has more bargaining power, is less in need of the consumer protections under Article 2, and may more prefer to bargain for the risks involved in the software failure than the buyer who is buying software which was not designed specifically for the transaction.

Although it makes sense to include embedded software developed specifically for a transaction within the general scope of Article 2B, the use of the word "developed" may encompass more than software purchased by

56. *See* U.C.C. § 2B-103(c)(2)(B) (Feb. 1998 Draft).
57. *See id.*

buyers who have bargaining power and an awareness of the software as a separately functioning element of the good in which it is embedded. The use of the word "developed" may be interpreted in a variety of ways, leading to uncertainty as to what falls within Article 2B. Applying this condition for exclusion may lead to inconsistent results for buyers of goods which contain embedded software and which qualify for the exclusion from Article 2B according to the four factors (awareness, risk, ease of copying, and purpose), but which are not excluded from Article 2B because they were developed specifically for the transaction.

Neither the Reporter's Notes nor the language of the provision itself indicate a special trade meaning or definition of the word "developed." Thus, there are several possible interpretations of "developed": a program designed to meet the needs of a particular client; a code that is written to fulfill the program design; an existing program that is customized for a particular client; or an existing program that is configured for a particular client by activating or deactivating toggle switches within the program. Whether the word "developed" refers to complex programming or programming involved in simple configurations may be an important factor in determining the scope of Article 2B.

Determining the proper interpretation of "developed" requires a consideration of the policies underlying the U.C.C., as a whole. The U.C.C. recommends liberal construction.[58] Therefore, the construction of the phrase "developed specifically for the transaction" should reflect the U.C.C.'s policy to "simplify, clarify, and modernize the law."[59] In addition, the construction should reflect the purpose of and policy behind the provision in question.[60] Although this particular provision does not state its policy or purpose either in the text or the Reporter's Notes, Article 2B's general purpose is to cover all software and information which is licensed and which all have similar characteristics—ease of copying, ease of modifying and unnamed "other uses" that result in express or implied limitations on the licensing of the information or software.[61]

The word "developed" in the context of software programming is inherently complex and ambiguous. As such, without interpretation, the phrase "developed specifically for the transaction" does not carry out policies underlying the U.C.C. It does not simplify and clarify the law, or fulfill the drafter's intention to include all information which is susceptible to

58. *See* U.C.C. § 1-102(1).
59. *See id.* § 1-102(2).
60. *See id.* § 1-102 cmt.1.
61. *See* U.C.C. § 2B-103, Reporter's Note 3 (Sept. 25, 1997 Draft).

copyright abuse within the scope of Article 2B. And, even if the software is developed specifically for the transaction, it is embedded, and therefore is not easily copied or modified. Embedded software within the meaning of the exclusion is, by its nature, embedded in a good that is not equipped with the technology or mechanics to enable the user to copy or transfer the software. Regardless of whether the good was developed specifically for the transaction, including this type of embedded software within the scope of Article 2B does not fulfill the drafters' intentions.

Therefore, placing specifically developed embedded software within the scope of Article 2B must fulfill some purpose other than the drafters' desire to include all information susceptible to copyright infringement and all information subject to express restrictions. As neither the U.C.C. nor section 103 of Article 2B mention any additional purposes or policies underlying Article 2B's embedded software exclusion, it may be helpful to consider the factors discussed, *supra*, in Part II.A.[62] The applicable factors included: the purpose of owning the good, the risk associated with the malfunction of the good, and the buyer's awareness or expectation of the software as a product which functions separately from the good.[63]

Neither the risk associated with the malfunction of the good nor the purpose of owning the good would change if the sole difference between embedded software in similar goods was the extent to which the software was or was not developed specifically for the transaction. One robotic arm containing embedded software which was developed specifically for the buyer has the same risk of harm due to malfunction as ten robotic arms sold to ten factories, all containing identical embedded software. Likewise, the purpose of owning those robotic arms does not change from arm to arm where one arm contains software developed specifically for the transaction, while the other arms do not. All the robotic arms were purchased for the services performed by the arm, and not for the services provided by the software, alone.

But when embedded software is developed specifically for the transaction, it may create a heightened level of awareness in the buyer—the cost and time involved in developing the software may have signaled to the buyer that the software is a separately functioning element of the product. Therefore, the buyer may expect that the embedded software is covered under a separate article of the U.C.C.

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62. *See supra* Part II.A.

63. The fourth factor, the ease of copying, was discussed in the preceding paragraphs in the context of fulfilling the drafters' intentions to include all information particularly susceptible to copyright infringement.

If embedded software which was developed specifically for the transaction falls within Article 2B because of the buyer's awareness, an interpretation of the word "developed" should incorporate the amount of money and time needed for the development, and the involvement required of the buyer. Of the four interpretations of development suggested, *supra*, designing a program requires the most time, money, and client involvement, and is most likely to make the buyer aware of the software as a separate element of the product.

Customizing an existing program or configuring a program by activating or deactivating toggle switches would probably result in a lower awareness than designing a new program for a buyer. Customizing an existing program requires rewriting portions of code or adding code to suit the needs of a particular client. In this case, someone has already designed the program and the majority of the code has been written. The costs of rewriting small portions of the code are much less than the costs of designing a new program. When customizing, the seller or producer of the software needs much less client information because the client may use the product to perform some common service—the seller only needs information on small details specific to the client to customize the program.

An example of customizing an existing program is the creation of an accounting system for advertisers or law firms. The program provider may have designed a basic accounting program already, but must rewrite certain parts of the program to meet the differing needs of the law firms or advertisers. For example, the billing categories into which the program saves items or the client information required from a user on an input screen may need modification.

The configuration of an existing program is also low cost and requires minimal buyer involvement. When configuring a program, the seller does not write or revise any code in the program. Rather, the seller needs only to activate or deactivate certain toggles or features of the program. One particularly common example is home alarm systems. Home alarm systems work through the operation of mechanical detection equipment and software. This mechanical detection equipment differs in quality and sophistication from system to system, but the software itself is consistent among models and manufacturers of alarm systems. The alarm systems must be configured to each house or business premises. The customization involves the customer's choices of certain "points of contact" in the house (usually doors or windows) which will trip detection devices if the contact is broken. The chip containing the software that activates the alarm must then be configured to reflect the choices. The program configuration is

accomplished with a laptop computer[64] and may even be performed by hand on the self-installation models of home alarm systems sold in stores such as RadioShack.[65] The configuration does not substantially change the program, but it activates or deactivates certain features of the program that the consumer did or did not choose to install. The main function of the software is to report, via phone lines, any violation of a contact point (known as a "trip"), to a computer in a central control station. The computer in the central control station can identify the point of the trip based on the information delivered by the software and call an emergency number.[66]

After configuration, the programming differs slightly for each home alarm system. However, the basic program which provides the framework does not significantly differ between programs used by customers with small homes who buy average alarm systems and large commercial businesses with elaborate customized systems.[67] If the alarm system in a single house does not work effectively, then industry experts would consider it a fault in the configuration, rather than a fault in the software program, itself.[68]

When the development of custom software requires substantial amounts of time, money, and buyer involvement, it seems that a buyer's awareness of the separate nature of the software will usually be heightened. But the lower cost and customer involvement of customization or configuration does not necessarily mean that the buyer of customized or configured embedded software is not aware of the separate nature of the software, also. In the case of home alarm systems, the customer probably is aware of the software as a separately functioning part of the alarm system.

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64. The laptop can also program the chip with a copy of the software, making the chip seem closer to a copy of a program, similar to the disk copies of software which are excluded from Article 2B. *See* Telephone Interview with Bill Winter, former vice-president of Wells Fargo, Inc. (Feb. 16, 1998) (on file with author).

65. *See id.* In a self-installed alarm system, the customer does not use a laptop to program the software. Instead, she customizes the program by sliding levers called "dip-switches" to activate or deactivate trip points. The customization of the program is manual, and does not require the use of a computer. *See id.* One RadioShack model currently available (catalog model number 49-485) lists "customizing" as one step in the installation instructions, but does not mention a computer. In this particular model, the customer must connect wires to certain breaker points in a central box instead of sliding dip-switches. The customer must also program a "control center" with passwords, designated trip points and alarm power schedules.

66. *See id.*

67. *See id.*

68. *See id.*

The awareness factor may help determine which types of "developed" software should fit within the exclusion. But even if a buyer is aware of the software's separate nature, the risk due to malfunction of the embedded software may still be high. In those cases, the buyer might be better protected under Article 2 or other law, but may not be in a position to bargain for terms which differ from those contained in Article 2B; therefore, the buyer may still need the additional protection of the Article 2B exclusion.[69]

The drafters may have intended to include buyers with a high degree of bargaining power within the scope of Article 2B by formulating this "specifically developed" exception to the embedded software exclusion. If this was its purpose, then it has not been successful. Consumers of home alarm systems have little bargaining power, yet do not fall under the exclusion because the alarms were "developed" specifically for their transaction.

C. Proposed Changes to the Language of the Embedded Software Exclusion

The provision excluding embedded software from the scope of Article 2B is ambiguous, producing uncertain results. Whether or not a certain type of software is embedded within the meaning of the exclusion is unclear. Products such as computerized surgical equipment, ATMs, factory machinery, and home appliances may or may not fall within the exclusion. The ambiguous language of section 103 could also lead to the arbitrary exclusion of certain embedded software just because the embedded software was configured to fit the needs of the buyer (failing the condition to the exclusion that the software cannot have been "developed specifically for the transaction").

This Article proposes a more descriptive exclusion for embedded goods by listing two of the qualities of embedded software within the definition: ease of copying and purpose. The use of only these two factors is adequate to protect reasonable consumer expectations.

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69. The exclusion of embedded software is not applicable if the software is "subject to a separate license with the transferee of the goods." U.C.C. § 2B-103(c)(2)(C) (Feb. 1998 Draft). The bargaining power of the buyer may underlie this condition, but it also applies to cases in which the embedded software was not developed specifically for the transaction. If bargaining power of the buyer is the underlying policy of both of these conditions, then there are two ways to tell that the buyer has sufficient bargaining power to include the embedded software within the scope of Article 2B: the buyer has bargained a specific license just for the software, or the buyer has sufficient money to require the specific development of a program.

Although the risk factor is not specifically listed in this proposed definition, the purpose and ease of copying factors should encompass all embedded software which is not contained in a computer or disk, and, therefore, all items which may have some level of risk. The other factor not included in the descriptive listing is the awareness factor. The condition that embedded software is not within the exclusion if it has been "developed specifically for the transaction" should, once rewritten, sufficiently address this factor.

The February 1998 draft of the language excluding embedded software simply states that Article 2B does not apply to "a sale or lease of a computer program embedded in goods and sold or leased as part of the goods unless ... the goods are merely a copy of the program or are an information processing system in which the program is to operate."[70] The definition of embedded software should use more descriptive language, such as:

> Article 2B does not apply to "a sale or lease of a computer program embedded in goods and sold or leased as part of the goods, if 1) the computer program is not in a form easily copied or transferred, and 2) obtaining the services of the goods is the purpose of the transaction."

Language in the March 1998 draft also supports a broad interpretation of the term "embedded software," using the purpose of the good as the principal determinant.[71] According to the Reporter's Notes, embedded

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70. U.C.C. § 2B-103(c)(2) (Feb. 1998 Draft).

71. *See* U.C.C. § 2B-103 Reporter's Note 5(c) (Mar. 1998 Draft). The Reporter's Notes state that:

> [The examples of computers and navigation software] together with the general principle of the exclusion set two bright lines at either end of a continuum. Article 2B does not apply to cars, toasters, washing machines and other traditional goods, even if part of the goods consists of embedded software.... Within these two extremes lies an inherently gray area. As modern products are increasingly automated and operated by digital software, it is important to provide guidance on the relative distribution of treatment between this Article and Article 2 or 2A in this gray area. Under the exclusion here, embedded software is covered by Article 2B if contained in a product whose *primary purpose* is to provide access to the functional or other attributes of the program, as contrasted to performing other information processing activities. Thus, while a television set in modern practice is increasingly driven by computer programs, it remains a television set whose purpose is to provide television program reception unless or until the system evolves into something more or different in which a primary purpose is to offer software processing capability.

Id. (emphasis added).

software is excluded from the scope of Article 2B unless its "primary purpose is to provide access to the functional or other attributes of the program."[72] These notes clearly exclude computerized surgical equipment, ATMs, factory machinery, and home appliances because the purpose of each of these goods goes beyond providing access to the services of the software by itself.[73]

The condition to the February 1998 draft's exclusion that the software cannot have been "developed specifically for the transaction" is also not clear enough to achieve the exclusion of embedded software with uniformity and without arbitrary results.[74] If the underlying policy of the condition to the exclusion for embedded software were to protect only those buyers of goods containing embedded software who lack bargaining power,[75] then using Article 2B's definition of a mass market transaction to determine the extent of the exclusion might limit the application of the condition appropriately.[76] If the condition were to apply only to transactions which were not mass market transactions, then the condition to the exclusion would not apply to consumers or to licensees who acquired "the information in a retail transaction under terms and in a quantity consistent with an ordinary transaction in that marketplace."[77] The definition of a

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72. *Id.*
73. *See* supra Part II.A.
74. *See* U.C.C. § 2B-103(c)(2)(B) (Feb. 1998 Draft).
75. *See* supra Part II.B.
76. *See* U.C.C. § 2B-102(31) (Feb. 1998 Draft).
77. *Id.* The full text of the definition of a mass market transaction reads:

> (31) "Mass-market transaction" means a consumer transaction and any other transaction in information directed to the general public as a whole under substantially the same terms for the same information with an end-user licen*see*. To qualify as a mass-market transaction if the licen*see* is not a consumer, the licen*see* must acquire the information in a retail transaction under terms and in a quantity consistent with an ordinary transaction in that marketplace. The term does not include:
>
> (A) a contract for redistribution;
>
> (B) a contract for public performance or public display of a copyrighted work;
>
> (C) a transaction in which the information is or becomes customized or otherwise specially prepared for the licen*see*;
>
> (D) a site license, or
>
> (E) an access contract not involving a consumer.

Id. This definition seems to create the same problem as the phrase "developed specifically for the transaction" because it provides that a mass market transaction does not include "a transaction in which the information is or becomes customized or otherwise specially prepared for the licensee." *Id.*. However, the Reporter's Notes indicate that this is simply a drafting oversight and that the customization stricture does not apply to con-

"mass market" in Article 2B is used in provisions generally protecting buyers with less bargaining power.[78] Therefore, its use in the condition to the embedded software exclusion furthers this purpose of protecting buyers with less bargaining power. The use of the definition affords these buyers the greater protection of laws other than Article 2B by excluding them from the scope of Article 2B, even if the embedded software was developed specifically for the mass market transaction.[79]

Using the term "mass market transaction" would also prevent the uncertainty created by differing interpretations of "developed" in the phrase "developed specifically for the transaction." Because both consumers and non-consumers who buy goods with configured or customized embedded software can be included within the definition of "mass market transactions," the remaining uncertainties surrounding the interpretation of the terms configured and customized are minimized.

The February 1998 draft's condition to the embedded software exclusion reads that a program is not excluded if "the program was developed specifically for the transaction."[80] If the condition to the embedded software exclusion included Article 2B's "mass market transaction" definition by stating that "the program is not within the exclusion if the program was designed or written specifically for a transaction which was not a mass market transaction," then consumers and other mass market licensees would be protected from the harms caused by varied interpretations of the word "developed."

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sumers. *See id.* § 2B-102, Reporter's Note 29 ("[W]here the information product is customized for the licensee *and that licensee is not a consumer*, the transaction lacks the anonymous, non-negotiated character of the mass market.") (emphasis added).

Another problem with the application of this definition to the exclusion of embedded software relates to the types of retail markets in which a mass market transaction takes place: arenas in which the general public shops, like grocery stores, malls, gas stations and department stores. While the purchase of home appliances might occur in these arenas, home alarm systems, for example, are not sold in stores. But this restrictive definition of a retail market in which mass market transactions take place may also be an oversight by the drafters. It does not include purchases made on the Internet or "anonymous" and "non-negotiated" purchases. However, the Reporter's Notes indicate that an Internet transaction might be considered a mass market transaction. *Id.* (noting that the definition of mass market transactions includes consumer Internet or on-line transactions).

78. *See, e.g., id.* § 2B-208 (enforcing form contracts in mass market transactions only if there is an opportunity to review and if there is an affirmative manifestation of assent); *id.* § 2B-502(2)(B) (giving a mass market licen*see* the right to transfer a non-exclusive license without the consent of the licensor).

79. *See id.* §§ 2B-102(31); 2B-103(c)(2)(B).

80. *Id.* § 2B-103(c)(2)(B).

The March 1998 draft of Article 2B removed the condition to the embedded software exclusion, thus eliminating any problems that would have been created by arbitrarily including embedded software within the scope of Article 2B.[81] Although the Reporter's Notes do not comment on it, the deletion may reflect intentions to further broaden the exclusion and to avoid ambiguities in its interpretation.

If the language of the exclusions to Article 2B were changed as suggested, *supra*, then the exclusions would be clearer and not overbroad. This would allow Article 2B to achieve the drafters' stated purpose of including all licensed software and information which have such similar characteristics as ease of copying or modification.[82] In addition, the interpretation of the exclusion provisions of Article 2B would be more uniform because of the clearer language, resulting in more certainty to software and technology licensing and contracting.

III. HYBRID TRANSACTIONS AND THE MERELY INCIDENTAL EXCLUSION

Like the language in the provision excluding embedded software, the language of the provision governing hybrid transactions and merely incidental information creates uncertainty in software and technology licensing and contracting. This is because varying interpretations could lead to inconsistencies in the treatment of hybrid transactions and incidental information. Three tests govern the application of Article 2B to hybrid transactions involving both Article 2B subject matter and goods or services: the merely incidental test,[83] the gravaman of the action test,[84] and the predominant purpose test.[85]

The merely incidental test arises from language added to the February 1998 draft of Article 2B and continued as part of the March 1998 draft with only minor changes.[86] It excludes information which would have been governed by Article 2B if the information is either merely incidental

81. *See* U.C.C. § 2B-103(b)(2)(C) (Mar. 1998 Draft).

82. *See* U.C.C. § 2B-103 Reporter's Note 3 (Sept. 25, 1997 Draft).

83. *See* U.C.C. § 2B-103(b)(2)(C) (Mar. 1998 Draft).

84. *See id.* § 2B-103(c)(1) & Reporter's Note 3.

85. *See id.* § 2B-103(c)(2)(A).

86. *See id.* § 2B-103(b)(2)(A); U.C.C. § 2B-103(a)(1) (Feb. 1998 Draft). In addition, the Reporter's Notes to the merely incidental exclusion are identical in each draft. *See* U.C.C. § 2B-103, Reporter's Note 5(a) (Mar. 1998 Draft); U.C.C. § 2B-103, Reporter's Note 4 (Feb. 1998 Draft); *but c.f.* U.C.C. § 2B-103, Reporter's Note 2(d) (Aug. 1, 1998 Draft). This Article mainly cites to the February 1998 draft, but applies equally to both drafts because of the similarity of the provisions.

to services being performed under the contract,[87] or is only a minor part of any transaction.[88] For example, an attorney may provide information to a client as a service, governed by common law, but that information may be restricted by contract. Because the restriction on the information is merely incidental to the larger service—legal counseling—the information does not fall within the scope of Article 2B.[89] Article 2B also would not apply to a license or restriction on information where it is only a minor part of a larger transaction which predominantly involves services.

If the licensing or software contract does not satisfy the merely incidental test, then a gravaman of the action test determines which laws govern the information, services, or goods involved in the transaction.[90] Under the gravaman of the action test, information would be regulated by Article 2B, while goods would be regulated by Article 2 or 2A. For example, if a computer configured by software programs malfunctioned, Article 2B would govern the software programs, while Article 2 would govern the computer hardware itself (i.e., the mechanical parts of the computer's memory, such as chips and boards).

Unlike the merely incidental and gravaman of the action tests which apply to the actual transactions, the predominant purpose test is used only when determining which law will govern contract formation issues in a hybrid transaction.[91] If Article 2B subject matter is the predominant purpose of the transaction, then Article 2B governs the contract formation of the entire transaction. Although Article 2B may govern contract formation for the goods and even the services involved in a hybrid transaction, it does not govern the services in matters which do not involve contract formation.[92] For example, Article 2B would govern the contract formation issues for a contract involving the sale of accounting software and instruction to use the software. Even though the contract involves both software and services, Article 2B would govern the contract formation issues of both the software and the services as long as the predominant purpose of the contract was to provide the accounting software, not the instruction in using the software.

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87. *See* U.C.C. § 2B-103, Reporter's Note 4 (Feb. 1998 Draft).

88. *See id.*

89. *See* U.C.C. § 2B-104, Reporter's Note 2 (Aug. 1, 1998 Draft).

90. *See* U.C.C. § 2B-103(c)(1) (Mar. 1998 Draft).

91. *See id.* § 2B-103(c)(2)(A) ("The contract formation rules of this article apply to the entire transaction if: (A) the contract includes services that are not within this article, but the subject matter that is within this article is the predominant purpose of the transaction ...").

92. *See id.* (applying the predominant purpose test only to issues of contract formation).

A. The Merely Incidental Test as an Exclusion of Licensed Information that is Incidental to Services

The first element of the merely incidental test determines whether licensed information is incidental to services performed under a contract, and therefore excluded from the scope of Article 2B. The changes in the language of the provision during the drafting history of Article 2B provide some guidance for interpretation, while the language of the provision itself and the Reporter's Notes accompanying it provide further guidance. After examining these considerations, this Article suggests an expansion of the exclusion to reach licensed information incidental to services which may have been inadvertently included within the scope of Article 2B by the current language of the provision.

Previous drafts of the provision delineating the scope of Article 2B applied both Article 2 and Article 2B to any hybrid transaction, not just transactions which involved software or licensing on a more than incidental level.[93] Although the previous drafts of Article 2B seemed intent on

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93. *See* U.C.C. § 2B-103(b) (Sept. 25, 1997 Draft) ("[I]f another article of [the Uniform Commercial Code] applies to a transaction, this article does not apply to the part of the transaction involving the subject matter governed by the other article except to the extent that this article deals with financial accommodation contracts."). Section 2B-103(c) of the Sept. 25, 1997, draft states:

> If a transaction involves both information and goods, this article applies to the information and to the physical medium containing the information, its packaging, and its documentation, but Article 2 or 2A governs standards of performance of goods other than the physical medium containing the information, packaging, or documentation pertaining to the information. If a transaction includes information covered by this article and services outside this article or transactions excluded from this article under subsection (d)(1) or (2), this article applies to the information, physical medium containing the information, and its packaging and documentation.

Id. This earlier draft of the scope provision intended to cover licensing or software governed by Article 2B regardless of how intermingled the software had become with goods or transactions not covered under Article 2B. The Reporter's Notes state that the "primary rule applies each [article] to its particular subject matter" in mixed transactions. *Id.* § 2B-103, Reporter's Note 4 (Sept. 25, 1997 Draft). The Reporter specifically rejected the predominant purpose test from common law. *See id.* The predominant purpose test is primarily used in the Article 2 context when determining whether to apply Article 2 to a transaction involving both goods and services. If the purpose of the transaction is predominantly to sell goods, then it is covered under Article 2; but if the purpose of the transaction is predominantly to sell services, then it is covered by other law. *See* U.C.C. § 2-102 (1994); JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE § 1-1 (4th ed. 1995). Note that, under the predominant purpose test, Article 2 may apply to a sale consisting almost entirely of services as long as the predominant purpose of the transaction is the sale of a good. For examples of applications of the predominant purpose

applying Article 2B as broadly as possible, notes from the newest draft of Article 2B indicate that the drafters are no longer interested in as broad an application.[94]

The language excluding information which is incidental to services in the February 1998 draft limits the scope of Article 2B in two ways.[95] The first type of exclusion required by the language of Article 2B occurs when information and the contract or license governing the information is "an inherent incident of excluded services."[96] The Reporter's example of an inherent incident of excluded services is the information a lawyer might give to a client, like a memo, which has certain restrictions on it.[97] Because advice from a lawyer is a service which does not fall under Article 2B, the restricted information incidental to the service also does not fall

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test, see United States ex rel. Bartec Indus., Inc. v. United Pac. Co., 976 F.2d 1274 (9th Cir. 1992), amended, 15 F.3d 855 (9th Cir. 1994); St. Anne-Nackawic Pulp Co. v. Researh-Cottrell, Inc., 788 F. Supp. 729 (S.D.N.Y. 1992); Hope's Architectural Prods., Inc. v. Lundy's Constr., Inc., 781 F. Supp. 711 (D. Kan. 1991), aff'd, 1 F.3d 1249 (10th Cir. 1993). Instead of the predominant purpose test used in Article 2 mixed transaction cases, earlier versions of Article 2B used a gravaman of the action test. *See* U.C.C. § 2B-103, Reporter's Note 4 (Sept. 25, 1997 Draft).

94. The Reporter's Notes in the February 1998 draft of Article 2B state that "[t]he article does not cover all contracts in [the copyright and information] industries or all contracts involving information. It focuses on license contracts and on transactions typically conducted in areas of commerce associated with digital technologies." U.C.C. § 2B-103, Reporter's Note 1 (Feb. 1998 Draft).

Earlier drafts of section 2B-103 were much broader in scope. A February 1996 draft provided that the article "applies to transactions in information, including licenses, access contracts, unrestricted transfers of information, sales of copies of information and software contracts, and to agreements to support, maintain, develop, or modify information." Unlike the merely incidental test which limits the scope of the latest draft of Article 2B, the earlier drafts included transactions as long as "information exists at the time of the contract, is expected to come into being after the contract is formed, or is to be developed, discovered, compiled, or transformed as part of performance of the agreement ...." *Id.* § 2B-103(a).

95. *See id.* § 2B-103, Reporter's Note 4.

96. *Id.* Earlier versions of this exclusion were more specific. *See* U.C.C. § 2B-103(d)(3) (Feb. 2, 1996 Draft) (excluding the application of Article 2B to "a contract for professional services involving performance by a member of a regulated profession with respect to services commonly associated with regulated aspects of that profession"). Article 2B no longer requires the profession to be regulated. The only requirement is that the transfer of information be "incidental." *See* U.C.C. § 2B-103, Reporter's Note 4 (Feb. 1998 Draft). One reason given for the exclusion of information transferred pursuant to professional services was the fact that the professions were already regulated. *See* U.C.C. § 2B-103, Reporter's Note 7 (Feb. 2, 1996 Draft). The fact that the exclusion is now extended to professionals who are not regulated leads to the conclusion that another policy is really behind the exclusion in its current form.

97. *See* U.C.C. § 2B-103, Reporter's Note 4 (Feb. 1998 Draft).

under Article 2B. However, the scope of the exclusion is not clear because the Reporter's Notes suggest that a fact specific analysis is necessary to determine whether the information is incidental.[98]

The scope of the exclusion must extend beyond the Reporter's only example because this example concerns services and transfers of information from a regulated professional.[99] Services of regulated professionals are already specifically excluded under section 2B-103(c)(4) of Article 2B.[100] and had been excluded even in the earliest drafts.[101] This new addition to the language of the scope provision must therefore indicate a further limitation on the scope of Article 2B.

The further limitation on the scope of Article 2B also signals a different policy underlying the exclusion. In earlier drafts, the policy of the exclusion was that professionals who were already regulated did not need to be regulated under Article 2B.[102] This original policy cannot apply to the expansion of the exclusion to non-regulated professions. By expanding coverage of Article 2B to services beyond the services of regulated professionals, the drafters step outside the original policy of the exclusion.

According to the Reporter's Notes, the policy behind the exclusion now seems to lie in the characterization of the transaction as a whole. The information should be excluded because it is inherent in the service—the transfer of information and the service should be treated as a single unit under the law that governs the service.[103]

The extent of this new exclusion is difficult to determine. The Reporter's Notes recognize that the merely incidental exclusion does not ap-

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98. *See id.* ("Of course, as various personal service provide[r]s engage in related, but broader activities, Article 2B applies.").

99. *See id.*

100. *See id.* § 2B-103(c)(4).

101. *See* U.C.C. § 2B-103(d)(3) (Apr. 2, 1996 Draft) (excluding "a contract for professional services involving performance by a member of a regulated profession with respect to services commonly associated with regulated aspects of that profession").

102. *See id.* § 2B-103, Reporter's Note 7(b) (assuming that "there is no need to deal with these contracts to the extent that they fall within general areas of professional regulation"). The Reporter's Notes also indicate that the regulated professionals are only governed by Article 2B if they are engaging in activities which are not regulated by the profession. *See id.*; U.C.C. § 2B-103, Reporter's Note 7(b) (Feb. 2, 1996 Draft). The Reporter's Notes in a later draft even state that "the exclusion only pertains to regulated services and not to other contracts or services" for the purposes of "avoid[ing] confusion between the interplay of this Article and the regulatory standards of regulated professions." U.C.C. § 2B-103, Reporter's Note 6 (Dec. 12, 1996 Draft). This exclusion of transfers of information in regulated professions persists up to the November 1997 draft. *See* U.C.C. § 2B-103, Reporter's Note 5(a) (Nov. 1, 1997 Draft).

103. *See* U.C.C. § 2B-103, Reporter's Note 4 (Feb. 1998 Draft).

ply to services such as software development.[104] As in the context of the embedded software exclusion,[105] the Reporter's Notes give examples at two opposite extremes. An example of merely incidental information excluded from the scope of Article 2B is the expressly restricted memorandum or document prepared by a lawyer for a client in the course of performing professional services. At the opposite end of the spectrum lies an example of information which is not merely incidental, even though it is performed in the course of services—information transferred by an "independent contractor hired to develop software."[106]

These two examples do not inform a fact-specific application of Article 2B to services. Like the embedded software exclusion, there are cases which fall between the two examples—some services which involve the transfer of information expressly limited by contract may or may not fall within the merely incidental exclusion. For example, the services of a professional photographer at a wedding would result in: 1) the transfer of information (photographs) which fit within Article 2B's definition of information,[107] and 2) an express contractual restriction on the use of the information (an explicit restriction on the reproduction of the photographs). However, it is unclear whether the merely incidental exclusion would apply to this transaction. The photographer is not a regulated professional, nor is he in entertainment services, so he does not fit within the exclusion in section 2B-103(c)(4).

He may still fall within the scope of Article 2B depending on other factors, such as the type of equipment he uses. If he uses film which may be loaded onto computer software, then he may still fit within the scope of Article 2B. The fact that providers of all types of services routinely use computer software makes the application of this exclusion more difficult than it first appears.

Since the drafters seem to favor the treatment of services and the transfer of information inherent to services as one unit, governed by one law, it would make sense to expand the exclusion in section 2B-103(c)(4) to *all* transfers of information inherent in services, with a condition that the services cannot involve computer software development or services supplying support, maintenance, or modification of software. This conditional exclusion would resemble the exclusion for embedded software, making the structure of the exclusions to Article 2B more consistent.

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104. *See id.*

105. *See supra* Part II.A.

106. U.C.C. § 2B-103, Reporter's Note 4 (Feb. 1998 Draft).

107. *See id.* § 2B-102(23) (stating that the definition of information includes "images").

Expanding the exclusion of Section 2B-103(c)(4) in this way follows the trend of reducing the scope of Article 2B. It supports the apparent policy of Article 2B to exclude all documents which are unrelated to software or computers. The drafters have already narrowed the scope of Article 2B by excluding the entertainment industries,[108] books and other printed material,[109] banking services,[110] and most patents.[111] Instead of continuing to draft language excluding specific industries, Article 2B should strive for a more general exclusion that can flexibly accommodate all industries that are served by the policy of the exclusion. In addition, expanding the exclusion under section 2B-103(c)(4) and eliminating the language about transfers of information incidental to services in the Reporter's Notes would result in a clearer merely incidental test which applies only to one literal definition of the word "incidental" instead of two.

Instead of excluding "a contract for performance of professional services by a member of a regulated profession,"[112] this Article proposes an expansion of the exclusion by changing the language to exclude "a contract for the performance of services which do not involve software development or services under section 2B-103(a)(2)."[113]

By expanding the language of the exclusion, the exclusion will achieve the policy evident in the Reporter's Notes to exclude all services that contain incidental transfers of licensed information. Since the current language may have been interpreted to exclude only licensed information incidental to services provided by those in a regulated profession or in entertainment services, it did not achieve the purpose of treating services and information incidental to those services as one unit governed by one law.

B. The Merely Incidental Test as an Exclusion of Licensing and Software Contracts that are a Minor Part of a Transaction

The second element of the merely incidental test determines whether Article 2B subject matter is a minor part of a transaction, and, therefore,

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108. *See id.* § 2B-103(c)(4).

109. *See id.* § 2B-103, Reporter's Note 3.

110. *See id.* § 2B-103(c)(3).

111. *See id.* § 2B-103(c)(1).

112. *See* U.C.C. § 2B-103(c)(4) (Feb. 1998 Draft).

113. *Cf.* Letter from Roland E. Brandel et al., to the Banking Industry Article 2B Group (Nov. 19, 1997), *available at* <http://www.2Bguide.com/docs/mofo1.html> (visited Nov. 23, 1998) (suggesting a similarly broad exclusion of "the provision of a service as to which access to, use of, or processing information is not the primary purpose of the service, but is the technology incidentally used to accomplish the service"). The March 1998 draft of Article 2B achieved an expansion of the exclusion by eliminating the language referring to regulated professions, instead excluding agreements for personal services from the scope of Article 2B. *See* U.C.C. § 2B-103(b)(2)(E) (Mar. 1998 Draft).

excluded from the scope of Article 2B. Under this element, a licensing or software contract is excluded if it is "no more than a minor part of a transaction" not governed by Article 2B.[114] The Reporter states that the test for whether the information is a minor part of a transaction is whether the "licensed information is so small a part of the transaction that it would be cumbersome, confusing and awkward to apply Article 2B to that small part of the transaction."[115]

Although the Reporter's Notes clearly state that the merely incidental test is not a predominant purpose test,[116] this element of the merely incidental test is closely related to the predominant purpose test. The predominant purpose test is valuable because is saves time, and it is less costly than administering many different laws for one transaction.[117] Many jurisdictions use the predominant purpose test for these reasons when choosing between the application of Article 2 or the common law in a hybrid transaction.[118] The merely incidental test lists the same policy reasons for its application: "it would be cumbersome, confusing and awkward to apply Article 2B to that small part of the transaction."[119] Yet, in a situation in which the contracts were not merely incidental, Article 2B applies a gravaman of the action test in which the subject matter of Article 2B, such as software and licensed information, would be governed by Article 2B, while the subject matter of common law or other articles in the U.C.C., such as services or goods, would be governed by the applicable common law or article in the Code.[120] If the contracts were not incidental, the problems of applying more than one law would seem to be magnified.

By instituting both tests, the drafters get the worst of both worlds: litigation about the application of the merely incidental test (whether that part of the transaction is minor enough) and the cumbersome application of many laws under the gravaman of the action test. It is confusing to have both policies instituted within Article 2B. Since Article 2B was drafted to supply an appropriate body of law to the realm of software and licensing,

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114. U.C.C. § 2B-103 Reporter's Note 4 (Feb. 1998 Draft).

115. *Id.*

116. *See id.* ("What is meant here is not simply that the personal services predominate or that obtaining the services was the predominant purpose of the transaction ....").

117. *See* Hudson v. Town and Country True Value Hardware, Inc., 666 S.W.2d 51, 54 (Tenn. 1984) (holding that the predominant purpose test applied to a hybrid transaction because the application of more than one law would cause "insurmountable problems of proof in segregating assets and determining their respective values ... to apply two different measures of damages.").

118. *Id.*

119. *See* U.C.C. § 2B-103, Reporter's Note 4 (Feb. 1998 Draft).

120. *See id.* § 2B-103(d).

then it seems that the gravaman of the action test should apply to all transactions, regardless of the amount of the transaction concerning software. In addition, applying the gravaman of the action test to transactions involving minor amounts of software will probably not create cumbersome problems because the software is also likely to be a minor part of the litigation. Article 2B bears much similarity to Article 2, so it should not be too cumbersome to apply both Articles. Instead of keeping the February 1998 draft language, that Article 2B does not apply to a "license of a trademark, trade name, trade dress, patent, and related know-how, unless it is part of a license that is otherwise within this article,"[121] the drafters should eliminate this language and rely only on the gravaman of the action test contained in section 2B-103(d).

Eliminating this language and relying only on the gravaman of the action test avoids the problems associated with the predominant purpose test: hindsight decisions about the predominant purpose of the transaction, further litigation about the court's decision, and the application of inappropriate law to part of the transaction.[122] Focusing on one test, instead of trying to apply both the gravaman of the action test and the predominant purpose test in different scenarios, also simplifies the law and helps promote certainty in the application of Article 2B because there will be less room for ad hoc decisions about the type of test to apply and the type of licensed information to exclude from Article 2B.

IV. CONCLUSION

The drafting of Article 2B fills a void in the U.C.C. by addressing the licensing and sale of software. If states adopt this uniform law, the software industry and consumers will benefit through decreased transaction costs. These benefits will only occur if Article 2B is drafted with default rules that reflect actual practices and expectations in the commercial world, and if the scope of Article 2B is clear.

The scope of the February 1998 draft of Article 2B is not clear enough to achieve a uniform application of Article 2B. The language of exclusions for embedded software and merely incidental information undermine the uniform application of Article 2B. The ambiguous language of the embedded software exclusion may lead to arbitrary exclusions of software depending on the interpretation of "embedded software" as a term of art. Instead of the ambiguous language in the February 1998 and March 1998 drafts of Article 2B, which do not illustrate the application of

121. *Id.* § 2B-103(c)(1).
122. *See id.* § 2B-103, Reporter's Note 6.

the term "embedded software," the drafters should use more descriptive language. This more descriptive language, based on the principles of the embedded software exclusion should guide the interpretation and application of this provision.

The February 1998 draft's ambiguous language of the condition to the exclusion regarding software that may not have been "developed specifically for the transaction" may lead to arbitrary results. A court interpreting "developed" to mean "designed, written, customized, or configured" may include software within the scope of Article 2B, whereas a court interpreting "developed" to mean only "designed" may not. Instead, the drafters should limit the application of this condition to non-mass market transactions, or eliminate the condition, as the drafters did in the March 1998 draft.

The February 1998 draft excluding merely incidental information and licenses creates two problems in the scope of Article 2B: 1) the exclusion of information incidental to services is a confusing repetition of the exclusion for services of regulated professions, and 2) the exclusion of information, if it is a minor part of a hybrid transaction, is contrary to the gravaman of the action test used for other hybrid transactions. Instead of excluding information which is incidental to services through the merely incidental test, the drafters should expand the exclusion for services from regulated professions to include all personal services, as the drafters have done in the March 1998 draft of Article 2B, and eliminate the reference to information which is incidental to services in the notes on the merely incidental exclusion. And, instead of excluding information which is a minor part of a hybrid transaction based on a merely incidental test, the drafters should eliminate the test in favor of the gravaman of the action test, thus promoting the application of the appropriate body of law regardless of the importance of the subject matter to the transaction. Use of the gravaman of the action test would ensure the consistency of the scope of Article 2B and avoid litigation about whether an information transfer or license constitutes an incidental part of the transaction.

By instituting these changes, the drafters will achieve more uniform application of Article 2B. This will increase certainty in commercial law, resulting in more efficient transactions due to reduced litigation and contracting costs.

WHEN IS A COMPUTER PROGRAM NOT A COMPUTER PROGRAM? THE PERPLEXING WORLD CREATED BY PROPOSED U.C.C. ARTICLE 2B

By Michele C. Kane †

ABSTRACT

The primary purposes of the Uniform Commercial Code set forth in section 1-102(2)(a) are to simplify, clarify, and modernize the law governing commercial transactions. Contrary to this objective, proposed Article 2B of the Uniform Commercial Code adds needless complexity to computer industry transactions. If enacted, it will produce uncertainty in intellectual property transactions, create unnecessary litigation, and eliminate protections for licensees afforded by existing law.

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I. ARTICLE 2B NEEDLESSLY COMPLICATES RATHER THAN SIMPLIFIES THE LAW

Article 2B states that a "commercial law premise defines codification as a means to facilitate commercial practice. ... The benefits of codification lie in defining principles consistent with commercial practice which can be relied on and are readily discernible and understandable to commercial parties."[1] Contrary to its stated intentions, Article 2B creates distinctions within computer programs in a manner contrary to common understanding and commercial practice, making the simple complex and the statute difficult to discern and apply.

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1. U.C.C. Article 2B, Preface at 10 (Aug. 1, 1998 Draft) ("Basic Themes, Default Rules").

Section 101 of the United States Copyright defines a "computer program" as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."[2] This definition as set forth by federal law comports with the prevailing perception of computer programs. Computer programs are commonly understood to encompass, for instance, the word processing program that resides on our desktops, the video game that teaches our preschoolers how to spell, and the program that enabled the Sojourner vehicle to navigate around obstacles on the surface of Mars.

Notwithstanding the Copyright Act definition, interpretation, and longstanding commercial practice, the April 15, 1998 and earlier drafts of Article 2B included in section 2B-102(a)(6) a different definition for a computer program. "Computer program" means a set of statements or instructions to be used directly or indirectly in an information processing system in order to bring about a certain result. *This term does not include informational content.*[3]

In the August 1, 1998 draft, the Copyright Act definition for "computer program" replaced the earlier definition.[4] However, the Reporter's Notes to section 2B-102 explain that, contrary to the revised definition, "computer program" means only the functional aspects of the computer program, and not those aspects that would be considered "informational content."[5] The Notes state:

> In this article, a distinction exists between programs as operating instructions and "informational content" communicated to people. "Computer program" refers to functional and operating aspects of a digital system, while "informational content" refers to output that communicates to a human being. There is an inevitable overlap. However, if issues arise that require a close distinction, the answer lies in whether the issue addresses functional operations (program) or communicated content (informational content). The distinction is like the [sic] made in copyright law between a computer program as a "literary work" (code) and the program interface or other output as an "audiovisual work" (images, sounds). In copyright, the distinction relates to what reference points are used in determining whether a copyrighted work was created or infringed. In Article 2B, the distinction relates to

2. 17 U.S.C. § 101 (1992).
3. *See* U.C.C. § 2B-102(a)(6) (Apr. 15, 1998 Draft) (emphasis added).
4. *See* U.C.C. § 2B-102 (Aug. 1, 1998 Draft).
5. *See id.* § 2B-102(a), Reporter's Note 6.

> contract law issues relevant in determining liability risk and performance obligations.[6]

The foregoing serves to confuse rather than to enlighten.

Informational content of a computer program is defined in section 102(a)(26) as follows:

> "Informational content" means information that is intended to be communicated to or perceived by an individual in the ordinary use of the information, or the equivalent thereof. The term does not include instructions used merely to control the interaction of a computer program with other computer programs or with a machine.[7]

The Reporter's Notes explain the definition of informational content as "information whose ordinary use entails communicating the information to a human being. This is the information people read, see, hear and otherwise experience."[8]

The distinction between functional and informational content is made finer in section 102(a)(36), the definition of "published informational content":

> "Published informational content" means informational content prepared for or made available to recipients generally or a class of recipients in substantially the same form and not customized for a particular recipient by an individual that is a licensor, or by an individual or group of individuals acting on behalf of the licensor, using judgment and expertise. The term does not include informational content provided in a special relationship of reliance between the provider and the recipient.[9]

The definition of published informational content is explained in the Reporter's Notes as a type of information "most closely associated with First Amendment and related public policy concerns ... the material of newspapers, books, motion[s] pictures and the like ... ."[10]

These distinctions between a computer program's informational content and functional content are unnecessary and problematic. None of the

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6. *Id.*
7. *Id.* § 2B-102(a)(26).
8. *Id.* § 2B-102(a), Reporter's Note 23.
9. *Id.* § 2B102(a)(36).
10. U.C.C. § 2B-102(a), Reporter's Note 32 (Aug. 1, 1998 Draft).

other federal[11] or international[12] laws or regulations surveyed make such distinctions. Because reasonable people may easily differ on where to draw the line between the functional and informational types of computer program content, the legal effects of creating such a distinction are uncertain and will likely lead to expensive and time-consuming litigation.

II. ARTICLE 2B WILL PRODUCE LEGAL UNCERTAINTY

The distinction between informational and functional content in the definition of computer programs forces the intellectual property practitioner to answer the question:

What aspects of a computer program, as commonly understood, is a computer program under Article 2B?

For example, is the source code considered a computer program or informational content? In the April 15, 1998 draft, Reporter's Note 6 to section 2B-102 categorized it as a computer program by stating that "[i]n situations where a program is provided in source code form, the fact that the source code can be read by a human does not change the fact that the transaction involves a computer program and applicable merchantability or other warranties pertaining to the functioning of that program apply."[13] The language addressing source code was omitted from the August 1, 1998 draft. Note 6 in the August 1, 1998 draft attempts to draw a distinction between the code, on one hand, and the program interface or other output as an audiovisual work, on the other.[14] The distinction is nonsensical, however, because the source code for the computer program is the code in human-readable form that produces the interface.

A characterization (or partial characterization) of source code as a computer program is inconsistent with the definition of informational

11. *See* Federal Acquisitions Regulations, 48 C.F.R. §§ 252.227-7013(a)(2), 7014(a)(3), 7018(a)(3) ("Computer program means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.").

12. *See* European Union Directive 91/250 and the copyright laws of Australia (Copyright Act 1968, as amended, Art. 10); Brazil (Software Law of 1987, as amended in 1998, Art. 1); Canada (Copyright Act, Art. 2); Japan (Copyright Law of 1970, as amended through 1997, Ch. I, Sec. I, Art. 2 (xbis)); Mexico (Federal Law on Copyright, 1996, Art. 101); Oman (Copyright Law, 1996, Art. 1(x)); Russian Federation (Law on Copyright and Neighboring Rights, 1993, Art. 4); Singapore (The Copyright Act 1987, as amended in 1998, Part II, 7.(I)); and Venezuela (Law on Copyright, 1993, Art. 17).

13. U.C.C. § 2B-102(a), Reporter's Note 6 (Apr. 15, 1998 Draft).

14. *See* U.C.C. § 2B-102(a), Reporter's Note 6 (Aug. 1, 1998 Draft).

content set forth in section 2B-102(a)(26).[15] Under this section, source code should be interpreted as informational content because it is "intended to be communicated to or perceived by an individual in the ordinary use of the information ...."[16] The source code for a computer program is typically provided to facilitate the customer's understanding of the program and to enable her to maintain, modify, and enhance it. If all or part of the source code is characterized as informational content under Article 2B, the customer will lose legal protections provided for computer programs under current law.

These problems resulting from the confusion of whether source code should be categorized as a computer program or informational content illustrate the potentially harmful consequences of enacting Article 2B.

III. ARTICLE 2B HARMS CONSUMERS BY ELIMINATING EXPRESS AND IMPLIED WARRANTIES

Article 2B will have detrimental consequences for a broad spectrum of consumers, from individual consumers, using video games and word processing programs, to large and small corporations depending on computer software to run their businesses through Article 2B's exclusion of implied warranties for informational content. Because of the difficulty in distinguishing "informational content" from the remainder of a computer program, the consumer, and his or its attorney, may be unable to determine the extent to which warranties apply.

The applicability of warranties to a computer program, under Article 2B, might change depending on the licensee's use of it. For example, implied warranties may apply to a virus detection computer program under Article 2B if a licensor sends it to a technically inexperienced user who uses it to detect viruses. However, it may be categorized as informational content if the program is examined line by line for a new virus. Furthermore, if one programmer sends another programmer an e-mail version of a new program, the ordinary use would be to communicate it to the recipient who perceives and uses it. It is unclear whether the e-mailed material would be characterized as "informational content," to which no implied warranties would attach.

In addition, an entertainment company contracting for the development of an animation-based computer program may have difficulty determining whether a defect is in the computer program (functional content)

15. *See id.* § 2B-102(a)(26).
16. *Id.*

or merely a defect in the informational content for which no warranties exist under Article 2B. For example, if characters in a video game have unnatural, jerky movements, is this a defect in the computer program or in the informational content? If the software contains inaccurate user help information or displays the information improperly, is this considered defective informational content? In either case, if the defect is determined to be in the informational content, there would be no warranties under Article 2B. Unfortunately, this determination will only be made by a trier of fact after the problem has occurred.

Confusion also exists over what warranties are available for "off-the-shelf" computer software. A reasonable interpretation of the Article 2B definition of "published informational content" could lead a state court to rule that any perceivable portions of the information ("or any equivalent thereof," the meaning of which is uncertain) of an off-the-shelf computer software product would come under the definition since it is "prepared for or made available to recipients generally or a class of recipients in substantially the same form and not customized for a particular recipient."[17] Thus, significant portions of off-the-shelf computer software may be categorized as published informational content and, as with newspapers, books, and motion pictures, Article 2B creates no express warranties for it.

Part 4 of Article 2B sets forth the warranty provisions.[18] Section 2B-402(a) follows U.C.C. Article 2 and establishes the means by which express warranties are created.[19] Warranties are created by, for example, affirmations of fact made by the licensor in advertising,[20] or by samples, models or demonstrations of a final product.[21] However, subsection (b) takes away some or all of the express warranties established by subsection (a)(3) by stating that "a display or description of a portion of the information to illustrate the aesthetics, market appeal or the like, of informational content ... does not create a warranty."[22] Thus, demonstration of a portion of a finished video game, a sample of a product containing clip art, or a display of a commercial software product will not create an express warranty under Article 2B because some or all of the content demonstrated or displayed would be informational content. This loss of express warranty

17. *Id.* § 2B-102(a)(36). The April 15, 1998 draft also referred to creation of an express warranty by product documentation. That reference was omitted from the August 1, 1998 draft.

18. *See generally id.* § 2B, Part 4 (warranties).

19. *See id.* § 2B-402(a).

20. *See id.* § 2B-402(a)(1).

21. *See* U.C.C. § 2B-402(a)(3) (Aug. 1, 1998 Draft).

22 *Id.* § 2B-402(b).

protection defeats a customer's expectation based on the prototyping and sign-off practices common to software development transactions and based on existing U.C.C. section 2-313.[23]

Section 2B-403 sets forth the implied warranty of merchantability and quality of a computer program, but it does not apply to that portion of the product that would be considered informational content under Article 2B.[24] Section 2B-403(d) states that "[a] warranty created under this section applies to the functionality of a computer program, but does not relate to informational content, including its aesthetics, market appeal, accuracy, or subjective quality, whether or not the content is included in or created by a computer program."[25]

If implemented, section 2B-403(d) would produce the undesirable and unreasonable consequence of allowing the quality of programs to fall below the requirements of section 2B-403(b), or existing U.C.C. section 2-314[26] without constituting a breach of the implied warranty. For example, under section 2B-403(d), no breach of the implied warranty would occur if the characters of a video game or virtual reality attraction move in a manner that would not pass without objection in the trade, if the quality of the graphics render the product unmarketable, or if the data displayed by the program is inaccurate. This Article 2B "take away" would be harmful for consumers and business customers alike.

Section 2B-404, entitled "Implied Warranty: Informational Content,"[27] might appear to provide the missing warranty for the informational content of computer programs. A reading of the text reveals, however, that this low-level warranty is provided only to those in a special relationship of reliance with the merchant. Hence, the customer of mass market or other off-the-shelf software is potentially left with no statutory warranty as to the accuracy of portions of the software if such portions are, again, categorized as informational content.

Moreover, if the software is deemed to be published informational content under section 2B-404(b)(2), no implied warranty is available.[28] This exclusion for published informational content could eliminate any warranty for published user manuals and operators' manuals upon which

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23. *See* U.C.C. § 2-313 (West 1995) ("Express Warranties by Affirmation, Promise, Description, Sample").

24. *See* U.C.C. § 2B-403(d) (Aug. 1, 1998 Draft).

25 *Id.*

26. *See* U.C.C. § 2-314 (1995) ("Implied Warranty; Merchantability; Usage of Trade").

27. U.C.C. § 2B-404 (Aug. 1, 1998 Draft).

28. *See id.* § 2B-404(b)(2).

customers must rely. Note 2(c) of the Reporter's Notes to this section states "[t]his excludes information distributed to the public ... . This exclusion stems from First Amendment and general social norms about the value of encouraging distribution of information."[29] Neither the First Amendment nor "general social norms" dictate the exclusion of warranties for standard, off-the-shelf computer software and accompanying documentation.

In addition, published informational content is excluded from section 2B-409(a) which extends warranties given to a licensee to "persons for the benefit of which the licensor intends to supply the information and which rightfully use the information."[30] Thus, certain people in the distribution chain, such as consumer licensees and their household members, will be left without the benefit of such warranties as to portions of their purchased or licensed computer software products.

IV. ARTICLE 2B LIMITS LICENSEES' REMEDIES AND PROTECTIONS

Outside the warranty area, the proposed definitions of computer program, informational content, and published informational content affect the availability of, and limitations on, remedies. Section 2B-707(b)(1) provides that neither party is entitled to recover "consequential damages for losses caused by the content of published informational content unless the agreement expressly so provides."[31] One can be sure that shrink-wrap, click-wrap, and other vendors' license agreements covering off-the-shelf computer software will never expressly entitle the customer to consequential damages. This is, yet again, another "take away" from the remedies available to the customer under Article 2 of the U.C.C.

Finally, section 2B-716, which appeared in the April 15, 1998 draft, provided certain (but inadequate) protections to licensees with respect to licensors' electronic self-help rights under the proposed statute.[32] Under former section 2B-716(a)(2), these protections did not pertain if "the licensed information is information content licensed for display or performance for entertainment or educational purposes."[33] That provision appeared to allow a licensor, in exercising its self-help rights, to disable or remove the source code copy or user interface of a computer program

29 *Id.* § 2B-404, Reporter's Note 2(c).
30. *Id.* § 2B-409(a).
31. *Id.* § 2B-707(b)(1).
32. *See* U.C.C. § 2B-716 (Apr. 15, 1998 Draft).
33. *Id.* § 2B-716(a)(2).

without complying with the requirements of section 2B-716(a)(4) if the computer program had an entertainment or educational purpose.[34] This was not an appropriate result. In the August 1, 1998 draft, section 2B-716 was deleted, and section 2B-715 was altered in such a way as to allow largely unfettered (so long as no breach of the peace occurred or there was no foreseeable risk of personal injury or significant damage to information or property other than the licensed information) electronic self-help by the licensor,[35] without benefit of even the inadequate licensee protections that existed in the earlier drafts of section 2B-716. This presents a grave exposure to business licensees.

V. CONCLUSION

The primary purposes of the Uniform Commercial Code set forth in U.C.C. section 1-102(2)(a) are to simplify and clarify the law. Contrary to this fundamental objective, Article 2B complicates the law by excluding "informational content" from each critical usage of the term "computer program." If Article 2B is enacted, it will create uncertainty for counselors and those who negotiate and document computer software and computer system transactions by making it difficult to determine what portions of a computer program will be treated as such under state contract law. By its terms, Article 2B eliminates warranties, limits licensee remedies, and limits licensee protections against licensor remedies. It also adds needless complexity to these transactions. If this Article is to be implemented, significant work needs to be done to clarify the code and move it closer to fair treatment for licensees and commercial reality.

34. *See id.* § 2B-716(a)(4).
35. *See* U.C.C. § 2B-715 (Aug. 1, 1998 Draft).

ARTICLE 2B AS LEGAL SOFTWARE FOR ELECTRONIC CONTRACTING—OPERATING SYSTEM OR TROJAN HORSE?

By A. Michael Froomkin †

ABSTRACT

The proposed draft of Article 2B of the Uniform Commercial Code can be thought of as akin to a complex computer software suite which seeks to dominate a market by offering all things to all people. The author suggests, however, that Article 2B's electronic contracting rules interoperate poorly with existing digital signature laws, and with some forms of electronic commerce. The author also questions whether Article 2B is the proper means to enact controversial rules that ordinarily would make consumers liable for fraudulent uses of their digital signatures by third parties. After considering Article 2B's potential interaction with existing digital signature laws, state consumer laws and liability rules, and the practices of Certificate Authorities, the author suggests that Article 2B still contains several bugs in its code and is therefore still not ready for adoption.

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Online commerce is no longer a prediction; it is an economically significant reality,[1] so significant that online sales may well become the predominant means of selling consumer goods. Online distribution may also someday become the primary means of distributing software and other information. So far, online contracting generally has proceeded with surprisingly few legal crashes. Nevertheless, law reformers across the world are rolling out model laws to conform to what appear to be the new realities of Internet-based trade, and to facilitate the use of new technologies such as digital signatures. Proposed Uniform Commercial Code Article 2B—Licenses[2] now joins this bandwagon. In its desire to create a complete legal regime for the regulation of transactions in licenses for information products, and in particular software and databases, Article 2B proposes several provisions relating to the online purchase and delivery of information and other products.

Like software vendors, legal reformers have different styles. Some attempt to create sleek, narrowly targeted products that meet a single, sometimes modest, need. Others have a more ambitious agenda, and attempt to create the legal equivalent of the software suite: wholesale legal reforms that provide a solution to every imaginable legal problem. And if legal reformers are software vendors, then legislators are the institutional buyers of their products. Some jurisdictions seek out the newest and latest legal devices; others prefer to hang back and wait for version 2, or even 3.x, or '99, when maybe the worst bugs will have been ironed out.[3] Moreover, like large corporate buyers, legislators have widely varying understand-

1. *See generally* UNITED STATES DEPARTMENT OF COMMERCE, THE EMERGING DIGITAL ECONOMY (1998), *available at* <http://www.ecommerce.gov/emerging.htm>.

2. U.C.C. Article 2B—Licenses (Aug. 1, 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/ucc2/2b898.htm>. The Microsoft Word version of the August draft, available on the web site maintained by the University of Pennsylvania repository of U.C.C. drafts, contains redline and strikeout marks that show changes from the previous draft. To track changes from the April to the August draft one must acquire each of the intervening drafts available at <http://www.law.upenn.edu/library/ulc/ulc.htm#ucc2b>.

3. At the Berkeley symposium I learned that the Article 2B as software metaphor used in this paper, which grew out of a conversation with my colleague Patrick Gudridge, has been used by others, notably Cem Kaner. *See, e.g.*, Cem Kaner, *Bad Software—Who is Liable?*, Address at the Proceedings of the American Society for Quality's 52nd Annual Quality Congress (May 1998), *available at* <http://www.badsoftware.com/asqcirc.htm>; Cem Kaner, Brian Lawrence & Bob Johnson, *SPLAT! Requirements Bugs on the Information Superhighway*, 5 Software QA 18 (1997).

ings of the information products they are considering acquiring, and have different capacities to undertake whatever customization may be necessary to adapt a generic product to their environment. As a result of this diversity, current laws relating to online contracting and especially digital signatures are something of a patchwork, but they are evolving quickly.

As regards electronic commerce ("e-commerce") at least, Article 2B is also evolving rapidly. For example, in the five months between the March, 1998 draft,[4] (which was current when most contributions to this symposium first were being drafted) and the August 1, 1998 draft, provisions regarding e-commerce have been materially altered, and in one critical case completely reversed.[5] Substantial changes have appeared since the April 1, 1998 draft—which the drafters said was all but final. Subsequent changes resulting in versions dated July 1998[6] and August 1998 testify to the hard work of the drafters and to their attempts, perhaps not always successful, to respond to critics. No good deed goes unpunished, however, and when faced with so many continuous changes in a long and complex document, one is entitled—even required—to ask whether the code is stable and whether one can rely on it.[7]

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4. U.C.C. Article 2B—Licenses (Mar. 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/ucc2/2b398.htm>.

5. *Compare* U.C.C. § 2B-104(c) (Apr. 15, 1998 Draft) ("A statute authorizing electronic or digital signatures in effect on the effective date of this article is not affected by this article"), *available at* <http://www.law.upenn.edu/library/ulc/ucc2/2b498.htm>, *with* U.C.C. § 2B-104(c) (Mar. 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/ucc2/2b398.htm> ("A statute authorizing electronic or digital signatures in effect on the effective date of this article is not affected by this article, *but in the case of a conflict this article controls.*") (emphasis added). *See also infra* text accompanying note 40.

6. The July draft, which was prepared for the July 1998 meeting of the National Conference of Commissioners on Uniform State Laws, can be found at <http://www.law.upenn.edu/bll/ulc/ucc2b/ucc2bamg.htm>.

7. It should not need to be said, but it also follows from the rapid rate of change in a complex document that arguments in favor of Article 2B based on some form of notice and estoppel ("we discussed this issue two years ago—where were you?") deserve to be treated with derision. Alas, some of Article 2B's more exuberant proponents continue to make such arguments. *See, e.g.*, Memorandum from the Business Software Alliance et al. on Article 2B (July 15, 1988) ("One would expect ALI motions and votes to be circumspect and to give credence to the open forum of NCCUSL and the endless hours of discussion heard and considered by the Article 2B Drafting Committee. But they do not. [One] motion on standard form contracts seeks to overturn the delicate compromise reached by the Drafting Committee after untold hours of debate and consideration of alternative approaches. The motions on choice of law and choice of forum also ignore hours of discussion and compromise, as well as commercial realities and needs. We do

One reason why Article 2B has proven to be so difficult to get right is that the information technologies to which it would apply are themselves in a state of ferment. As many papers in this Symposium demonstrate, the task of defining licensing rules for information is difficult enough; adding in the task of defining distinct rules applicable to all electronic contracts of sale, or even just those electronic contracts licensing information, may make it impossible. But while information licensing agreements may present special legal issues and problems that require a particularized legal regime, it does not follow that they require their own *electronic* contracting regime as well—unless there is something special about the electronic sale of information licenses, or about information itself that distinguishes the formation and enforcement of online sales agreements from contracts relating to other online sales. Whether or not the case for distinct rules relating to information licenses has been proved, the case for distinct rules relating to the electronic sale of information has not been made.

Indeed, to the extent that Article 2B creates unique electronic contracting rules, the introduction of special rules in Article 2B threatens to create confusion rather than standardization. When transactions are "mixed," combining information licenses with more traditional goods, the confusion may become more pronounced if inconsistent rules apply to different parts of the same transaction, or because the dominance of one set of rules provides unexpected outcomes. In any case, the over-ambitious reach of Article 2B seems certain to have unwanted and no doubt unintended consequences for e-commerce.

Although the electronic contracting provisions in Article 2B raise a host of interesting and complex issues, this Comment will give disproportionate emphasis to Article 2B's potentially awkward interaction with so-called digital signature laws, and with rules relating to Certification Authorities. Article 2B itself seeks to be technology neutral, and thus its e-commerce provisions apply more broadly than this Comment's focus on digital signatures might suggest.[8] Nevertheless, I chose to focus primarily on digital signatures because they are currently the most widely recognized method of electronic authentication, and are increasingly widely deployed. In addition, the profusion of laws and proposals relating to digital signatures at the state, federal, and international level means that, for this type of e-commerce at least, Article 2B does not enjoy the luxury of writing on a blank slate.

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not support this type of above-the-fray tinkering, particularly on such fundamental issues."), *available at* <http://www.2Bguide.com/docs/amemo981.html>.

8. For instance, Article 2B also has innovative features regarding automated contracts formed by electronic agents, some of which are discussed in section II.D.

The diversity of existing and proposed approaches increases the case for standardization across jurisdictions. On the other hand, an evaluation of the standardization Article 2B offers must also take account of the policy choices embedded in the standard, and the extent to which it either affects other types of e-commerce or it risks creating dual and perhaps conflicting rules for electronic contracting depending on the subject matter of the transaction. Like the makers of a new operating system or a complex software suite, the proponents of a wide-ranging legal reform must contend with legacy applications and with the habits they have engendered. Despite some improvements in its most recent revisions, and even discounting for the relative newness of digital signature-based commerce and the laws that seek to enable it, there is ample reason to doubt that Article 2B is compatible with the emerging model of digital signature-based e-commerce.

I. BACKGROUND: DIGITAL SIGNATURES, CERTIFICATE AUTHORITIES AND THE EMERGING LEGAL LANDSCAPE

A digital signature is a mathematically generated, probabilistically unique, data string that can be associated with digitized information in order to demonstrate the authenticity of that information and the identity of the signer. A digital signature created with Alice's private key[9] links her to the data and can be used to prove that the data has not been altered since Alice signed it.[10] Anyone who has Alice's public key corresponding to the private key she used to generate the signature, and the right software, can then verify[11] the integrity of Alice's signature. Because the signature algo-

9. For a fuller explanation of public-private key technology see A. Michael Froomkin, *The Essential Role of Trusted Third Parties in Electronic Commerce*, 75 OR. L. REV. 49, 50-53 (1996), *available at* <http://www.law.miami.edu/~froomkin/articles/trusted.htm>.

10. When combined with a digital time stamp the message can also be proved to have been sent at a certain time. *See id.* at 65-67.

11. Article 2B does not use the term "verify" in the context of electronic contracting. The term is used in the ABA Digital Signature Guidelines and in the Utah Digital Signature Act: "Verify a digital signature" means, in relation to a given digital signature, message, and public, key, to determine accurately that: (a) the digital signature was created by the private key corresponding to the public key; and (b) the message has not been altered since its digital signature was created. *See* DIGITAL SIGNATURE GUIDELINES § 1.37 (1996), *available at* <http://www.abanet.org/scitech/ec/isc/dsgfree.html>; Utah Digital Signature Act § 103(37), UTAH CODE ANN. tit. 46, ch. 3 (1995). Instead, Article 2B uses the term "authenticate" which refers to both the act of creating the original digital signature and the act of confirming its authenticity and validity. *See* U.C.C. § 2B-102(a)(3) (Aug. 1, 1998 Draft). Conflating the two significantly different actions into one term creates a real, and avoidable, potential for confusion.

rithm uses the entire original digitized information as input, if the information is altered in even the slightest way, the signature will not decrypt properly, thus showing that the message was altered in transit or that the signature was forged by copying it from a different message.[12] A digital signature copied from one message has an infinitesimal chance of successfully authenticating any other message.[13]

A digital signature cannot work well in isolation. In most arms-length uses where the parties have no other means of confirming their identity and the security of their signatures, and especially those involving the transfer of value, a digital signature requires a certificate issued by someone other than the parties to back it up. If Alice e-mails Bob a program that she has authenticated with a digital signature, the presence of the digital signature alone adds little. Bob needs a copy of the public key that corresponds to Alice's private key to check the validity of the signature. More importantly, Bob needs a way to confirm that the corresponding public key is actually Alice's and not an imposter's. Current practice—which may be about to change[14]—further assumes that before relying on Alice's digital signature, Bob usually needs to confirm that Alice's key is still valid, since keys are sometimes revoked before their natural expiry date due to key compromise or for other reasons.

In order to rely on the authenticity of Alice's public key, therefore, Bob needs to get the key, or data authenticating the key, from some source

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12. Digital signatures achieve this by computing a *one-way hash value* of the message and then encrypting the hash value with the user's private key. A hash function takes an input string and converts it to a fixed-size, and usually smaller, output string. A one-way hash function adds the property that while it is easy to compute the hash value from the input it is very hard to find other inputs that produce the same hash output. *See* BRUCE SCHNEIER, APPLIED CRYPTOGRAPHY 28 (2nd ed. 1996). The recipient checks the digital signature by decrypting the hash value with the sender's public key, then comparing the hash value with the independently generated hash value of the file received. If the two numbers are the same, the file is authentic and unchanged. *See* RSA Laboratories, *Answers to Frequently Asked Questions About Today's Cryptography* § 2.1.6 (visited Nov. 9, 1998) <http://www.rsa.com/rsalabs/newfaq/alg_tech.htm>.

13. *See* SCHNEIER, *supra* note 12, at 38 (noting that a digital signature using a 160-bit hash number has only a one in 2^{160} chance of mistakenly authenticating another document).

14. *See* Ronald L. Rivest, *Can We Eliminate Certificate Revocation Lists?*, PROC. OF FINANCIAL CRYPTOGRAPHY 178 (Rafael Hirschfeld ed., 1988) (proposing and advocating a means of dispensing with certificate revocation lists in which the proponent of a digital signature bears the burden of providing a suitably recent and reliable certificate to the relying party), *available at* <http://theory.lcs.mit.edu/~rivest/revocation.ps>; *see also* Richard Hornbeck, *The Troubling Truth About "Trust" on the Internet*, 10 J. ELECTRONIC COMM. 59, 65 (1997) (critiquing CRL model), *available at* <http://www.primenet.com/~hornbeck/trust.htm>.

other than the "Alice" sending him the original e-mail message. This is because if someone is forging a message from Alice, that malicious third party will send his own public key as well, claiming that it is actually Alice's. This imposture will fail if and only if Bob has access to Alice's real public key from some outside source, so that when Bob attempts to use Alice's real public key to verify a message signed with the imposter's private key, the verification will fail, revealing the forgery.

There are many ways of providing Bob with the information he needs to satisfy himself that the public key he will use to verify the authenticity of Alice's message is both genuine and still valid. One possible outside source is a business that sells and administers certificates attesting to the binding between Alice and her public key, and which offers online verification services. These businesses are known as *Certificate Authorities* ("CAs"). An increasing number of enterprises are seeking to establish themselves as CAs. Firms such as VeriSign offer a variety of CA services to all comers at a variety of prices and levels of assurance.[15] Others, such as the American Bankers Association (which recently announced an agreement with Zions National Bank in Utah to provide root CA services for banks), seek to serve specialty markets.[16]

The growth in the number of CAs, and the increasing interest in digital signatures as elements of e-commerce, parallels an extraordinary law-making effort on the part of state, federal, foreign, and international legislative and law reform bodies. Digital signature laws or policies have been debated, proposed, or adopted by almost every state in the union,[17] most European nations,[18] the EU itself,[19] UNCITRAL,[20] non-European na-

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15. *See VeriSign Home Page* (visited Nov. 9, 1998) <http://www.verisign.com>.

16. *See ABA Announces Plan to Become Certificate Authority For Financial Services Industry* (Mar. 6, 1998) <http://www.aba.com/abatool/showme_rel.html?location=PR_030698ec.htm>; *OCC Approves A National Bank to Certify Digital Signatures* (Jan. 13, 1998) <http://www.occ.treas.gov/98Rellst.htm>.

17. For a continually updated summary of state legislation see McBride, Baker & Coles, *Summary Of Electronic Commerce And Digital Signature Legislation* (last modified Oct. 13, 1998) <http://www.mbc.com/ds_sum.html>.

18. *See generally* Juan Avellan, *Digital Signature Links*, (last modified June 10, 1997) <http://www.qmw.ac.uk/~tl6345/#Europe> (Summary of activities in European countries, including Germany, Italy and the UK.).

19. *See generally Towards A European Framework for Digital Signatures And Encryption*, COM(97)503, *available at* <http://www.ispo.cec.be/eif/policy/97503toc.html>.

20. *See generally Draft Uniform Rules on Electronic Commerce*, UNICITRAL, 32nd Sess., U.N. Doc. A/CN.9/WG.IV/WP.73 (1998), *available at* <http://www.un.or.at/uncitral/english/sessions/wg_ec/wp-73.htm>; *UNCITRAL Model Law on Electronic Commerce*, G.A. Res 51, U.N. GAOR 6th Comm., 85th plen. mtg.,

tions,[21] and many private bodies including the American Bar Association.[22] This activity responds to a real need: absent clarifying legislation, the law relating to CAs' duties and liabilities is likely to be confused and confusing.[23] Nevertheless, this outpouring of legislative enterprise was not caused by a barrage of lawsuits resulting from Internet commerce gone wrong.[24] Nor can this activity easily be explained by a massive pent-up consumer demand for digital signatures that has been held back by legal uncertainty, as there is only equivocal evidence of pent-up demand, and indeed only some evidence of demand pure and simple, on the part of consumers. The flurry of legislative activity appears primarily entrepreneurial, designed not only to facilitate existing demand for e-commerce but also to nurture new demand and speed the development of the necessary software tools and social institutions.[25] There is indeed some truth to one commentator's warning that, "[d]igital signature technology may be loved to death before it ever gets to really take off."[26]

Given the limited amount of Internet and other e-commerce that relies upon digital signatures today, both digital signature-based commerce and the statutes and rules designed to support it must be viewed as very early production models. If we are perhaps beyond the point of experiment and prototype and into the roll-out period, we are still at version 1.0[27]—and

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U.N. Doc. A/51/628 (1996), *available at* <http://www.un.or.at/uncitral/english/texts/electcom/ml-ec.htm>.

21. *E.g.*, Japan. *See* Electronic Commerce Promotion Council of Japan, *Certification Authority Guidelines* (Alpha Version) (Apr. 7, 1997) <http://www.ecom.or.jp/eng/output/ca/eng-guideline.htm>.

22. *See generally* DIGITAL SIGNATURE GUIDELINES (1996), *available at* <http://www.abanet.org/scitech/ec/isc/dsgfree.html>.

23. I belabor this point in Froomkin, *supra* note 9.

24. So far as I am aware, there have been none, other than rare cases in which courts addressed whether an electronic "copy" can have the same legal force and effect as a traditional written signature in the absence of a "written original." *See, e.g.*, Allen v. Caldwell, 470 S.E.2d 696, 698 (Ga. App. 1996) (questioning the validity of a "facsimile" that lacks an "original").

25. It is entirely normal, appropriate, and often praiseworthy for the legislature (and others) to seek to enact power-conferring laws. *See generally* H.L.A. HART, THE CONCEPT OF LAW 27-33 (1961). The issue is the content of the facilities created for individuals to realize their wishes, and the structure of the resulting de facto as well as the de jure structures of rights and duties that will flourish within the coercive framework of the law.

26. Stewart A. Baker, *International Developments Affecting Digital Signatures*, (Oct. 1997) <http://www.steptoe.com/WebDoc.NSF/Law+&+The+Net+All/International+Developments+Affecting+Digital+ Signatures? OpenDocument>.

27. In the case of states such as Utah or Minnesota, which have already amended their original digital signature laws, we may be at version 1.1. The rapidity and frequency

every software user today knows what that means: like the early adopters of new software, the consumers and others who participate in the early days of digital signature-based e-commerce will be only a little more than uncompensated beta-testers. It is true that many of the legislative efforts today share common features, and in many cases were drafted by people who are in close communication.[28] On the other hand, there are also some sharp differences in approach regarding a number of issues, not least the allocation of risk and liability, the extent to which CAs or consumers should be shielded from loss, and the extent to which the relevant rules should be drafted by legislatures or regulatory authority delegated to administrative bodies.[29]

II. ARTICLE 2B ON ELECTRONIC CONTRACTING

While there is a great deal to be said for a uniform national standard regarding the legal force and effect of digital signatures and the regulation of CAs, we do not have enough transactional experience today to know which of the various approaches will be the best, whether we have a stable technological model,[30] or indeed whether any of these approaches already deployed might have unintended legal or social consequences. Article 2B's approach to e-commerce suffers from numerous problems as applied to digital signature-based commerce. First, as regards digital signatures, Article 2B is not uniform: different rules will apply in states with grandfathered digital signature laws. Second, whether or not states have pre-existing digital signature laws, it will sometimes be difficult to figure out

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with which digital signature laws are likely to be revised underlines the point that we are at an early stage in their development.

28. Several institutions enable continual contacts, including committees of the American Bar Association, the Commissioners on Uniform Laws, the UNCITRAL drafting process, and an excellent electronic mailing list with more than 150 members maintained by Professor Amelia Boss at Temple.

29. For an excellent survey of digital signature issues relating to other sections of the U.C.C., see Jane Kaufman Winn, *Open Systems, Free Markets, and Regulation of Internet Commerce*, 72 TULANE L. REV. 1177 (1998). Very valuable, more narrowly focused, treatments of various issues relating to digital signatures and online sales or to digital signatures and specific articles of the U.C.C. include C. Bradford Biddle, *Legislating Market Winners: Digital Signature Laws and the Electronic Commerce Marketplace*, 34 SAN DIEGO L. REV. 1225 (1997); C. Bradford Biddle, *Misplaced Priorities: the Utah Digital Signature Act and Liability Allocation in a Public Key Infrastructure*, 33 SAN DIEGO L. REV. 1143 (1996); Walter A. Effross, *The Legal Architecture of Virtual Stores: World Wide Web Sites and the Uniform Commercial Code*, 34 SAN DIEGO L. REV. 1263 (1997); and Jane Kaufman Winn, *Couriers Without Luggage: Negotiable Instruments and Digital Signatures*, 49 S. CAR. L. REV. 739 (1998).

30. *See supra* note 14 (noting a potential alternative model of e-commerce).

which parts of Article 2B apply to an e-commerce transaction. In particular, Article 2B applies its contract formation rules to so-called "mixed" transactions composed of matters covered by and excluded from Article 2B creating potential for confusion both as to what is covered and as to which parts of Article 2B constitute the contract formation rules. Third, Article 2B undertakes to override important parts of pre-existing consumer law in the interests of ease of use and national uniformity. Yet, the early deployment of new, poorly understood, and potentially fallible technologies such as digital signatures and especially intelligent agents seems to be an odd occasion for reducing consumer protections. Fourth, Article 2B adopts a liability regime for digital signature-based e-commerce that has been rejected by most states which have considered the issue.

A. Scope and Contract Formation

The first difficulty that confronts anyone seeking to understand the likely effects of Article 2B on e-commerce is determining the range of transactions likely to be affected by this Article. The very difficulty of this task is itself one of the more troubling aspects of Article 2B. Whether or not there already is too much legal uncertainty associated with e-commerce, the need for additional uncertainty appears to be remarkably low.

Certain parts of Article 2B have special application to electronic contracts, notably sections 2B-113 to 2B-120 (collectively within Part I.B, "Electronic Contracts: Generally") as well as Part 2 on contract formation, section 2B-107 on choice of law, section 2B-108 on choice of forum, and section 2B-111 on manifesting assent. All these provisions arise in the wake of Article 2B's scope provisions (sections 2B-103 to 2B-105), which set out the range of transactions to which Article 2B should be applied, and also discuss Article 2B's relationship to other law in the adopting state. As issues of scope and relationship are fundamental, they provide the starting point for an analysis of Article 2B's effects on e-commerce.

Section 2B-103(a) sets out what appears to be a quite limited reach for Article 2B: the Article will apply to (1) licenses, software contracts, and "access contracts,"[31] and (2) "any agreement to provide support for, maintain, or modify information related to a contract within the scope of this article."[32] But the treatment of mixed contracts is actually rather more

31. "'Access contract' means a contract to electronically obtain access to, or information in electronic form from, an information processing system. The term does not include a contract for physical access to a place, such as a theater or building." U.C.C. § 2B-102(a)(1) (Aug. 1, 1998 Draft).

32. *Id.* § 2B-103(a).

far-reaching and complex (and much changed, at least in presentation, from earlier versions of Article 2B). If Article 2B governs part of the transaction and other contract law governs part, then Article 2B will apply *inter alia* to information, informational rights and their documentation.[33] Article 2B will not apply to the conveyance of goods governed by Article 2 or 2A, unless those goods are licenses, software contracts, or access contracts, in which case Article 2B trumps 2 and 2A after all.[34] Furthermore, section 2B-103(b) applies the contract formation rules of Article 2B to all mixed transactions in which the parties agree to be bound by Article 2B.[35] Even absent agreement, the contract formation terms of Article 2B will apply to all mixed transactions involving services "or other subject matter" not within Articles 2, 2A, or 2B, if the "information or services that are within the scope of [Article 2B] are the predominant purpose of the transaction."[36]

Given the potentially wide reach of the contract formation terms of Article 2B, it becomes essential to determine which parts of that Article concern contract formation, and which are about something else. Alas, as Article 2B does not define precisely which sections concern contract formation there is room for confusion, both real and forensically feigned, as to what precisely constitutes a contract formation term for an electronic contract under Article 2B. The essence of a contract is agreement on its terms. Do rules about the terms of the contract constitute a contract formation term? Is a rule about choice of law terms or venue terms a rule of contract formation or interpretation and effect? Certainly all of Part 2 on

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33. *See id.* § 2B-103(b).

34. According to section 2B-103(b)(2), Articles 2 or 2A also apply and Article 2B does not apply "as to subject matter that is excluded [from Article 2B] under Section 2B-104(3)," *i.e.* to the extent that a transaction:

> (3) is a sale or lease of a copy of a computer program as part of a sale or lease of goods that contain the computer program unless:
>
> (A) the goods are merely a copy of the program;
>
> (B) the goods are a computer or computer peripheral; or
>
> (C) giving the purchaser of the goods access to or use of the computer program is a material purpose of the transaction.

Id. § 2B-104(3) (emphasis added). This is not very clear. Is the purchase of a computer system, promoted as a word processing package and bundled with word processing software, for the express purpose of writing a book, a transaction in which "giving the purchaser ... access to or use of the computer program" is or is not "a material purpose of the transaction"? If it is, then unraveling the double negative of sections 2B-103(b)(2) and 2B-104(3)(C) suggests that Article 2B applies to the sale of the program and the computer system.

35. *Id.* § 2B-103(b)(3)(A).

36. *Id.* § 2B-103(b)(3)(B).

contract formation and terms falls within the contract formation rubric, but other parts would seem to also. For example, Part I.A ("General Terms and Scope") includes some sections that are part of contract formation, namely the definitions in section 2B-102, and the scope provisions in sections 2B-103 to 2B-105, discussed earlier, as well as sections that would not ordinarily be considered related to contract formation (e.g., section 2B-109 on breach of contract). Similarly, Part I.B ("Electronic Contracts: Generally") includes both rules of contract interpretation, (e.g., section 2B-115 "Effect of Imposing a Commercially Unreasonable Attribution Procedure"), and pure contract formation (e.g., section 2B-119 "Electronic Agents Operations").

A Reporter's Note suggests that the purpose of this language is to allow "maximum scope to the contract formation rules and electronic commerce."[37] Indeed, even if the exact reach of the contract formation terms cannot easily be discerned, it is evident that these terms will apply to a range of transactions well beyond pure software licenses or intellectual property licenses generally. Furthermore, if the parties agree, they can choose to apply Article 2B to any transaction that does not fall under either Article 2, or 2A—although in those cases, unlike those where Article 2B applies by its own terms, existing consumer law rules remain unaffected.[38]

B. Article 2B's Relationship to Existing Digital Signature Laws

One likely consequence of Article 2B's broad scope is that it will be applied to many agreements concerning the issuance and maintenance of digital signatures. Article 2B's effects on these transactions, as discussed in more detail below, are likely to be unanticipated and unhelpful. The potential for difficulties caused by Article 2B for purchasers and perhaps issuers of digital signatures contrasts with the less troubling approach adopted by the drafters of the Uniform Electronic Transactions Act ("UETA"). Article 2B and UETA originally shared a common general approach to the regulation of e-commerce, even if they differed on nomenclature. As the two drafting processes have proceeded, however, the documents have evolved in different directions. Despite some significant changes, Article 2B continues to take a relatively comprehensive and even intrusive approach, while UETA has scaled back to a less ambitious but perhaps more realistic strategy. Article 2B will affect everything from the formation of digital signature agreements to the assignment of liability if they go wrong. UETA now avoids the liability issue entirely.

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37. *Id.* § 2B-103, Reporter's Note 5.
38. *Id.* § 2B-103(c)(1).

As of the April 15, 1998 draft of Article 2B—and in a sharp departure from the March 1998 draft—Article 2B provides a savings clause for pre-existing digital signature laws: "A statute authorizing electronic or digital signatures in effect on the effective date of this article is not affected by this article."[39] In contrast, earlier drafts of Article 2B had included the following italicized language: "A statute authorizing electronic or digital signatures in effect on the effective date of this article is not affected by this article, *but in the case of a conflict this article controls.*"[40] While this change is a welcome response to the complaint that Article 2B needlessly overturned existing state experiments in digital signature regulation, it introduces problems of its own. Grandfathering inevitably undermines uniformity, and thus undermines a major policy reason for even addressing the issue of digital signatures in an Article of the U.C.C. ostensibly devoted to licensing. Conversely, were Article 2B to be widely adopted, states with idiosyncratic digital signature laws would feel increasing pressure to repeal their laws and conform to the emerging national standard. The realities of national commerce mean that were Article 2B to be adopted, its digital signature provisions stand a good chance of becoming dominant; if so, the grandfathering of existing non-conforming state laws is less meaningful than it might seem.

As currently drafted, the digital signature provisions of Article 2B threaten to cause unneeded confusion. In Article 2B parlance, when Alice associates a digital signature based on her private key to any digitized information, be it an e-mail, a World Wide Web page, a purchase order, a program or a digitized movie, Alice *authenticates* that information.[41] Although earlier drafts of UETA used the term signature in a similar way,[42]

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39. *Id.* § 2B-105(g). Note that this was section 104(c) in the April draft.

40. U.C.C. § 2B-104(c) (Mar. 1998 draft) (emphasis added).

41. Article 2B defines "Authenticate" as:

> to sign, or otherwise to execute or adopt a symbol or sound, or encrypt or similarly process a record in whole or part, with intent of the authenticating person to:
>
> (A) identify the person;
>
> (B) adopt or accept the terms or a particular term of a record that includes or is logically associated or linked with the authentication or to which a record containing the authentication refers; or
>
> (C) establish the integrity of the information in a record which includes or is logically associated or linked with the authentication or to which a record containing the authentication refers."

U.C.C. § 2B-102(a)(3) (Aug. 1, 1998 Draft).

42. *See, e.g.*, UNIFORM ELECTRONIC TRANSACTIONS ACT § 102(a)(20) (Mar. 23, 1998 Draft) (defining "signature" as "any symbol, sound, process, or encryption of a record in whole or in part, executed or adopted by a person or the person's electronic agent

the UETA drafters have now changed their approach. The September 18, 1988 UETA draft defines a signature as "an identifying symbol, sound, process, or encryption of a record in whole or in part, executed or adopted by a person, as part of a record."[43] The UETA formulation is now superior to Article 2B's. The term signature is more likely to be familiar to the average person than authentication, and therefore more clearly embodies the idea that legal consequences, such as the formation of contractual obligations, will tend to flow from certain uses of a digital signature. As discussed in more detail below, Article 2B's definition of authenticate obscures the difference between "authenticating" a document in the sense of showing it has not been altered and "signing" a document in the sense of completing a legal formality signifying an intent to be bound. If Bob appends a digital signature to a contract labeled "DRAFT," it often will be clear from the context that he intends only to demonstrate that it is his draft, and not to extend a firm offer. But there will inevitably be circumstances where the course of conduct makes it less clear whether a digital signature is associated to a document with the intent of authenticating or signing it.[44] Having one term do multiple duty risks confusion. A legal reform whose most immediate impact is that every risk-averse user of a digital signature for authentication must keep separate keys for each type of activity, and henceforth append a statement to message integrity authentications saying "this digital signature is only an authentication of the integrity of the message, it does not attest to the approval, acceptance or accuracy of the content nor does it constitute either an offer or an acceptance" seems to be the sort of modernization one can do without.

C. Article 2B Applied to CAs and the Conveyance of Certificates

Most models of digital signature-based commerce assume that some sort of trusted third parties, usually called Certificate Authorities (CAs), will provide essential intermediation services to participants in e-

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with intent to: (A) identify that person; (B) adopt or accept a term or a record; or (C) establish the informational integrity of a record or term that contains the signature or to which a record containing the signature refers."), *available at* <http://www.law.upenn.edu/library/ulc/uecicta/eta398.htm>.

43. UNIFORM ELECTRONIC TRANSACTIONS ACT § 102(a)(20) (Sept. 18, 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/uecicta/eta1098.htm>.

44. *See infra* text accompanying notes 87-89. *Compare* Guideline 1.4 of the ABA Digital Signature Guidelines, which defines "authentication" as: "A process used to ascertain the identity of a person or the integrity of specific information. For a message, authentication involves ascertaining its source and that it has not been modified or replaced in transit." This definition *excludes* signing with an intent to be bound. *See* DIGITAL SIGNATURE GUIDELINES § 5.2 (1996), *available at* <http://www.abanet.org/scitech/ec/isc/dsgfree.html>.

commerce. The drafters of Article 2B do not seem to have appreciated the extent to which Article 2B will apply not only to the users of digital signatures but also to the parties who may issue the certificates on which digital signature users must rely. Article 2B is likely to apply to the original provision of a certificate, and to the database services that make certificates reliable. Exactly when and to what extent Article 2B will apply is somewhat uncertain because it seems the drafters did not envision such highly customized transactions would nonetheless have mass market characteristics.

Imagine the following somewhat simplified set of related transactions. Alice, a merchant, intends to engage in e-commerce. As a first step, Alice contacts a CA in order to acquire one of the CA's digital certificates attesting to the linkage between Alice's public key and Alice's real-life identity. Bob, a consumer, contacts a different CA to acquire a certificate for his public key. The CAs may require some proof of ID, a payment, perhaps even some other form of security. Suppose Alice and Bob, neither of whom have any fraudulent designs, honestly provide everything required. If the CAs issue X.509-style certificates, currently the most common kind, the certificates will include several data elements, including a copy of Alice's public key signed by each CA's private key, a reliance limit, an expiration date, and a reference to the URL where each CA's *certification practice statement* (CPS) resides.[45] The CA's contract with its customers, and probably the certificates as well, will incorporate the CPS by reference.[46]

Suppose Bob visits Alice's web page and places an order for a computer program. If Alice's web site is signed with her private key, and if her certificate is compatible with Bob's browser, Bob can check the CA's *certificate revocation list* (CRL) to ensure that Alice's web page is truly hers, and not a spoof nor a hack.[47] Once reassured that Alice's key remains valid and uncompromised, Bob can send Alice his payment details with less fear that they will be going to a malicious third party pretending to be Alice.[48]

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45. For a state-of-the-art CPS see *Verisign Certification Practice Statement* (May 15, 1997) <https://www.verisign.com/repository/CPS1.2/CPS1.2.pdf>.

46. *See generally* Froomkin, *supra* note 9, at 55-65, 97.

47. For an example of a CRL lookup form see VeriSign, *Verify the Status of a Digital ID*, (visited Nov. 19, 1998) <http://digitalid.verisign.com/status.htm>.

48. I have argued elsewhere that the second part of this scenario has some limits. If, for example, Bob is paying by credit card, the credit card company fulfills the role of trusted third party and there is little reason for Alice to require Bob to guild the lily with a certificate. Indeed, to the extent that the credit card company functions as an insurer,

If Alice is licensing information, with delivery online, she may be particularly interested in learning where Bob lives (as this may affect what law applies), and in making sure that Bob is who he says he is (as this may become relevant if he violates the terms of his license). Thus, if Alice requests Bob's public key and his certificate, she will want assurances that Bob's key remains valid and uncompromised. One way for Alice to confirm this is to consult the CA's CRL. If Bob's certificate checks out, Alice will complete the transaction.

It can be seen from the foregoing that in e-commerce models which rely on certificates verified by reference to a CRL, the CA is really providing two different things to Alice and Bob: 1) the certificate itself, and 2) access to a CRL. It is not an exaggeration to say that for these certificates, the CRL is at least as important as the original certificate.[49] The original, after all, will be generated only once; the CRL needs to be constantly available on a 24 hour a day, 7 day a week basis ("24x7"), and may be referenced any number of times by parties unknown at the time the certificate is created.[50]

1. *Certification Services*

Once Article 2B is enacted, CAs may find that its provisions allow them to structure the sale of certificates and certificate services in a manner that reduces their liabilities. The CA may structure the provision of a certificate as a sale, in which case Article 2 might apply absent other agreement. Subject to the doubts about the applicability of U.C.C. Article

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there is little incentive for Bob to worry about the validity of Alice's public key either, since he bears little or no risk of loss. *See generally* Froomkin, *supra* note 9, at 68. Nevertheless, as the scenario in the text appears to animate most digital signature statutes, it remains worth considering.

49. Indeed, failure to consult a CRL before relying on a certificate in these models likely would be per se negligence. *See* DIGITAL SIGNATURE GUIDELINES § 5.4 (1996), *available at* <http://www.abanet.org/scitech/ec/isc/dsgfree.html>. A person who negligently uses an attribution procedure that *could* have been adequate may be estopped from pleading reliance upon the attribution procedure of which the certificate is a part, since only those who act reasonably are entitled to claim this type of reliance. *See, e.g.*, U.C.C.§ 2B-117(4) (Aug. 1, 1998 Draft) ("If the sender complies with the attribution procedure, but the receiving party does not, and the change or error would have been detected had the receiving party also complied, the sender is not bound by the error or change.").

50. On the other hand, one can also imagine alternate e-commerce models using digital signatures backed by certificates which do not rely on CRLs, perhaps because parties always demand reasonably fresh certificates, and the market responds by having CAs provide a continual stream of newly minted but short-lived certificates. This, more or less, is the model discussed in Rivest, *supra* note 14.

2 to intangible goods, this might work for the sale of the certificate alone, but it looks like a poor bet for the CA if the CA sells a package consisting of a certificate and CRL services:

> The view that a CA is providing a service (or a hybrid in which the service element predominates) appears more convincing than the alternative under either the "predominant factor" test or the "final product" test .... To issue a certificate worthy of trust, the CA must: (1) have a valid and verifiable certificate of its own; (2) conduct the inquiry on which the certificate will be based; (3) accurately state facts in the certificate, including both the facts about the subject and the facts about the CA's investigation; and (4) maintain a CRL. The CA's continuing duty to maintain the CRL in a form that can be rapidly and efficiently used by persons wishing to rely on a certificate is in itself significant evidence that the service element predominates in what the CA is selling.[51]

Even if the provision of the original certificate is an Article 2 sale, the provision of CRL services is unlikely to be a sale in most states. Indeed, states that use a predominant purpose test are unlikely to treat even the sale of the certificate as falling under Article 2. This legal vacuum will be readily filled by Article 2B.

If Article 2B is enacted, CAs may structure their deal as a license, in which case Article 2B would apply by default. In previous drafts of Article 2B it appeared that the provision of a certificate was excluded from Article 2B's definition of a "mass-market transaction," since each certificate is tailor-made for a customer and Article 2B's definition of a mass market transaction required that the information being licensed to each consumer be the "same information."[52] In contrast, the current draft defines a mass market transaction as including any "transaction within this article that is a consumer transaction,"[53] i.e., any transaction in which a

51. Froomkin, *supra* note 9, at 89-90.

52. For example, in the March 1998 draft, Article 2B defined a mass market transaction as a "consumer transaction ... directed to the general public ... for the same information." U.C.C. § 2B-102(a)(31) (Mar. 1998 Draft). The term excluded "a transaction in which the information is or becomes customized or otherwise specially prepared by the licensor for the licensee." *Id.* at § 2B-102(a)(31)(C). If a certificate is not the subject of a mass market transaction, by definition it cannot be covered by a "mass-market license" since a "'[m]ass-market license' means a standard form that is prepared for and used in a mass-market transaction." *Id.* § 2B-102(a)(30). As a result, various consumer protections designed to apply to mass market transactions would not have applied to CAs under the March 1998 formula.

53. U.C.C. § 2B-102(a)(32) (Aug. 1, 1998 Draft).

consumer[54] is the licensee.[55] Thus, under the current definition, a CA's provision of a certificate and CRL services to a consumer would be a mass market transaction, even though one suspects that the drafters' operating image of a consumer transaction remains one in which a person acquires a standardized program rather than a bespoke certificate.

As a result—unlike in previous drafts of Article 2B—the consumer protections in Article 2B that apply to mass market transactions[56] and licenses appear to apply to CAs that transact with consumers, although apparently not to CAs when they transact with other businesses. The Reporter's Notes conflict with this reading, however. For example, although section 2B-102(a)(32) defines a mass market transaction broadly, Reporter's Note 28 following that section cautions that the "definition must be applied in light of its intended function."[57] And, as in previous drafts of Article 2B, the consumer transactions envisaged are those in which every consumer acquires identical information, i.e., "relatively small dollar value, routine and anonymous transactions that occur in a retail market available to and used by the general public ... where information is made available in pre-packaged form under generally similar terms to the general public and in which the general public is a frequent participant."[58] This is a vision that would tend to exclude certificates, since every certificate must include the unique public key of the party being certified, and by their very nature few of these transactions will be anonymous. Worse, the same Reporter's Note states that the mass market transactions "concept applies only to information aimed at the general public as a whole, including consumers. It does not include products directed at a limited subgroup of the general public or restricted to members of an organization or to persons with a separate relationship to the information provider."[59] Perhaps this is merely a carry-over from earlier versions and will also be re-

54. "Consumer" is defined at section 2B-102(a)(10).

55. U.C.C. § 2B-102(a)(11) (Aug. 1, 1998 Draft).

56. The drafters identify the following as consumer protections in mass market transactions: "The provisions of this Article that provide additional consumer protections include: 2B-107 (choice of law); 2B-118 (electronic error); 2B-208 (limit on mass market license; right to refund); 2B-303 (limit on no-oral modification clause); 2B-304 (limit on modification of continuing contract); 2B-406 (warranty disclaimer); 2B-409 (third-party beneficiary); 2B-609 (perfect tender); 2B-619 (limit on hell and high water clauses); 2B-703 (exclusion of personal injury claim)." *Id.* § 2B-105, Reporter's Note 5.

To what extent each of these matter in the context of a CA is another debate; one place where it matters whether a transaction is mass market or not is the extent to which warranty disclaimers must be conspicuous. *See id.* § 2B-406 (b)(4).

57. *Id.* § 2B-102, Reporter's Note 28.

58. *Id.*

59. *Id.*

vised to match the changes in the definition, as otherwise it risks creating confusion.

One might also reasonably question whether the CA's provision of a certificate to a customer could alternately be considered the provision of an informational good within the purview of Article 2B. A certificate is certainly information, but it might be argued that in demanding and checking information about the subject of a certificate, the CA is performing a service whose predominant purpose is outside the scope of Article 2B, just as a lawyer or valuer who memorializes her professional opinion on paper or in an e-mail does not therefore fall within Article 2B's scope.[60] Whether a CA provides a professional service sufficiently like a lawyer or valuer to say that the memorialization is merely incident to the provision of a professional service is open to debate; conceivably it might turn on the quality or nature of the investigation or other initial inquiry performed by the CA.[61] This uncertainty is unhelpful.

In addition to controlling the form of the transaction, the CA has a number of options for manipulating the transaction's reality. A CA that chose to "sell" certificates could simply transmit the information to a client; a CA that wanted to emphasize the license or services nature of the transaction could ask clients to enter into a license agreement, by which the CA agrees to make the certificate available on a Web page to all who wish to see it. Current practice seems to be to convey certificates to customers. Verisign, for example, does not currently use license language to describe what happens when it creates a certificate for a consumer. This

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60. *See id.* § 2B-104(5) (excluding contract for "personal or entertainment services"); *see id.* Reporter's Note 2.

61. *See* Froomkin, *supra* note 9, at 87-88:

> A certificate resembles a professional's opinion in that a certificate ordinarily is the tangible memorial of a process of analysis in which the subject's credentials were checked in some manner. On the other hand, a certificate differs from a professional's opinion in some ways that may be relevant. Any trustworthy CA will be managed by a professional—someone who knows how to run a trustworthy computer system—but it is not inevitable that the actual checking of credentials in all cases will be the sort of activity traditionally undertaken by professionals. If Alice's certificates are founded on checking the subject's passport, it may well be that the person who actually examines Alice's passport and issues her certificate is a clerk who has been trained in passport authentication, not an expert like a surveyor or valuer. There is no policy reason, however, why the classification of a certificate as a good or service should turn on whether the person making the report happens to be a professional.

Id.

may change. Already, both VeriSign's public keys and its CPS are made available to the public as licensed information.[62]

2. *Provision of Access Services*

While one might debate whether a CA's provision of a certificate falls within Article 2B, there seems far less doubt that the CA's provision of CRL services falls squarely within Article 2B's provisions relating to access to databases. The CRL is a database, and Bob's right to access it, or to point others towards it, is a license. This makes Bob's access to the CRL an access contract contemplated by Article 2B.[63] Furthermore, many of the parties consulting a CA's CRL are likely to be persons with no pre-existing contractual relationship with the CA. If Alice gets her certificate from a CA, Bob will need to consult its CRL whether or not he happens to have purchased anything from that CA. If the CA's provision of the certificate is not a license, (which seems to be current practice) but the provision of CRL services is, then either we have two separate transactions potentially governed by different rules, or one mixed transaction—parts of which may or may not be governed by different rules.

Before proceeding with the effect of treating a CA's business as involving a "mixed" transaction, one possible objection deserves to be noted. One might argue that a CA's services fall within the "core financial

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62. "VeriSign public keys: VeriSign root public keys, including all PCA public keys, are the property of VeriSign, Inc. VeriSign licenses relying parties to use such keys only in conjunction with trustworthy hardware or software product in which the root public key is distributed with VeriSign's authority." *VeriSign CPS*, *supra* note 45, at § 12.13; *see also id.* at i (describing right to reproduce CPS itself in license terms).

63. *See, e.g.*, U.C.C. § 2B-102(a)(1) (Aug. 1, 1998 Draft) (defining "access contract" as "a contract to electronically obtain access to, or information in electronic form from, an information processing system. The term does not include a contract for physical access to a place, such as a theater or building."); *see also id.* § 2B-615 ("Access Contracts"). There are potential conflicts between some of the rules for access contracts, (e.g., section 2B-107(b) on choice of law for access contracts) which provides that even in a consumer transaction "[a]n access contract or a contract providing for electronic delivery of a copy is governed by the law of the jurisdiction in which the licensor is located when the agreement is made" and the general deference to digital signature laws in section 2B-105(g) since some state digital signature laws require that parts of their own law be applied regardless of the physical location of the CA. *See, e.g.*, Washington Electronic Authentication Act, WASH. REV. CODE § 19.34.220(3) (1997) (providing that CA must certify to "all those who reasonably rely on the information" that information in certificate and listed as confirmed is accurate, that subscribers accepted certificate; that all information foreseeably material to reliability of the certificate is stated or incorporated by reference in the certificate; and that CA complied with Authentication Act and other applicable laws of the state).

functions"[64] exceptions to Article 2B's scope. Article 2B does not apply "to the extent that a transaction ... provides access to, use, transfer, clearance, settlement, or processing of ... identifying, verifying, access-enabling, authorizing, or monitoring information" that is related to electronic cash, an "instrument," as defined in section 3-305, or the wholesale or retail transfer of funds including credit and debit card transactions.[65] Arguably the CA's contract with Alice to create a certificate is an agreement "that provides access to ... identifying, authenticating [or] ... authorizing information" that may well at some future date be "related to" electronic cash, or the retail transfer of funds. The problem, however, is that many certificates are and will be general-purpose identification certificates, and at the time Bob acquires the certificate neither he nor the CA may know what he intends to use it for. The time that a customer makes the agreement with the CA seems by far the most reasonable time to determine what law applies to the contract. Otherwise, this "core financial functions" exclusion might suddenly spring into effect if Bob one day used his certificate and Alice did a CRL lookup on it to support a transaction that involved electronic cash ("e-cash"). It seems more reasonable, therefore, to read the core financial functions exception in section 2B-104(4) as excluding the e-cash portion of every transaction in which e-cash is used, but not to every certificate.

If a CA's provision of a certificate and CRL services makes its deal with Alice and Bob a mixed transaction, it appears from the scope provisions of Article 2B that at least the contract formation parts of Article 2B will apply to the CA's relationships with Alice and Bob in the example above—even if the CA was able to categorize its provision of the original certificate as a sale of data rather than a license. Recall that according to section 2B-103(b)(3), even if the parties have made no agreement to invoke Article 2B, Article 2B's contract formation terms apply to the entire transaction if "the transaction involves services or other subject matter not within this article or Article 2 or Article 2A and the information or services that are within the scope of this article are the predominant purpose of the transaction."[66] "Services" is not a defined term in section 2B-102, and

64. U.C.C. § 2B-104, Reporter's Note 5 (Aug. 1, 1998 Draft).

65. *Id.* § 2B-104.

66. *Id.* § 2B-103(b)(3)(B). In addition, section 2B-103 (c) states that the parties may agree that all of Article 2B applies so long as this agreement does not alter mandatory consumer protections rules that would otherwise apply, and so long as this agreement does not remove a transaction from either U.C.C. Article 2 or U.C.C. Article 2A when one of those articles would otherwise apply. *See id.* § 2B-103(c).

the only other reference to services in section 2B-104 seems irrelevant.[67] If the term services is distinct from the sale of goods, as it is, for example, in U.C.C. Article 2,[68] but it includes the performance of an access contract, then section 2B-103 creates the risk of an anomalous situation: whether all of a transaction whose predominant purpose is the licensing of information would fall under Article 2B might depend on whether the transaction happened to include the provision of an incidental non-sale service.

Article 2B's reliance on Article 2's goods/services distinction is odd and slightly uncomfortable since a primary objective of Article 2B was supposed to be to erase that distinction. As Article 2B's Preface notes, the "distinction that used to be drawn between 'goods' and 'services' is meaningless, because so much of the value provided by the successful enterprise ... entails services [and information]."[69] Nevertheless, the current draft of Article 2B adopts the predominant purpose test[70] for determining when Article 2B should apply to a mixed transaction, [71] a test which will be familiar to U.C.C. lawyers from the context of Article 2. This is a substantial change from earlier versions of Article 2B: until recently, Article

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67. Section 2B-104(5) states that 2B will not apply to the extent that an agreement "is a contract for personal or entertainment services by an individual or group of individuals, other than a contract of an independent contractor to develop, support, modify or maintain software." Interestingly, if somewhat puzzlingly, the Reporter's Note states that this exclusion "does not exclude situations where automation creates a digital replacement for activities previously characterized as personal services." *Id.* § 2B-104, Reporter's Note 6.

68. U.C.C. § 2-102 (1996) states that "unless the context otherwise requires, this Article applies to transactions in goods ...."

69. U.C.C. 2B, Preface, p.6 (Aug. 1, 1998 Draft) (quoting ROBERT REICH, THE WORK OF NATIONS 85-86 (1991)) (alterations in original).

70. On the "predominant purpose" test, see JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE 3-4 (4th ed. 1995) ("If a sale of goods is not the 'predominant purpose,' then [the U.C.C. Article] does not apply at all.").

71. *See* U.C.C. § 2B-103, Reporter's Note 5:

> *Formation Rules.* Subsection (b)(3) addresses an effect created by Article 2B contract formation rules and the fact that Article 2B validates electronic commerce practices that may not be effective under common law or under current Article 2 or 2A. The subsection applies Article 2B formation rules to the entire transaction if Article 2B subject matter constitutes the predominant purpose of the transaction itself. This allows maximum scope to the contract formation rules and electronic commerce.

Id.

2B rejected the predominant purpose test in favor of a considerably more nebulous gravaman of the action test.[72]

3. *The Bottom Line: Effect of Article 2B on CA Transactions*

It follows from the above that Article 2B will confuse as much as it clarifies the legal duties and contractual rights of CAs and their customers.

In a state with no digital signature laws,[73] Article 2B will ensure that contracts for the licensing of information, and also mixed contracts that are formed via electronic contracting supported by properly implemented and deployed digital signatures, are as valid as contracts formed in a traditional fashion. Furthermore, in states that do not have pre-existing digital signature laws, or whose existing laws do not address contract formation or warranty issues, Article 2B is likely to have the following effects on contracts for the provision of a certificate and associated access to a CRL :

(1) If the conveyance of a certificate is a *license* of information within Article 2B, then both the certificate and the CRL lookup services are within all of Article 2B, since the CRL lookup service, an "access contract," is clearly covered by Article 2B.

(2) If the conveyance of a certificate is merely the *memorialization of a service*, akin to a lawyer's or valuer's opinion, then so long as the certificate relies on a CRL for its validity there is a good chance that the contract formation rules of Article 2B may apply to the entire transaction, since the initial certification service is a "service[] that [is] not within this article" and, arguably, "the information that is within this article"—the access to the CRL—is the predominant purpose of the transaction.[74] All of Article 2B applies to the customer's access to the

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72. *See* U.C.C. § 2B-103, Reporter's Note 3 (Mar. 1998 draft) ("This Article applies *to the extent* that the transaction involves subject matter within its scope, but not to the extent that a particular subject matter or aspect of a relationship is excluded or otherwise outside the scope.") The tautological reassurance that what is excluded is excluded, and what is included is included was not comforting and seemed to mean that if the predominant purpose of the transaction is within Article 2B, then the contract formation rules—but not the other parts—of Article 2B applied to the entire transaction. Whatever it meant, we are well rid of it.

73. The situation in states with pre-existing digital signature laws may be even more complex. These statutes are not uniform, and Article 2B does not seek to displace them. *See* U.C.C. § 2B-105(g) (Aug. 1, 1998 Draft). To the extent that some of these statutes may have explicit contract formation terms, beyond defining a "writing," those terms will trump anything in 2B. *See id.* In the absence of an explicit provision to the contrary, however, Article 2B's terms will presumably control, including the treatment of mixed transactions described in this section.

74. *See id.* § 2B-103(b)(3)(B).

CRL, but only the contract formation rules apply to the initial generation and conveyance of the certificate, and to its updates.

(3) If the conveyance of the certificate is a *sale*, or if the CRL service is not the "predominant purpose" of the entire transaction, then different contract formation rules may apply to the certificate and the CRL even if they are acquired in a single transaction.

(4) If the conveyance of the certificate is *outside Article 2B* for any reason, and the certificate if of a type that does not require a CRL look-up to be valid, then Article 2B probably does not apply to the CA's part of the transaction.

Could not law *reform* come up with something more straightforward?

Moreover, the application of Article 2B to the CA's provision of CRL services threatens some odd results. CRLs online subject to Article 2B may be relieved of the burden of being constantly online and accessible. According to section 2B-615(a)(3), access pursuant to a contract that provides for continuous access,

> (3) must be available at times and in a manner:
>
> (A) conforming to the express terms of the contract; and
>
> (B) to the extent not expressly dealt with by the contract, in a manner and with a quality that is reasonable in light of the ordinary standards of the business, trade, or industry for the particular type of contract.

On the other hand, and of potentially greater relevance to most CA's provision of retail CRL lookup services, section 2B-615(b) provides:

> (b) In an access contract that gives the licensee a right of access at times substantially of its own choosing during agreed periods of time, an intermittent and occasional failure to have access available during those times is not a breach of contract if it is:
>
> (1) consistent with the express terms of the contract;
>
> (2) consistent with ordinary standards of the business, trade, or industry for the particular type of contract; or
>
> (3) caused by scheduled downtime, reasonable needs for maintenance, reasonable periods of equipment, software, or communications failure, or events reasonably beyond the licensor's control.[75]

There seems to be a conflict between the requirement in section 2B-615(a) that access conform to the express terms of the contract, and the

75. *Id.* § 2B-615.

terms of section 2B-615(b), which suggests that even when a contract provides for occasional access on a 24x7 basis, an intermittent and occasional failure of access is not necessarily a breach of contract. Every access contract for intermittent access drafted by a minimally competent lawyer is going to have some representation about the nature and quality of the service to be provided. Either the contract will promise uninterrupted 24x7 service, or the promise will be hedged with some sort of limitations. In contracts with any specific representation about quality of service, section 2B-615(b) becomes relevant only if the provider's express limitations are less sweeping than those set by Article 2B. Yet, in the absence of a more sweeping disclaimer, the subscriber would be entitled to think that the contract explicitly provides for a higher level of service. Perhaps section 2B-615(b) can best be understood as applying only to access contracts that have no agreed terms about quality of service at all. The text invites a broader reading,[76] but anything broader risks causing great confusion. Suppose that a CA promises "24-hour-a-day access to the CRL" or "best efforts for 24x7" or "access any time." Which of those make full-time access an express term of the contract? If a given formulation is an express promise of uninterrupted access, but a court finds that industry practice allows for substantial downtime, why should that norm be allowed to trump the express contractual term? At present, a CA's potential customers have almost no way of discerning industry norms, if indeed any have yet been born. As a result, there may be no norms for a CA to invoke; if there are, however, it is unclear why the CA should be allowed to do so if it has made any stronger contractual representations as to service reliability. Nor is it evident why lawyers should have to argue whether a blue screen of death[77] is a reasonable software failure rather than the unreasonable sort.

It may be that the computer technology backing up online services and especially the Internet generally remains sufficiently experimental and unreliable that providers need some sort of safe harbor provision to excuse unforeseeable breaches in service. Even so, the solution is to craft a stan-

76. The word "or" at the end of section 2B-615(b)(2) suggests that one should read an "or" into the end of section 2B-615(b)(1) and that therefore each of the three circumstances listed in section 2B-615(b) are independent defenses against claims for breach of contract.

77. The Free On-Line Dictionary of Computing defines the "blue screen of death" as "[t]he infamous white-on-blue text screen which appears when Microsoft Windows crashes. BSOD is mostly seen on the 16-bit systems such as Windows 3.1, but also on Windows 95 and ... Windows NT 4." Free On-Line Dictionary of Computing, *Blue Screen of Death* (Sept. 9, 1998) <http://wombat.doc.ic.ac.uk/foldoc/foldoc.cgi?blue+screen+of+death>.

dard from contract language that allows providers to distinguish between regular service and premium. Not only should the language itself put a reader on notice that the ordinary 24x7 promise may mean less than it seems, but a CA which chooses to make an express contractual commitment to provide full-blooded 24x7 service should be able to do so—and customers should have a right of action if the service nonetheless fails to perform as promised.

Each of the criticisms set out above arises from the same fundamental problem. CAs are in a business that has a number of characteristics differentiating it from the more ordinary sales and licenses that appear to have been contemplated by the drafters of Article 2B. Rules designed for software licenses, access to LEXIS or Westlaw, or to marketing databases, simply do not work well when applied to a CA's provision of certificates and CRL lists. The difficulty of fitting an erratically shaped peg with substantially unknown tensile properties into even a good-sized round hole suggests rather strongly that Article 2B's attempt to draft comprehensive rules for e-commerce as an adjunct to its licensing rules was simply too ambitious.

D. Consumer Law and Electronic Transactions

Although section 2B-105(d) sets out a general principle that Article 2B will defer to a law that "establishes a consumer protection," this general principle is subject to four significant exceptions which substantially alter consumer protections for electronic transactions. The Reporter's Notes claims that these four derogations from state consumer law "reflect a limited approach that balances the modernization theme and the desire not to alter existing protection."[78] In so doing, however, Article 2B undermines the consumer law requirements it seeks to modernize and risks leaving consumers particularly vulnerable to more modern threats caused by hacked software and rogue electronic agents.[79] In this regard, it may be relevant to note that the UNCITRAL model law, which appears to have inspired at least some of Article 2B's approach to electronic contracting,[80] specifically defers to all relevant consumer law.[81]

Taken either individually or as a group, these four derogations are significant. First, any requirement that a contractual obligation, waiver, notice

78. *Id.* § 2B-105(d), Reporter's Note 6.

79. *See infra* text accompanying notes 105-116.

80. *See, e.g.*, U.C.C. § 2B-116, Reporter's Note 2 (Aug. 1, 1998 Draft).

81. *See UNCITRAL Model Law*, *supra* note 20, at art. 1, n.** ("This Law does not override any rule of law intended for the protection of consumers.").

or disclaimer be in writing is satisfied by "a record,"[82] which is defined as "information inscribed on a tangible medium or stored in an electronic or other medium and retrievable in perceivable form."[83] Thus, notwithstanding any state consumer law to the contrary, contractual terms, waivers, notices and disclaimers need not *actually* be retrieved by the consumer "in perceivable form"; the consumer need not even decline an offer to read it. The principle that an electronic message should have no less binding legal consequences and effects than one on paper seems entirely sensible and is a common theme in even the most modest law reform efforts relating to e-commerce. That modest and uncontroversial end is achieved by section 2B-113,[84] and by section 301 of the Draft Uniform Electronic Transactions Act (UETA).[85] But Article 2B's exception to the writing requirement in section 2B-104 goes farther than the minimum, since it does not require actual perception of the writing by either a human being or her electronic agents. For example, a sufficiently prominent link to a web site that contains required disclosures satisfies a disclosure requirement even if the consumer did not click on the link. Some consumer contracts today purport to incorporate by reference standardized terms that the ordinary consumer never sees; to the extent that online contracting puts those terms a click away, meaningful disclosure will be improved. But to the extent that state statutes require that contractual obligations, waivers, notices or disclaimers actually be visible to the consumer, enforcing clickwrap[86] contracts in which key terms are one hyperlink (or more?) away from the viewer does not further the objective of meaningful disclosure.

Second, a requirement that a contractual term be "signed" is satisfied by an "authentication."[87] Section 2B-102(a)(3)defines the act of authentication as:

> to sign, or otherwise to execute or adopt a symbol or sound, or encrypt or similarly process a record in whole or part, with intent of the authenticating person to:

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82. U.C.C. § 2B-105(e)(1) (Aug. 1, 1998 Draft).

83. *Id.* § 2B-102(a)(39).

84. *See id.* § 2B-113 ("A record or authentication may not be denied legal effect, solely on the ground that it is in electronic form.").

85. UNIFORM ELECTRONIC TRANSACTIONS ACT § 301 (Sept. 18, 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/uecicta/eta1098.htm>.

86. Clickwrap licenses are "textual windows of non-negotiable, take-it-or-leave-it contract terms that prompt a user to 'click' assent [on a web form or program button] before allowing installation of a program or access to a website." Keith Aoki, *The Stakes of Intellectual Property Law* (visited Nov. 22, 1998) <http://www.law.uoregon.edu/~kaoki/AOKI.html>.

87. U.C.C. § 2B-105(e)(2) (Aug. 1, 1998 Draft).

> (A) identify the person;
>
> (B) adopt or accept the terms or a particular term of a record that includes or is logically associated or linked with the authentication or to which a record containing the authentication refers; or
>
> (C) establish the integrity of the information in a record which includes or is logically associated or linked with the authentication or to which a record containing the authentication refers.[88]

Under this definition, any application of a digital signature by a consumer to a contractual term proffered by a merchant, even one merely intended to attest to its integrity, theoretically could be considered a signature in the teeth of contrary consumer law. It would be unreasonable to intend that *any* type of authentication should satisfy a statutory requirement that a contract be signed, as opposed to those authentications that are intended to manifest an intent to be bound or which are commonly understood to manifest an intention to be bound. Alas, if one takes seriously the broad definition of authentication, other actions, which neither result from an intent to be bound nor manifest that intent, could be held to have contractually binding effects.[89] This is surely not what the drafters of Article 2B intend; rather, it seems to be an accident caused by the drafting style. Indeed, participants in the Article 2B drafting process insist vociferously that Article 2B adopts an intentionality requirement throughout and that no court would be so foolish as find that an authentication intended to serve only to show the integrity of a record had unintentionally served to form a contract.[90] The trouble is that section 2B-111 says clearly that a manifestation of assent is accomplished by an "authentication." And, despite what

88. *Id.* § 2B-102(a)(3).

89. *Cf.* U.C.C. § 2B-119(c) ("*Unless the circumstances indicate otherwise*, authentication is deemed to have been done with the intent to establish the person's identity, its adoption or acceptance of the record or term, its acceptance of the contract, *and* the integrity of the records or terms as of the time of the authentication.") (emphasis added).

90. *See, e.g.*, Letter from Donald A. Cohn & Mary Jo Howard Divley to Carlyle C. Ring (Oct. 12, 1998) <http://www.2Bguide.com/docs/cdm1098.html> ("What does it take for me to manifest assent to a license under the proposed draft? First, I must be acting either with knowledge or after having had an opportunity to review the record or term. (Under Section 112, if I don't have the opportunity to see the record before I pay for the product, I must be given the unconditional right to return it if, after I do see the record, I don't accept any part of it, even if the product is fine.) If I use conduct, I must intend that conduct and I must know or have reason to know that the other party may infer from my conduct that I assented to the record or term. ... Just because we are dealing with certain new subject matter does not mean that all courts will suddenly lose their reason.")

the drafters say they intend, an authentication can be any one of the things defined in section 2B-102, including authentications intended only to attest to message integrity. If one is going to enact a forward-looking reform of e-commerce law, it ought not to offer judges an opportunity to fall into easy formalist traps.

As a result of this possible confusion, in jurisdictions where Article 2B controls, well-advised parties will have to include disclaimers every time they use a digital signature, warning counter parties that "the use of this digital signature is not intended to create a contract." This is unhelpful and threatens to put a large damper on the growth of digital signature-based e-commerce.

Third, a consumer law requirement of assent to a specific contractual term is satisfied by "an action that manifests assent to a term in accordance with this article."[91] As of this writing, however, the section on manifestation of assent appears to be in a state of flux.[92] Currently, Article 2B provides several means by which assent may occur, including an authentication after an opportunity to review,[93] whether or not the review actually happened. Moreover, electronic agents can assent on behalf of their masters. The opportunity to review can be satisfied if it suffices to "enable a reasonably configured electronic agent to react to the record or term."[94] What a reasonably configured electronic agent might look like, however, nobody knows.

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91. U.C.C. § 2B-105(e)(4) (Aug. 1, 1998 Draft).

92. For example, section 2B-111 of the August 1998 draft is heavily annotated with editorial cautions that the text has yet to be reviewed by the Drafting Committee. Similarly, the current UETA draft has bracketed section 107 on manifestation of assent, although it is clear that UETA intends to draw a sharp distinction between authentications and contractual commitments. *See* UNIFORM ELECTRONIC TRANSACTIONS ACT § 107 (Sept. 18, 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/uecicta/eta1098.htm> and accompanying notes.

93. Opportunity to review is defined in section 2B-112. The critical part of the definition reads:

> (a) A person or electronic agent has an opportunity to review a record or term only if the record or term is made available in a manner that:
>
> (1) in the case of a person, ought to call it to the attention of a reasonable person and permit review; or
>
> (2) in the case of an electronic agent, would enable a reasonably configured electronic agent to react to the record or term.

U.C.C. § 2B-112 (Aug. 1, 1998 Draft).

The Draft UETA section 108 contains similar language, but the section is bracketed for further discussion. *See* UNIFORM ELECTRONIC TRANSACTIONS ACT § 108 (Sept. 18, 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/uecicta/eta1098.htm>.

94. U.C.C. § 2B-112(a) (Aug. 1, 1998 Draft).

Last, but not least, a requirement in state consumer law "that a contractual term be conspicuous or the like" is satisfied by a term that meets the conspicuousness requirements of Article 2B. Currently, a term is "conspicuous" under Article 2B when it is:

> so written, displayed, or otherwise presented that a reasonable person against which it is to operate ought to have noticed or become aware of it. In the case of an electronic record intended to evoke a response by an electronic agent, a term is conspicuous if it is presented in a form that would enable a reasonably configured electronic agent to take it into account or react without review of the record by an individual. Conspicuous terms include but are not limited to the following:
>
> (A) with respect to a person:
>
> (i) a heading in capitals in larger or other contrasting type or color than the surrounding text;
>
> (ii) language in a record or display in larger or other contrasting type or color than other language or set off from other language by symbols or other marks that call attention to the language; or
>
> (iii) a term prominently referenced in an electronic record or display which is readily accessible and reviewable from the record or display; and
>
> (B) with respect to a person or an electronic agent, a term or a reference to a term that is so placed in a record or display that the person or electronic agent cannot proceed without taking some additional action with respect to the term.[95]

Thus, conspicuousness is explicitly satisfied by most conceivable types of clickwrap, or by a hypertext link to a page containing the required term even if the consumer does not visit the page and is thus not actually exposed to required language, so long as "a reasonable person ... ought to have noticed or become aware of it."[96] Current browser and e-mail technology makes it difficult, albeit not impossible, for the author of an electronic document to control how the reader will display it. It follows that familiar paper-based requirements such as a minimum sized typeface probably should not be carried over to electronic contracts. Reliance on prominence and the reasonable reader may well be the best one can do, but it will nonetheless invite dispute and litigation.[97]

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95. *Id.* § 2B-102(a)(9).

96. *Id.* § 2B-102(a)(9).

97. Reporter's Note 4 to section 2B-110 ("Bizarre and oppressive terms") states that "[u]nconscionability doctrine allows courts to monitor and limit application of [common

Taken as a group, these four provisions constitute a significant weakening of consumer protections in the electronic world. The Reporter's Note is disingenuous when it claims that "[t]he limited approach adopted here contrasts to non-uniform digital signature statutes enacted in several states which replace or amend all signature and writing requirements, including consumer statutes."[98] In fact, there appear to be no state digital signature statutes which have any effect on consumer protection rules, other than allowing an electronic record to substitute for a paper signature.[99] It is technically true that the approach in Article 2B contrasts to the prior practice of leaving consumer protection rules equally applicable to e-commerce. The approach in Article 2B may or may not be correct, but it is certainly not limited, and the difference is that Article 2B alters consumer protections to the consumers' likely detriment.

Meanwhile, whether a CA gives an implied warranty of accuracy for its CRL turns on whether the contents of the CRL are "published informational content" or mere "informational content." Article 2B defines "published informational content" as "informational content prepared for or made available to recipients generally or a class of recipients in substantially the same form and not customized for a particular recipient by an individual that is a licensor, or by an individual or group of individuals acting on behalf of the licensor, using judgment or expertise."[100] A CRL fits that definition fairly well. However, the definition goes on to exclude

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law principles] in a way that avoids binding the assenting party to unknown terms that are bizarre and unfairly oppressive." *Id.* § 2B-110, Reporter's Note 4. This seems to suggest that unconscionability might be invoked to correct gross defects in the process of contract formation, as well to correct grossly unfair contract terms, if electronic agents run wild. I find this to be a very intriguing idea—but one that is absent from the text of section 2B-110.

98. *Id.* § 2B-105, Reporter's Note 6. No examples are offered—probably because there are none. *See infra* note 99.

99. Other than stating the circumstances in which an electronic message may satisfy a writing requirement, most of the state digital signature statutes to date, including the influential Illinois statute, are silent on the subject of consumer protection. When they do address the issue, they add, not subtract, protections for consumers. For example, the Washington Electronic Authentication Act makes it clear that while agreements between a CA and a subscriber may vary many of the provisions of the Authentication Act itself, "Nothing in this chapter shall be construed to eliminate, modify, or condition any other requirements for a contract to be valid, enforceable, and effective." WASH. REV. CODE § 19.34.320(2)(b) (1997). Additional consumer protections include forbidding a CA from disclaiming or limiting warranties that a certificate has no known false information, and that the certificate satisfies all material requirements of the statute. A CA is also required to give a warranty that it has not exceeded limits of its license (e.g., the reliance limits). *Id.* § 19.34.220(1).

100. U.C.C. § 2B-102(a)(36) (Aug. 1, 1998 Draft).

"informational content provided in a special relationship of reliance between the provider and the recipient."[101] It seems reasonable to say that a CA has just such a special relationship with anyone who relies on its CRL. The problem is that, in some models, anyone in the world may be able to access the CRL and may have a need to do so. It is one thing to say that the CA has a special relationship with its clients; without more guidance, courts may be reluctant to impose a heightened duty on a CA that potentially runs to the whole world.[102] The distinction is potentially significant because under section 2B-404, there is no implied warranty of accuracy for published information content,[103] but there is such a warranty when a special relationship of reliance exists. On the other hand, even if a CRL is not published informational content, Article 2B allows a CA to disclaim all warranties of accuracy for its CRL unless there is something in state digital signature law to the contrary, or a court would find it unconscionable.[104]

The potential impact of Article 2B, and the possible harm to the unlucky or unwary, becomes much greater when one considers the ways in which Article 2B treats automated commerce. Article 2B contemplates "automated transactions," defined as "contract[s] formed by electronic means or electronic messages in which the actions or messages of one or both parties will not be reviewed by an individual in the ordinary course."[105] As a person is usually considered to intend and be responsible for the ordinary and foreseeable results of her actions, codification of a rule generally making people responsible for the acts of their electronic agents[106] changes little of substance, while usefully removing any doubts that might exist about the validity of agent-based commerce. It does not necessarily follow, however, that agent-based commerce is appropriate for all types of transactions. In particular, given how little is known about how agent-based commerce might work at the consumer level, if a state consumer law rule requires conspicuousness, one might reasonably expect that a uniform rule would say that those transactions cannot be consummated without first actually securing some manifestation of approval by the electronic agent's human principal. Instead, Article 2B removes any

101. *Id.*

102. *See* Froomkin, *supra* note 9.

103. *See* U.C.C. § 2B-404(b)(2) (Aug. 1, 1998 Draft).

104. *See id.* §§ 2B-404 to 2B-406.

105. *Id.* § 2B-102(a)(4).

106. "'Electronic agent' means a computer program or other automated means used by a person to independently initiate or respond to electronic messages or performances on behalf of that person without review by an individual." *Id.* § 2B-102(a)(19).

need for human intervention, stating that a term is conspicuous "if it is presented in a form that would enable a reasonably configured electronic agent to take it into account or react *without* review of the record by an individual."[107] Article 2B is more solicitous about the limited capacities of agents than of people: if a person has reason to know he is dealing with an electronic agent and proffers a contract term "to which the electronic agent could not react" *regardless of whether the person proffering the term knew or could have known of the agent's limitations and regardless of whether the agent was "reasonably configured,"* then the term is not part of any otherwise binding contract formed between the person and the agent.[108] People with limited capacities to wade through contractual terms do not get an equivalent solicitude.

In a world in which (Article 2B notwithstanding) some companies may increasingly be releasing the source code of their programs into the public domain so as to encourage third-party volunteer improvements,[109] the danger of hacked copies of desirable programs will become more and more significant. If some of these programs (e.g., web browsers enabled for commerce) are hacked in a way that causes agents to ignore warnings about critical terms or to engage in other rogue behavior undetectable by the average user until well after the fact, the consequences for unlucky consumers might be quite severe, especially if "[o]perations of an electronic agent constitute the authentication, manifestation of assent, or performance of a person if the person used the electronic agent for such purpose."[110] If Bob acquires and uses an e-commerce enabled web browser that unbeknownst to him has been hacked to order gifts for random strangers and arrange direct e-mailed or shipping, did Bob use the rogue electronic agent "for the purpose" of making transactions? Yes. For the purpose of making *those* transactions? No, since the transactions were not intended. But under Article 2B, and perhaps under pre-Article 2B law as well,[111] Bob may be liable anyway.

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107. *Id.* § 2B-102(a)(9) (emphasis added).

108. *See id.* § 2B-204(3) ("The terms of a contract formed under paragraph (2) are determined under Section 2B-207 or 2B-208 [relating to mass-market contracts], as applicable, but do not include terms provided by the individual in a manner to which the electronic agent could not react.").

109. *Cf.* Paul Phillips, *Why Mozilla Matters* (visited Nov. 9, 1998) <http://www.mozilla.org/why-mozilla-matters.html>.

110. U.C.C. § 2B-119(a) (Aug. 1, 1998 Draft).

111. *See also id.* § 2B-110, Reporter's Note 4:

> In some cases, however, automation may produce unexpected results because of errors in program, problems in communication, technological 'bugs', or other unforeseen circumstances. When this occurs,

According to section 2B-116, "an electronic authentication, message, record, or performance is attributed to a person if ... (2) the receiving person, in accordance with a commercially reasonable attribution procedure for identifying a person, reasonably concluded that it was the action of the other person or the person's electronic agent."[112] In other words, if the merchant correctly authenticated Bob's digital signature, as supplied by the rogue agent, then in the absence of contrary agreement or regulations, this "creates a presumption that the authentication, message, record or performance" was Bob's. Even if Bob figures out what is going on, and successfully rebuts the presumption that he wanted to send flowers to every member of Congress, Bob is "nevertheless liable for losses of the other party in the nature of reliance if the losses occur" if he failed to exercise reasonable care.[113] It would be churlish to complain that the drafters do not give any hint of what reasonable care might be since it is fairly clear that no one currently has any idea.

Article 2B contemplates that e-commerce may go wrong and provides a section, section 2B-118, that deals with "electronic error." This section defines electronic error as "an error created by an information processing system, by electronic transmission, or by a consumer using an electronic system, if a means for correction or avoidance of such errors was not reasonably provided." But section 2B-118 is oddly quiet on who should have reasonably provided a means of error-correction. Suppose Bob's hacked browser orders 1,000 copies of Tetris when Bob is sleeping. Who has the

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> common law concepts of mistake apply, as do the provisions of Section 2B-118 ["electronic error"—see *infra* note 114 and accompanying text]. In addition, unconscionability doctrine may be used to prevent oppressive results caused by the breakdown in the contracting process. While automated transactions are a new setting for this doctrine, the safeguards it supplies are important for this type of commerce.

Id. § 2B-110.

112. *Id.* § 2B-116(a).

113. *Id.* § 2B-116(c). Other requirements, satisfied in the hypothetical in the text, are that:

> (2) the other party reasonably relied on the belief that the person was the source of an electronic authentication, message, record, or performance,
>
> (3) the reliance resulted from acts of a third person that obtained access numbers, codes, computer programs, or the like from a source under the control of the person rebutting the presumption; and
>
> (4) the use of the access numbers, codes, computer programs, or the like created the appearance that it came from the person rebutting the presumption.

Id. § 2B-116(c).

burden of providing the means of correcting the error? Bob? The merchant with whom Bob's malicious intelligent agent transacts? Or the original manufacturer of Bob's browser? The Reporter's Note suggests that in this hypothetical the merchant has the duty to send Bob a confirmatory e-mail,[114] which sounds like a good start, although it would be more reassuring if the text of section 2B-118 spelled that out clearly. In the absence of electronic error—i.e. in the presence of the reasonable provision for correction of error such as the confirmatory e-mail—Bob has no recourse under section 2B-118. Thus in the example above the merchant can demand that Bob pay for the 1000 copies of Tetris even if Bob never read the e-mail, or had reason to expect that he should be checking his e-mail, and the copies were delivered to a third party without his knowledge.[115]

Even if there is the right sort of electronic error Bob escapes liability under section 2B-118 only in very limited circumstances:

> (b) In an automated transaction consumer transaction, the consumer is not bound by an electronic message that the consumer did not intend and which was caused by an electronic error if the consumer:
>
> (1) promptly on the earlier of learning either of the error or of the other party's reliance on the message:

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114. The Reporter's Note to section 2B-118 offers two illustrations:

> *Illustration 1:* Consumer intends to order ten copies of a video game from Jones. In fact, the information processing system records 110. The electronic agent maintaining Jones' site disburses 110 copies. The next morning, Consumer notices the mistake. He sends an E-Mail to Jones describing the problem, offering to immediately return or destroy copies; he does not use the games. Under this section, performing on these offers means that there is no presumption that the contract was for 110 copies. If it desires to enforce the apparent contract, Jones must prove that there was no error.
>
> *Illustration 2:* Same facts, except that Jones' system before shipping sends a confirmation, asking Consumer to confirm that it ordered 110 games. Consumer confirms 110 copies. This section no longer applies. If Consumer sees the confirmation request and does not respond, the section also does not apply. In either case, the system reasonably allowed for correction of the error.

Id. § 2B-118, Reporter's Note.

115. *See id.* § 2B-120 ("an electronic message is effective when received even if no individual is aware of its receipt. If an offer in an electronic message initiated by a person or an electronic agent evokes an electronic message in response, a contract is formed: (1) when an acceptance is received ...").

> (A) in good faith notifies the other party of the electronic error and that the consumer did not intend the original message; and
>
> (B) delivers all copies of any information it receives to the other party or delivers or destroys all copies pursuant to any reasonable instructions received from the other party; and
>
> (2) has not used or received a benefit from the information or informational rights or caused the information or benefit to be made available to a third party.[116]

These conditions resemble what a court might reasonably conclude under common law principles in a case with only two parties involved. But what if Bob's rogue software was configured to forward the Tetris software to one or more third parties without ever troubling Bob about the matter? Perhaps section 2B-118(b)(2) could be modified to require that Bob intentionally or knowingly have made the benefit available to another?

E. Liability Rules

The issue of liability rules and presumptions is perhaps the most controversial aspect of digital signature laws.[117] When digital signature laws exist and speak to the question, they will trump the relevant portions of Article 2B, although the interaction of Article 2B's choice of law principles and state digital signature laws may create some confusion. When a state does not have a digital signature statute, or has a statute that does not address liability issues, Article 2B's provisions will control.

Article 2B sets up a liability regime by which a person who uses a secure electronic authentication procedure, such as a digital signature, and then negligently loses control of that digital signature, is liable for all losses in the nature of reliance in transactions to which Article 2B applies that are caused by that negligence. If Bob, not fully understanding the implications or use of new technology, allows Alice to obtain access to Bob's computer, other device, PIN, or passphrase that will allow Alice to use Bob's digital signature, then, according to section 2B-116, Bob is responsible for paying the reliance costs caused by Alice's subsequent spending

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116. *Id.* § 2B-118.

117. For a summary of the issues see C. Bradford Biddle, *Misplaced Priorities: The Utah Digital Signature Act and Liability Allocation in a Public Key Infrastructure*, 33 SAN DIEGO L. REV. 1143 (1996).

spree.[118] Bob's proof that it was really Alice is of no use if the merchant reasonably relied at the time of sale, and in most cases it will be reasonable to rely on a digital signature backed by a valid certificate. As there is no equivalent to a credit limit in digital signature-based commerce, the liabilities that Alice could impose on Bob in seconds, perhaps with the aid of an electronic agent or two, is theoretically unlimited.

"Non-repudiation," that is, Bob's inability to escape from having to compensate parties who reasonably relied on Alice's claim that she was Bob, is one of the top items on the legislative agenda of those who hope to have digitally signed electronic purchasing replace credit and debit card transactions. Armed with a guarantee of non-repudiation, CAs should be able offer a transaction mechanism with much lower overheads than credit cards since the trusted third party would no longer function as a sort of insurer of the validity of the transaction—the law would. Non-repudiation contrasts dramatically with consumer habits and expectations engendered by credit cards, although the customer's ability to unwind transactions that use debit cards depends more on bank practices than law.[119]

Most states that have considered the issue have rejected the strong form of non-repudiation included in Article 2B. The specter of "grandma losing her house because she lost control of her digital signature" has simply proved too frightening.[120] Rejected proposals leave their traces, if any, in legislative history, not the statute books. Thus, although many states concluded that they did not wish to enact non-repudiation rules placing most or all potential liabilities on parties other than CAs, the nature of the legislative process ensures that these decisions to reject or defer the issue are not memorialized in law. It follows that were Article 2B's liability rules to be enacted, they would take effect even all states that do not have explicit contrary rules in their digital signature laws, even if they considered and rejected the idea.[121]

There are some sound policy arguments in favor of non-repudiation in e-commerce, such as when the transacting parties are both sophisticated, or the electronic transactions are sufficiently unusual that all parties under-

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118. Recall that, under U.C.C. § 2B-116, " an electronic authentication, message, record, or performance is attributed to a person if ... (2) the receiving person, in accordance with a commercially reasonable attribution procedure for identifying a person, reasonably concluded that it was the action of the other person."

119. *See* 15 U.S.C. § 1643(a)(1)(B); 12 C.F.R. § 205.6 (1995) (limiting liability to $ 50 for most unauthorized electronic funds transfers).

120. For what it's worth, I believe I originated this now-widespread meme in 1995, in my participation on the ABA Digital Signature Guidelines drafting process.

121. Recall that section 2B-105(g) grandfathers digital signature statutes.

stand that the technology is not used casually. My personal view happens to be that the case for non-repudiation of digital signature-based consumer transactions remains to be proved. Whether I am correct about that or not, a very significant amount of public debate and consumer education would be required before imposing potentially unlimited ability on the Bob's of the world, or on parents or grandparents of any gender. Perhaps that case could be made. It has not been made in Article 2B, and a statute about the rules appropriate for licenses relating to ever-shrinking types of intellectual property[122] is an inappropriate vehicle for such sweeping changes in electronic transactions law generally. Article 2B's adoption of strong non-repudiation contrasts with the revised draft UETA. Where once UETA included presumptions that Bob would have had to rebut, now the draft is neutral on the entire question of the legal effect of a reliance on a digital signature.[123]

III. CONCLUSION

The Reporter's comment that "Article 2B will have little impact on established commercial practice" because "[e]ven with a broad scope ... most provisions can be altered by agreement and defer to customs of trade, course of dealing, or formal contracts"[124] seems somewhat optimistic when applied to e-commerce, since so often there are no customs or usages of trade to fall back on.

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122. The Recording Industry Association of America, the National Association of Broadcasters, the National Cable Television Association, the Newspaper Association of America, the Magazine Publishers of America, and the Motion Picture Association of America have each expressed opposition to Article 2B or asked that their industry be excluded from it. *See, e.g.*, Letter from Cary H. Sherman, Senior Executive Vice President and General Counsel, Recording Industry Association of America to National Conference of Commissioners on Uniform State Laws (Oct. 9, 1998) (expressing opposition and noting similar views of other trade associations), *available at* <http://www.2Bguide.com/docs/riaa1098.html>. *See also infra* note 128 (noting suggestion by Director of ALI and other influential lawyers that scope of Article 2B should be limited).

123. The current draft's language is in flux, but reads "[a]n electronic record is attributable to a person if ... [an] other person, in good faith and acting in compliance conformity with a commercially reasonable security procedure for identifying the person to which the electronic record is sought to be attributed, reasonably concluded that it was the act of the other person, a person authorized by it, or the person's electronic agent." UNIFORM ELECTRONIC TRANSACTIONS ACT § 202 (Sept. 18, 1998 Draft), *available at* <http://www.law.upenn.edu/library/ulc/uecicta/eta1098.htm>.Even when a record created by Alice is "attributable" to Bob, it has only "the effect provided for by the agreement regarding the security procedure." *Id.*

124. U.C.C. § 2B-104, Reporter's Note 1 (Aug. 1, 1998 Draft).

For a legislature to pass Article 2B in its current form would be akin to installing a beta version of a large and complex operating system. Modern operating systems and software suites often attempt to occupy the field and provide an array of extensive, complex, and often poorly documented or understood features.[125] Some parts of the package may have strange interactions with software already installed on the system while other parts may assume the existence of hardware or software that is still in development (e.g., the reasonably configured electronic agent). Article 2B's enormously ambitious strategy of providing a full regime for the sale and delivery of licenses in information resembles one of these self-installing software suites. While some of the rules regarding electronic contracting may be defensible, or even sensible, the total package makes a series of policy choices, especially those displacing consumer law for online transactions and enacting a national law on non-repudiation for digital signature-based e-commerce which do not seem to be required to achieve the end of rationalizing the law of information licenses.

As an abstract proposition, Article 2B represents a praiseworthy attempt to identify problems and solve them early. It is surely correct that "[t]ypically, U.S. law is drafted in retrospect. Years of informal standards are developed and then codified. Article 2B is an attempt to get ahead of that curve."[126] There is a strong case to be made for writing uniform laws that will achieve the "optimal impact for the modernization themes developed with reference to electronic commerce." That case does not appear very clearly from Article 2B, nor does it appear that Article 2B's vision of what optimization looks like is necessarily the one that legislatures and the public would or should share. Whether or not Article 2B embodies the best vision of online contracting rules, it seems distinctly sub-optimal to adopt a special set of online contracting rules that would apply only to licenses in information (whether or not part of a larger sale), or only to mixed transactions in which the information license component was sufficiently great. Today at least, the look and feel of online shopping is much the same whether the thing being purchased is a CD-Rom with a program on it, a book, or computer part. If uniform laws are to be written for e-commerce, they should cover all of it, not perpetuate the patchwork we already have by overwriting new cleavages onto an already fractured law.

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125. *See* Yannis Bakos & Erik Brynjolfsson, *Aggregation and Disaggragation of Information Goods: Implications of Bundling, Site Licensing and Micropayment* (visited Oct. 24, 1998) <http://www.stern.nyu.edu/~bakos/aig.pdf>.

126. Letter from Terrence Maher, to Editor, *San Francisco Chronicle*, (June 17, 1998), *available at* <http://www.2Bguide.com/docs/tmaherrre.html> (visited Nov. 23, 1998).

And when those uniform rules are written, they must take due account of consumer law's considered mix of paternalistic rules and the correction of market failures created by information asymmetries, as well as taking account of consumer expectations and usages of trade.

Here, Article 2B says it well:

> [Quoting Grant Gilmore:]
>
> > The principal objects of draftsmen of general commercial legislation ... are to be accurate and not to be original. Their intention is to assure that if a given transaction ... is initiated, it shall have a specified result; they attempt to state as a matter of law the conclusion which the business community apart from statute ... gives to the transaction in any case. But achievement of those modest goals is a task of considerable difficulty.
>
> To be accurate and not original refers to commercial practice as an appropriate standard for gauging appropriate contract law unless a clear countervailing policy indicates to the contrary or the contractual arrangement threatens injury to third-party interests which social policy desires to protect. Uniform contract laws do not regulate practice. They sustain and facilitate it. The benefits of codification lie in defining principles consistent with commercial practice which can be relied on and are readily discernible and understandable to commercial parties.[127]

Despite some improvements in the most recent drafts, as regards its e-commerce rules Article 2B does not meet the high standard it rightly sets for itself.[128]

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127. U.C.C. Art. 2B, Default Rules (quoting Grant Gilmore, *On the Difficulties of Codifying Commercial Law*, 57 YALE L. J. 1341 (1957)).

128. On October 7, the Director of the ALI joined in a letter requesting substantial changes to Article 2B, including narrowing the scope to apply only to information subject to "informational right" as defined in section 102(a)(27) and the removal of all sections relating to contract formation by electronic means. *See* Memorandum from Geoffrey C. Hazard, Jr. et al. on July 1998 Draft Suggested Changes to Article 2B Drafting Committee (Oct. 7, 1998) *available at* <http://www.2Bguide.com/docs/gch1098.pdf> (visited Nov. 23, 1998). This is a very encouraging development.

THE ARTICLE 2B DEBATE AND THE SOCIOLOGY OF THE INFORMATION AGE

By Peter Lyman †

ABSTRACT

The economic institutions and practices that Article 2B seeks to regulate—electronic commerce, knowledge management, and information markets—are changing faster than the tools and concepts that policy makers are using to frame the debate. By describing and analyzing research relating to the nature of "information" and the components of the "digital economy," this Article suggests a new conceptual ground and common language for regulation of these new social and economic structures. In this way, this Article seeks to encourage a dialogue between the legal community, policy makers, modern industry, and social scientists.

Two elements are crucial to the formation of a productive interdisciplinary encounter. First, it is important that the participants in the Article 2B debate recognize that digital information is not simply a new kind of intellectual property that is difficult to regulate because easily copied. Rather, it is also a new kind of economic capital, and an emerging medium for innovative corporate, political, and cultural behavior. Second, the "digital economy" itself is not just a new economic market, just as surely as the Internet is not merely a new distribution channel. Instead, digital technology is transforming the nature and function of the corporation and every sector of the economy. In order to effectively and efficiently regulate the economic structures that digital information technology makes possible, the participants in the Article 2B debate need to recognize that the use of such technology has social as well as economic repercussions.

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I. INTRODUCTION

The legal debate to formulate commercial laws to govern the information economy is the most sustained and serious exploration of the policy implications of the information age thus far. The dialogue is remarkably interdisciplinary—each side shaping its view of the best regulatory regime upon different assumptions about the future social and economic dynamics of the information age. Yet this social analysis is tacit at best, and rarely grounded in empirical social science research. While legal disagreements about the nature and dynamics of the information age often mirror the debates of the social science research community, the difference is that while social scientists are debating about the right questions, the legal community is already debating about the right answers. Is it too soon to know how to regulate cyberspace? Has a debate about the right answers preempted a debate about the right questions? If so, what are the right questions? This Article is intended to broaden the Article 2B debate by exploring the possible links between current social science research and the social and economic assumptions underlying the various legal positions.

Perhaps the most subtle judgment the legal community must make is how well the concepts and techniques that have been developed to describe, analyze, and regulate our economic life in an industrial age will apply to cyberspace. Will information technology be the cause of fundamentally new social and economic innovations, requiring new concepts and an experimental approach to defining a new legal regime? Or will the digital economy present new variations on social behavior, requiring primarily new applications of established methodologies?

Within the social science community, there is significant disagreement about whether information technology will be different in kind from other communication media, such as the telephone or broadcasting, and, if it is, whether it will require new analytical concepts and methods. I will focus

upon issues concerning the use and dynamics of networked information that are particularly relevant to Article 2B debate's consideration of legal regimes to regulate the digital economy.[1]

Commentators have examined many aspects of the movement toward information technologies. For example, sociologist Karen A. Cerulo argues that information technologies extend the process of innovation begun by industrial technologies, observing that, "Like the railroad and the telegraph, the new technologies have redefined space, place and time."[2] And yet, the inseparable relationship between "information," cognition, and human experience suggests that printing technology, not transportation, is a better analogy. Thus Cerulo concludes, "In doing so, technology has provided us with *new sites of empirical experience and it has reconfigured the complex ties that bind the social and cognitive worlds.*"[3] Given this essentially new *mediated* dimension of human experience, she asks, what are the implications for the traditional methodological assumption "that *physical co-presence* provides the standard by which to judge the importance, the form, and the quality of all other varieties of exchange?"[4] Cerulo concludes that our basic assumption that "direct" is superior to "mediated" experience must change, as must our basic concepts and methods for analyzing the dynamics of social relations. Psychoanalyst Sherry Turkle similarly has described the way that software and network communications are transforming the psychology of personality formation.[5] Turkle concludes that "virtual life" is emotionally and intellectually part of "real life," and asks whether traditional concepts of the self and human identity are sustainable.

The economic implications of this conceptual shift are illustrated by Belgian banker Bernard Lietaer's argument that fundamental economic

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1. Many social scientists believe that it is too soon to know if there is a discontinuity in subject or method, and warn that focusing upon "social impacts of technology" encourages theoretical modeling of the future, distracting from empirical research. *See, e.g.*, Paul Attewell, *Research on Information Technology Impacts*, *in* FOSTERING RESEARCH ON THE ECONOMIC AND SOCIAL IMPACTS OF INFORMATION TECHNOLOGY 133, 134 (The National Research Council, 1998); Claude S. Fischer, *Computer Mediated Communications*, *in* FOSTERING RESEARCH ON THE ECONOMIC AND SOCIAL IMPACTS OF INFORMATION TECHNOLOGY 142, 143 (The National Research Council, 1998).

2. Karen A. Cerulo, *Reframing Sociological Concepts for a Brave New (Virtual?) World*, 67:1 SOCIOLOGICAL INQUIRY 48, 55 (1997).

3. *Id.*

4. *Id.* at 49.

5. *See* SHERRY TURKLE, THE SECOND SELF 24 (1984); Sherry Turkle, *Artificial Intelligence and Psychoanalysis: A New Alliance*, 117:1 DAEDALUS 241, 245 (1988); SHERRY TURKLE, LIFE ON THE SCREEN: IDENTITY IN THE AGE OF THE INTERNET 177-209 (1995).

realities have already changed. Lietaer states that "the development of electronic commerce can be seen as simply the rest of the economy joining in the virtual space where money has been functioning already for the past two or three decades."[6] If we are to develop workable fiscal tools for a global economy comparable to the monetary supply controls with which national economies have managed domestic economies, he argues, we must study the new kinds of exchange (especially network barter and gift exchange) that are developing within electronic virtual communities. That is, we must *discover* what a digital economy is—it cannot be legislated in the first instance.

The Article 2B debate explores parallel questions about the portability of traditional legal concepts to cyberspace: whether copyright or contract law is more adaptable to new forms of information, whether Article 2B can regulate new modes of authorship and publication, and whether it can apply to new kinds of social contexts. Some Article 2B writers have sounded notes of caution regarding whether we know enough to regulate cyberspace. For example, Michael Froomkin comments, "If we are perhaps beyond the point of experiment and prototype and into the roll-out period, we are still at version 1.0."[7] Thus the first question the legal community may need ask for itself may resemble that faced by the telecommunications industry nearly a decade ago: "How can sufficient experimentation and learning with the new technologies be guaranteed so that demand for advanced applications can be effectively generated?"[8] In a practical sense this would focus the Article 2B debate on defining a social policy to promote innovation and the development of new markets, and would contextualize it within the broader constitutional goal of promoting progress in the useful arts and sciences.

Although social science research about economic and social relationships in cyberspace is necessarily still very new, a dialogue between law and social science may help to clarify two questions that seem to be near the heart of the debate about the proper management of intellectual property in digital works:

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6. Bernard Lietaer, *The Social Impact of Electronic Money: A Challenge to the European Union?* A REPORT TO THE EUROPEAN COMMISSION'S FORWARD STUDIES UNIT (1998) (on file with author).

7. Michael Froomkin, *Article 2B as Legal Software for Electronic Contracting—Operating System or Trojan Horse?*, 13 BERKELEY TECH. L.J. 1023 (1998).

8. *See* Michael Borrus & Francois Bar, *The Future of Networking*, BRIE—Berkeley Roundtable on International Economy, Research Paper, March 16, 1993 *available to be ordered at* <http://brie.berkeley.edu/BRIE/pubs/wp/index.html>) (visited Nov. 8, 1998).

What is information? The need for a new legal regime to govern the digital economy emerged primarily because of the problem of illegal copying of software and other digital works. But upon further examination, regulations of digital technology raise important new questions concerning the use of software as a medium for social control. Discussion of any regulatory regime for the digital economy is therefore, in part, political, because such regulation will structure the new social formations that will take shape around the creation and use of digital information.

What is a digital economy? Digital networks were first described as "information highways," a comforting metaphor suggesting that networks were like the distribution technology of an industrial society, one regulated by the Commerce Department and established commercial codes. But is a network like a highway? Is information a commodity? Although digital networks may become important distribution channels for information "commodities," a new distribution channel does not in itself constitute something that deserves to be called a market, an industry, or an economy. In this respect the U.S. Department of Commerce paper on "The Emerging Digital Economy"[9] oversimplifies the problem of regulating e-commerce. In reporting impressive growth in digital commerce, it presents aggregate data that do not differentiate between various kinds of electronic commerce involving different kinds of digital information, nor does it define a strategic framework for information policy that could provide a context for specific regulatory discussions such as Article 2B. As this Article will demonstrate, there is not one regulatory problem for Article 2B to solve, but many.

In all, the Article 2B debate is remarkably thoughtful, and yet, like most discussions about information policy, uses language about 'information,' the 'network,' and a 'digital economy' as if these words refer to something already well understood. On the contrary, network technology is still evolving rapidly, commercial software is often experimental, and the social and economic formations for which we use labels like "digital economy" are very early in their development.[10] The danger is that a legal

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9. *See* United States Department of Commerce, *The Emerging Digital Economy* (1998).

10. For a review of the growth and dynamics of Internet information, see Peter Lyman and Brewster Kahle, *Archiving Digital Cultural Artifacts*, D-lib (July-August 1998) (visited Nov. 7, 1998) <http://www.dlib.org/dlib/july98/07lyman.html>. Because online information is not archived, and Web sites often disappear, printed citations to Web page sources often outlast the digital documents cited. However, the Internet Archive has established a freely accessible permanent archive of all documents on the public parts of the World Wide Web (that is, those that do not prohibit entry by robot web crawlers). *See* Alexa Internet (visited Nov. 29, 1998) <http://www.Alexa.com>.

regime intended to strengthen the digital economy could inhibit its growth and resiliency in the global economy if it does not fully understand its structures, dynamics, and needs.

II. WHAT IS INFORMATION?

The definition of the concept of information must be at the heart of any information policy. The Article 2B drafters recognized this need in distinguishing between "information," defined as machine to machine communication, and "information content," defined as that information which is perceived by humans.[11] Among the critics of this distinction, Michele Kane is concerned about the status of computer programs as both "information" and as "information content," and whether ambiguities at the boundary may give rise to confusion about a warranty of merchantability.[12] Jane Ginsburg is concerned with the political implications of a syllogism that would generalize from software to all works expressed in digital format, changing our concept of authorship and the relationship between author and publisher or distributor.[13] And Jessica Litman argues that public and private domains traditionally differentiated by copyright would be joined by a contract regime, arguing that Article 2B "contemplates the assertion of rights over material—ideas, facts, information—that the copyright law provides may not be privately owned."[14]

Here, the Article 2B debate engages the most fundamental questions of the sociology of information. What are the social and psychological implications of a new medium for the representation of knowledge that had been previously instantiated in different physical media? And beyond this, what are the implications of entirely novel modes of representation of information, such as simulation or visualization tools? What are the consequences of these differences for our notion of authorship and reading, for the creation and use of knowledge, and of property and power?

Manuel Castells's book "The Rise of the Network Society"[15] describes the nature and dynamics of the information economy in comprehensive terms that may help focus the issues, just as Daniel Bell's "The Coming of

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11. UCC 2B §§ 102(a)(24), (a)(26) (Aug, 1, 1998 Draft).

12. Michele C. Kane, *When is a Computer Program not a Computer Program: The Perplexing World Created by Article 2B*, 13 BERKELEY TECH. L.J. 1013 (1998).

13. Jane C. Ginsburg, *Authors as "Licensors" of "Informational Property Rights" Under Article 2B*, 13 BERKELEY TECH. L.J. 945 (1998).

14. Jessica Litman, *The Tales that Article 2B Tells*, 13 BERKELEY TECH. L.J. 931, 935 (1998).

15. MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY (1996).

Post-Industrial Society"[16] did in earlier decades. At its heart is the description of an historic change in the relationship between information and the economy:

> The contemporary change of paradigm may be seen as a shift from a technology based primarily on cheap inputs of energy to one predominantly based on cheap inputs of information derived from advances in microelectronic and telecommunications technology. ... Information is its raw material: these are technologies to act on information, not just information to act on technology, as was the case in previous technological revolutions.[17]

Castells's thesis helps clarify why the concept of information has been difficult to define in the debate over Article 2B. Is the economic value of information that of a commodity, something produced for commercial purposes, or is it better understood as a raw material?[18] If it is not a commodity, is it better conceived of as a flow, a service, or a utility? Does information itself add value, or is it the innovative use of information that is the origin of economic value? If so, how might this change the relative position of producers and consumers of information property in an information economy?

This reversal of the relationship between information and tools, making information the raw material for technological processing, has profound implications for the Article 2B discussion. At the birth of capitalism, printed books were one of the first manufactured commodities exchanged in international trade, giving birth to copyright laws intended to regulate commerce in books.[19] In a network age, as broadcast media have taught us, it is difficult to treat a signal as a commodity. Hence, Castells argues that information flows may be the origin of wealth in an information economy, not information commodities. In defining the nature of "information content" in a network age, then, it may not be best to begin by transforming digital signals into commodities, whether through the construction of legal fictions or technological encapsulations (e.g., cryp-

16. DANIEL BELL, THE COMING OF POST-INDUSTRIAL SOCIETY (1973).

17. Castells, *supra* note 15, at 61.

18. Historical economics literature discusses the utility of fictions that treat land, labor and money as commodities. *See, e.g.*, KARL POLANYI, THE GREAT TRANSFORMATION 68-76 (1944).

19. *See* FERNAND BRAUDEL, THE STRUCTURES OF EVERYDAY LIFE 400-01 (1981). If the copyright industry has turned to the information highway metaphor to analyze the network, the academic community has turned to the digital library metaphor, using the history of the book to gain perspective on the current situation. *See, e.g.*, ELIZABETH EISENSTEIN, THE PRINTING PRESS AS AN AGENT OF CHANGE 453-520 (1979).

tolopes). This approach suggests that "information content" may be an entirely new category of knowledge, resembling what we now call data, because its value is derived from its use in a particular social context, not its content *per se*.

There would be profound legal implications to this kind of a shift in the culture of information. Copyright doctrine, in protecting the *expression* of ideas, rather than the ideas themselves, has always balanced property rights ("expressions of ideas") with the cultural domain ("ideas"). For this reason, critics of Article 2B frequently argue that copyright law is more sensitive to the cultural and political dimension of information than contract alone can be. Castells's argument supports this point of view in postulating an inalienable link between information and the quality of life: "Because information is an integral part of all human activity, all processes of our individual and collective existence are directly shaped (although certainly not determined by) the new technological medium."[20]

Software, on the other hand, is an *abstract machine* for data and information processing, and can be viewed as a political device because it serves as a mediating technology for communication between people. If digital signals have value within the context of information flows, the distinction between software ("information" in the Article 2B sense) and information content becomes ambiguous. The problematic public and cultural implications of the concept of "information" (in the sense defined by Article 2B as communication between machines) appears most clearly in Julie Cohen's use of Lawrence Lessig's description of digital code as privatized law, or "code as code." In Lessig's description, code "constitutes itself as an inexorable arbiter of permissible conduct," one "that need not fit with, or respect, public law."[21] Pam Samuelson has made the same point in reminding members of the Association of Computing Machinery of their social responsibility as programmers: "Programmers may not realize it, but computer programs are privately constructed regulatory regimes. In these governance systems, some activities are authorized, while others are, by technical means, forbidden .... Code as code may be 'an efficient means of regulation', but it doesn't always produce socially optimal results."[22] In contrast to the Article 2B definition, sociologists and

20. *See* Castells, *supra* note 15, at 61. *See also* MANUEL CASTELLS, THE POWER OF IDENTITY at 5-67 (1997).

21. Julie Cohen, *Copyright and the Jurisprudence of Self-Help*, 13 BERKELEY TECH. L.J. 1089, 1141 (1998) (quoting Lawrence Lessig, *The Zones of Cyberspace*, 48 STANFORD L. REV. 1403, 1433 (1996)).

22. Pam Samuelson, *Encoding the Law into Digital Libraries*, 41 COMMUNICATIONS OF THE ACM 13, 13-14 (1998).

economists see software not simply as machine to machine communication, but rather as a key to understanding the relationship between technology, productivity and discipline in the workplace, privacy and surveillance in civil society, and, ultimately, structure in the economy.

British sociologists Geoff Cooper and Steve Woolgar also raise issues relating to the public interest in code as code in their presentation of the British Economic and Social Research Council's program of research into the interaction between technology and society:

> In this way of thinking, technology is congealed social relations—that is, a frozen assemblage of the practices, assumptions, beliefs, language and so on involved in its design and manufacture. Technology is thus a cultural artefact [sic] or system of artefacts [sic] which provides for certain new ways of acting and relating. The apposite slogan is that technology is society made durable: technology re-presents a form of social order (a defined concatenation of social relations) in material form. It freezes and offers this fixed version of social relations such that its adequately configured users re-enact the set social arrangements. They can only 'adequately' (that is, socially accountably) use/make sense of the technology as they conform to the community of social relations which the technology makes available.[23]

In describing the design of a new computer, Woolgar demonstrates that hardware is also "code" which has been stored in silicon form, and argues that software in any format is inherently a form of social engineering—a process he describes as "configuring the user."

> [T]he design and production of a new entity (a new range of microcomputers) amounts to a process of configuring its user, where 'configuring' includes defining the identity of putative users, and setting constraints upon their likely future actions .... As a result of this process, the new machine becomes its relationships with its configured users.[24]

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23. Geoff Cooper & Steve Woolgar, *Software is Society made Malleable: The Importance of Conceptions of Audience in Software and Research Practice*, Brunel University, Uxbridge Middlesex, United Kingdom: The Program on Information and Communication Technologies, Policy Research Paper No. 25, 1993, at 2 (on file with author).

24. Steve Woolgar, *Configuring the User: the Case of Usability Trials*, *in* A SOCIOLOGY OF MONSTERS: ESSAYS ON POWER, TECHNOLOGY AND DOMINATION 59 (1991). *See also* Bruno Latour, *Technology is Society Made Durable*, *in* A SOCIOLOGY OF MONSTERS: ESSAYS ON POWER, TECHNOLOGY AND DOMINATION 103-31 (1991).

Software, understood from this perspective, is a relation between a machine and its human user because *technology imposes a social discipline upon its users*, which they, as users, would call "skills."

An analysis of the consequences of "code as code" for the social structure of the digital economy can be seen in the "productivity paradox" —that is, the empirical observation that the introduction of information technology has not seemed to increase the productivity of knowledge workers. Erik Brynjolfsson defines three dimensions within which a solution to the productivity paradox might be found.[25] First, he notes that perhaps this "paradox" is in fact a measurement problem, since the outcomes of work mediated by information technology may not fit traditional categories. For example, bank productivity has been measured by outcomes such as the number of transactions by written checks; today the use of checks has been sharply reduced by the number of credit and debit card transactions. Or, secondly, productivity gains might only follow the reorganization of work processes, since the use of information technology might require very different work cultures, requiring new kinds of skills and incentives. Third, information technology may create new kinds of economic value (such as timeliness, or customized service), changing the very nature of the enterprise. Brynjolfsson's analysis suggests there is a mutually defining relationship between code, the organization and culture of work, and economic productivity. "Information" is more than machine to machine communication; rather, it is inherently linked to human behavior as it is experienced in organizational and psychological terms. And the use, social context, and format of "information content" (such as ATM transactions) are inherently structured by code.

Precisely these kinds of innovations in the organizational forms of the economy were discussed at a recent conference on "Knowledge and the Firm," hosted by the Institute of Management, Innovation, and Organization at UC Berkeley. Innovation was defined as the key to the production of wealth in the corporation of the future: "The fundamental bases of wealth creation are changing. Intellectual capital is the key to creating and appropriating wealth."[26] This premise led to two conclusions of importance to the Article 2B debate. First, and as discussed below, networks now make possible new modes of corporate organization that will be the foundation of the digital economy. And second, it was argued that the creator of information content in cyberspace may not be the "author" in

25. Erik Brynjolfsson, *The Productivity Paradox of Information Technology: Review and Assessment*, 36 COMMUNICATIONS OF THE ACM 67, 67-77 (1993).

26. Don Cohen, *Toward a Knowledge Context*, 40 CALIFORNIA MANAGEMENT REVIEW 22, 23 (1998).

any traditional sense, but the new kinds of social collectives made possible by network communication—the "network enterprise," "communities of practice," and "virtual communities."

These "communities of practice" are the informal organizations of professionals with shared goals, specialized knowledge and skills, that may be extended over space and time by information technology.[27] Research in the field, reports one review of the literature,

> has ranged from the effectiveness of the invisible colleges in the progress of the scientific enterprise, to the roles of cliques in the functioning of bureaucracies. In between, they run the gamut from informal networks of cooperation among chemists working for competitive pharmaceutical industries, to back channel exchanges between members of the foreign offices of adversary countries and the appearance of gangs in schools and prisons.[28]

Because computer networks enable such communication, on an unprecedented scale and depth, the idea of communities of practice is rapidly becoming the theoretical foundation of new theories of social organization, particularly in work focusing on the corporation of the future. That is, "communities of practice" are about the use of networked information in the *practice of knowledge*, and as such, suggest the possible shape of the information markets of the future.

A particularly striking passage describes the leading-edge scientific research, which has profound implications for the way we think about the nature of intellectual property management and its relationship to the larger constitutional goal of progress in the sciences and useful arts. Describing authorship in biotechnology, Don Cohen says:

> [T]he complexity and rapid pace of research means that *advances are necessarily made by large teams connected by their interlocking areas of expertise rather than by employment at the same institution or location*. Thus ... a recently published paper on the DNA sequence of yeast chromosomes listed 133 authors from 85 institutions. In the biotech industry, collaborative networks are becoming the places where important intellectual activity occurs; belonging to them is essential to success in an industry that exists on the frontier of developing knowledge. ...

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27. JEAN LAVE & ETIENNE WENGER, SITUATED LEARNING: LEGITIMATE PERIPHERAL PARTICIPATION 94-99 (1991).

28. Bernardo A. Huberman & Tad Hogg, *Communities of Practice: Performance and Evolution*, 1 COMPUTATIONAL AND MATHEMATICAL ORGANIZATION THEORY 73, 73-74 (1995).

> These virtual teams point to the future shape of knowledge work in general, which some predict will be accomplished by widely dispersed groups and individuals woven into communities of practice by networks, groupware and a complex common task.[29]

The biotechnology paper mentioned by Cohen was written by Walter Powell, and describes collaborative research across both corporate and national boundaries, illustrating the role of information flows in the innovation process in a networked society.[30] A similar contention was recently made in an article in *Science Magazine*, which argued that recently proposed database protection legislation would overprotect information, and so inhibit the progress of science.[31]

The notion of "communities of practice" expands upon the idea that networked communication creates a sense of "virtual community." The term "virtual community" describes the feelings of social solidarity made possible by network software, such as e-mail, Internet relay chat (IRC), bulletin boards, multi-user domains (MUDS), and MOOS (MUDS object oriented).[32] For example, SeniorNet is an organization using digital network services to link together elderly people, many of whom live alone, into a vibrant on-line community. Studies of the use of SeniorNet services suggest that it is not on-line information (e.g., databases) that sustains a sense of community, but rather the interactive services (such as e-mail and on-line chat groups) that SeniorNet provides.[33] This illustrates the point that it is information as flow, not as commodity, that creates value in the digital economy.

This exploration of the meanings of "information" suggests that a one-dimensional legal code will fail to regulate effectively the many kinds of

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29. Cohen, *supra* note 26, at 37 (italics added).

30. Walter W. Powell, *Learning from Collaboration: Knowledge and Networks in the Biotechnology and Pharmaceutical Industries*, 40 CALIFORNIA MANAGEMENT REVIEW 228, 228-240 (1998); *see also* Mario Biagioli, *The Instability of Authorship: Credit and Responsibility in Contemporary Biomedicine*, 12 FASEB JOURNAL 3, 3-4 (1998).

31. *See, e.g*, William Gardner & Joseph Rosenbaum, *Intellectual Property: Database Protection and Access to Information*, 281 SCIENCE MAGAZINE, Aug. 7, 1998, at 786-787.

32. On the application of social network theory to virtual communities, see Barry Wellman & Milena Gulia, *Net Surfers Don't Ride Alone: Virtual Communities as Communities*, *in* COMMUNITIES IN CYBERSPACE (Peter Kollock & Marc Smith, eds.) (forthcoming 1999) *available at* <http://www.chass.utoronto.ca/~wellman/links/index.html> (visited Oct. 29, 1998).

33. Mary S. Furlong, *An Electronic Community for Older Adults: The SeniorNet Network*, 39 JOURNAL OF COMMUNICATION 145, 149 (1989).

digital information, in all the many social contexts and uses in which economic value is created. For one thing, it is *networked* information that is distinctively new, not digital information. Other aspects of "the digital economy" described by the Commerce Department report do not raise fundamentally new kinds of regulatory problems. CD-ROMs, for example, contain digital documents, but are distributed in commodity form like any other product. Similarly, "hybrid" digital commerce, such as that performed by on-line retailers such as Amazon.com, that sells print books through network transactions, does not require a revised understanding of economic transactions (other than, perhaps, new privacy issues derived from the commercialization of data about on-line consumer behavior). Article 2B fails to recognize that the information economy will involve transactions in various kinds of information, and so will obscure the fundamentally different legal needs present in different information markets.

III. WHAT IS A DIGITAL ECONOMY?

The initial problem to be solved by Article 2B was to develop a commercial code for the use of the Internet as a distribution channel for software and digital publications. In the first instance, the success of this project rests upon an understanding of the use and dynamics of different kinds of digital information as deliverable products. The first part of this Article raises fundamental questions about whether digital signals can and should be treated simply as commodities, and found little empirical support for the proposed distinction between information and information content. But there is a second dimension to this problem as well: to regulate the "Internet economy," it is essential to begin by exploring the nature of "the Internet" as an economic organization, not simply as a technical infrastructure or distribution channel.

Current social science research suggests that the Internet is accelerating changes in the nature and structure of the economy itself, not just introducing a new distribution channel into the established structure. In this section the image of the Internet as an "information highway" or distribution channel will be questioned by describing social science research into two kinds of economic formations that appear consistent with the idea of a "knowledge economy" emerging in cyberspace. First, this Article will consider the "network enterprise," which may be described as a new form of corporation or industry that is changing not only the digital economy, but the manufacturing economy as well. Second, it will discuss the emerging social structure of the digital marketplace—that is, the possible emergence of new forms of consumer behavior that may shift the balance

of market power from the rights holder to the consumer. But these findings do not necessarily support a simplistic "information revolution" thesis envisioning the replacement of an industrial economy by a new information economy. Thus far the process of change seems to reflect different kinds of transformations within each sector of the economy, including manufacturing, as much as the growth of a new sector called "the digital economy." Thus the Article 2B policy choices should reflect a careful analysis of the differential impact that information technology will cause in each industry and economic sector, one at a time.

A. What form will the corporation take in a network society?

Alfred Chandler, a leading business historian, argues that the modern corporation took shape at the turn of the 20th century, reflecting dramatic improvements in the technology of communication, production and transportation. Today's business theory is centrally concerned with exploring the impact of information technology upon the shape and dynamics of the corporation economy as it grows more complex and diffuse. Manuel Castells's offers three propositions that provide a sociological description of the dynamics of a knowledge economy that may serve to provoke interesting questions for the Article 2B debate.

1. The "network enterprise" is a fundamentally new, post-industrial, organizational paradigm.

As a consequence of the open architecture of the Internet, the "network enterprise" makes possible a flexible organization, one very unlike the hierarchical forms of authority and control in industrial society. Castells argues, "Not only processes are reversible, but organizations and institutions can be modified, and even fundamentally altered, by rearranging their components."[34] Thus the network enterprise implies not only a system of *distribution* for digital products, but even more important, the transformation of *manufacturing* itself. Thus Borrus and Zysman describe the emergence of "cross-national production networks" (CPNs)—that is, manufacturing organizations which coordinate the means of production by outsourcing, rather than owning them.[35]

> CPN is a label we apply to the consequent dis-integration of the industry's value chain into constituent functions that can be contracted out to independent producers wherever those companies are located in the global economy. ... The networks permit firms

34. Castells, *supra* note 15, at 62.

35. Michael Borrus & John Zysman, *Globalization with Borders: The Rise of Wintelism as the Future of Global Competition*, 4 INDUSTRY AND INNOVATION 141(1997).

> to weave together the constituent elements of the value-chain into competitively effective new production systems, while facilitating diverse points of innovation. But even more importantly, CPN's have turned large segments of complex manufacturing into a commodity available in the market.[36]

While Fordism was characterized by the technical division of labor using privately owned industrial capital, making possible mass production, today manufacturing is characterized by customization of product design, and outsourcing of the production process itself. Compaq Computer, which builds only to fill a network order, and contracts out production to a company that assembles many other brands of computers, is a good example of such a "network enterprise." Companies like Federal Express have had a similar revolutionary impact upon distribution.

2. *Innovation is the primary economic activity of the network enterprise.*

Castells argues that the primary source of economic power in the network society will not be the manufacturing and distribution of commodities, but innovation and the customization of products.

> Value added is mainly generated by innovation, both of process and products. ... Innovation is itself dependent upon two conditions: research potential and specification capability. That is, new knowledge has to be discovered, then applied to specific purposes in a given organizational or institutional context. Custom design is critical for microelectronics in the 1990s; instant reaction to macroeconomic changes is fundamental in managing the volatile financial products created in the global market.[37]

The larger economic context of the Article 2B discussion, then, might well be its consequence for innovation and organizational flexibility in a knowledge economy. This would shift the focus away from the application of a theory of property rights based in the natural rights argument of early capitalism, which assumes that innovation is a matter of producing new intellectual property.

Castells's research began by asking how and why technical innovation occurs. As an urban sociologist he first turned to major world cities as the classic social milieu of innovation. Yet, as Castells found, the San Francisco Bay Area, though not one of the world's largest metropolitan regions, has been home to both the computer and biotechnology industries'

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36. *Id.* at 141-42.
37. Castells, *supra* note 15, at 243.

revolutions. Innovation in the modern world, he argues, is the product of a "milieu of innovation," characterized by a free flow of ideas.[38] In the case of Silicon Valley, it is the proximity of research universities (Berkeley, UCSF, and Stanford) and the development of a culture of entrepreneurship supported by venture capital that creates a critical mass of information for innovation. Yet, it is not information *per se* that is the central analytic concept of the network enterprise, nor flexible institutional form alone, but the *flow* of information; this *flow* is in turn the key to progress in the useful arts and sciences in an information society. Thus, Castells suggests that our traditional sense of geographic place should be replaced by an understanding of "the space of flows"—that is, the information flows that determine the wealth or poverty of a given neighborhood, city, region or nation.[39]

What is the relationship between the space of flows, the free flow of ideas, and the proposed contract regime? If indeed it is the flow of ideas that determines innovation and wealth, then Article 2B tends to commercialize and privatize political questions concerning progress in the useful arts and sciences by placing economic control into the hands of international corporations. But more importantly, if the protection of intellectual property is defined as the primary policy goal, whether by copyright or contract, the nature of the Internet as a "space of flows" will be transformed by encryption and other technological controls, turning signals into commodities by limiting access. Will the economic benefit of the network be fatally compromised—that is, will protection inhibit the flexibility making possible the "network enterprise" itself?

3. *Globalization with borders?*

It is often stated that the network economy is global, but Castells argues that there is a fundamental difference between the global economy and the industrial world economy we have previously experienced. The global economy has the "capacity to work as a unit in real time on a planetary scale," while the world economy that has developed over the past two centuries has organized "capital accumulation ... *throughout* the

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38. *Id.* On the urban milieu of innovation, *see generally* MANUEL CASTELLS, THE INFORMATIONAL CITY: INFORMATION TECHNOLOGY, ECONOMIC RESTRUCTURING AND THE URBAN-REGIONAL PROCESS (1989) (discussing the theoretical notion of urban milieu as conducive to or oppressive of innovation); ANNALEE SAXENIAN, REGIONAL ADVANTAGE (1994) (applying the notion that urban milieu and innovation are connected by comparing the business and social networks that contributed to innovation in the Silicon Valley area to those in Boston's less successful "Route 128" region).

39. Castells, *supra* note 15, at 378-79.

world."[40] This global scale of the network economy threatens to transcend regulation due to both the temporal pace and spatial scope of the network enterprise.[41] If the flow of information on the network is replaced with technological control and surveillance aimed at protecting intellectual property, it is certainly not impossible to see multi-national corporations replacing the nation state as the central actors in the new economic order.

B. What is a digital marketplace?

While the Article 2B debate focuses on the rights of the owners of digital property, it pays little attention to consumers' use of information, consumers' rights, and consumers' access to possible sources of economic power. But it is consumers who make markets, not rights holders alone. If the sociology of information suggests that the network expands the range of civil society, and that the author of the future may well be a community, what, then, will digital *markets* look like—how will the consumer of digital products use the network?

One economic historian describes the Internet as "a new economic space," stating,

> [t]he vast mass of information, images, and opinions on the Internet is accessible to any computer owner with even a relatively low-cost connection. It is an interactive communications medium through which the user travels virtually; by accessing the Internet, information that would have taken much time and even physical effort to find, is now almost instantly available. The traditional marketplace ... is now accessible to everywhere, simultaneously.[42]

How does this distribution system and consumer information system become an *economy*?

It might be argued that networks indeed make possible virtual communities, but that this merely impacts social relations, not the economy.[43]

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40. *Id.* at 92 (emphasis added).

41. *See generally* BORDERS IN CYBERSPACE: INFORMATION POLICY AND THE GLOBAL INFORMATION INFRASTRUCTURE (Brian Kahin & Charles Nesson, eds. 1997).

42. Martin Kenney & James Curry, *The Internet, New Firm Formation, and Enterprise Patterns*, The International Workshop on Business Venture Creation and New Human Resource Management Strategies in Japan, Europe and the U.S. Tokyo, October 1-2, 1998 46 HITOTSUBUSHI BUSINESS REVIEW (forthcoming 1998) (manuscript at 6, on file with author).

43. On virtual communities and civil society, see Mary E. Virnoche and Gary T. Marx, *"Only connect"—E.M. Forster in an Age of Electronic Communication: Com-*

John Hagel and Arthur Armstrong reject such a limited view of a network economy, arguing that access to information will shift market power from the producer to the consumer, and that therefore the key to business success in the information age will be the use of virtual community technology to create customer loyalty:

> As virtual communities tip the balance of power in commercial transactions toward the customer, they'll provide a powerful vehicle for vendors to deepen and broaden their relationships with customers. This is likely to affect the way traditional businesses are run in 'physical space' as well as in the virtual world ... In fact, ownership of customer relationships as a whole is likely to be thrown up for grabs by the emergence of virtual communities.[44]

While Article 2B imagines a scarcity-based marketplace tightly controlled by information owners, some network entrepreneurs imagine the consumer living in an information rich environment in which vendors must compete to provide community services in order to sell products. This prediction was not based upon any systematic analysis of digital commerce, for even the basic economic indicators needed to perform such research have not yet been defined. But it does suggest that Article 2B's focus upon the rights of property owners should be complemented by an interest in the power of consumers in the development and dynamics of the digital marketplace. Indeed, information about the use of networked information by consumers has become the first successful cash crop of the Internet economy, but has also raised issues involving consumers' right to privacy, acceptable means of surveillance, and the ownership of surveillance data.

IV. ARTICLE 2B AS INFORMATION POLICY

This paper has explored two questions about the nature of an information society that underlie the Article 2B debate, yet are rarely formulated directly by commentators, namely: (1) What is information? and (2) What is a digital economy? Seen from the perspective of social science, the Article 2B debate has become too focused upon legal technique—the means by which, and degree to which, intellectual property should be protected in an information economy—and is too little aware of its implications for

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puter-Mediated Association and Community Networks, 67 SOCIOLOGICAL INQUIRY 85, 86-88 (1997).

44. JOHN HAGEL III & ARTHUR G. ARMSTRONG, NETGAIN: EXPANDING MARKETS THROUGH VIRTUAL COMMUNITIES 187 (1997).

American information policy as a whole. Seen as an information policy, the legal debate about Article 2B must consider the social dynamics of code as code and the emerging social relations in cyberspace—the "network enterprise" and "virtual communities" of consumers—before imposing regulations that may inhibit the development of these new economic formations. Only by integrating legal analysis with some understanding of the social relations that are developing around network technology might the drafters of Article 2B succeed in crafting a legal regime that truly promotes the progress of science and the useful arts.

The Article 2B argument is ultimately tangled because it contemplates changes so fundamental that it engages every level of a comprehensive information policy. In conclusion, this Article will illustrate the way that Article 2B changes American information policy by examining the impact of a contract regime upon the research library, the institution developed over the past century to promote progress in the useful arts and sciences. And, since Article 2B is an information policy masquerading as an application of the commercial code to a new distribution channel, the quality of the debate will be measured against the four dimensions any information policy for a digital economy must achieve.

A. The death of the research library.

Alfred D. Chandler points out that the history of the corporation, and thereby the shape of economic power, directly reflects the history of control over "information flows," which he calls "paths of learning."[45] Ultimately Article 2B is a debate about concentration of economic power. The information age may well pose unprecedented monopoly problems if the control of information flows is privatized because today the basic "know how" about code is concentrated in a few corporations. In the past, Chandler argues, most industries were characterized by multiple paths of learning, which ensured competition; today while biotechnology is characterized by multiple information flows, as was illustrated by the "community of practice" described earlier, information technology is characterized by increasing concentration of power over the information infrastructure.[46]

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45. Alfred D. Chandler, *Paths of Learning*, Address at the Haas School of Business at the University of California, Berkeley Conference on Knowledge Creation and Transfer: The Second Annual UC Berkeley Forum on Knowledge and the Firm (Sept. 25, 1998) (visited Oct. 29, 1998) <http://www.haas.berkeley.edu/~imio/conference>. "Paths of Learning" will be the title of Professor Chandler's forthcoming book.

46. *Id.*

Social science research has largely concentrated upon social formations in the public portion of the World Wide Web, while the Article 2B discussion has focused upon commercial information resources, licensed and perhaps protected by password and encryption. These parallel realities are not necessarily in conflict, although they are different. All markets consist of a mix of what anthropologists call gift exchange and market exchange. The two are not opposites, but are inter-related and symbiotic: exchange within the family tends to be characterized by gift exchange, for example, but families interact with the economy through market exchange. Today the Internet includes many varieties of gift exchange, such as shareware and freeware (e.g. Linux, Apache), along with varieties of market exchange, such as software that can be downloaded but requires a keyword to activate. The problem is at the boundary, when public domain information or software is privatized ("enclosure"), and private information property is copied illegally ("software piracy").

In the print world, this boundary has been managed by copyright laws, particularly fair use and the first sale doctrine, which has made possible the modern public research library as a boundary maintenance institution, buying information in the market, but loaning it within a gift culture.[47] The public research library has governed the information flow for innovation and research for the past century, and, together with the Land Grant University, has served as the core of American information policy in the age of industrialization. But this strategy is now becoming endangered by the enclosure of the public domain. Today the digital library is still a hybrid of gift and market exchange, as libraries digitize works that are out of copyright or produced for the public domain. But many current publications, particularly scientific journals, are regulated by contractual terms that do not permit sales to libraries, but instead only license the use of their "information content." Indeed, the term "information content" was designed by the publishing industry to signify that they have become merchant bankers in intellectual property; the business of publishing now concerns ownership of information flows, the licensing of the use of information. Publishers' contracts generally forbid the use of digital documents in the traditional library gift economy, such as circulation outside of the institutional license or inter-library loan. Research information flows in the digital library of the future will likely be governed on a per capita or fee for service basis.

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47. Peter Lyman, *What is a Digital Library? Technology, Intellectual Property and the Public Interest*, 125 DAEDALUS 1, 26-28 (1996).

There are costs and benefits in this vision of the information economy, as the Article 2B discussion has revealed. The benefits include economic incentives to develop high quality networked information, and, in principle, universal access to research information nearly anywhere in the world through the Internet. The cost is that, in practice, access to information will be governed by the ability to pay, and, given the increasing commercialization of scientific publishing, the price of journals will continue to increase at double-digit annual rates. Previously, fair use based information policy had subsidized information access in the name of the public interest in education. Today, universal access is being defined as access to the Internet itself, rather than to educational content. Will there be an Internet equivalent to the bandwidth reserved for public interest broadcasting?

In many ways Article 2B merely formalizes the transition from an information policy based on public libraries to a system of "universal access" modeled after telecommunications, in which public access to information flow technology is subsidized, but information services are paid for by the consumer. This has become a legitimation crisis, as few funding authorities have been willing to increase library budgets at a double-digit annual rate simply to subsidize free access to information. Hence, today, library collections represent an increasingly smaller proportions of published information. The research library of the future is likely to become a repository of public domain information (including, at least for the moment, government information), and access to licensed information on a fee-for-service basis. The primary unsolved problem in this scenario is the funding of archives: in the past, libraries have preserved and stored printed information as an archive of the history of knowledge; as information loses its commercial value, it is unlikely that commercial rights-holders will subsidize its continued existence. Only late in its evolution has the Article 2B debate begun to address the role, if any, of public interest subsidies for libraries and education. In the absence of a concept of the public interest, there should be an accounting of the consequences for a democratic society of the enclosure of the domain of publicly accessible information.

B. A Framework for Further Analysis.

Bar and Murase have defined four basic levels of function which must exist in any system of commerce, whether conventional or electronic, posing linked yet differentiated kinds of technological and regulatory

challenges.[48] Their "levels" might serve as a helpful framework for organizing an analysis of the Article 2B debate:

> Commercial activities, whether conventional or electronic, involve four basic levels: a *communication infrastructure*, carrying messages about prices, quantities, service or product characteristics; *a marketplace*, the market coordination environment within which buyers meet sellers and negotiate; *transaction* mechanisms to send, execute and settle orders (including payments); and *deliverables*, the service or merchandise being exchanged.[49]

The Article 2B debate engages each of these levels of discourse at different times, reminding us that the present legal debate implies the formation of a comprehensive economic policy for emerging markets. But this larger context is often lost for one of three reasons. First, there may be confusion about the level of commercial infrastructure involved, or the implications of an argument made at one level for policy at another level. Second, examples of "the digital economy" often confuse "indirect" or "hybrid" e-commerce, such as the electronic ordering of tangible goods (sometimes called "network aided conventional commerce"), with "direct" e-commerce, the on-line delivery of e-goods, where all four levels are electronic. And finally, national debates about policy regulation of electronic commerce necessarily occur within the broader context of global competition, because the scope of the network economy is international. For this reason, even a commercial code may require global coordination through trade and treaty negotiations, given that the scope of the network economy transcends traditionally national legal jurisdictions.

1. A communication infrastructure

The infrastructure that makes communication and transportation possible is the precondition of all commerce; as Bar and Murase describe this level, "widespread diffusion of electronic commerce requires an *advanced network infrastructure* that can be accessed equitably and on a technologically neutral basis. ... Governments must therefore set ground rules that guarantee infrastructure access, network interoperability, and technical standards."[50] As we have seen, however, "code as code" is not simply a matter of network management, but shapes and regulates conduct and or-

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48. Francois Bar & Emily M. Murase, *Charting Cyberspace: A U.S.-European-Japanese Blueprint for Electronic Commerce*, *in* TRANSATLANTIC TRADE COOPERATION IN ASIA: SECTORS, ISSUES AND MODALITIES 5 (Richard Steinberg & Bruce Stokes eds.) (forthcoming 1998).

49. *Id.*

50. *Id.* at 7-8.

ganizations as well. Therefore, there can be no such a thing as a "technologically neutral basis" of access. These social contexts are illustrated by this definition of the word "computer" in a review of the literature: "Computers, in this review, refer to substantially more than the basic machines associated with computing. Computer technology is a 'package' that encompasses a complex, interdependent system comprised of people (computer specialists, users, managers), hardware (computer mainframes, peripherals, telecommunications gear), software (operating systems, utilities and application programs), techniques (management science models, procedures, organizational arrangements), and data."[51] Inevitably, then, issues of economic power and monopoly will arise when technical standards and practices are allowed to be proprietary.

2. *A marketplace.*

"A *network marketplace*," then, "is created upon this infrastructure by defining, through *software* configuration, the rules of market participation and coordination."[52] But Bar and Murase continue, "Policies defining a 'Commercial Code' for e-commerce, as well as ground rules for privacy or taxation, will critically shape the emerging e-marketplace."[53] The notion of an e-marketplace has been the goal of the Article 2B debate, although there has been relatively little discussion of consumers' rights or the creation of new markets. The issue of taxation policy has been recognized as an important economic factor, but one that is separable in principle from either commercial codes or copyright policy. The issue of privacy has come up primarily within the context of self-help, rather than in terms of a user's ability to control access to personal data generated in using networked information. In general, Bar and Murase contrast American policy, an "approach that relies heavily on industry self-regulation and ex-post legal remedies," with European Union policy, "a comprehensive regulatory regime that provides *ex-ante* legal protection for consumers."[54] This contrast resonates with Cohen's statement that "the drafters are far more concerned with intangible harms to commercial interests than with intangible harms to individuals."[55] These factors provide good examples of

51. John Leslie King & Kenneth L. Kraemer, *Computer and Communication Technologies: Impacts on the Organization of Enterprise and the Establishment and Maintenance of Civil Society*, FOSTERING RESEARCH ON THE ECONOMIC AND SOCIAL IMPACTS OF INFORMATION TECHNOLOGY 188, 190-91 (The National Research Council, 1998).

52. Bar & Murase, *supra* note 47, at 8.

53. *Id.*

54. *Id.* at 27.

55. Cohen, *supra* note 21, at 1106.

why code must be understood as "frozen social policy," and as raising issues of the public interest as much as private property rights.

3. Transaction mechanisms.

The third level consists of "the electronic transactions that occur within the network marketplaces [that] require guarantees about data security and support for electronic payments ...."[56] At this level the Article 2B debate has not engaged the global dimensions of information policy, particularly international debates concerning data security. For example, American insistence upon export controls over encryption technologies and "back doors" accessible to U.S. national security agencies is perceived by Europeans as a thinly disguised trade barrier.

4. Deliverables.

Finally, "in cases where the deliverables themselves are electronic (e.g., software sold over the Internet), e-commerce will also involve policies about intellectual property rights and content regulation."[57] The Article 2B debate is centrally focused on the adequacy of the definitions of deliverables as "information" and "information content," as well as issues concerning the coordination between federal laws concerning copyright and state commercial codes.

5. Summary: The commonality of code across these levels.

Although parsing the problem in these four levels is helpful in gaining a sense of the place of the Article 2B debate in a comprehensive information policy, it is striking that there is also a commonality across the four levels of analysis. At each level the digital economy is dependent upon code. Whether software-based or instantiated in silicon, code determines both the means and the mode of production, and therefore it is the key to wealth and power in an information society. Indeed, a vision of an information society is the real subject of the Article 2B debate, even if it is only occasionally visible as such.

V. CONCLUSION

This paper has argued that the Article 2B debate, like all discussions of "the computer revolution," has become trapped in its own metaphors—metaphors about "information highways" and the "knowledge economy."

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56. Bar & Murase, *supra* note 47, at 9.
57. *Id.*

The first stage of every process of historical change must necessarily use metaphors from the past, but they are at best heuristic.

Social science research has been presented in this paper as a test of these heuristics, and has identified two important concerns. First, while software code is the infrastructure of the new economy, it is not simply a commodity like other forms of capital investment; it is also a communications medium that engages important political interests. Second, the knowledge economy does not replace the industrial economy in any simple sense; rather each economic sector is being transformed according to its own logic, and therefore regulatory policy must be modest and incremental. Unfortunately, the Article 2B debate has most often failed to appreciate and respond to these concerns.

COPYRIGHT AND THE JURISPRUDENCE OF SELF-HELP

By Julie E. Cohen †

ABSTRACT

The proposed draft of Article 2B grants broad rights to enforce electronically contract provisions governing access to and use of digital works. Purveyors of digital works may engage in electronic self-help following breach of contract, and may also elect to foreclose unauthorized uses ex ante, via electronic "regulation of performance." This Article examines these provisions in light of existing law authorizing self-help repossession of tangible chattels, leading academic justifications for self-help repossession, and federal copyright law and policy. It concludes that the provisions authorize an unprecedented degree of intrusion into private homes and offices, that they lack a sound theoretical basis, and that their adoption would threaten constitutionally-mandated limits on copyright protection. It concludes, further, that the law should afford users of digital works rights of electronic self-help where necessary to preserve the copyright balance.

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I. INTRODUCTION

A new wind is blowing in copyright law. For centuries, authors and their assignees have relied primarily on federal copyright law to define and protect their legal rights. Suddenly, that may be about to change. New developments in digital technology offer copyright owners the tantalizing possibility of near-absolute control of their creative and informational content, even after its delivery to end users, via self-enforcing digital contracts. Copyright owners, along with purveyors of other (noncopyrightable) informational content, envision using these contracts to secure—and redefine—their "informational rights."[1] Within this vision of private ordering and technological self-help, contract law rather than copyright law is paramount. Limits on information ownership set by the public law of copyright are conceived as optional restrictions that can be avoided using appropriate contractual language.

Proposed Article 2B of the Uniform Commercial Code (U.C.C.) is designed to play a central role in the restructuring of information law along contract-based lines. Information providers hope that Article 2B will establish, as background principles of commercial law, rules that will enable them to implement their vision of self-enforcing private ordering.[2] The

1. *See* U.C.C. § 2B-102(a)(27) (Aug. 1, 1998 Draft). As defined in Article 2B, "informational rights" encompass "all rights in information created under laws governing patents, copyrights, mask works, trade secrets, trademarks, publicity rights, or any other law that permits a person, independently of contract, to control or preclude another person's use of the information on the basis of the rights holder's interest in the information." *Id.*

Unless otherwise noted, all citations to 'Article 2B' or 'proposed Article 2B' in this article refer to the July 24-31, 1998 Proposed Draft. Current and previous drafts of proposed Article 2B, together with other official documents from the drafting process, are available online via the National Council of Commissioners on Uniform State Laws' Web page collection of draft uniform laws, maintained by the Biddle Law Library at the University of Pennsylvania Law School. *See* National Council of Commissioners on Uniform State Laws, *Drafts of Uniform and Model Acts*, (last modified Oct. 21, 1998) <http://www.law.upenn.edu/library/ulc/ulc.htm#ucc2b>. Correspondence and other documents submitted by interested parties during the drafting process are also available on the Web. *See* Carol A. Kunze, *The 2B Guide* (last modified Nov. 1, 1998) <http://www.2BGuide.com/>.

2. *See* U.C.C. § 2B-208 (July 24-31, 1998 Draft) (validating mass market standard-form license terms); *id.* § 2B-310 (authorizing licensors to implement electronic regulation of performance); *id.* § 2B-715 (authorizing licensor self-help following cancellation of a covered agreement).

drafters of Article 2B characterize these rules as broadly consistent with the existing framework of commercial law.[3] They suggest, further, that the private agreements reached under such a regime can coexist with federal copyright law without disrupting the balance it seeks to establish.[4] Information providers agree, and argue that, in any case, such agreements lie beyond copyright's preemptive reach.[5] This article examines those assertions. It concludes that the provisions of Article 2B threaten a substantial departure from the existing law of self-help, and that this departure cannot be justified by reference either to doctrine or to theory.[6] Moreover, copyright law and policy point the other way, toward affording self-help rights to users of copyrighted works.

Part II of this article describes the emerging digital "rights management" technologies and traces the history of the provisions of Article 2B that are designed to authorize or facilitate their implementation. Although the most recent draft of Article 2B appears to moderate one of these provisions, issues that earlier drafts had resolved in favor of electronic private ordering will now confront courts. Parts III and IV explore, respectively,

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3. *See id.* §§ 2B-208, Reporter's Notes 3-4, 2B-310, Reporter's Note 1, 2B-715, Reporter's Note 3; *see also* U.C.C. Article 2B, Preface at 9 (July 24-31, 1998 Draft) ("Article 2B does not *create* contract law here—it merely provides a more coherent base for contracting."); Raymond T. Nimmer, *The Relation Between Contract and Intellectual Property Law*, 13 BERKELEY TECH. L.J. 827, 829 (1998).

4. *See* U.C.C. § 2B-105, Reporter's Notes 2-3; *see also id.* § 2B-105, Reporter's Notes 7-8; Nimmer, *supra* note 3, at 844. For a different characterization of Article 2B's approach to the relationship between contract and copyright, see David F. McGowan, *Free Contracting, Fair Competition, and Article 2B: Some Reflections on Federal Competition Policy, Information Transactions, and "Aggressive Neutrality,"* 13 BERKELEY TECH. L.J. 1173 (1998).

5. *See, e.g.*, ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996); Brief of Amicus Curiae Software Publishers Association in Support of Plaintiff-Appellant, ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996) (No. 96-1139); Information Indus. Ass'n, *Comments of the Information Industry Association on Article 2B and Prof. Charles McManis' Proposed Amendment to Section 2B-308* (July 18, 1997) <http://www.infoindustry.org/ppgrc/doclib/grdoc010.htm>; Copyright Comm., Ass'n of Am. Publishers, *Contractual Licensing, Technological Measures and Copyright Law* (visited Nov. 11, 1998) <http://www.publishers.org/home/abouta/copy/licensing.htm>; *see also* Robert W. Gomulkiewicz & Mary L. Williamson, *A Brief Defense of Mass Market Software License Agreements*, 22 RUTGERS COMPUTER & TECH. L.J. 335 (1996); Holly K. Towle, *Electronic Transactions and Contracting*, *in* SECOND ANNUAL INTERNET LAW INSTITUTE 515 (PLI, 1998).

6. Currently, self-help repossession is authorized in certain circumstances by U.C.C. Articles 2A and 9, which govern leases and secured transactions respectively. *See* U.C.C. § 2A-525 (1990), U.C.C. § 9-503 (1972). The standards that govern self-help repossession under Articles 2A and 9 are derived from the pre-U.C.C. common law. *See infra* text accompanying notes 45-54.

the doctrinal foundations of self-help under the U.C.C. and more theoretical models advanced by legal scholars, and conclude that none of the common justifications for commercial private ordering supports according information providers the broad powers of self-help that they claim as a matter of right. To the contrary, Article 2B's self-help provisions raise important problems that the drafters have failed to address. In Parts V and VI, I evaluate the proposed law and emerging practice of electronic self-help against the backdrop of copyright law and policy. Part V examines the role of the public-private distinction in mediating between copyright and contract, and argues that Article 2B is not merely a neutral background for private bilateral agreements, but a public act of social ordering that is flatly inconsistent with copyright and First Amendment principles. Part VI argues that licensees, not licensors, should be accorded rights of electronic self-help when necessary to preserve the balance that the Copyright Act is intended to establish.

II. ELECTRONIC FENCING AND SELF-HELP UNDER ARTICLE 2B

For information providers, digital networks represent both a promise and a threat. Computer networks eliminate or minimize many of the costs associated with product distribution, and make it possible for small businesses to serve national or even global markets. However, digitized information is easily copied, and networks also minimize the costs of distributing unauthorized copies. Information providers have expressed fears that by making their products available in digital form, they may destroy their own markets. Scholars and industry commentators dispute these predictions of total disaster, and argue that the economic principles that determine profitability in markets in tangible commodities do not necessarily apply to markets in intangibles.[7] Nonetheless, information providers have stated a reluctance to experiment with digital distribution without additional legal and technological protection against unauthorized copying.[8]

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7. *See, e.g.*, John Perry Barlow, *The Economy of Ideas: A Framework for Rethinking Patents and Copyrights in the Digital Age*, WIRED, Mar. 1994, at 85; JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY 35-41 (1995); Julie E. Cohen, Lochner *in Cyberspace: The New Economic Orthodoxy of "Rights Management,"* 97 MICH. L. REV. 301, 381-90 (1998); J. Bradford DeLong & A. Michael Froomkin, *The Next Economy?*, *in* INTERNET PUBLISHING AND BEYOND: THE ECONOMICS OF DIGITAL INFORMATION AND INTELLECTUAL PROPERTY (Deborah Hurley et al. eds., forthcoming 1998); Esther Dyson, *Intellectual Value*, WIRED, July 1995, at 136.

8. *See, e.g.*, *WIPO Copyright Treaties Implementation Act: Hearing on H.R. 2281 Before the Subcomm. on Telecommunications Trade & Consumer Protection of the House*

Happily for information providers, digital technologies also offer a solution to their perceived problem. The same technologies that can be used to propagate information can also build fences around it. Together with technology experts, information providers are developing secure packaging and delivery software designed to prevent purchasers and third parties from making unauthorized uses of digital content.[9] As envisioned by the copyright and information industries, these "rights management systems" will be "capable of detecting, preventing, and counting" almost

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Comm. on Com., 105th Cong. (1998) [hereinafter *H.R. 2281 Commerce Hearing*] (statement of Robert W. Holleyman, II, President, The Business Software Alliance); *Copyright Legislation: Hearings on H.R. 2281 Before the Subcomm. on Cts. and Intell. Prop. of the House Comm. on the Judiciary*, 105th Cong. (1997) [hereinafter *H.R. 2281 Judiciary Hearings*] (statements of Robert W. Holleyman, II, President, The Business Software Alliance; Allee Willis, on behalf of Broadcast Music, Inc.; Tom Ryan, CEO, SciTech Software, Inc., on behalf of the Software Publishers' Ass'n; Gail Markels, General Counsel and Senior Vice President, Interactive Digital Software Ass'n; and Allen R. Adler, Vice President for Legal and Governmental Affairs, Association of Am. Publishers); *National Information Infrastructure: Hearing on S. 1284 Before the Senate Comm. on the Judiciary*, 104th Cong. (1996) [hereinafter *S. 1284 Hearing*] (testimony of Kenneth R. Kay, Executive Director, Creative Incentive Coalition); *Copyright Protection on the Internet: Hearings on H.R. 2441 Before the Subcomm. on Cts. and Intell. Prop. of the House Comm. on the Judiciary*, 104th Cong. (1996) [hereinafter *H.R. 2441 Hearing*] (statements of Barbara A. Munder, Senior Vice President, The McGraw-Hill Companies, Inc.; Frances W. Preston, President and CEO, Broadcast Music, Inc.; Jack Valenti, Chairman and CEO, Motion Picture Ass'n of Am., Inc.; and the Association of Am. Publishers); *see also* WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS, U.S. DEP'T OF COMMERCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 10-12 (1995) [hereinafter NII WHITE PAPER].

9. *See* Jon Bing, *The Contribution of Technology to the Identification of Rights, Especially in Sound and Audio-Visual Works: An Overview*, 4 INT'L J.L. & INFO. TECH. 234 (1996); CHRISTOPHER BURNS, INC., COPYRIGHT MANAGEMENT AND THE NII: REPORT TO THE ENABLING TECHNOLOGIES COMMITTEE OF THE ASSOCIATION OF AMERICAN PUBLISHERS (1996); Charles Clark, *The Publisher in the Digital World*, *in* INTELLECTUAL PROPERTY RIGHTS AND NEW TECHNOLOGIES: PROCEEDINGS OF THE KNOWRIGHT '95 CONFERENCE 85 (Klaus Brunnstein & Peter Paul Sint eds., 1995; Daniel J. Gervais, *Electronic Rights Management Systems (ERMS): The Next Logical Step in the Evolution of Rights Management* (visited Nov. 13, 1998) <http://www.copyright.com/>; Daniel J. Gervais, *Electronic Copyright Management Systems (ECMS): From Rights Trading to Electronic Publishing* (visited Nov. 13, 1998) <http://www.copyright.com/>; Mark Stefik, *Shifting the Possible: How Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 BERKELEY TECH. L.J. 138 (1997); MARK STEFIK, *Letting Loose the Light: Igniting Commerce in Electronic Publication*, *in* INTERNET DREAMS: ARCHETYPES, MYTHS, AND METAPHORS 219 (1996); PETER WAYNER, DIGITAL COPYRIGHT PROTECTION (1997); Robert Weber, *Digital Rights Management Technologies*, <http://www.ncri.com/articles/rights_management/ifrro95.html>. *See generally* Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981, 983-87 (1996) (describing capabilities of digital rights management systems).

every conceivable use of a digital work.[10] In addition, these industries lobbied heavily for nearly three years for legislation that would prohibit tampering with or circumventing these systems.[11]

Unhappily for consumers, however, digital rights management regimes will enable information providers to appropriate far more protection against copying and distribution than intellectual property law now provides. Copyright law allows some reuse of protected expression under a variety of exceptions designed to serve the public interest, and allows any reuse after the term of copyright protection has expired.[12] Copyright also does not attach to facts, ideas, or functional principles; instead, it treats these materials as public domain "building blocks" for future works.[13] Many compilations of information consist largely of such public domain material and are protected only minimally, if at all, by copyright.[14] The common law tort of data misappropriation provides some protection for uncopyrightable facts, but cannot protect against all copying, since the Copyright Act expressly preempts state-created rights that are "equivalent" to the rights afforded under copyright law.[15] Trade secrecy law pro-

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10. *See* Weber, *supra* note 9, § 3.1.1; *see also* CHRISTOPHER BURNS, INC., *supra* note 9, at 17-21, 31-35; Stefik, *Shifting the Possible*, *supra* note 9, at 140-44; STEFIK, *Letting Loose the Light*, *supra* note 9, at 228-38.

11. For information provider testimony in support of legislation, see *H.R. 2281 Commerce Hearing*, *supra* note 8; *H.R. 2281 Judiciary Hearings*, *supra* note 8; *S. 1284 Hearing*, *supra* note 8; *H.R. 2441 Hearing*, *supra* note 8; *see also* NII WHITE PAPER, *supra* note 8. Legislation designed to protect digital rights management systems was enacted this year. *See* Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998). For discussion of its provisions, see *infra* note 201.

12. *See, e.g.*, 17 U.S.C. §§ 107 (1994) (fair use doctrine, which allows, *inter alia*, reuse of protected expression for purposes of criticism, classroom or research use, and parody), 108 (1994) (library copying privileges), 109(a) (1994) (limitation of exclusive distribution right to first sale of copy for most works), 110 (1994) (public performance and display exemptions for nonprofit activities and organizations), 302 (1994) (duration of copyright protection).

13. *See* 17 U.S.C. § 102(b) (1994); Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349-50 (1991); Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965, 993 (1990).

14. *See Feist*, 499 U.S. at 349-50. Even for those compilations that incorporate original expression in the selection or arrangement of the underlying data, copyright protection extends only to those aspects and not to the data itself. 17 U.S.C. § 103(b) (1994). *See generally* 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 3.04[B][2] (46th rel. 1998).

15. *See infra* Part V.A. *Compare* International News Serv. v. Associated Press, 248 U.S. 215 (1918) (recognizing a common law cause of action for misappropriation of uncopyrightable news content), *with* 17 U.S.C. § 301(a) (1994) (preempting "equivalent" state-created rights in subject matter of copyright). On the appropriate role of data misappropriation law within the interstices of federal copyright law, see National Basketball

tects only information that is not generally known or readily ascertainable, and allows discovery of protected information by reverse engineering and other "proper means."[16] In short, legal protection against unauthorized copying and distribution is incomplete, and is so by design.

Information providers conceive digital rights management systems as self-enforcing contracts, and argue that copyright law does not displace private bargains that alter the distribution of rights and privileges as between the parties.[17] However, courts have differed on the validity, as a

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Ass'n v. Motorola, Inc., 105 F.3d 841, 852-54 (2d Cir. 1997); *see also* United States Golf Ass'n v. St. Andrews Sys., 749 F.2d 1028, 1037-38 (3d Cir. 1984) (articulating a narrow basis for the misappropriation tort).

There may soon exist federal protection for uncopyrightable databases and their contents. Database protection bills were introduced in both houses of Congress in 1998. *See* Collections of Information Antipiracy Act, H.R. 2652, 105th Cong. (1997); Collections of Information Antipiracy Act, S. 2291, 105th Cong. (1998). The House bill was incorporated into the Digital Millenium Copyright Act, which passed the House on July 29, 1998. *See* Digital Millenium Copyright Act, H.R. 2281, 105th Cong., Title V. However, the Senate-approved version of the Digital Millenium Copyright Act did not include database protection. *See* Digital Millenium Copyright Act, S. 2037, 105th Cong. Because the Senate has yet to hold hearings on database protection, the database provisions were removed from the final version of the bill. *See* Digital Millenium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998). Whether and to what extent such protection would be inconsistent with the constitutional origins of and limits to federal copyright protection are unresolved questions. *Cf. infra* Part V.A (discussing constitutional preemption of state laws that confer property-like protection on uncopyrightable material).

16. *See* UNIF. TRADE SECRETS ACT § 1 (1985); RESTATEMENT (THIRD) OF UNFAIR COMPETITION §§ 39, 43 (1995); Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 157 (1989); Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 476 (1974).

17. *See, e.g.*, ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996); Brief of Amicus Curiae Software Publishers Association in Support of Plaintiff-Appellant, ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996) (No. 96-1139); Information Indus. Ass'n, *supra* note 5; Copyright Comm., Ass'n of Am. Publishers, *supra* note 5; *see also* Tom W. Bell, *Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine*, 76 N.C. L. REV. 557, 609-11 (1998). Many other commentators disagree, and argue that copyright does and should displace at least some types of contract restrictions. *See, e.g.*, Cohen, *supra* note 7, at 322-28; Julie E. Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 BERKELEY TECH. L.J. 161, 181-82 (1997); Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 BERKELEY TECH. L.J. 93, 107-10 (1997); Dennis S. Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 U. DAYTON L. REV. 512, 525-33 (1997); Robert A. Kreiss, *Accessibility and Commercialization in Copyright Theory*, 43 U.C.L.A. L. REV. 1, (1995); Mark A. Lemley, *Beyond Preemption: The Federal Law and Policy of Intellectual Property Licensing*, 87 CALIF. L. REV. 111 (forthcoming 1999); Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239 (1995); 1 NIMMER & NIMMER, *supra* note 14, § 3.04[B][3]; David A. Rice, *Public Goods, Private Contract, and Public Policy: Federal Preemption of Software License Provisions Against Reverse Engineering*, 53 U. PITT. L. REV. 543 (1992); *see also infra* Part V.

matter of contract law, of "shrinkwrap" licenses that purport to restrict the uses of information products based on terms packaged with the product and revealed to the customer after purchase.[18] Accordingly, many information providers have supported efforts to draft a new Article 2B of the Uniform Commercial Code to establish different ground rules for transactions in software, information, and other intangible intellectual products.[19] Among other things, proposed Article 2B is intended to validate self-enforcing shrinkwrap (or "clickwrap") licenses—including mass market standard forms—implemented via digital rights management regimes.[20]

Proposed Article 2B implements this regime of electronic private ordering primarily through two provisions. Section 2B-310, which applies to performance of the contract, allows "electronic regulation of performance" by either party in specified circumstances.[21] First, section 2B-310 permits

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18. *Compare, e.g.*, *ProCD*, 86 F.3d at 1451-53 (holding shrinkwrap license valid and enforceable because consumer could have returned the product before using it if he did not wish to accept the terms), *with, e.g.*, Step-Saver Data Sys., Inc. v. Wyse Tech., 939 F.2d 91 (3d Cir. 1991) (holding that shrinkwrap license terms disclosed after product had been exchanged for payment did not become part of the bargain between the parties). It is worth noting that despite the enormous amount of attention and discussion devoted to the *ProCD* decision, far more courts have held later-disclosed license terms unenforceable. *See* Lemley, *Beyond Preemption*, *supra* note 17, at 120, n.20 (collecting cases).

19. *See, e.g.*, Business Software Alliance, Software Publishers Ass'n & Info. Indus. Ass'n, *Article 2B* (July 15, 1998) <http://www.2BGuide.com/docs/amemo981.html>; Information Indus. Ass'n, *supra* note 5; Business Software Alliance, Information Indus. Ass'n & Silicon Valley Software Indus. Coalition, *Article 2B* (July 14, 1998) <http://www.2BGuide.com/docs/amtng98.html>; *see also* Business Software Alliance, *Policy Issues: Response to Comments on Draft of UCC Article 2B by Consumers Union* (July 17, 1997) <http://www.2BGuide.com/docs/bsacun.html >; Software Publishers Ass'n, *Article 2B, Uniform Commercial Code: Exploding the Myth that the Draft is Unbalanced* (July 15, 1997) <http://www.2BGuide.com/docs/span.html >. *See generally* Cem Kaner, *Restricting Competition in the Software Industry: Impact of the Pending Revisions to the Uniform Commercial Code* (last modified Nov. 11, 1998) <http://www.badsoftware.com/nader.htm> (describing information provider involvement in Article 2B drafting process). Although the more "traditional" copyright industries have supported digital rights management vociferously in other contexts, *see supra* notes 8, 11, they have not all been as enthusiastic about Article 2B as a whole. *See, e.g.*, Letter from Simon Barsky, Senior Vice President and General Counsel, Motion Picture Ass'n, to Carlyle Ring, Jr., Chair, Article 2B Drafting Committee (Apr. 29, 1998) <http://www.2BGuide.com/docs/conn0429.html> (expressing reservations about Article 2B and suggesting that the scope of the project be narrowed to include only computer software and electronic information products). *But see* Association of Am. Publishers, *supra* note 5 (expressing support for the Article 2B project).

20. *See* U.C.C. §§ 2B-208, 2B-310 (July 24-31, 1998 Draft). On the significance of the "license" characterization, see David A. Rice, *Digital Information as Property and Product: U.C.C. Article 2B*, 22 U. DAYTON L. REV. 621, 624-26, 632-34 (1997).

21. Section 2B-310 provides:

Section 2B-310. Electronic Regulation of Performance.

electronic regulation if expressly authorized by a term in the license agreement.[22] However, section 2B-310 goes on to create a list of exceptions that virtually swallows this express disclosure rule. The license need not disclose electronic regulation that merely implements a stated temporal or quantitative restriction on use, or enforces "informational rights which were not granted to the licensee."[23] Nor must it disclose electronic regulation that "prevents uses of the information which are inconsistent

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(a) In this section, "restraint" means a program, code, device, or similar electronic or physical limitation that restricts the use of information.

(b) A party entitled to enforce a limitation on use of information which does not depend on a breach of contract by the other party may include a restraint in the information or a copy of the information and use that restraint if:

(1) a term of the agreement authorizes use of the restraint;

(2) the restraint prevents uses of the information which are inconsistent with the agreement or with informational rights which were not granted to the licensee;

(3) the restraint prevents uses of the information after expiration of the stated duration of the contract or a stated number of uses; or

(4) the restraint prevents use when the contract terminates, other than on expiration of a stated duration or number of uses, and the licensor gives reasonable notice to the licensee before further use is prevented.

(c) Unless authorized by a term of the agreement, this section does not permit a restraint that affirmatively prevents or makes impracticable a licensee's access to its own information in the licensee's possession by means other than by use of the licensor's information or informational rights.

(d) A party that includes or uses a restraint pursuant to subsection (b) or (c) is not liable for any loss caused by its authorized use of the restraint.

(e) This section does not preclude electronic replacement or disabling of an earlier copy of information by the licensor in connection with delivery of a new copy or version under an agreement to electronically replace or disable the earlier copy with an upgrade or other new information.

U.C.C. § 2B-310 (July 24-31, 1998 Draft).

22. *Id.* § 2B-310(b)(1). On its face, this provision is unremarkable. However, when read in conjunction with section 2B-208, which validates standard-form terms that consumers have had the opportunity to review (whether or not they actually did so), it raises troubling questions. Whether mass market licensees should be deemed to have consented to provisions for automatic, self-enforcing electronic regulation is discussed *infra* Part IV.

23. U.C.C. § 2B-310(b)(2)-(3) & Reporter's Note 5 (July 24-31, 1998 Draft).

with the agreement"—apparently, even if copyright law or other applicable "informational rights" law would allow such uses.[24]

Effectively, section 2B-310 would allow information providers to contract around copyright law without disclosing that fact to users. The Reporter's Notes to section 2B-310 make only oblique mention of copyright preemption. They assert that the provision simply represents "[t]he basic principle ... that a contract can be enforced."[25] Proposed Article 2B does contain another provision, section 2B-105, that acknowledges the possibility of copyright preemption of particular contract terms; in the accompanying Reporter's Notes, the drafters disclaim jurisdiction to make specific recommendations about preemption.[26] Nonetheless, both the Reporter's Notes and the prefatory memorandum accompanying Article 2B make clear their belief that even mass market contracts that are inconsistent with copyright are not necessarily invalid for that reason.[27] The drafters describe Article 2B's approach to the question of federal preemption as one of "neutrality"; under this vision, it appears, contract may extend wherever it is not expressly prohibited by Congress or the federal courts.[28]

Section 2B-715, which applies in the event of a breach by the licensee justifying cancellation of the agreement, governs "self-help repossession" by the licensor.[29] Unlike section 2B-310, which has no analogue in the

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24. *Id.* § 2B-310(b)(2).

25. *Id.* § 2B-310, Reporter's Note 2.

26. *Id.* § 2B-105(a) ("A provision of this article which is preempted by federal law is unenforceable to the extent of that provision."); *Id.* § 2B-105, Reporter's Note 1 ("When or whether federal law controls is not an issue of state law. State law, including the U.C.C., cannot alter federal policy and the balance it may entail. Article 2B does not intend to do so.").

27. *Id.* at 10-12; *id.* § 2B-105, Reporter's Notes 3-4. It is difficult to imagine that the drafters would have included detailed provisions authorizing electronic private ordering if they believed that such agreements would be preempted. *See also* Nimmer, *supra* note 3, at 845-51.

28. *See* U.C.C. § 2B-105, Reporter's Note 3 (July 24-31, 1998 Draft); McGowan, *supra* note 4, at 1195-1214 (explicating the drafters' vision of "neutrality"); David Nimmer et al., *The Metamorphosis of Contract into Expand*, 87 CALIF. L. REV. 17, 41-42 (forthcoming 1999) (analyzing Article 2B's "neutrality myth").

29. Section 2B-715 provides:

> Section 2B-715. Right to Possession and to Prevent Use.
>
> (a) Upon cancellation of a license, the licensor has the right:
>
> (1) to possession of all copies of the licensed information in the possession or control of the licensee and any other materials pertaining to that information which by contract were to be returned or delivered by the licensee to the licensor; and
>
> (2) to prevent the continued exercise of contractual and informational rights in the licensed information.

current U.C.C., section 2B-715 is expressly modeled after section 2A-525, which authorizes self-help repossession of leased property by the lessor, and section 9-503, which authorizes self-help repossession of secured collateral by the holder of the security interest.[30] Like sections 2A-525 and 9-503, section 2B-715 allows self-help repossession following cancellation if possible "without a breach of the peace."[31] Cancellation, in turn, requires a material breach or express contractual authorization.[32] In addition, section 2B-715 adds the express requirement that the repossession not create "a foreseeable risk of personal injury or significant damage to information or property other than the licensed information."[33]

The most recent draft of Article 2B is silent on the question of *electronic* self-help repossession—or, more precisely, since nothing physical

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> (b) Except as otherwise provided in Section 2B-714, a licensor may exercise its rights under subsection (a) without judicial process only if this can be done:
>
> (1) without a breach of the peace; and
>
> (2) without a foreseeable risk of personal injury or significant damage to information or property other than the licensed information.
>
> (c) In a judicial proceeding, a court may enjoin a licensee in breach of contract from continued use of the information and the informational rights and may order that the licensor or an officer of the court take the steps described in Section 2B-627.
>
> (d) A party has the right to an expedited judicial hearing on prejudgment relief to enforce or protect its rights under this section.
>
> (e) The right to possession under this section is not available to the extent that the information, before breach of the license and in the ordinary course of performance under the license, was so altered or commingled that the information is no longer identifiable or separable.
>
> (f) A licensee that provides information to a licensor subject to contractual use restrictions has the rights and is subject to the limitations of a licensor under this section with respect to the information it provides.

U.C.C. § 2B-715 (July 24-31, 1998 Draft). Section 2B-714 permits an access contract provider to discontinue access in the event of a material breach. *Id.* § 2B-714.

30. U.C.C. § 2A-525 (1990); U.C.C. § 9-503 (1972). For discussion of the legal standards governing self-help repossession, as developed in the contexts of Articles 2A and 9, see *infra* Part III.A-B.

31. U.C.C. § 2B-715(b)(1) (July 24-31, 1998 Draft).

32. *See id.* § 2B-702(a).

33. *Id.* § 2B-715(b)(2). Because the "breach of the peace" standard has been applied to prohibit injury to persons or property, the Reporter's Notes to previous drafts correctly characterized these additional restrictions as a mere "clarifying step." *See, e.g.*, U.C.C. § 2B-716, Reporter's Note 1 (Apr. 15, 1998 Draft). The most recent version of the Reporter's Notes represents, instead, that this language places "more restrictions" on self-help than under sections 2A-525 and 9-503. U.C.C. § 2B-715, Reporter's Note 3 (July 24-31, 1998 Draft).

need be reclaimed, electronic self-help deactivation or *de*possession—of licensed information products. This was not always so. In previous drafts, Article 2B contained a special provision expressly authorizing electronic self-help repossession.[34] Section 2B-716 (now omitted) established additional procedural requirements for electronic self-help in cases involving licensed software "material to the licensee's business."[35] Such material could be repossessed or "depossessed" electronically only if the licensor first gained physical possession of a copy (subject to the "breach of the peace" limitation) or if the license authorized the repossession and the licensor gave at least ten business days' notice.[36] By implication, licensed information consisting of "informational content," or used for personal rather than business purposes, was subject to electronic repossession without physical possession and without notice of any kind, as long as no "breach of the peace" occurred.[37]

During its short life, proposed section 2B-716 was enormously controversial. The drafting committee itself was deeply divided on the question of electronic self-help, so much so that for a time section 2B-716 existed in two versions, a majority version allowing electronic self-help and a minority version prohibiting it except to the extent expressly authorized by other law.[38] The new section 2B-715 simply steers clear of the entire controversy without resolving any of the issues that former section 2B-716 raised. The Reporter's Notes state that the draft "takes no position on whether self-help can be pursued through electronic means."[39] This abrupt retrenchment leaves to the courts the task of interpreting the "breach of the peace" and "material breach" limitations in the context of digitally-mediated transactions in creative and informational works.

Together with other provisions of Article 2B that validate mass market "licenses,"[40] sections 2B-310 and 2B-715 would give information provid-

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34. *See, e.g.*, U.C.C. § 2B-716 (Apr. 1, 1998 Draft).

35. *Id.* § 2B-716(a).

36. *Id.*

37. *Id.* §§ 2B-715(b), 2B-716(a). On the question whether the "breach of the peace" standard that limits physical repossession is an appropriate measure of the harms threatened by electronic regulation and repossession, see *infra* Part III.

38. *See, e.g.*, U.C.C. § 2B-716 (Feb. 1998 Draft).

39. U.C.C. § 2B-715, Reporter's Note 3 (Aug. 1, 1998 Draft).

40. *See id.* § 2B-208. Under section 2B-208, the terms of a mass market license are valid and enforceable if the license manifests assent to the license prior to use of the licensed information, whether or not the licensee actually reviewed the license terms. *Id.* § 2B-208(a). If the first opportunity to review the terms occurs after payment and the licensee does not wish to manifest assent, the licensee is entitled to rescission and a refund. *Id.* § 2B-208(b).

ers enormous power to alter the balance of creator rights and user privileges established by the Copyright Act.[41] This is true even though section 2B-715 now leaves unanswered the question of electronic self-help following cancellation. As Professor Friedman correctly recognizes, the most effective electronic self-help is the kind covered by section 2B-310—so-called "electronic regulation of performance" that simply forecloses potential breach at the outset.[42] As the technologies of electronic regulation become more sophisticated, a separate right of electronic "repossession" is of less moment. As I have noted, the drafters of Article 2B nonetheless characterize sections 2B-310 and 2B-715 as entirely consistent with the existing framework of commercial law, and indicate their belief that the regimes of private ordering authorized by Article 2B would not violate copyright law or other law or policy.[43] The remainder of this article evaluates those contentions.

III. DOCTRINE: SELF-HELP, TRESPASS, AND THE RIGHTS OF PERSONS

Both the common law and the U.C.C. have traditionally afforded rights of self-help to vendors and creditors. However, both bodies of law limit the right to enter private property to repossess goods, allowing such entry only when the circumstances indicate consent, or at least acquiescence. Judged against these limits, Article 2B sanctions a degree of intrusion into private homes and offices that is unprecedented. It also authorizes self-help in a much broader range of circumstances, including those in which licensee conduct, although defined as breach, is privileged by the public law of copyright. To a far greater extent than existing law, Article 2B elevates the rights of mass market vendors over those of consumers and rights in "informational property" over the rights of persons to secu-

41. At the same time, the drafters have eliminated defenses that might have been raised by licensees, such as section 2-403's provision for the unenforceability of property rights against a bona fide purchaser for value, on the ground that they are inconsistent with licensors' federal intellectual property rights. *Id.* at 15.

42. *See* David D. Friedman, *In Defense of Private Orderings*, 13 BERKELEY TECH. L.J. 1151, 1153-54 (1998). For example, the license for a work might allow only one user at a time, and the software in which the work is encoded might enforce this restriction by preventing a second user from opening the work if it detects that the work is already in use. As long as the second user cannot defeat the restriction by tampering with the encoding software—a possibility discussed further in Part VI—the circumstances that would constitute a breach cannot occur.

43. *See* U.C.C. Article 2B, Preface at 10-12 (July 24-31, 1998 Draft); *id.* § 2B-105, Reporter's Notes 3-4; Nimmer, *supra* note 3, at 840-50, 858-70, 877-84.

rity and autonomy within private spaces.[44] Whether and to what extent this approach is warranted depends on how "intrusion" is conceived and on the purposes that self-help and the legal standards governing it are thought to serve.

Before digital technologies made remote or prospective self-help possible, self-help repossession necessarily entailed physical recovery of disputed goods following an alleged breach of contract. The law of self-help thus has been, until now, the law of physical, ex post repossession of chattels, which in turn has focused heavily on the likelihood of physical violence. Courts considering these cases have not explained, because they have not needed to, whether the judicially-developed "breach of the peace" standard is *only* designed to minimize the likelihood of physical violence and harm to persons and property, or is (or should be) more broadly concerned with preventing nonconsensual intrusion—and if so, what kinds of nonconsensual intrusion count. Because the universe of possible transgressions with respect to leased and secured chattels is relatively narrow, they also have not explored whether in other circumstances the law might or should impose substantive limits on the sorts of dereliction that justify self-help behavior. Finally, they have not considered whether standards developed to govern self-help following cancellation should apply to self-enforcing "regulation of performance" ex ante. Article 2B's proposed extension of self-help privileges to encompass electronic repossession and prospective self-help requires answers to all three sets of questions.

A. Self-Help and Private Spaces

The physical self-help tactics employed at the dawn of the consumer credit era created risks of physical violence and raised questions about

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44. As used in this essay, "consumers" includes both individuals and other entities that purchase (or "license") creative and informational works through the retail mass market. Although Article 2B defines "consumers" to include individuals only, this broader definition is consistent with Article 2B's distinction between mass market and non-mass market transactions:

> In the retail mass market, and in many non-retail transactions, most modern transactions are standardized. An information provider defines the terms under which its information products are made available to the retail marketplace and end users in that marketplace elect to either acquire or not acquire [sic] the information on these terms. The transactions are anonymous in that the information provider does not restrict those to whom the information is given except based on the licensee's willingness to agree to terms and to pay the applicable license fee.

U.C.C. § 2B-208, Reporter's Note 2 (July 24-31, 1998 Draft).

debtors' rights to security against trespass and other intrusions. To minimize these concerns, courts developed rules that allowed self-help repossession only if it could be accomplished without a breach of the peace.[45] Although courts created exceptions to the law of trespass to accommodate a perceived need for self-help repossession of chattels kept on private property, they used the "breach of the peace" standard and the concept of noncoerced consent to cabin these exceptions. Thus, creditors could enter private property to recover chattels sitting in plain view in a yard or driveway, if the debtor offered no resistance.[46] They could not, however, break into a debtor's home or business premises, or use or threaten force to gain entry if permission to enter was refused.[47] Only the state could enter a private home or office against the owner's will, and then only within the limits established by due process principles.[48]

The rules governing self-help repossession under Articles 9 and 2A of the U.C.C., which expressly incorporate the "breach of the peace" standard, mirror those developed under the common law.[49] Creditors may en-

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45. *See* JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE 912-13 (4th ed. 1995) (characterizing "breach of the peace" standard as based on whether the creditor sought to enter peaceably or threatened force, and whether the debtor consented to entry or opposed it).

46. *See id.* at 913 & n.5.

47. *See id.* at 913 & n.4.

48. *See* U.S. CONST. amends. IV, XIV; Wolf v. Colorado, 338 U.S. 25, 28 (1949) (characterizing Fourth Amendment guarantee of privacy as "implicit in 'the concept of ordered liberty'" established by Fourteenth Amendment's due process clause, but holding that exclusionary rule is not constitutionally-mandated as to states) (quoting Palko v. Connecticut, 302 U.S. 319, 325 (1937)), *overruled by* Mapp v. Ohio, 367 U.S. 643, 654-57 (1961) (expanding due process-based guarantee to include exclusionary rule).

49. U.C.C. § 2A-525 (1990); U.C.C. § 9-503 (1972); *see* WHITE & SUMMERS, *supra* note 45, at 912 ("The drafters knowingly chose this well-worn phrase, and did not define it anew. Accordingly the numerous pre-Code cases are still good law."); *see also* BARKLEY CLARK, THE LAW OF SECURED TRANSACTIONS UNDER THE UNIFORM COMMERCIAL CODE ¶ 4.05[2][b][i] (3d ed. 1993 & Supp. 1998). *Compare, e.g.*, Chrysler Credit Corp. v. Koontz, 661 N.E.2d 1171, 1173-74 (Ill. App. Ct. 1996) (upholding repossession of car parked in debtor's front yard), *and* Wade v. Ford Motor Credit Co., 668 P.2d 183, 187 (Kan. Ct. App. 1983) (upholding repossession of car parked in debtor's driveway), *with* Laurel Coal Co. v. Walter E. Heller & Co., 539 F. Supp. 1006, 1007 (W.D. Pa. 1982) (holding repossession unlawful where repossessors cut chain used to lock debtor's premises), *and* Morris v. First Nat'l Bank & Trust Co., 254 N.E.2d 683, 686 (Ohio 1970) (holding repossession unlawful where debtor's son confronted repossessors and stopped protesting only when he was physically surrounded).

Similar balancing principles exist in landlord-tenant law, another area in which both parties may be said to have "property"-like interests in the subject matter of the dispute. *Cf.* Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 993 (1982) (delineating a theory of property rights based on "personhood" interests and arguing that rental

ter upon private property, but their ability to do so is severely restricted. "'The two primary factors considered in making th[e] determination are the potential for immediate violence and the nature of the premises intruded upon.'"[50] Although many contracts expressly authorize creditors to enter private premises to effectuate repossession, courts have read the breach of the peace limitation into these clauses, as well.[51] In the eleven states that have adopted the Uniform Consumer Credit Code ("U3C") as a modification to Article 9, moreover, the creditor may not enter a *dwelling* "unless the consumer voluntarily surrenders possession of the collateral to the creditor."[52] Courts in non-U3C jurisdictions have not specified what

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tenants should be recognized as having property interests in their homes); MARGARET JANE RADIN, CONTESTED COMMODITIES 108-12 (1996) (incorporating housing-related interests into a broader theory of "human flourishing"). Early English common and statutory law accorded landlords broad rights to eject tenants and distrain their personal property to satisfy unpaid rent obligations. *See* Special Project, *Self-Help: Extrajudicial Rights, Privileges and Remedies in Contemporary American Society*, 37 VAND. L. REV. 845, 938-41, 946-49 (1984). However, later courts and legislators gradually restricted the permissible scope of landlord self-help. *See id.* at 940-41, 947-49. Contemporary American landlord-tenant law is increasingly hostile to self-help eviction of any kind. Many states prohibit self-help repossession outright, and most that allow it impose a strict "breach of the peace" standard. *See id.* at 950-53; ROGER A. CUNNINGHAM ET AL., THE LAW OF PROPERTY § 6.80, at 403-04 (2d ed. 1993). Instead, all states have created summary eviction procedures designed to afford tenants notice and an opportunity to appear before a judge. *See* RESTATEMENT (SECOND) OF PROPERTY: LANDLORD AND TENANT §§ 14.1-.3 (1977); CUNNINGHAM ET AL., *supra*, § 6.79, at 400-01; *see, e.g.*, Berg v. Wiley, 264 N.W.2d 145, 150-51 (Minn. 1978). In addition, recognizing that tenants who fail to make rent payments may have justification, most states allow tenants to raise defenses, such as the implied warranty of habitability, for consideration by the court. *See* CUNNINGHAM ET AL., *supra*, § 6.79, at 401.

50. Salisbury Livestock Co. v. Colorado Cent. Credit Union, 793 P.2d 470, 474 (Wyo. 1990) (quoting Cottam v. Heppner, 777 P.2d 468, 472 (Utah 1989)); *cf.* Stone Mach. Co. v. Kessler, 463 P.2d 651, 654 (Wash. Ct. App. 1970) ("To constitute a 'breach of the peace' it is not necessary that the peace be actually broken ... nor is actual personal violence an essential element of the offense."). *See generally* Jean Braucher, *The Repo Code: A Study of Adjustment to Uncertainty in Commercial Law*, 75 WASH. U. L.Q. 549, 572-91 (1997) (summarizing case law on self-help repossession); CLARK, *supra* note 49, ¶ 4.05[2][b][i] (same).

51. *See* CLARK, *supra* note 49, ¶ 4.05[2][b][i], at 4-82 ("A security agreement that purports to waive breach of the peace in advance is not worth the paper it is written on."). As Clark explains, courts have implied this limitation even though Article 9 does not forbid waiver of the right against breach of the peace. *See id.* Arguably, this restricts the parties' freedom to contract for terms of their own choosing. For discussion of the theoretical and practical difficulty of applying notions of "consent" to mass market, standard-form contract terms, see *infra* Part IV.

52. UNIF. CONSUMER CREDIT CODE art. 5, § 5-112 & cmt. 1 (1974) ("It is necessary ... to make it clear that dwellings cannot be entered absent the consent of the occupants

constitutes permissible entry, and why, in situations not involving overt force or threats of force.[53] Generally speaking, courts in non-trespassory repossession cases have allowed some forms of deceit and trickery and prohibited others, and have justified both kinds of results by reference to the relationship between force, consent, and the likelihood of harm.[54]

How should the ancient "breach of the peace" standard and its associated concern with protecting private spaces be understood in connection with virtual, nonrepossessory self-help? Is the touchstone nonconsensual intrusion, or is the objection to nonconsensual intrusion simply that it threatens violence? Plainly, the nonviolent nature of electronic self-help—not to mention electronic "regulation" of performance—does not negate its invasiveness from the consumer's perspective. The widespread outrage that greeted rumors of a "registration wizard" in Microsoft's Windows software, which purportedly reported back to Microsoft via the Internet on

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except under the supervision of the court."); *see* AM. JUR. 2D *Desk Book* Item No. 282 (1992) (summarizing adoption of uniform laws by jurisdiction).

The U3C is not an isolated instance of pro-consumer liberalization. In particular, a number of states have exempted, completely or partially, consumer sales from Article 2's provisions allowing disclaimers of warranty. *See, e.g.*, CONN. GEN. STAT. ANN. § 42a-2-316 (West 1990 & Supp. 1998); MASS. GEN. LAWS ANN. ch. 106, § 2-316(a) (West 1990); MINN. STAT. ANN. § 325.954 (West 1966 & Supp. 1998); WASH. REV. CODE ANN. § 62A-2-316 (West 1995); *see also* Magnuson-Moss Warranty Act, 15 U.S.C. §§ 2301-2310 (1994) (establishing federal minimum standards for warranty protection of tangible consumer products).

53. In a U3C jurisdiction, this question would exist as to private property other than dwellings.

54. *Compare, e.g.*, K.B. Oil Co. v. Ford Motor Credit Co., 811 F.2d 310, 315 (6th Cir. 1987) (upholding repossession of truck being serviced by used truck dealer after misrepresenting to dealer that debtor had consented), Thompson v. Ford Motor Credit Co., 550 F.2d 256, 258 (5th Cir. 1977) (upholding repossession from garage after misrepresenting to garage employees that debtor had consented), *and* Cox v. Galigher Motor Sales Co., 213 S.E.2d 475, 479 (W. Va. 1975) (upholding repossession made after telling the debtor that truck was being taken to have repairs performed), *with, e.g.*, Chrysler Credit Corp. v. McKinney, 38 U.C.C. Rep. Serv. (CBC) 1409 (Ala. 1984) (invalidating repossession made after luring debtor to leave car with dealership for repairs), *rev'd on reh'g and remanded on other grounds*, 456 So. 2d 1069 (Ala. 1984) *and* Ford Motor Credit Corp. v. Byrd, 351 So. 2d 557 (Ala. 1977) (invalidating repossession made by luring debtor to a meeting to continue good-faith settlement discussions). *See generally* Braucher, *supra* note 50, at 587-91 (discussing cases and concluding that they "leave confusion about what sorts of tricks are impermissible"); CLARK, *supra* note 49, ¶ 4.05[2][b], at 4-85 to 4-86, 4-88 to 4-89 (observing that "a little stealth is all in the game of repossession," but describing some cases finding impermissible "chicanery"); ALPHONSE M. SOUILLANTE & JOHN R. FONSECA, THE MODERN LAW OF COMMERCIAL PRACTICES 1368-69 (Supp. 1997) (observing that consent gained by trickery is not meaningful, but that "[t]he majority of cases liberally interpret what 'breach of the peace' means in favor of the creditor").

the contents of users' hard drives, suggests that individuals also assess intrusion in other ways.[55] (Imagine, for example, that a team of high-tech repo men had just used a transporter device to "beam" your sofa out of your living room and back to the furniture store. It would be difficult for the creditor to convince you that no intrusion had occurred.) The law of privacy agrees that intrusion need not be violent to be actionable; nonconsensual "intrusion upon seclusion" is actionable without regard to the intruder's use of force.[56] Assessing the degree of intrusion allowable as a matter of commercial law, therefore, requires us to do more than simply weigh the risk of physical injury to persons or property against the licensor's countervailing proprietary rights.

The fact that section 2B-715 also prohibits self-help repossession in situations presenting a risk of injury to information, independent of any injury to persons or tangible property, indicates some recognition that physical harm is not the only kind of harm threatened by unilateral acts of private enforcement.[57] Article 2B makes clear, however, that the drafters are far more concerned with intangible harms to commercial interests than with intangible harms to individuals. Thus, section 2B-715 includes special protections for the licensee whose trade secrets become entangled with information "belonging to" the licensor, but includes no such protections for the licensee whose diary or great American novel meets a similar fate.[58] The Reporter's Notes to sections 2B-310 and 2B-715 do not even

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55. *See* Peter H. Lewis, *Conspiracy Buffs See Things to Worry About in Microsoft's Electronic Software Registry*, N.Y. TIMES, June 19, 1995, at D3.

56. *See* RESTATEMENT (SECOND) OF TORTS, § 652B (1977); *id.* § 652B (listing decisions recognizing this tort theory from 31 states and the District of Columbia). *See generally* ANITA L. ALLEN, UNEASY ACCESS: PRIVACY FOR WOMEN IN A FREE SOCIETY 57-61 (1988) (discussing the sources and rationales for the concept of privacy rights in one's home). Similarly, the U3C represents a judgment that nonconsensual intrusion into a private home, whether or not violent, is objectionable in its own right. *See supra* note 52 and accompanying text.

57. *See* U.C.C. § 2B-715(b)(2) (July 24-31, 1998 Draft).

58. *See id.* §§ 2B-715(e) (prohibiting repossession if licensor's information is so commingled with licensee's information that separation is infeasible), 2B-715(f) (according repossession rights to licensee who provides information to licensor subject to use restrictions). Neither restriction would appear to apply to word processing files containing documents created by licensees. *Cf.* U.C.C. § 2B-310(c) (July 24-31, 1998 Draft) (excluding from the definition of authorized "electronic regulation of performance" restrictions that interfere with a licensee's access to his or her own information "by means *other than* by use of the licensor's information or informational rights"). By contrast, a creditor who takes personal property of the debtor during a repossession—such as tools or other belongings left in the trunk of a car—must return the property quickly or pay conversion damages for loss of use. *See* CLARK, *supra* note 49, ¶ 12.05[3][b].

acknowledge that the law of privacy exists, or that "privacy" is a state or characteristic that has independent value for individuals and for society.

Determining whether and how privacy concerns should influence the law of electronic self-help requires defining the interests that "privacy" protects and the senses in which it is subject to invasion. Volumes have been written on this subject, and the exact provenance of privacy is still unsettled. For purposes of this article, however, it is sufficient to note that privacy is broadly acknowledged as having decisional, informational, and spatial dimensions.[59] Plainly, the self-help rights provided by Article 2B do not directly implicate privacy concerns related to intimate personal decision-making.[60] Self-help might entail collection and revelation of information about an individual licensee's activities. The privacy implications of such monitoring are clear, and are thoroughly treated elsewhere; I will not repeat that analysis here.[61] My concern here is with the new kind of self-help that digital technologies allow—self-help that consists solely of "dumb," hard-wired prevention of unauthorized conduct. Although this kind of self-help does not appear to raise informational privacy concerns, that does not end the inquiry.[62] Whether such self-help implicates privacy in the spatial sense remains to be considered.

The common law of privacy protects only those expectations of privacy that are "reasonable."[63] One possible understanding of "reasonableness" in the context of assertedly private spaces is that the state of the art of self-help technology determines (and limits) the expectations of privacy that consumers can reasonably have. This is not entirely far-fetched; technology plays an important role in shaping privacy-related rules and norms.[64] Yet if reasonable expectations are defined solely by the limits of

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59. *See, e.g.*, Sheldon W. Halpern, *Rethinking the Right of Privacy: Dignity, Decency, and the Law's Limitations*, 43 RUTGERS L. REV. 539, 541 n.12 (1991); JULIE C. INNESS, PRIVACY, INTIMACY, AND ISOLATION 56-69 (1992); Jerry Kang, *Information Privacy in Cyberspace Transactions*, 50 STAN. L. REV. 1193, 1202-03 (1998).

60. They might do so indirectly—if, for example, a licensor attempted to prevent use of its products to inform or facilitate such decisions. However, this type of privacy violation probably could not be accomplished without a concurrent invasion of informational or spatial privacy interests.

61. For discussion of the privacy concerns and other concerns raised by monitoring intellectual activities, see Cohen, *supra* note 9, at 994-1019. For more general discussion of informational privacy issues, see Kang, *supra* note 59; *see also* Friedman, *supra* note 42 at 1153, 1163-64.

62. *See* Friedman, *supra* note 42, at 1153, 1163-64.

63. *See* RESTATEMENT (SECOND) OF TORTS § 652B cmts. c-d (1977).

64. *Cf.* Jeffrey Reiman, *Driving to the Panopticon*, 11 SANTA CLARA COMPUTER & HIGH TECH. L.J. 27, 32 (describing the level of privacy enjoyed by individuals as a function of both formal (legal) and material (physical) conditions).

technological possibility, privacy has a bleak future. Individuals' legal entitlement to privacy will simply recede as the technologies of intrusion advance. This approach also rests on an important, and misguided, assumption concerning the unidirectional nature of technological progress. Technology can evolve in privacy-destroying or privacy-protecting ways. The actual path of technological evolution will depend on many factors, including the priorities of stakeholders and the processes by which stakeholders are identified and consulted.[65] To say that electronic self-help is legitimate because it is possible ignores the degree to which both "privacy" and "technology" are normative as well as positive constructs—functions of the laws and mores of society as well as the laws of physics.

Another possible interpretation of "reasonableness," suggested by cases involving alleged intrusion upon seclusion via remote listening and viewing devices, is that an intrusion into private space is actionable only if it renders the space accessible, or potentially so, to a human observer.[66] This answer also is unsatisfactory, however, because it depends, ultimately, on informational privacy concerns. Privacy protects certain spaces not only to shield personal behaviors from observation by others, but also to preserve a zone of autonomy from interference by others.[67] Freedom

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65. *Cf.* Cohen, *supra* note 7, at 398-402 (arguing that technology both constitutes and is constituted by social values and institutions); Lawrence Lessig, *Governance* 5-9 (Aug. 23, 1998 Draft) (arguing that choices about the technical architectures of cyberspace are, inevitably, also choices about the regularity of cyberspace behavior) <http://cyber.law.harvard.edu/works/lessig/NY_q_d2.pdf>.

66. *Compare, e.g.*, Marks v. Bell Tel. Co., 331 A.2d 424, 431 (Pa. 1975) (holding that secret taping of conversations in police station holding room not actionable as invasion of privacy because recordings were not actually replayed and were routinely erased several weeks after being made), *with, e.g.*, Amati v. City of Woodstock, 829 F. Supp. 998, 1010-11 (N.D. Ill. 1993) (holding that secret taping of conversations actionable as invasion of privacy whether or not anyone actually listened to the recordings, because "[o]ne would never obtain the full benefits accorded to a private place if he or she reasonably believed someone would or could be listening"), Harkey v. Abate, 346 N.W.2d 74, 76 (Mich. Ct. App. 1983) (holding that see-through panels above stalls in women's bathroom at roller skating rink constituted invasion of privacy whether or not panels actually were used to view plaintiffs), *and* Hamberger v. Eastman, 206 A.2d 239, 243 (N.H. 1965) (holding that listening device installed by landlord in tenants' bedroom constituted invasion of privacy whether or not landlord ever used it).

67. *See, e.g.*, *Marks*, 331 A.2d at 433 (Pomeroy, J., concurring in the result) ("The tort of intrusion is designed to protect an individual, not against what other human beings think of him, but rather against the very act of interference with his seclusion."); Edward J. Bloustein, *Privacy as an Aspect of Human Dignity: An Answer to Dean Prosser*, *in* PHILOSOPHICAL DIMENSIONS OF PRIVACY: AN ANTHOLOGY 156, 165 (Ferdinand David Schoeman, ed. 1984) ("The fundamental fact is that our Western culture defines individuality as including the right to be free from certain types of intrusions. This measure of per-

from observation means little without freedom from outside control. Because autonomy interests may be violated even if informational interests are not, whether a human observer gleans any *direct* information from an autonomy-destroying intrusion is irrelevant. It is worth noting, too, that "dumb" intrusions are not divorced from human agency, but only separated from it in time. In a sense, the intrusion (or at least its but-for cause) occurred much earlier, when the licensor determined that consumers in their private homes and offices would be allowed to take certain actions but not others.[68]

It is true that "dumb" self-help is a *different* kind of intrusion than that caused by human perception. Yet to characterize it as "merely" a communication surely would go too far. A dinnertime telemarketing phone call may annoy, but a spurned telemarketer cannot turn off software that happens to be running on a personal computer in one's study, or deny access to copies of digital works stored there. Electronic self-help is a communication that suspends or restricts preexisting access to stored digital information; as such, it is qualitatively different than an unwanted telephone call that has no further effect.[69]

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sonal isolation and personal control over the conditions of its abandonment is of the very essence of personal freedom and dignity ...."); Thomas Scanlon, *Thomson on Privacy*, 4 PHIL. & PUB. AFF. 315, 317 (1975) ("The interests to which an account of privacy must refer thus include, in addition to specific interests in not being seen, overheard, etc., broader interests in having a zone of privacy in which we can carry out our activities without the necessity of being continually alert for possible observers, listeners, etc."); *cf.* Stanley v. Georgia, 394 U.S. 557, 565-66 (1969) (holding that the First Amendment protects "the right to satisfy [one's] intellectual and emotional needs in the privacy of [one's] own home"); MARGARET JANE RADIN, REINTERPRETING PROPERTY 56-63 (1982) (arguing that property rights in the home are a necessary constituent of individual personhood); Claudia W. Tuchman, Note, *Does Privacy Have Four Walls? Salvaging* Stanley v. Georgia, 94 COLUM. L. REV. 2267, 2283-84 (1994) (characterizing constitutionally-protected privacy as "the right of an individual to conduct a private life free from state interference").

Fourth Amendment protection against unreasonable searches and seizures serves similar values. *See, e.g.*, Boyd v. United States, 116 U.S. 616, 630 (1885) ("It is not the breaking of his doors, and the rummaging of his drawers, that constitutes the essence of the offence; but it is the invasion of his indefeasible right of personal security, personal liberty, and private property ...."); *see also* Michael Adler, *Cyberspace General Searches, and Digital Contraband: The Fourth Amendment and the Net-Wide Search*, 105 YALE L.J. 1093, 1108-13 (1996) (emphasizing importance of the home as a zone of autonomy).

68. Technically, of course, the licensor and the consumer "agreed" to the restrictions; for discussion of whether it makes sense to treat these restrictions as the subject of genuine mutual consent, and why it might not, see *infra* Part IV.

69. According to the Restatement view, even telephone calls may constitute intrusion upon seclusion, depending on the circumstances. *See* RESTATEMENT (SECOND) OF TORTS, § 652B cmt. b, illus. 5 (1977).

Telephone, electric, and gas companies supply a somewhat closer parallel. These entities have the undisputed power to disconnect service to private homes and offices. However, they do not have the power to reach inside the home or office and disable lawfully acquired products, such as lamps, stoves, and telephones, merely because they require electricity, gas, or telephone wire to function. In addition, public utilities' power to exercise self-help is limited in other ways. The telephone company may not disconnect a consumer for making fun of the company, nor for taking apart the telephone to try to build a better one; it may do so only for nonpayment, and only after providing notice and a grace period.[70] In contrast, section 2B-310 and (depending on judicial interpretation) possibly section 2B-715 authorize intrusion into private individuals' homes, offices and computer systems for a wide variety of misconduct, without prior notice, as a matter of routine business practice. Thus, to decide whether the intrusions-by-communication authorized by Article 2B are reasonable based on a public utility analogy, we also must consider whether their subject matter justifies their scope.

B. Self-Help, Notice and "Materiality"

Self-help historically has been understood, and rightly so, as a drastic remedy. For this reason, existing commercial law requires that the range of conduct that will trigger self-help behavior be clearly defined. For leases, the language of Article 2A sets these initial limits. A lessor of tangible property may engage in self-help only if the lessee "wrongfully rejects or revokes acceptance of goods or fails to make a payment when due or repudiates" all or part of the contract, or otherwise "*substantially* impairs" its value.[71] The language of Article 9, in contrast, is relatively open-ended; it allows self-help repossession by the holder of a security interest upon the debtor's "default."[72] Because Article 9 does not define "default," courts have required that the events alleged as default be defined as such in the security agreement.[73] Moreover, courts in a number of states have

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70. *See, e.g.*, CAL. PUB. UTIL. CODE §§ 779, 779.1 (West Supp. 1998); CONN. GEN. STAT. ANN. § 16-262d (West 1988 & Supp. 1998); N.H. REV. STAT. ANN. § 363-B:1 (1995); N.Y. PUB. SERV. LAW § 47-32 (McKinney 1989). Public utilities in general are heavily regulated. Thus, taking seriously an argument that information providers are "like" public utilities is unlikely to lead us to a model law that emphasizes "freedom of contract."

71. U.C.C. §§ 2A-523(1), (3)(a) (emphasis added), 2A-525(2), (3) (1990).

72. U.C.C. § 9-503 (1972).

73. *See* CLARK, *supra* note 49, ¶ 4.02[1]; 9 WILLIAM D. HAWKLAND ET AL., UNIFORM COMMERCIAL CODE SERIES § 9-503:1, at 667-69 (1997); WHITE & SUMMERS, *supra* note 45, § 25-2, at 902. When events of default are not specifically defined, courts will require failure of payment or other clearly "material" breach to justify repossession. *See, e.g.*,

cabined contractual events of default by imposing objective limits on "catchall" belief-in-insecurity clauses;[74] by restricting the use of insecurity-acceleration clauses and requiring clear notice of acceleration in all relevant documents;[75] by limiting the use of demand clauses if the contract also contains enumerated events of default;[76] and by applying principles of estoppel to bar repossession or acceleration by creditors in some circumstances notwithstanding the contract language.[77] In U3C jurisdictions, these restrictions are codified; a creditor may not accelerate the debt, but instead must afford both notice and an opportunity to cure the deficient installment(s), and may proceed with self-help repossession only upon objective evidence of "significant impairment of the prospect for payment or realization on the collateral."[78] These restrictions are designed to mitigate the severity of the self-help remedy by ensuring that self-help will not follow minor or debatable infractions, and by alerting consumers to the kinds of conduct that create risk.

Measured against existing law and practice, the self-help provisions of proposed Article 2B require much less advance notice, and authorize self-help in an even broader range of circumstances. Section 2B-310, in particular, allows electronic regulation of any behavior considered inconsistent with the contract, without contractual notice in many cases.[79] In contrast, although the Article 2B drafting committee had previously approved post-cancellation self-help provisions without any materiality restriction, the new version of section 2B-715 requires either that the breach be "material" or that the license expressly define it as grounds to cancel.[80] Even

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Bankwest, N.A. v. Groseclose, 535 N.W.2d 86 (S.D. 1995); Stillwell Welding Co. v. Colt Trucking, 741 P.2d 598 (Wyo. 1987); CLARK, *supra* note 49, ¶ 4.02[1].

74. *See* CLARK, *supra* note 49, ¶ 4.02[2][a], at 4-9.

75. *See id.* at 4-8 to 4-9, 4-13.

76. *See id.* ¶ 4.02[2][a], at 4-12.

77. *See id.* ¶¶ 4.02[3], 12.05[1][b]-[c]. Each of the above judicially-developed limitations is informed by the general duty of good faith required by U.C.C. section 1-203. In general, however, "§ 1-203 does not support a cause of action where no other basis exists under the U.C.C." CLARK, *supra* note 49, ¶ 4.02[4], at S4-18; *see also id.* ¶ 4.02[2][b], at 4-11 (citing U.C.C. § 1-208 (1995)) (noting that § 1-203 does not limit the use of demand notes, which by definition may be called for any reason or no reason). Article 2B appears to follow the same approach.

78. UNIF. CONSUMER CREDIT CODE art. 5, §§ 5-109, -110, -111(a) (1974); *see* CLARK, *supra* note 49, ¶ 12.05[1][a].

79. *See* U.C.C. § 2B-310 & Reporter's Note 3 (July 24-31, 1998 Draft). Arguably, Article 2B's provision for the unenforceability of unconscionable terms offers a way out of this difficulty. *See id.* § 2B-110. It is unlikely, however, that this is the result the drafters intended.

80. *See* U.C.C. §§ 2B-702, 2B-715 (July 24-31, 1998 Draft).

these restrictions, however, do very little to bring Article 2B in line with the existing law of self-help repossession.

First, as described above, existing law requires written notice of the possibility of electronic self-help in all cases, not just some. This is true for electronic self-help as well. Every court that has considered a challenge to electronic self-help repossession of licensed software has indicated that in view of its drastic nature, electronic self-help requires prior contractual authorization.[81] The Reporter's Notes to sections 2B-310 and 2B-715 do not mention these decisions at all.[82] The omission is hard to fathom. Given the severity of the consequences and the inability of most consumers to evade them, lack of written notice of the possibility of electronic self-help is simply unfair. (If a creditor considered itself entitled to "beam" your sofa out of your living room, or to prevent you from installing new cushion covers, you almost certainly would prefer to know this up front.) It is worth noting, too, that none of the cases concerning electronic self-help has involved a non-negotiated, mass market contract; thus, no court was required to consider whether the "notice" afforded consumers by standard-form provisions is enough to validate electronic self-help. It is

81. *See* American Computer Trust Leasing v. Jack Farrell Implement Co., 763 F. Supp. 1473 (D. Minn. 1991) (rejecting tort claims for electronic deactivation because plaintiff's contract with software vendor gave vendor the right to deactivate software if plaintiff failed to make payments), *aff'd on other grounds sub nom.* American Computer Trust Leasing v. Boerboom Int'l, Inc., 967 F.2d 1208 (8th Cir. 1992); Clayton X-Ray Co. v. Professional Sys. Corp., 812 S.W.2d 565 (Mo. Ct. App. 1991) (affirming award of punitive damages against software vendor that deactivated software, even though plaintiff was liable to vendor for failing to pay vendor's bill, because vendor had no "legal right" to deactivate software); Franks & Son, Inc. v. Information Solutions, No. 88-C-1474E (N.D. Okla. Dec. 23, 1989), 1989 Cptr. Indus. Litig. Rep. (Andrews) 8927-35 (Jan. 23, 1989) (rejecting software vendor's argument that U.C.C. Article 9 authorized deactivation of software because, *inter alia*, contract did not disclose deactivation code's existence); *see also* Werner, Zaroff, Slotnick, Stern & Askenazy v. Lewis, 588 N.Y.S.2d 960 (N.Y. Civ. Ct. 1992) (affirming punitive damages award against software consultant who secretly included code that caused plaintiff's software to shut down, in the hope that plaintiff would offer him a service contract to fix the problem, and noting that consultant had "no right" to include the deactivation code); Art Stone Theatrical Corp. v. Technical Programming & Sys. Support, Inc., 549 N.Y.S.2d 789 (N.Y. App. Div. 1990) (holding that vendor that removed essential software code from plaintiff's system pending resolution of contract dispute could not claim benefit of general release agreement negotiated while code was being withheld if plaintiff could prove duress). Perhaps the most well-known case involving electronic self-help repossession, Revlon v. Logisticon, Inc., No. 70533 (Cal. App. Dep't Super. Ct. filed Oct. 22, 1990), settled before the court could rule on plaintiff's contract and tort claims. *See* Gary J. Edwards, *Self-Help Repossession of Software: Should Repossession Be Available Under Article 2B of the U.C.C.?*, 58 U. PITT. L. REV. 763, 778-79 (1997).

82. U.C.C. § 2B-310, Reporter's Notes; *id.* § 2B-715, Reporter's Notes.

at least an open question whether the severity of the remedy justifies heightened notice requirements.[83]

Second, even apart from the issue of notice, the self-help rights afforded by Article 2B are extremely broad. In part, this is the result of specific drafting decisions; even section 2B-715's materiality restriction is virtually meaningless because Article 2B's definition of "material" breach is so broad that it encompasses almost any breach.[84] In part, however, it is a consequence of the open-ended nature of "informational rights" as conceived by licensors and the Article 2B drafting committee. Both Article 2A and Article 9 inherently concern a narrower range of potential transgressions than Article 2B. The typical Article 2A lease or Article 9 security agreement is concerned only with behaviors that bear on the debtor's financial soundness or on the availability of the collateral to satisfy the debt.[85] In practice, a default most often will consist of failure to make required payments. Article 2B, in contrast, contemplates a seemingly limitless range of restrictions on the uses that licensors may make of creative and informational works, and appears to contemplate electronic enforcement of most such restrictions—which, in turn, exacerbates the notice problem still further. An expansive conception of breach need not, however, automatically translate into an expanded scope for self-help. At minimum, before adopting this robust conception of private ordering, we should weigh its merits and demerits and consider other possible approaches.

Affording licensors such broad powers of self-help is enormously problematic, for several reasons. First, the determination of breach (or, as in section 2B-310, behavior "inconsistent with" the license) is not always as clear-cut as sections 2B-310 and 2B-715 imply. Deciding whether a consumer has failed to pay is relatively easy; for other license provisions, however, the determination of breach may require resolution of difficult questions of fact or law.[86] Appointing the licensor judge, jury, and execu-

83. *See supra* note 40. As discussed *infra* Part V.C., the Supreme Court has held that private self-help repossession activity does not implicate constitutional due process protection. Even if that rule holds for the self-help authorized by Article 2B, a threshold level of notice to the consumer might be required as a matter of sound commercial policy.

84. *See* U.C.C. § 2B-109(b)-(c) (July 24-31, 1998 Draft) (defining "material" breach to include any conduct likely to cause substantial harm; any conduct substantially likely to cause substantial deprivation of an expected benefit; failure to perform an "essential element" of the contract; the cumulative effect of nonmaterial breaches; and anything else defined in the contract as material).

85. *See* U.C.C. § 9-102 (1972).

86. Consider, for example, a license authorizing the customer to adapt and debug, but not materially alter, a copyrighted software program.

tioner on these questions seems singularly unwise. Second, the alleged inconsistency or breach may consist of conduct that copyright law permits. A licensee might trigger digital policing mechanisms while trying to fix bugs in licensed software, or using the licensed information to create a classroom handout or critical commentary.[87] In such a case, the licensee has a defense—copyright preemption—that is unavailable to the person who simply has failed to pay for goods received, and the outcome may turn—as the drafters themselves note—on the resolution of difficult questions of federal law.[88]

One obvious solution to the overbreadth problems in sections 2B-310 and 2B-715 is to authorize self-help only for the same kinds of misconduct that have traditionally warranted it: failure to pay and other conduct that substantially impairs the value of the covered property based on an objective standard.[89] In the case of section 2B-715, courts could simply interpret "materiality" this way. Neither approach appears to have occurred to the drafters, for reasons that also are self-evident: such restrictions would diminish Article 2B's utility as a vehicle for private ordering of rights in information. Yet at the same time, the drafters' decision to impose some sort of materiality restriction, however vague, on self-help under section 2B-715 suggests a recognition, however murky, that wholly unrestrained private ordering might be bad policy. A narrow understanding of "materiality" makes the most sense, both in terms of fairness to consumers and in terms of broader societal concerns about the rule of law. Section 2B-310, however, contains no express materiality restriction, and as we have seen, there are other significant differences between the self-help powers conferred by section 2B-310 and those conferred by 2B-715. Thus, to finish the project undertaken in this Part, we must consider the drafters' implicit assumption that "regulation of performance" ex ante is fundamentally different than "self-help" ex post.

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87. *See* 17 U.S.C. §§ 107, 117 (1994); Acuff-Rose Music, Inc. v. Campbell, 510 U.S. 569 (1994).

88. The licensee may have a First Amendment defense as well. *See infra* Part V.B.

89. Thus, for example, self-help might be reasonable in the case of a licensee who makes and distributes multiple copies of a covered work outside an academic or research setting, but unreasonable in the case of a licensee who makes one or two copies, or who distributes multiple copies within an academic or research setting. *Cf.* 17 U.S.C. § 107 (1994) (listing education and research among uses of copyrighted works that are likely to be fair); Sony Corp. of Am. v. Universal City Studios, 464 U.S. 417 (1985) (holding home videotaping of broadcast programming for personal viewing purposes to be a fair use).

C. Self-Help in Time

Sections 2B-715 and 2B-310 diverge markedly with regard to materiality and notice; this suggests that the drafters see an important difference between the two types of self-help. This difference follows fairly straightforwardly from the libertarian notion of freedom of contract. From this perspective, it is conceivable that wholly unfettered rights of "repossession," or post-breach self-help, might unacceptably blur the line between the rule of law and the state of nature. A central purpose of the social contract, after all, is to eliminate the chaos and uncertainty that would arise in a society without formal systems of dispute resolution. Electronic regulation, however (or so the argument goes), invokes the law of the market, not the law of the jungle. "Regulation of performance" is simply a high-tech way of describing the licensor's right to determine the features of its product. The restrictions become part of the product, which consumers can take or leave.[90]

The freedom of contract argument for unfettered electronic regulation of performance is simple and elegant—and breathtakingly sophomoric. First, it conflates choice with submission and product capabilities with control of behavior. Your vacuum cleaner cannot fly, or clean your oven, and you have no particular right to one that can. However, except in special cases governed by the patent laws, within private spaces you may use or modify a lawfully-acquired vacuum cleaner in any way you see fit. There might be questions about liability for injuries arising from unintended uses, but that is a separate matter well within the scope of existing contract and tort law concerning warranties, warnings, and disclaimers. Second, the freedom-of-contract argument conflates digital code with "contract," and calls the result a purely private form of ordering exempt from public policy limits—although "contract" is not and never has been exempt from such limits.[91] Section 2B-310 sanctions the control of people, not products; it negates agency, and calls the result freedom.

Theory aside, consider (again) your living room sofa. Suppose, first, that the purchase agreement states that no more than three people may sit

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90. *See* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1453 (7th Cir. 1996) ("Terms of use are no less a part of 'the product' than are the size of the database and the speed with which the software compiles listings. Competition among vendors, not judicial revision of a package's contents, is how consumers are protected in a market economy."); Friedman, *supra* note 42, at 1163-64; Nimmer, *supra* note 3, at 838-54.

91. *See* Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach* (Sept. 20, 1998 Draft) <http://cyber.harvard.edu/works/lessig/LNC_Q_D2.PDF>. On the remedial significance of this distinction, see *infra* Part VI. As the existence of tort law demonstrates, product design also has never been exempt from public policy limits.

on the sofa at a time. When a fourth person (say, perhaps, the small child of an adult sofa-sitter) attempts to join the others, the sofa vanishes, dumping its erstwhile occupants onto the floor. This is repossession, swift and (largely) bloodless.[92] Now suppose, instead, that the child's approach activates an invisible force field, such that the child may not sit while all three adults remain. There is no repossession (the sofa remains) and no loss of "use" (as defined by the licensor), but only regulation of use. There is little risk of physical injury, and little need for invasion of privacy in the informational sense. Yet I suspect most readers will feel that from the standpoint of personal autonomy within a space hitherto conceived as private, there is not much difference between the two scenarios.[93] Article 2B stands for the proposition that intellectual property is different enough from sofas that licensors can, with straight faces, propound and demand acceptance of precisely the latter sort of regime.[94]

Is there any consideration that might justify broader rights of private ordering and self-help repossession, and a correspondingly restricted sense of individual autonomy, as to information products than as to tangible articles of commerce? The answer, according to the drafters of Article 2B, seems to be that unauthorized use is reconceived as an invasion of the information provider's "property" interests in the work, as distinct from the particular copy the licensee happens to possess.[95] It is true that intellectual property and sofas are not entirely the same—sofas are not public goods, and cannot be costlessly copied—but the need to prevent market-destroying appropriation is a very different sort of argument, and it is far from clear that it justifies the full range of autonomy-destroying practices that section 2B-310 would allow.[96] Moreover, the fact that the licensor may have "informational rights" in the licensed subject matter also cuts the other way, because "informational rights" are limited by law in ways that rights in chattels are not. A copyrighted work is not "property" in the same sense as land or consumer goods, because the public has protectable

92. Section 2B-715 would authorize suit for any personal injury that might result. *See* U.C.C. § 2B-715 (July 24-31, 1998 Draft).

93. I am indebted to James Davis of the Xerox Palo Alto Research Center for inspiring this train of thought.

94. Or, still more frighteningly, that electronic regulation of sofa use would be wholly legitimate.

95. *Cf.* Trotter Hardy, *The Ancient Doctrine of Trespass to Web Sites*, 1996 J. ONLINE L. art. 7 (1996); Trotter Hardy, *Property (and Copyright) in Cyberspace*, 1996 U. CHI. LEGAL F. 217 (1996).

96. This argument is considered further *infra* Part IV.

interests in certain public-domain aspects of copyrighted works at the outset.[97]

Even the common law of property historically has recognized certain public rights of access to or across the property of another.[98] Most closely analogous is the public trust doctrine, which preserves a right of access across privately-owned land when necessary to reach beaches and other areas that the law considers to be commonly-owned.[99] Similarly, the exceptions and exclusions in copyright law preserve public access to the linguistic, cultural, and scientific commons. The common law of property also recognizes public rights of privacy while on the property of another; for example, landlords may not use listening devices or trick mirrors to spy on their tenants, or install viewing devices in public restroom stalls.[100] In short, the fact that something is "property" does not, without more, confer on its owner rights of absolute, unqualified control.[101] The scope of permissible private ordering of others' behavior within private spaces should be a subject of conversation for society generally, not a unilateral decision for information providers.

In sum, Article 2B proposes to arrogate to private information providers the power to reach into customers' homes and offices and literally shape their behavior—in many cases without even the courtesy of express

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97. *See supra* text accompanying notes 13-14 (discussing public-domain status of facts, ideas, and functional principles). "Informational rights" in noncopyrightable works are even narrower. *See supra* text accompanying notes 14-16 (discussing data misappropriation law and copyright preemption).

98. Common law rights against trespassers are not and never have been absolute. One may not, for example, use deadly force against a trespasser unless one's own life is threatened. *See, e.g.*, Katko v. Briney, 183 N.W.2d 657 (Iowa 1971). And one may trespass on another's property to save one's own life. *See, e.g.*, Vincent v. Lake Erie Transp. Co., 124 N.W. 221 (Minn. 1910). (A trespasser under these circumstances will be held responsible for damages, if any, but that is a separate question. *See id.* at 222.)

99. *See* Phillips Petroleum Co. v. Mississippi, 484 U.S. 469 (1988); JACK H. ARCHER ET AL., THE PUBLIC TRUST DOCTRINE AND THE MANAGEMENT OF AMERICA'S COASTS (1994); Kathryn R. Heidt, *Cleaning Up Your Act: Efficiency Considerations in the Battle for the Debtor's Assets in Toxic Waste Bankruptcies*, 40 RUTGERS L. REV. 819, 860 (1988) ("The concept here is that there are certain rights in the public that cannot be conveyed by the state."); *cf.* Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986) (describing the origins of and justifications for common law doctrines that vest collective property rights in the "unorganized" public). I am indebted to Dan Burk for suggesting this analogy.

100. *See, e.g.*, Mas v. Perry, 489 F.2d 1396 (5th Cir. 1974); Hamberger v. Eastman, 206 A.2d 239 (N.H. 1965); Harkey v. Abate, 346 N.W.2d 74 (Mich. Ct. App. 1983).

101. For further discussion of the origins and errors of this "control theory" of property, see Cohen, *supra* note 7, at 343-53.

contractual notice. Even if self-enforcing digital contracts did not implicate federal copyright law, these new technological methods for regulating the use of information products and effectuating self-help repossession would raise important questions about the permissible scope of private enforcement activity. Ultimately, Article 2B requires us to decide whether "self-help" as a legal construct exists solely for the narrow purpose of protecting vendors and consumers from avoidable financial harm, or also for the broader purpose of allowing vendors to shape the behavior, even within private spaces, of those with whom they deal. That such self-help concerns intellectual property makes it more, not less, troubling, because private ownership of intellectual property traditionally has been conceived as less complete than private ownership of chattels. These questions deserve far more careful consideration than they appear to have received. Platitudes about the need for enforcement of contracts are simply inadequate to justify such a radical reallocation of authority to monitor and control individual conduct.

IV. THEORY: CONSENT, EFFICIENCY, AND NORMS

The electronic regulation and self-help provisions of Article 2B also cannot be justified under any of the prevailing scholarly accounts of self-help and its role in the fabric of commercial exchange. Although these theories run the gamut from freedom of contract to economic efficiency, they share a common failing. All of the theories ignore or assume away the structural peculiarities of the consumer mass market, and thus fail to recognize that neither consent nor efficiency can be judged in the abstract. In addition, theoretical approaches that privilege allocative efficiency to the exclusion of all other considerations are inappropriate given the public good nature of creative and informational works. When mass market transactions in information products are considered in context, theoretical justifications for unfettered private electronic ordering become difficult to sustain.

Several legal scholars and at least one court have sought to justify enforcing contract terms governing use of creative and informational works by reference to individual freedom of contract. Consumers, the theory posits, are free to accept or reject the terms offered in the market. If they consent to license agreements that abrogate the user privileges established by copyright law, it must be because they find such agreements desirable.[102]

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102. *See* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996); Bell, *supra* note 17, at 588-89 n.142; Friedman, *supra* note 42, at 1155-57; Maureen O'Rourke, *Copy-*

In the mass market context, however, the argument from consent is far too simple. The market system established by the U.C.C. bears little resemblance to the atomistic market of the neoclassical, libertarian paradigm, which presumes perfect information and fully-informed consent as to every term of the deal.[103] The U.C.C. was designed to allow commercial transactions to proceed without exact specification of every term, and in particular to obviate the need for bargaining over the allocation of product-related risks.[104] Article 2B's mass market license provisions continue this approach; they are designed (among other things) to facilitate market exchange in the absence of complete information. Particularly for complex products (or "ordinary" products that have been subjected to complex contract terms) the argument that the structure of the typical mass market transaction enables voluntary, informed exchanges with respect to most terms other than price is sheer fantasy.[105] This is especially true for implicit contract terms, such as the electronic "regulation" of behavior "inconsistent with the agreement" authorized by section 2B-310.[106] This is not to say (yet) anything about the legitimacy of particular mass market terms expressly or implicitly authorizing self-help, but only that a meaningful justification for broad powers of self-help must proceed without reliance on a hypothetical state of affairs that bears no resemblance to reality.

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right Preemption After the ProCD *Case: A Market-Based Approach*, 12 BERKELEY TECH. L.J. 53, 83-87 (1997).

103. *See* ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 186-93 (2d ed. 1997) (describing requirements for a perfectly-functioning market); *cf.* DeLong & Froomkin, *supra* note 7 ("[T]oday's purchaser of, say, a suite of software programs is faced with needs and constraints that a metric designed to explain the market for pins may leave us poorly prepared to understand.").

104. *See* Cohen, *supra* note 7 at 322-28; Rice, *supra* note 17, at 564-65.

105. *See* Cohen, *supra* note 7 at 322-28; Victor P. Goldberg, *Institutional Change and the Quasi-Invisible Hand*, 17 J.L. & ECON. 461, 483-85 (1974); William T. Vukowich, *Lawyers and the Standard Form Contract System: A Model Rule That Should Have Been*, 6 GEO. J. LEGAL ETHICS 799, 800-11 (1993); *cf. Goldberg, supra* note 15, at 484-91 (characterizing the legal institution of the standard form as a societal decision to delegate most commercial rulemaking to private firms). To the contrary, as Vukowich notes, purveyors of standard forms often simply refuse to allow consumers to review the fine print before concluding the transaction. Vukowich, *supra*, at 806-07. Article 2B would validate this practice, creating obvious practical difficulties for even the most determined comparison shoppers. *See* U.C.C. §§ 2B-111, 2B-112(b)-(c) & Reporter's Notes 2, 5 (July 24-31, 1998 Draft) (allowing disclosure of terms after purchase but prior to use of the product).

106. *See supra* text accompanying notes 21-24.

At the other end of the epistemological spectrum lie efficiency-based arguments of varying degrees of sophistication.[107] The simplest economic rationale for allowing self-help repossession turns on the seller's opportunity cost. Creditors seeking expanded self-help powers typically have argued that requiring them to incur litigation costs, or to charge off as losses items of collateral too small to justify litigation, will raise the price of credit for other, law-abiding consumers.[108]

This "lost-value" justification for self-help does not apply as neatly to intangible intellectual property, however, both because of the public good nature of creative and informational works and because of the broad scope of self-help contemplated under Article 2B. First, the "lost value" attributable to a product whose value lies chiefly in its public good aspect is inherently speculative. Failure to recover a car after the buyer defaults precludes the secured creditor from recovering a portion of its investment; failure to recover a copy of a creative or informational work does not preclude the information provider from realizing a profit on the work.[109] Particularly in the case of digital works, the supply of copies is infinite and virtually costless, and there is no necessary or inevitable relationship between the price charged to consumers and the value invested in each copy. The point is not that information providers have no claim to remuneration

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107. In a sense, the notion of a spectrum of theoretical argument is inapposite; as I and others have demonstrated, there is substantial overlap between the two "endpoints." *See* Cohen, *supra* note 7, at 322-34, 343-53 (arguing that libertarianism and neoclassical economic theory proceed from the same set of normative premises); Gillian K. Hadfield, *The Economics of Copyright: An Historical Perspective*, 38 COPYRIGHT L. SYMP. (ASCAP) 1, 41-45 (1988) (same); Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 TEX. L. REV. 873, 896-98 (1997) (same); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 310 n.109 (1996) (same). *See generally* C. Edwin Baker, *The Ideology of the Economic Analysis of Law*, 5 PHIL. & PUB. AFF. 3, 33 (1975) (discussing the convergence of Chicago-style utilitarian and libertarian justifications for market ordering).

108. *See, e.g.*, Fuentes v. Shevin, 407 U.S. 67, 102-03 (1972) (White, J., dissenting).

109. *See* Edwards, *supra* note 81, at 786; Henry Gitter, *Self-Help Remedies for Software Vendors*, 9 SANTA CLARA COMPUTER & HIGH TECH. L.J. 413 (1993); Esther C. Roditti, *Is Self-Help a Lawful Contractual Remedy?*, 21 RUTGERS COMPUTER & TECH. L.J. 341 (1995); Pamela Samuelson, *Embedding Technical Self-Help in Licensed Software*, 40 COMM. ACM 13, 16 (Oct. 1997) ("Licensors of software or other information ... will generally invoke self-help to destroy the licensed property rather than to preserve its value for resale to another customer.").

In a relative sense, some consumers may end up subsidizing others' uses, in that the prices charged them may be greater than they otherwise would have been. It is appropriate to consider whether these relative subsidies, or quasi-subsidies, represent good policy in a system intended to promote the production and distribution of this particular type of public good. But that is a very different question. *See infra* text accompanying notes 142-47.

for copies of works—plainly, they do and should—but only that "lost value" arguments are less compelling in this context; thus, it seems odd that information providers should demand greater powers of self-help than are available to purveyors of tangible goods.[110]

Second and more important, Article 2B authorizes self-help in a wide variety of circumstances unconnected to failure of payment or financial insecurity—for example, unauthorized modification of software or copying of content for educational purposes.[111] Even if lost profits warrant electronic self-help when consumers fail to pay, that does not justify using lost profits to bootstrap electronic self-help rights in other cases. Here again there is a gray area, though: if the information provider wishes to charge a fee for every use of a work, or to charge different users different types of fees, may not any case be converted into one of failure to pay? The answer is complicated. In a recent essay, Terry Fisher argues that allowing information providers the freedom to price discriminate may benefit society—except when ceding greater control to information providers threatens other important social values.[112] Plainly, price discrimination will benefit marginal consumers; plainly too, there will be difficult cases involving marginal sellers for whom the extra profit would make the difference.[113] But the need to consider other social policies—discussed at greater length below—means that information providers cannot be the ones to decide when certain uses may be restricted, or when electronic self-help may follow. Decisions about privatizing information policy must be based on more than the licensor's desire for additional profit.

Other economic theorists focus on the general deterrence value of self-help rules and practices. Robert Scott argues that the threat of self-help plays an important role in inducing non-defaulting consumers to pay their

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110. The routinely-invoked threat of piracy following loss of control of digital works is overstated, as it is far from clear that every pirated copy represents a lost sale. *See, e.g.*, David M. Hornik, *Combating Software Piracy: The Softlifting Problem*, 7 HARV. J.L. & TECH. 377, 390 (1994). Moreover, other sanctions (in particular, social norms) work to constrain the kinds of unauthorized distribution that represent significant market threats. *Cf.* Michael J. Madison, *"Legal-Ware": Contract and Copyright in the Digital Age*, FORDHAM L. REV. (forthcoming 1999) (discussing the importance of social norms, or "conventions," in determining the practices of copyright users); Michael J. Meurer, *Price Discrimination, Personal Use and Piracy: Copyright Protection of Digital Works*, 45 BUFFALO L. REV. 845 (1997) (treating the "markets" for piracy and unauthorized personal use as factually and conceptually distinct).

111. *See supra* Part III.B.

112. William W. Fisher III, *Property and Contract on the Internet*, 74 CHI.-KENT L. REV. (forthcoming 1998); *see also* Meurer, *supra* note 110, at 869-80.

113. For examples of both cases, see ProCD v. Zeidenberg, 86 F.3d 1447, 1449-51 (7th Cir. 1996).

debts.[114] He characterizes the right of self-help repossession as an economic hostage offered by the debtor in a game-theoretic bargaining environment to signal the debtor's commitment to pay.[115] In turn, the creditor signals its commitment to enforce the debtor's promise by precommitting to "a sequence of discrete steps ... each act escalating incrementally."[116] Scott contends that self-help remedies as a class are important to a creditor's ability to maintain a reputation as an enforcer of promises. The challenge, then, is to "design a pattern of reciprocal commitments that effectively constrains the debtor without unduly tempting the creditor."[117]

If we accept Scott's argument as sufficient in principle to justify some self-help practices, the question still remains how Article 2B's electronic regulation and self-help provisions fare under his "unduly tempting" standard, which acknowledges that some forms of self-help may create unacceptably high risks of abuse.[118] There are good reasons to think that electronic self-help would create such risks. As Part I discussed, section 2B-310 would authorize intrusion at the licensor's sole discretion; in this, it resembles the "confession of judgment" clauses that Scott condemns as offering too great a temptation "to evade contractual risks."[119] Once again, this concern is especially great for self-help unconnected to payment, and intended solely to regulate unacceptable behavior as defined by the licensor. In addition, Scott notes that distributional concerns might justify some regulation of otherwise efficient creditor self-help practices.[120] To the extent that copyright's user privileges reflect such concerns, as this article

114. *See* Robert E. Scott, *Rethinking the Regulation of Coercive Creditor Remedies*, 89 COLUM. L. REV. 730 (1989). Scott's work addresses the economic justifications for self-help generally; as far as I am aware, he has not written about self-help in the particular context of Article 2B.

115. *See id.* at 744-49.

116. *Id.* at 750-51.

117. *Id.* at 763-64.

118. *See id.* at 764-65. In fact, I am not willing to accept Scott's argument in its entirety, but that is a subject for another occasion.

119. *Id.* at 765; *see supra* text accompanying notes 21-24.

120. *See* Scott, *supra* note 114, at 782-86. Ultimately, Scott concludes that fairness-based justifications for prohibiting creditor self-help are illusory because consumers who pay their debts bear the costs. *Id.* At most (and again), this argument might support electronic self-help rights in cases of nonpayment. With regard to behavioral restrictions, particularly those aimed at copyright user privileges, it is unpersuasive. In the context of copyright, arguments from redistribution ignore the possibility that the decision to accord user privileges, with the understanding that these privileges may affect prices, represents a societal judgment that a regime of limited author-owner control is best-suited to promoting creative progress and public access to creative and informational works. *See* Cohen, *supra* note 7, at 383-90. Without more information, the fact that consumers "bear the costs" of copyright's user privileges does not tell us which regime is better.

argues they do, they might well justify a ban on licensor self-help that takes the form of direct electronic control of user behavior.[121]

A different sort of justification for creditor self-help remedies is supplied by theories that marry consent and efficiency rationales for commercial rules. Starting from essentially libertarian premises, Randy Barnett argues that rules about contract enforcement must be premised on individual consent.[122] To avoid the pitfalls of subjectivism, however, Barnett contends that consent should be presumed when legal rules mirror social conventions.[123] Barnett's "conventionalist" analysis resonates with the norm-based approach to commercial law, which emphasizes the interplay between law and extra-legal social ordering among groups. To these theorists, the "new law merchant" should reflect a decentralized, bottom-up approach to lawmaking that seeks to affirm existing commercial practices.[124]

An initial problem that confronts the use of norm theory to justify electronic self-help is that such self-help is not, as a factual matter, the ordinary practice—yet. Whether it becomes the norm will depend, in part, on how the law chooses to treat it; norms and law constitute each other in important and complex ways.[125] More fundamentally, however, the notion that commercial law should be premised on market norms is deeply problematic when applied to the consumer mass market. Norms presuppose communities, and analysis of contracting behavior in the consumer mass market suggests that the community that drives the evolution of mass market norms is the community of providers. Norms also presuppose a sense of shared benefit, and community satisfaction is not necessarily the most appropriate measure for rules that affect relationships between community members and outsiders.[126] Certainly, such norms cannot be said to

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121. *See infra* text accompanying notes 142-147.

122. Randy E. Barnett, *The Sound of Silence: Default Rules and Contractual Consent*, 78 VA. L. REV. 821, 831-55, 860-73 (1992).

123. *See id.* at 855-59, 875-97.

124. *See, e.g.*, Robert D. Cooter, *Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant*, 144 U. PA. L. REV. 1643 (1996). *But see* Eric A. Posner, *Law, Economics, and Inefficient Norms*, 144 U. PA. L. REV. 1697 (1996) (arguing that the norms developed by close-knit communities may also be inefficient).

125. *See* Madison, supra note 110. *See generally* Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943 (1995) (exploring the complex interrelation of norms and law); Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903 (1996) (same).

126. *See* ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 169 (1991); Lewis A. Kornhauser, *Are There Cracks in the Foundations of Spontaneous Order?*, 67 N.Y.U. L. REV. 647, 652-55 (1992); Kerry Lynn Macintosh, *Lib-*

be freely chosen by the outsiders whom they affect.[127] In addition, they may be inefficient when assessed in terms of their effect on the larger society within which the community exists.[128] The fact of the larger community also should cause us to question our initial identification of provider practice as the relevant norm; if, instead, we chose the community of consumers as the baseline, we probably would discover that existing social norms militate in favor of copyright user privileges.[129]

Historical evidence suggests that Karl Llewellyn, who first conceived the Uniform Commercial Code, sought to establish the Article 2's merchant-nonmerchant distinction precisely so that the rules governing merchants could be regularized without placing individual consumers at a disadvantage or constraining courts' equitable powers in merchant-consumer disputes involving sales of goods.[130] For similar reasons, Article 9 contains provisions that afford heightened protection for individual consumers in the context of secured transactions.[131] Arguably, Article 2B's distinc-

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erty, Trade, and the Uniform Commercial Code: When Should Default Rules Be Based on Business Practices?, 38 WM. & MARY L. REV. 1465 (1997); *see also* Cooter, *supra* note 124, at 1684-85.

127. *Cf.* Macintosh, *supra* note 126, at 1534-40.

128. *See, e.g.*, Edward Rubin, *Efficiency, Equity, and the Proposed Revision of Articles 3 and 4*, 42 ALA. L. REV. 551, 562-69 (1991) (arguing that the provisions of Articles 3 and 4 of the U.C.C. that allocate the entire loss from forged checks to consumers, consistent with banking industry practice, are inefficient because banks are in the best position to develop procedures for reducing the risk of loss); Macintosh, *supra* note 126, at 1525-34 (same).

129. *See* Jessica Litman, *The Exclusive Right to Read*, 13 CARDOZO ARTS & ENT. L.J. 29 (1996); Madison, *supra* note 110; Lloyd L. Weinreb, *Fair's Fair: A Comment on the Fair Use Doctrine*, 103 HARV. L. REV. 1137, 1152-53 (1990). *See generally* Cooter, *supra* note 124, at 1664-65 (discussing methodological issues that attend the identification of norms).

130. *See* U.C.C. § 2-104(1) (1994) (defining "merchant"); Ingrid Michelsen Hillinger, *The Article 2 Merchant Rules: Karl Llewellyn's Attempt to Achieve the Good, the True, the Beautiful in Commercial Law*, 73 GEO. L.J. 1141 (1985); Zipporah Batshaw Wiseman, *The Limits of Vision: Karl Llewellyn and the Merchant Rules*, 100 HARV. L. REV. 465 (1987).

131. *See, e.g.*, U.C.C. § 9-307(2) (1972) (providing that a buyer for value of consumer goods for personal, family, or household use takes the goods free of any security interest, even if perfected, as long as the buyer is unaware of the security interest); *id.* § 9-505(1) (providing that if a secured party repossesses consumer goods from a debtor who has paid at least 60% of the price or loan amount, the secured party must resell the goods within 90 days or be liable to the debtor for conversion); *see also supra* note 52 and accompanying text (discussing additional protections afforded in some states by the Uniform Consumer Credit Code, as well as state and federal modifications to Article 2's rules governing warranties for tangible consumer products). And, as one might expect, a debate has raged over whether such protections are economically efficient, and whether there might be other rea-

tion between negotiated and mass market licenses is more appropriate for information markets; many small businesses that Llewellyn might consider "merchants" are nonetheless consumers of mass marketed information products.[132] However, Article 2B turns Llewellyn's point on its head by according less protection to mass market licensees than to parties to negotiated agreements, and the least protection to individuals who use licensed information products for personal, non-business purposes.[133] This approach is consistent with the hypothesis that Article 2B reflects provider norms. That information providers as a group feel Article 2B would put them at an advantage in their dealings with consumers hardly constitutes a compelling case for its adoption.[134]

Still needed, then, is a standard by which to evaluate the desirability of the particular self-help regime embodied in Article 2B. Economic analysis of commercial law posits that the law of commercial transactions should focus primarily on establishing default rules that are "efficient." For some legal scholars, this means that legal rules for resolving disputes should reflect the ex ante bargains that a majority of the parties would have reached.[135] Others contend that the law should sometimes set default rules differently, to encourage one or both parties to reveal information in the course of bargaining around them.[136] Once again, however, the notion that a rule should mirror or encourage "bargaining" is less than useful in the mass market context, where bargaining typically does not occur on a term-by-term basis. In the mass market, consumers are contract takers; they can refuse to buy, or hold out for a lower price, but they generally cannot de-

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sons for retaining them even if they are not. *See* Elizabeth Warren, *Making Policy with Imperfect Information: The Article 9 Full Priority Debates*, 82 CORNELL L. REV. 1371 (1997).

132. *See* U.C.C. § 2B-208, Reporter's Note 2 (July 24-31, 1998 Draft); *supra* note 44; *see also* Braucher, *supra* note 50, at 558 ("Consumer protection appropriately also applies to what I call 'quasi consumers'—sole proprietorships and small businesses without the sophistication and resources to use legal counsel regularly."); Hillinger, *supra* note 130, at 1184 (suggesting that a consumer-nonconsumer distinction would be more appropriate for Article 2); Wiseman, *supra* note 130, at 471, 522-24 (same).

133. *See supra* text accompanying note 58.

134. *Cf.* Goldberg, *supra* note 105, at 476-81 (observing that it is only logical for participants in markets to seek to enhance their profits by altering existing institutions to their advantage).

135. *See, e.g.*, Frank H. Easterbrook & Daniel R. Fischel, *The Corporate Contract*, 89 COLUM. L. REV. 1416 (1989); Friedman, *supra* note 42, at 1157-58. *See generally* Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 89-90 (1989) (collecting sources).

136. *See* Ayres & Gertner, *supra* note 135.

mand a particular package of contract terms or product characteristics.[137] Thus, if the default rule under Article 2B allows electronic regulation and self-help, we would not expect to see consumers bargain around that rule in most cases—even if the rule were structured as a "penalty default" requiring actual disclosure to consumers.[138] The opposite rule, disallowing electronic self-help unless authorized in a separately-negotiated agreement, probably would encourage more "bargaining," in that information providers most likely would offer lower prices to consumers willing to agree to electronic monitoring. But information providers also might offer non-monitored products at such high prices that most consumers could not or would not purchase them.[139] Thus, under either rule, electronic regulation might become the prevailing approach without consumers having any real say in the matter. The problem here is not lack of "bargaining" per se, or even lack of knowledge, but rather lack of consent and inability to affect the options on the table.[140] One may say many things about the results of such a system—that they reduce transaction costs, or that they promote

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137. *See, e.g.*, DANIEL W. BROMLEY, ECONOMIC INTERESTS AND INSTITUTIONS: THE CONCEPTUAL FOUNDATIONS OF PUBLIC POLICY 65-66 (1989); Samuel Bowles & Herbert Gintis, *The Political Economy of Contested Exchange*, *in* RETHINKING POWER 196, 221 (Thomas Wartenburg ed., 1992); Cohen, *supra* note 7, at 362-70.

138. *See* O'Rourke, *supra* note 102, at 83-87 (suggesting this approach for contract terms that alter the copyright balance). Ayres and Gertner term this a "penalty default" approach because it penalizes the more informed party (here, the licensor) for failure to disclose information by applying a default rule that is undesirable from that party's perspective. *See* Ayres & Gertner, *supra* note 135, at 97-98. This is the model chosen, for example, for U.C.C. § 2-316, which requires express disclaimer of the implied warranty of merchantability. As noted above, a number of states and the federal government have concluded that the penalty default model for § 2-316 provides inadequate consumer protection. *See supra* note 52.

139. *See* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449-50 (7th Cir. 1996) (outlining a similar strategy); O'Rourke, *supra* note 102, at 62-63 (discussing the efficiencies available to information providers as a result of price discrimination). Since most consumers in the real world operate under budget constraints, this would not necessarily mean that consumers did not value the absence of electronic monitoring and self-help.

140. It is for this reason that leading scholars have for decades described this regime as one of "private legislation." *See* Goldberg, *supra* note 105, at 468 n.15, 484-91; Friedrich Kessler, *Contracts of Adhesion—Some Thoughts About Freedom of Contract*, 43 COLUM. L. REV. 629 (1943); Todd D. Rakoff, *Contracts of Adhesion: An Essay in Reconstruction*, 96 HARV. L. REV. 1173 (1984); W. David Slawson, *Standard Form Contracts and Democratic Control of Law-Making Power*, 84 HARV. L. REV. 529, 538-42 (1971); Vukowich, *supra* note 105, at 800-11; *cf.* Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570, 1611-13 (1995) (offering a narrower definition based on antitrust-style market power). For a more detailed discussion of the distribution and exercise of "bargaining power" in the mass market for creative and informational works, see Cohen, *supra* note 7, at 356-77.

freedom of contract for information providers—but one cannot say that they are reliable measure of what consumers want.

Another way to approach the question of private ordering of rights in creative and informational works is by asking whether such private ordering creates unacceptable costs, either for consumers or for society generally. If so, we might decide that a prohibition on the use of electronic regulation and self-help—or on their use in certain categories of disputes—should be an immutable rule.[141] The answer to the question depends largely on how overall or social welfare is defined. From a purely allocative standpoint, the mass market behavior predicted above suggests that banning electronic private ordering would be inefficient. If most consumers would submit to self-help that negates their copyright privileges, that would mean that they do not value these privileges as highly as licensors value their absence. Allocative efficiency is a poor measure of social welfare, however. Social welfare is in part a function of nonmonetizable values, external effects, and distributional concerns, all of which the allocative criterion ignores.[142] To decide whether the law should permit or forbid contractual exit from copyright, we must consider the particular social goals that copyright is intended to promote, and whether market transactions in private-law "usage rights" will promote them as effectively.

As I have demonstrated elsewhere, the copyright system promotes the social goals of creative progress and public access to creative works in important ways that the market cannot measure.[143] Because it is difficult to assess creative potential ex ante, because there is no necessary relationship between creative potential and ability to pay, and because current information providers may perceive some works by second-comers (for example, parodies) as detrimental to their interests, there is no reason to think that giving information providers control over all uses of their information products would result in more or better creative progress.[144] Even under a well-functioning regime of contractual usage rights, moreover, second-

141. *See* Ayres & Gertner, *supra* note 135, at 88-89 (discussing economic justifications for immutable rules).

142. *See, e.g.*, Baker, *supra* note 107, at 32-41; BROMLEY, *supra* note 137, at 75-83 (demonstrating that different initial distributions of entitlements will generate different market equilibria, and arguing that it is incoherent to speak of the "efficient" outcome while ignoring policy considerations that affect the initial distribution); ANDREAS A. PAPANDREOU, EXTERNALITY AND INSTITUTIONS 200-04, 225 (1994).

143. *See* Cohen, *supra* note 7, at 382-98 (describing the shared external benefits conferred by the public law of copyright and the nonmarket values implicated in decisions about the appropriate regime of rights in creative and informational works).

144. *See id.* at 335-44; *see also* Mark A. Lemley, *The Economics of Improvement in Intellecutual Property Law*, 75 TEX. L. REV. 989, 1048-68 (1997).

comers whose works produce substantial shared social benefits would be unable to appropriate the full value of their contributions, and would be unwilling to pay the prices demanded by existing content owners.[145] In this respect, the enhanced accessibility of creative and informational works under copyright law produces important external benefits that most likely would be underproduced by a private-law, market-based regime.[146] Copyright's access and use privileges, which distribute the "costs" of uncompensated uses broadly among all consumers, attempt to correct for this market failure—or, more accurately, for this failure of markets.[147]

In short, the copyright regime of limited rights and user privileges not only serves nonmonetizable and distributional concerns, but those concerns also are central to a particular understanding of creative and social "progress." This suggests that overall or social efficiency may well require an immutable rule prohibiting electronic regulation and self-help in at least some circumstances where private ordering threatens to disrupt the copyright balance. At the very least, the case for unfettered electronic private ordering is resoundingly inconclusive.

V. THE U.C.C., COPYRIGHT, AND THE PUBLIC-PRIVATE DISTINCTION

We turn now from Article 2B's doctrinal and theoretical antecedents to the question of its validity as a matter of federal copyright law and policy. Whether the self-help provisions of Article 2B implicate copyright law, or the limits imposed on copyright law by the First Amendment, turns on interpretation of the public-private distinction in the particular context of the laws that govern ownership of creative and informational works. For Article 2B's electronic rights management and self-help provisions to be valid, Article 2B must be seen to establish merely a neutral background or framework for private exchange. Indeed Article 2B is intended to establish a background framework; however, the framework is not neutral. To the

145. *See* Cohen, *supra* note 7, at 384-87; *see also* Lemley, *supra* note 144, at 1056-58.

146. *See* Cohen, *supra* note 7, at 384-90. User privileges that increase the accessibility of creative and informational works also contribute to the creation of a shared basis for social discourse and the development of a rich and robust public sphere independent from government contol. *See id.* at 384-87, 394-98; Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 347-64 (1996); *cf.* C. Edwin Baker, *Giving the Audience What It Wants*, 58 OHIO ST. L.J. 311, 350-66 (1997) (describing shared external benefits and costs produced by mass media products). These shared social benefits also must be included in any assessment of the total value generated by creative and informational works.

147. *See* Cohen, *supra* note 7, at 387-90.

extent that Article 2B is intended to give information providers the tools and the authority to contract around their limited entitlements under copyright law and into more robust entitlements of their own design, its adoption threatens to subvert completely the statutory and constitutional underpinnings of federal intellectual property law. Moreover, the process that produced Article 2B has been dominated by information provider interests to such a degree that the public-private distinction cannot credibly be invoked to shield their conduct.

A. Preemption and the "Dormant Intellectual Property Clause"

The public-private distinction mediates the relationship between copyright and contract in several different ways. First, as discussed in Part II, it helps to define the scope of preemption under section 301 of the Copyright Act. Section 301 preempts state-created rights in the subject matter of copyright that are "equivalent" to the rights afforded by copyright.[148] It is fairly clear that Congress did not intend section 301 to preempt many private contracts relating to works falling within the subject matter of copyright—for example, agreements authorizing book publication and distribution, or authorizing the public display of copyrighted films.[149] That does not end the matter, however. Some "contracts" closely resemble universally-applicable proprietary rights. In particular, standard-form, mass market "licenses" for creative and informational works elide the boundary between property and contract.[150] Any state that adopts the electronic regulation and self-help provisions of Article 2B should recognize that it is authorizing the implementation of quasi-proprietary regimes that will affect thousands and even millions of consumers.

Even if contracts as a class are outside the scope of section 301, though, the electronic regulation and self-help provisions of Article 2B fall afoul of the general principle, embodied in the Supremacy Clause, that a

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148. 17 U.S.C. § 301(a) (1994); *see supra* notes 15-17 and accompanying text.

149. *See* Rice, *supra* note 17, at 602-04.

150. *See, e.g.*, Cohen, *supra* note 7, at 322-28; Cohen, *Some Reflections*, *supra* note 17, at 181-82; Elkin-Koren, *supra* note 17, at 107-10; Dennis S. Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 U. DAYTON L. REV. 511, 528-33 (1997); Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570, 1611-13 (1995); *see also* Jane C. Ginsburg, *Copyright, Common Law, and Sui Generis Protection of Databases in the United States and Abroad*, 66 U. CIN. L. REV. 151, 166-70 (1997) (agreeing that the rights created by mass market contracts approach property rights, but suggesting that copyright policy supports allowing such contracts in the case of uncopyrightable databases).

state-created regulatory regime cannot undermine federal law.[151] Here, the federal law in question is both statutory and constitutional.

The Supreme Court has issued conflicting pronouncements as to whether it will find implied preemption when the federal statute in question contains an express preemption provision that does not cover the challenged action.[152] Most recently, however, it has suggested that a narrow preemption provision merely establishes a rebuttable presumption of Congress' intent not to preempt.[153] The conflict between Article 2B and the Copyright Act presents a strong case for finding such a presumption rebutted. It is clear that when Congress enacted section 301 as part of the Copyright Act of 1976, it did not consider the possibility of state legislation designed to enable self-enforcing digital contracts that would enable the wholesale displacement of copyright.[154] And, as discussed above, authorizing information providers to define the scope of their entitlements would materially undermine the social objectives that the Copyright Act is intended to promote. The Court's preemption decisions establish as much. Although the Court has held that states may grant protection to potentially copyrightable works that Congress has not chosen to protect,[155] it has also held that they may not grant property-like rights in *un*protectable inventions, although they may afford a lesser level of protection.[156] On the same

151. *See* U.S. CONST. art. VI, cl. 2; Gade v. National Solid Waste Management Ass'n, 505 U.S. 88, 108 (1992); Felder v. Casey, 487 U.S. 131, 138 (1988).

152. *Compare* Freightliner Corp. v. Myrick, 514 U.S. 280, 288 (1995) ("The fact that an express definition of the pre-emptive reach of a statute 'implies' ... that Congress did not intend to pre-empt other matters does not mean that the express clause entirely forecloses any possibility of implied pre-emption."), *with* Cipollone v. Liggett Group, Inc., 505 U.S. 504, 517 (1992) ("When Congress has considered the issue of pre-emption and has included in the enacted legislation a provision explicitly addressing that issue, and when that provision provides a 'reliable indicium of congressional intent with respect to state authority,' ... 'there is no need to infer congressional intent to pre-empt state laws from the substantive provisions' of the legislation.") (citations omitted).

153. *See Myrick*, 514 U.S. at 288.

154. Indeed, Congress' codification of the first sale doctrine, under which the initial sale of an object embodying a copyrighted work exhausts the copyright owner's right to control the further disposition of that object, suggests just the opposite. *See* 17 U.S.C. § 109(a) (1994).

155. *See* Goldstein v. California, 412 U.S. 546, 560 (1973).

156. *Compare* Aronson v. Quick Point Pencil Co., 440 U.S. 257, 262 (1979) (allowing enforcement of a contract requiring ongoing royalty payments for the right to use a trade secret that had subsequently fallen into the public domain, but noting that the two-party agreement did not prevent others from copying the technology) *and* Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 475-76 (1974) (allowing state law protection of trade secrets, but noting that the protection afforded by trade secrecy laws is substantially less complete), *with* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141 (1989) (striking down

reasoning, nor may they confer property-like rights in unprotectable (as opposed to merely unprotected) works, or in unprotectable aspects or components of otherwise copyrightable works.

Ultimately, however, the determination of conflict is not Congress' to make. Neither the copyright objectives nor the limitations on copyright ownership designed to promote them are legislatively-determined. Both are required by the language of the Intellectual Property Clause of the Constitution, which authorizes Congress to grant "exclusive Right[s]" only to "Authors and Inventors" for "their respective Writings and Discoveries," and only for "limited Times."[157] To qualify as a patentable invention under this standard, an innovation must represent a nonobvious advance over the prior art; to qualify as a copyrightable "writing," an expression must attain a minimal level of originality.[158] Consistent with these requirements, the Intellectual Property Clause prohibits copyright protection for facts, ideas, methods of operation, and other elements of "writings" that do not in themselves constitute original expression.[159]

Congress, of course, has other sources of power. In particular, it may use its commerce power to grant certain types of rights in intellectual creations; the Lanham Act is one such example.[160] However, the com-

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state statute that prohibited a commonly-used method of reverse engineering unpatented boat hulls), Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 230 (1964) (holding that states may not use their unfair competition laws to confer perpetual protection on functional but unpatentable product features), *and* Compco Corp. v. Day-Brite Lighting, Inc., 376 U.S. 234, 237 (1964) (same). *See generally* Howard B. Abrams, *Copyright, Misappropriation, and Preemption: Constitutional and Statutory Limits of State Law Protection*, 1983 SUP. CT. REV. 509.

157. U.S. CONST. art. I, § 8, cl. 8.

158. *See* Graham v. John Deere Co., 383 U.S. 1, 6 (1966) (holding that Intellectual Property Clause prohibits Congress from "enlarg[ing] the patent monopoly without regard to the innovation, advancement, or social benefit gained thereby," and from "issu[ing] patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available"); Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349-50 (1991) (holding that Intellectual Property Clause requires originality as a prerequisite for copyright, and therefore bars protection for facts and ideas).

159. *See Feist*, 499 U.S. at 349-50 (holding denial of copyright protection for facts constitutionally compelled); Baker v. Selden, 101 U.S. 99, 103-104 (1879) (holding methods of operation protectable, if at all, only under the patent system, and indicating that the Intellectual Property Clause informs this result); The Trade-Mark Cases, 100 U.S. 82, 93-94 (1879) (holding that Intellectual Property Clause does not authorize grant of exclusive rights in trademarks).

160. *See* U.S. CONST. art. I, § 8, cl. 3 (Commerce Clause); 15 U.S.C. §§ 1051, 1058, 1125 (1994) (authorizing federal registration of and/or protection for trademarks, trade dress, and other designators of product origin used in connection with goods or services in interstate commerce).

merce power is plenary only up to a point; it may not be exercised in a manner that ignores other, more specific constitutional constraints.[161] Thus, Congress may not invoke the commerce power to do what the Intellectual Property Clause bars it from doing: granting "exclusive Right[s]" in unpatentable or uncopyrightable subject matter.[162] Nor may it invoke the commerce power to authorize the states to grant such rights.[163] Congress, in short, could neither enact nor authorize the provisions of Article 2B that allow information providers to grant themselves exclusive rights in uncopyrightable content, and to extend their exclusive rights in copyrightable expression for unlimited times.

Where Article 2B is concerned, the relevant question is how these limits on Congress' power bear on what the states may do on their own. Here the plot thickens, for the Court has held that the Intellectual Property Clause does not bar states from enacting their own forms of intellectual property protection, even for works otherwise patentable or copyrightable.[164] But it has never held that the states may offer protection that conflicts with the constitutional scheme, and indeed, on the terms of its own preemption decisions, it could not. The statutory limits that required preemption in those cases are positive constitutional mandates as well. The Intellectual Property Clause denies protection to certain subject matter precisely so that it may remain in the public domain, available to all comers.[165] It follows that where unpatentable know-how and uncopyrightable

161. *See, e.g.*, Railway Labor Executives Ass'n v. Gibbons, 455 U.S. 457, 468-69 (1982) (holding that Congress may not invoke the commerce power to enact bankruptcy legislation that violates the Bankruptcy Clause's uniformity requirement).

162. *See* Marci A. Hamilton, The Dormant Copyright Clause, 66-70 (1998) (draft unpublished manuscript, on file with author); David L. Lange, *The Intellectual Property Clause in Contemporary Trademark Law: An Appreciation of Two Recent Essays and Some Thoughts About Why We Ought to Care*, 59 LAW & CONTEMP. PROBS. 213, 225-44 (Spring 1996); Malla Pollack, *Unconstitutional Incontestability? The Intersection of the Intellectual Property and Commerce Clauses of the Constitution: Beyond a Critique of* Shakespeare Co. v. Silstar Corp., 18 SEATTLE U. L. REV. 259, 313-20 (1995).

163. Thus, the rule of *Prudential Ins. Co. v. Benjamin*, 328 U.S. 408 (1946), does not apply here. *See id.* at 419-27 (holding that commerce power encompasses congressional authorization for states to discriminate against interstate commerce).

164. *See* Goldstein v. California, 412 U.S. 546, 560 (1973); Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 482-83 (1974) (citing *Goldstein*). For criticism of the *Goldstein* decision, see Abrams, *supra* note 156, at 527-30.

165. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349-50 (1991) (reasoning that the constitutionally-granted copyright power requires that facts, ideas, and the like remain in the public domain as building blocks for subsequent creators to use); Graham v. John Deere Co., 383 U.S. 1, 9 (1966) (reasoning that constitutionally-granted patent power requires that insufficiently innovative advances remain in the public domain, because of the high social cost of monopoly when weighed against "the inherent free nature

facts or principles are concerned, the same restrictions that bind Congress also bind the states.[166] Any state adopting Article 2B should recognize that it effectively allows information providers to opt out of those restrictions, thereby frustrating constitutional policy.

B. Speech Harms and the First Amendment

The public-private distinction also demarcates the boundary between private disputes about infringement and public regulation of speech. This observation is commonplace as to tort law. Private parties may sue for defamation, but the state may not structure its law of defamation to chill speech on matters of public concern.[167] Because copyright also implicates First Amendment concerns, the same analysis applies. Private parties may sue for infringement, but neither Congress nor the courts may define the law of infringement in a way that tramples on speech. In particular, the Court has indicated that the idea-expression distinction and the fair use doctrine—and the public domain that these limitations on copyright own-

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of disclosed ideas"); Abrams, *supra* note 156, at 579; Lange, *supra* note 162, at 225-44; David Lange, *Copyright and the Constitution in the Age of Intellectual Property*, 1 J. INTELL. PROP. L. 119, 130-34 (1993); L. Ray Patterson, *Copyright Overextended: A Preliminary Inquiry into the Need for a Federal Statute of Unfair Competition*, 22 U. DAYTON L. REV. 385, 394-95 (1992); *cf.* Pollack, *supra* note 162, at 313-20.

166. In allowing states to afford their own forms of protection for potentially protectable works, the Court noted that states may have special interests in particular innovations, and that the framers granted intellectual property powers to Congress because they believed that a state-by-state patchwork of protection would be ineffective. *See Goldstein*, 412 U.S. at 556-58. Abrams, in particular, has raised serious objections to this reasoning. *See* Abrams, *supra* note 156, at 527-30. Even taken at face value, however, it does not justify allowing state-level protection that applies (via choice-of-law clauses) extraterritorially, and is so effective that it frustrates the federal scheme. *Cf.* Paul J. Heald, Comment, *Unfair Competition and Federal Law: Constitutional Restraints on the Scope of State Law*, 54 U. CHI. L. REV. 1411 (1987) (arguing that federal trademark and unfair competition law should preempt extraterritorial application of state unfair competition law via multistate injunctions). Just as the states have not reserved the power to frustrate Congress' commerce authority, they also have not reserved the power to frustrate its intellectual property authority, but only the right to adopt limited forms of protection that supplement federal incentives to innovate.

167. *See* New York Times Co. v. Sullivan, 376 U.S. 254, 264-65 (1964) (holding that Alabama libel law violated First and Fourteenth Amendments as applied to critics of a public official's conduct); Cohen, *supra* note 9, at 1020-21; *cf.* Cohen v. Cowles Media Co., 501 U.S. 663, 668 (1991) (holding that enforcement of promissory estoppel claim constituted state action).

ership guarantee—are necessary adjuncts of a statute that creates proprietary rights in expression.[168]

Even if the Intellectual Property Clause did not constrain Congress' power to grant "exclusive [r]ights" in intellectual creations, Congress could not erase these First Amendment-based limitations on copyright's reach. Similarly, even if no "dormant Intellectual Property Clause" binds the states, no state could establish a regime of proprietary rights in information that ignored First Amendment boundaries. Sections 2B-310 and 2B-715, in contrast, appear to stand for the proposition that private information providers may use non-negotiated, digital standard forms to enforce prohibitions on a broad range of speech activity, ranging from the traditional (criticism, educational discussion, and commentary on the news of the day) to the less so (reverse engineering of software).[169] Any state adopting Article 2B should recognize that widespread adoption of these practices would significantly undermine the First Amendment's guarantees.[170]

C. Private Enforcement and Due Process

Finally, the public-private distinction determines what procedures may be used to enforce contract rights. The Supreme Court's procedural due process decisions make clear that a state-aided seizure of licensed information products, as authorized under section 2B-715 of Article 2B, would require certain pre-deprivation safeguards.[171] Yet in *Flagg Brothers, Inc.*

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168. *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 555-60 (1985); Lange, *supra* note 162, at 239-40; *see also* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 575-76 (1994).

169. *Cf.* Bernstein v. United States Dep't of State, 922 F. Supp. 1426, 1429 (N.D. Cal. 1996) (holding that computer source code is speech protected by the First Amendment).

170. As a facially content-neutral law that burdens speech, Article 2B would need to undergo "heightened" or "intermediate" scrutiny. *See* Turner Broad. Sys. v. FCC, 114 U.S. 2445, 2469 (1994); *see also* Denver Area Educ. Telecomm. Consortium, Inc. v. FCC, 518 U.S. 727, 740-53 (1996) (applying *Turner* scrutiny to content-based legislation allowing private cable operators to prohibit "patently offensive" programming on leased channels). For an idea of how the analysis might go, see Cohen, *supra* note 9, at 1024-28. Briefly, it is difficult to imagine a government interest "substantial" enough to justify wholesale contractual displacement of core First Amendment rights of comment and criticism, and easy to imagine ways in which Article 2B might be tailored to prevent that result.

171. *See* Connecticut v. Doehr, 509 U.S. 1 (1991); Mitchell v. W.T. Grant & Co., 416 U.S. 600, 615-20 (1974); Fuentes v. Shevin, 407 U.S. 67, 96 (1972); *see also* Mathews v. Eldridge, 424 U.S. 319, 339-49 (1976) (setting forth a three-part balancing test for determining the level of procedural protection to be afforded prior to a state-ordered deprivation of property). The exact amount of "process" that should be required before a court-ordered seizure of information products is a matter for debate. *Doehr* suggests that due process requires a hearing when the facts alleged to support the seizure are not readily susceptible of

v. Brooks,[172] the Court held that a private warehouse that had been storing the plaintiff's household goods was not required to provide a hearing before selling the goods to satisfy her account, even though a provision of the U.C.C. adopted by the state authorized the sale. Private self-help repossession, in short, does not involve "state action" and thus is subject to fewer procedural constraints than enforcement via judicial process.

As *Flagg Brothers* suggests, the argument that Article 2B merely will establish neutral background rules for private exchange comports with a well-established (though much-criticized) understanding of the public-private distinction.[173] However, sections 2B-310 and 2B-715 do far more than simply reshape the private law of contract to accommodate the unique characteristics of information products. Any state adopting Article 2B should recognize that the proprietary regimes Article 2B authorizes likely will rely heavily on electronic self-enforcement, and even more heavily on electronic "regulation of performance" ex ante. As a result, the definition of "informational rights"—which, until now, has occurred largely via the judicial enforcement process—will be insulated from public oversight. Article 2B does not merely provide default rules for the private sector; rather, it works a radical reconceptualization of what "private" encompasses.

D. Private Interests and Public Acts

Finally, it is worth noting that Article 2B in fact constitutes a hybrid species of action, both public and private, that the conventional understanding of the public-private distinction does not contemplate. Article 2B is (or will be, if enacted) public action at the behest—and, some would argue, the direction—of particular private interests.[174] Public-choice

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documentary proof. *See Doehr*, 509 U.S. at 13-15. This is likely to be the case when fair use is claimed, since the challenged use must be considered in light of the totality of the circumstances. *Doehr* also suggests that exigent circumstances might justify granting a seizure based only on an ex parte judicial hearing, and affording the debtor a post-deprivation hearing. *See id.* at 16-18. As discussed above, intangible collateral generally does not raise the same exigency concerns as physical, rivalrous collateral. *See supra* notes 107-10 and accompanying text. Finally, the *Doehr* Court did not reach the question whether the Due Process Clause requires that the party seeking the seizure post a bond. *See id.* at 18. *But see id.* at 18-21 (plurality) (arguing that a bond is constitutionally required).

172. 436 U.S. 149 (1978).

173. *See, e.g.*, Paul Brest, *State Action and Liberal Theory: A Casenote on* Flagg Brothers v. Brooks, 130 U. PA. L. REV. 1296 (1982).

174. The capture of the Article 2B drafting process has been alleged by numerous observers. *See, e.g.*, Gail Hillebrand, *The Uniform Commercial Code Drafting Process: Will Articles 2, 2B and 9 Be Fair to Consumers?*, 75 WASH. U. L.Q. 69 (1997) (arguing that the U.C.C. drafting process systematically disadvantages consumer interests); Kaner, *supra*

analysis of Article 2B is complicated by the involvement of the National Council of Commissioners on Uniform State Laws and the American Law Institute in the U.C.C. drafting and approval process. However, pioneering efforts to model the decision-making patterns of "private legislatures" such as the NCCUSL and the ALI suggest that their involvement makes the U.C.C. process more, not less, subject to capture.[175]

Systematic exploration of whether and how the phenomenon of legislative capture should affect judicial characterization of state laws modifying traditionally private-law regimes is well beyond the scope of this article. Nonetheless, one of the primary rationales for the public-private distinction—that laws governing private transactions merely establish a neutral, background framework for private bargaining—is significantly weakened when public power is coopted to serve a private agenda. The resulting law is neither "neutral" nor "background;" it is a partisan instrument undertaken to serve a specific purpose. The realist-inspired challenge to the conventional understanding of the public-private distinction holds that the state always chooses.[176] One need not accept that conclusion to see that when the state enters a private dispute as captive or agent of an affected interest, rather than as "neutral" arbiter, there is a much stronger argument that it should bear responsibility for the result.

The question that Article 2B poses is this: May the states reshape their law of contract to allow automatic, self-enforcing foreclosure of conduct

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note 19 (describing information providers' role in the Article 2B drafting process); Consumer Project on Technology, *Protest Page on: Uniform Commercial Code Article 2B* (visited Nov. 7, 1998) <http://www.cptech.org/ucc/ucc.html>.

175. *See* Larry E. Ribstein & Bruce H. Kobayashi, *An Economic Analysis of Uniform State Laws*, 25 J. LEGAL STUD. 131 (1996); Alan Schwartz & Robert E. Scott, *The Political Economy of Private Legislatures*, 143 U. PA. L. REV. 595 (1995); Robert E. Scott, *The Politics of Article 9*, 80 VA. L. REV. 1783 (1994).

It is perhaps unsurprising that initial efforts to integrate the insights of public choice theory and the legal understanding of the public-private distinction have been in the area of antitrust. *See* Mark A. Lemley & David McGowan, *Antitrust Immunity: State Action and Federalism, Petitioning and the First Amendment*, 17 HARV. J.L. & PUB. POL'Y 293 (1994); John S. Wiley, Jr., *A Capture Theory of Antitrust Federalism*, 99 HARV. L. REV. 713, (1986). Under the antitrust laws, the NCCUSL probably would be considered analogous to a private standard-setting organization, with the result that the state-action immunity doctrine would not shield from judicial scrutiny efforts to coopt the standard-setting process. *See, e.g.*, Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492 (1988); Lemley & McGowan, *supra* note 175, at 308-13.

176. *See, e.g.*, Brest, *supra* note 173; Morton J. Horwitz, *The History of the Public/Private Distinction*, 130 U. PA. L. REV. 1423 (1982); Duncan Kennedy, *The Stages of the Decline of the Public/Private Distinction*, 130 U. PA. L. REV. 1349 (1982).

privileged by copyright law and, ultimately, by the Intellectual Property Clause and First Amendment, given that they may not reshape their tort law or their trade secrecy law to produce a similar result? I have suggested that the answer must be no. Whatever the force of arguments that private enforcement of private contracts does not constitute state action, the same arguments cannot apply to state legislation designed largely to authorize private information providers to opt out of the framework of proprietary rights and exceptions established by federal copyright law and mandated (in broad brush) by the Constitution. Put differently, the states should not be able to set default rules that invite information providers to override exceptions that lie at the core of the federal copyright balance.[177] By conferring on information providers the authority to displace federal copyright law, sections 2B-310 and 2B-715 of Article 2B constitute a deliberate usurpation of Congress' role in defining and enforcing the scope of protection in creative and informational works. By any standard—and certainly if the limitations on copyright ownership are to continue to have any meaning in the market for digital works—this is a public act that the Intellectual Property Clause and the First Amendment should not permit. Part VI contends, instead, that copyright law and policy require quite a different approach to electronic self-help in information markets.

VI. RESTORING THE BALANCE: THE CASE FOR LICENSEE SELF-HELP

Courts may, and should, apply principles of preemption and freedom of speech to invalidate license terms authorized by Article 2B that are inconsistent with copyright limitations.[178] Because of the self-enforcing nature of digital rights management technologies, however, relying exclusively on these principles to cure Article 2B's excesses would be unwise. The restrictions authorized by sections 2B-310 and 2B-715 are intended to operate automatically, and in many cases without advance disclosure.[179] These provisions shift the burden of initiating litigation to the licensee,

177. *See* Cohen, *supra* note 9, at 1022-23; *cf. Flagg Bros.*, 436 U.S. at 162 n.12 ("This is not to say that dispute resolution between creditors and debtors involves a category of human affairs that is never subject to constitutional constraints."). This is doubly so for mass market information providers, whose boilerplate "agreements" operate as quasi-legislative regimes. *See supra* note 140 and accompanying text.

178. *See supra* notes 151-173 and accompanying text. Ordinarily, these will be mass market license terms, for the reasons suggested *supra* notes 111-126 and accompanying text; however, I do not intend to suggest that terms in negotiated licenses may never be subject to preemption.

179. *See supra* Part II.

who in many cases will be poorly equipped to bear it. It is not clear, moreover, what copyright-based cause of action a licensee could assert.[180] Restoring the copyright balance requires procedural as well as substantive measures. Specifically, it requires that rights of self-help be extended to licensees.[181]

Of course, Article 2B does not leave information consumers wholly without recourse to challenge information providers' electronic regulation and self-help practices. Electronic regulation of performance "that prevents use permitted by the agreement" constitutes a breach, as does electronic self-help repossession in violation of the restrictions imposed by section 2B-715.[182] If a consumer wishes to file suit, Article 2B provides the usual assortment of contract remedies.[183] In addition, in any case in-

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180. Fair use, the idea-expression distinction, and preemption traditionally have been raised (and conceived) as defenses to claims of infringement. *See, e.g.*, 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT, §§ 13.03[B][2]-[4], 13.05, p. 13-149 (46th rel. 1998).

181. The simplest and best way to restore the balance that copyright law was designed to establish would be to set better ground rules—including some immutable rules, *see supra* text accompanying note 141—for digitally-mediated transactions in creative and informational works. The Article 2B drafting committee could acknowledge the implications of electronic private ordering of "informational rights" and exercise its power more responsibly. *See, e.g.*, J.H. Reichman & Jonathan A. Franklin, Privately Legislated Intellectual Property Rights: The Limits of Article 2B of the U.C.C. 26-45 (Apr. 10, 1998) (draft unpublished manuscript, on file with author) (advocating the inclusion of a "public interest unconscionability" provision to protect "the public interest in education, science, research, technological development and the preservation of competition"); *see also* U.C.C. § 2B-105(b) & Reporter's Note 3 (July 24-31, 1998 Draft) (noting the introduction and adoption of a similar motion at the NCCUSL's July 1998 Annual Meeting, but implementing the public policy limitation in substantially watered-down form). Instead, the drafters have elected an empty and disingenuous formalism that pleads lack of jurisdiction to address the preemption issue even as it assiduously undermines federal interests. *See* U.C.C. § 2B-105, Reporter's Note 3 (July 24-31, 1998 Draft); *id.* at 10-12. Alternatively, Congress could impose limits on techno-contractual displacement of copyright. *See, e.g.*, Digital Era Copyright Enhancement Act, H.R. 3048, 105th Cong. (1997) (rendering unenforceable "non-negotiable license terms" that abrogate fundamental copyright policy, as expressed in statutory limitations on copyright protection). Thus far, however, Congress has failed to do so; instead, it too has deferred substantially to private ordering, electing not to confront the conflict brewing between digital standard forms and traditional (and constitutionally-mandated) copyright principles. *See* Digital Millennium Copyright Act, Pub. L. No. 105-304, § 3, 112 Stat. 2860 (1998); *infra* note 200. Even if Congress were to act to restore the balance, however, the new rules still would need to be interpreted and enforced. Thus, the procedural considerations discussed in the text would remain vitally important.

182. U.C.C. § 2B-310(d) (July 24-31, 1998 Draft); *see id.* § 2B-715.

183. *See* U.C.C. §§ 2B-706 (July 24-31, 1998 Draft) (fraud), 2B-709 (damages), 2B-711 (specific performance), 2B-713 (right to continue use), 2B-714 (right to discontinue use); *see also id.* §§ 2B-208(b) (right to refund if mass market license terms are unaccept-

volving electronic self-help repossession, section 2B-715 affords the licensee the right to an expedited post-seizure hearing.[184]

Nonetheless, Article 2B is not a consumer protection statute, and plainly, the drafters do not intend it to be one. Edward Rubin has criticized the U.C.C. for establishing remedial processes that systematically disadvantage consumers.[185] Rubin decries the U.C.C.'s use of a common-law institutional model for enforcement of consumer remedies as inappropriate given the expense and complexity of litigation, and given the incentives created for merchants, as repeat players in the litigation process, to litigate disputes aggressively for strategic reasons.[186] In a similar vein, Jean Braucher suggests that the uncertainty that surrounds judicial application of the "breach of the peace" standard and the minimal damages typically awarded to successful debtor plaintiffs deter lawyers from agreeing to represent debtors in wrongful repossession suits.[187] Both Rubin and Braucher argue that effective consumer protection requires inexpensive, accessible procedures and incentive-shifting remedies such as statutory damages and attorneys' fees.[188]

One avenue of recourse for consumers of mass marketed information products might be the Federal Trade Commission, which has broad jurisdiction over "unfair or deceptive acts or practices in or affecting commerce."[189] Licenses for information products, which implicate federal

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able), 2B-616 (same right extended to licensees who acquire information products from a distributor). Article 2B also provides, however, that the license agreement may limit the available remedies "to return of, or delivery to the other party [of] all copies of the information and refund of the contract fee." *Id.* § 2B-703(a).

184. *See* U.C.C. § 2B-715 (July 24-31, 1998 Draft).

185. *See* Edward L. Rubin, *The Code, the Consumer, and the Institutional Structure of the Common Law*, 75 WASH. U. L.Q. 11 (1997); *see also* Braucher, *supra* note 51, at 557-60.

186. *See* Rubin, *supra* note 185, at 21-42.

187. *See* Braucher, *supra* note 51, at 557-60.

188. *See* Rubin, *supra* note 185, at 58-60 (recommending public enforcement of consumer claims); *id.* at 33 ("For the last twenty years, federal legislation involving commercial relationships between merchants and consumers has routinely provided for attorney's fee and court cost awards to prevailing consumer plaintiffs."); *id.* at 41 ("A statutorily liquidated amount, or a mechanical rule by which damages can be calculated without proving actual loss, will lower litigation costs significantly in cases of this nature."); Braucher, *supra* note 51, at 559 (advocating statutory "specificity concerning what acts are prohibited" and "a remedy that provides a prize worth the trouble and expense of pursuing a lawsuit"); *id.* at 613-14 (recommending conversion damages as a "minimum statutory penalty" for wrongful repossession that would not be offset against the debt still owing).

189. 15 U.S.C. § 45(a)(1) (1994). *See generally* EDWIN S. ROCKEFELLER, DESK BOOK OF FTC PRACTICE AND PROCEDURE 53-58 (3d ed. 1979) (delineating sources of and limits on FTC jurisdiction).

copyright interests as well as interstate commerce, fall squarely within the class of transactions with which the FTC is properly concerned. Thus, for example, we might expect the FTC to take an interest in Article 2B's provisions and information providers' practices relating to disclosure and disclaimer of warranties—and, if necessary, to request that Congress extend the specific protections afforded under the federal Magnuson-Moss Warranty Act to information products.[190] In the case of electronic self-help, we would expect the FTC to take an interest in licensor practices relating to disclosure of terms, and to care whether consumers are given adequate notice of the possibility of electronic self-help and the conduct that will trigger it.[191]

The FTC, however, has neither the jurisdiction nor the expertise to preserve the substantive balance mandated by federal copyright law. Here, Rubin's analysis hints at another option for consumers. Rubin suggests that the law might partially "correct[] the imbalance" inherent in the civil litigation process by allowing consumers to use certain self-help remedies, thereby shifting to merchants the burden of initiating litigation.[192] His analysis applies with even more force to Article 2B, because the addition of self-enforcing technological restraints to information providers' arsenal of enforcement measures produces an even greater imbalance.

In the case of sections 2B-310 and 2B-715, the greater worry is not that information providers will breach their "contracts" with licensees, but that they will honor them, thereby stripping licensees of the privileges they enjoy, and have come to expect, under the public law of copyright. Jane Ginsburg has suggested that in some circumstances the law might afford licensees who engage in contractually-prohibited conduct that is permitted by copyright a "right of fair breach."[193] That is fine as far as it goes, but an abstract right of breach may count for little in the face of self-enforcing technological protection. I propose to extend Ginsburg's suggestion even

190. Currently, the Magnuson-Moss Warranty Act covers only warranties relating to "tangible personal property." 15 U.S.C. § 2301(1) (1994). The Act and its associated FTC regulations establish requirements for the contents of warranties, including clear and comprehensible disclosure of terms and procedures for asserting claims, and mandate minimum substantive standards for warranty protection. *See id.* §§ 2301-10; 16 C.F.R. §§ 700 *et seq.*

191. *See supra* Part III.B (discussing notice and overbreadth issues).

192. Rubin, *supra* note 185, at 54.

193. Jane C. Ginsburg, *Copyright Without Walls: Speculations on Literary Property in the Library of the Future*, 42 REPRESENTATIONS 53, 63-64 (1993). Ginsburg appears to believe, however, that these occasions should be rare. *See id.* at 63-65.

It is worth noting that patent licensees have similar rights. *See* Lear, Inc. v. Adkins, 395 U.S. 653, 676 (1969) (invalidating contract terms purporting to estop licensee from challenging patent validity).

further: If the user privileges established by copyright, and necessary to ensure that proprietary rights in expression do not frustrate First Amendment freedoms, are to mean anything, users must be afforded affirmative rights to protect themselves. A "right of fair breach" is meaningless unless it includes a right to effectuate the breach—a right to hack the digital code that implements and enforces the challenged restriction.

Larry Lessig has characterized digital code as "privatized law"—"law that need not fit with, or respect, public law," but instead may undermine values that public law has attempted to protect.[194] With respect to rights management code, at least, this is both true and false. Code constitutes itself as an inexorable arbiter of permissible conduct.[195] In this, as Lessig observes, it is not really "contract" at all; rights denominated "contract" are themselves subject to public policy limits.[196] Yet rights management code is, at the same time, simply the physical instantiation of desired contract restrictions.[197] If information providers may not contract around copyright- and First Amendment-based limits on information ownership, it follows they also may not invoke code as an independent legal basis for avoiding those limits.[198] To the extent that copyright overrides inconsistent contract provisions, it supplies a defense for licensees who disable the protective code in order to commit electronic breach. The corollary to Les-

194. Electronic mail from Larry Lessig, Professor, Harvard Law School, to recipients of list CO-E-CONF (Nov. 8, 1996) (on file with author) (proceedings of 25-person online focus group convened by the United States Copyright Office, as part of its "Project Looking Forward," to discuss the future course of Internet technology and its implications for copyright); *see also* Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach* (Sept. 20, 1998 Draft) <http://cyber.law.harvard.edu/works/lessig/LNC_Q_D2.PDF>; Lawrence Lessig, *The Zones of Cyberspace*, 48 STAN. L. REV. 1403 (1996).

195. *See* Lessig, *Zones*, *supra* note 194, at 1408 ("One obeys these laws as code not because one should; one obeys these laws as code because one can do nothing else .... In the well implemented system, there is no civil disobedience.").

196. *See* Lessig, *The Law of the Horse*, *supra* note 194, at 25-27.

197. Indeed, section 2B-310 says as much. *See* U.C.C. § 2B-310(b)(2) & Reporter's Note 2 (July 24-31, 1998 Draft) ("This Section distinguishes between active and passive electronic devices .... [A] passive device merely precludes acts that constitute a breach.").

198. Even if the federal courts were to conclude that Article 2B does not conflict with federal copyright law, for that matter, consumers would still have other legitimate First Amendment and privacy-based grounds for objecting to some of its more intrusive remedies. For discussion of these grounds, see Cohen *supra* note 9. It appears that Congress agrees with this analysis. *See* Digital Millennium Copyright Act, Pub. L. No. 105-304, § 3, 112 Stat. 2860 (1998) (enacting new section 1201 of the Copyright Act, but specifying in section 1201(i) that individuals may tamper with rights management systems to prevent the collection of personally-identifying information).

sig's observation, in short, is that public law need not respect inconsistent code.[199]

Licensees who hack, of course, face the prospect that they will be sued and their actions judged infringing.[200] But this is the ordinary rule; the right to challenge a rule of law by violating it is sacred, but the individual disobeys the law at his or her peril. In the case of digital rights management systems, recognizing a right of self-help for licensees simply reaffirms the balance between authors and users, and between information ownership and the public domain—a balance that Article 2B threatens to distort beyond recognition.[201]

VII. CONCLUSION

The electronic rights management provisions of Article 2B represent bad policy, bad theory, and bad law. Allowing electronic intrusion into private homes and offices, and into private computer systems maintained there, would grossly violate established principles of privacy; would empower private information providers to decide a dangerously broad range of factual and legal disputes; and would enable complete displacement of the copyright framework of limited entitlements and user privileges. There is no tenable theoretical justification for according information providers

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199. This argument was first set forth in an online discussion group convened by the United States Copyright Office in November 1996. *See* Electronic mail from Professor Julie Cohen, University of Pittsburgh School of Law, to recipients of list CO-E-CONF (Nov. 8, 1996) (on file with author). I am indebted to Larry Lessig for naming it the "Cohen Theorem." Electronic mail from Professor Lawrence Lessig, Harvard Law School, to recipients of list CO-E-CONF (Nov. 11, 1996) (on file with author); Lawrence Lessig, *Tyranny in the Infrastructure*, WIRED, May 1997, at 96.

200. I would be remiss not to note that there will soon be additional risks. Congress recently enacted legislation prohibiting this particular form of civil disobedience. *See* Digital Millenium Copyright Act, Pub. L. No. 105-304, §3, 112 Stat. 2860 (1998). The anti-tampering provisions are subject to a two-year moratorium while the Librarian of Congress assesses their impact on fair use, and to ongoing oversight thereafter. *See id.* Efforts to amend the bill to make fair use an outright defense to a charge of tampering with or circumventing digital rights management systems were unsuccessful. The analysis in this article suggests, however, that such a defense may be constitutionally mandated. *See supra* Part V.A-B.

201. It is true that most individuals lack the skills needed to hack rights management code. If such hacking is lawful, though, skilled individuals will be able to sell their services to others. *Cf.* Cohen, *supra* note 9, at 1029-30 (arguing that individuals who hack rights management code to preserve constitutionally-protected rights of anonymity will have standing to assert their customers' rights). If the consequences of this "universal private ordering" are unacceptable, other avenues for preserving the copyright balance remain available. *See supra* note 181.

such sweeping authority. To the contrary, copyright's user privileges are constitutionally mandated. A state law that seeks to enable information providers to opt out, en masse, from the copyright system cannot, and should not, be saved by ritual invocation of the public-private distinction. For the same reasons, the technologies that implement this exit cannot, and should not, be protected against private acts of resistance designed to preserve the copyright balance.

ON SELF-ENFORCING CONTRACTS, THE RIGHT TO HACK, AND WILLFULLY IGNORANT AGENTS

By James Raymond Davis †

ABSTRACT

Various aspects of the proposed draft of Article 2B have been critiqued from a number of different perspectives. This Article comments on Julie Cohen's description of self-enforcing contracts and the technical feasibility of Cohen's proposed "right to hack." Finally, certain provisions of Article 2B are analyzed from the standpoint of a software practitioner—a self-proclaimed hacker.

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I. INTRODUCTION

I must begin with a disclaimer. I am not a lawyer, economist, or policy analyst. I am a hacker, by which term I mean one skilled in the art of software, as opposed to a cracker, one who uses hackerly skill for illicit profit or wanton destruction. The distinction between the two will be important to part of the argument below.

In this brief note, I will discuss certain aspects of Article 2B from a technologist's point of view. First, I will extend the analogy that Julie Cohen offers for self-enforcing contracts,[1] showing that it raises even more problems than the one she suggests. Second, I will raise some doubts regarding the technical feasibility, and hence value, of the "right to hack"

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1. *See* Julie Cohen, *Copyright and the Jurisprudence of Self-Help*, 13 BERKELEY TECH. L.J. 1089 (1998).

that Professor Cohen proposes.[2] Finally, I will offer a criticism, from the standpoint of the software practitioner, of the section of Article 2B which deals with negotiating with software agents.

II. FURTHER CAPABILITIES OF SELF-ENFORCING CONTRACTS

Julie Cohen compares self-help repossession to a "repo man" who enters your house to repossess a sofa using a device like the "transporter" on the science-fiction television series *Star Trek*.[3] Consistent with Cohen's use of *Star Trek* imagery, I propose that "Odo" from the *Star Trek* sequel *Deep Space Nine* provides a more suitable analogy. This character, like Proteus of Greek myth, has the ability to assume any shape he wishes. A self-enforcing contract, then, can be compared to Odo, after he has assumed the shape of a sofa. Odo does not need to "beam" into your house to enforce the terms of the contract, because he was there from the moment you brought the sofa into your house. Admittedly, such an "intelligent sofa" is unlikely to reach the market soon. A more tangible example of a self-enforcing contract is a rental car with contractual terms that prohibit driving at speeds greater than 75 miles per hour, and whose electronic engines strictly enforce this limit. Here the actual contract and enforcement are separate, but in the digital products that will soon be commonplace, the two entities will be one. These examples of "embedded intelligence" suggest a number of additional consequences, which may arise much sooner than expected as computer intelligence becomes a more integral part of the goods and services industry.

An intelligent product, be it a sofa, a car or a word-processing tool, can do more than just assist in self-help repossession. First, intelligence allows a vendor to set and enforce arbitrary limits on capability. Imagine a sofa that automatically cancels the warranty if more than three adults sit on it. In the software industry, one common distribution tactic is to provide a commercial product, free of charge, that only contains a subset of the full range of features. The limitations of this type of software, known as "crippleware," are always fully disclosed, because the entire point of the strategy is to demonstrate that these limits could be removed for a fee. However, it is less clear that limits imposed by self-enforcing contracts would be as fair, reasonable, or obvious to the buyer.

Second, an intelligent product can try to understand what you do with it: how, when and why you use it. What happens next depends on the ca-

2. *See id.* at 1141.
3. *See id.*

pabilities of the agent. The product may simply offer advice, as does the "paper clip agent" in Microsoft Windows 97. It might suggest additional products for you to purchase. It might even contact a vendor on your behalf. This may be seen as helpful, or it may be taken as a violation of privacy. Suppose, for example, that while you are editing a letter about your plans for a forthcoming vacation, your intelligent word-processor relays a summary to a travel agent.

Finally, an intelligent product can change its price structure. An intelligent sofa might be sold at a low base price, then charge you only for the actual hours you spend on it. A very intelligent sofa might change its price depending on its model of your willingness and ability to pay. Got a hot date for Friday night? Better hope the sofa doesn't know, or the price might rise! I return to the topic of negotiating with software agents in the final section of this note.

One could argue that the capabilities I have outlined could lead to a more equitable distribution of goods and services. While I do not dispute this, it is important that these particular consequences be addressed in any discussion of Article 2B implications.

III. THE "RIGHT TO HACK" IS NOT LIKELY TO BE USEFUL

Professor Cohen argues for a "right to hack" as a means of achieving access to which one is legally entitled, and would otherwise have, except for software obstruction.[4] I sympathize with her, but technically, I am highly skeptical that this right will be of any use, even if granted. My argument stems from the relative advantage of those creating and using software security over those who would hack them. The owners of a valuable resource will expend as much effort to protect the resource as they would expect to lose were it left unprotected, less the cost of such protection. But the cost of this protection can be amortized over the full product line. By assumption, Cohen's hackers are only seeking use to which they are already entitled; they are not, for example, seeking to divert the entire revenue stream from the sofa, or to make a thousand copies. Rationally, these hackers should only exert as much effort as the missing value. But, attacks on modern security systems are expensive, and hence only rational when either the value is high (diverting electronic funds transfer) or where many potential customers are available to share the costs. Such conditions will rarely exist for hackers.

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4. *Id.*

IV. ON WILLFULLY IGNORANT AGENTS

Article 2B section 204(3) states that when a human individual is negotiating with a software agent, the contract "terms do not include terms provided by the individual in a manner to which the agent could not react."[5] It is unclear to me, as a software practitioner, what is meant by "a manner in which the agent could not react." The abilities of a typical software agent to understand and react will be limited more by the effort expended by its creator than the state of the art. Article 2B, as written, places no obligation on the agent's maker to support reasonable forms of understanding, or even to provide an explicit indication of incomprehension. The agent can simply remain mute, and thereby nullify proposed terms. This defies the principles of user interface design which are known to every skilled practitioner.[6] A user interface should provide either a positive indication of comprehension or an explicit indication of non-comprehension. Although an explicit indication may be frustrating and uninformative about the source of the problem,[7] it leaves the user with no doubt as to whether the communication was accepted or rejected.

To a large extent, the lengths to which one must go in providing such indications depend on the user's familiarity with a particular device. I would expect most readers of this journal to have used voice interactive systems (e.g., voice mail, reservations, or home banking) with enough frequency as to be familiar, if not delighted, with their conventions. For instance, most of us know that it is useless to speak; that we must instead push buttons, and then only when prompted to do so. But this was not always common knowledge. In 1986, I worked on an early voice interaction system.[8] At that time, it took substantial effort to make this interaction work at all. It was difficult to engage people in a dialog, because unlike an answering machine, such systems speak several times, not just once. Further, it was hard to convince people to respond by pressing buttons, not by speaking, as they would to an answering machine. Were I to deploy such a system today, my task would be simpler, as I could rely on a base of shared cultural experience in using such systems. Still, if cost were no object, or if the interaction were sufficiently important, I would include cir-

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5. U.C.C. § 2B-204(3) (Aug. 1, 1998 Draft).

6. *See generally* Philip J. Hayes & D. Raj Reddy, *Steps Toward Graceful Interaction in Spoken and Written Man-Machine Communication*, 19 INT. J. MAN-MACHINE STUDIES 231 (1983).

7. For example, the much maligned "syntax error" message.

8. James R. Davis, *Giving Directions: A Voice Interface to an Urban Navigation Program*, AMERICAN VOICE I/O SOCIETY PROC. (1986).

cuitry to detect when my users were trying to talk, so that an agent could advise them that their input was not understood.

In summary, there are two important issues to consider when agents are involved in negotiation. First, the standard of "could not react" is not only poorly defined in Article 2B,[9] but is also dependent on the amount of care the vendor chooses to take on the limits of technology. For instance, a vendor may cut corners by building a system that would not be able to react appropriately. Should this be a way to avoid negotiation? Second, the vendor's considerable freedom in setting the limits of an agent's ability to negotiate makes it unreasonable to place the burden of discovering and coping with such limits on the user. Instead, a "reasonable person" standard should be used, i.e., what a reasonable person knows or should know about an agent's capabilities. Since this standard will change as the population becomes more familiar with intelligent agents, vendors who wish to obtain certainty would do well to follow the principles established by the user interface design community. After all, if we are going to have Odo in the couch anyway, we should not have him "play dumb."

9. U.C.C. § 2B-204 Reporter's Note 1 (Aug. 1, 1998 Draft).

IN DEFENSE OF PRIVATE ORDERINGS: COMMENTS ON JULIE COHEN'S "COPYRIGHT AND THE JURISPRUDENCE OF SELF-HELP"

By David Friedman †

ABSTRACT

It is becoming possible for owners of intellectual property in digital form to use technological protection instead of, or in addition to, copyright to control the use of their property. Professor Cohen argues against legal changes designed to facilitate this development; I argue in favor of them.

Her argument depends in part on conventional attacks on the legitimacy, hence the enforceability, of mass market contracts, in part on the claim that such technologies threaten individual privacy and autonomy, in part on the claim that copyright preempts alternative forms of protection—and should, since it produces more desirable outcomes.

Economic theory suggests no reason why mass market contracts should be less enforceable than individually negotiated contracts—and computer technology, in the form of "click-wrap" contracts, makes it easier than in the past to create a legally adequate contract in a mass market context. With the exception of technologies that monitor software use and report it, and ought, therefore, to be accompanied by suitable warnings, technological protection of software poses no more threat to privacy or autonomy than traditional forms of producer control over the characteristics of their products. A private ordering of the market for intellectual property, based on contract and technological protection, can be expected to produce both more intellectual property and greater use of existing intellectual property than the current "one size fits all" public ordering of copyright law. Current developments in this direction ought to be encouraged, not discouraged, by the law.

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I. INTRODUCTION

Professor Cohen's subject is the legal implications of technologies for controlling the use of intellectual property in digital form. Most of these technologies are unfamiliar to the majority of us; some do not yet exist. One consequence, here as elsewhere in computer law, is that issues and arguments tend to vanish into a fog of abstractions and (often misleading) metaphors. In the hope of reducing that problem, I start with a brief sketch of the technologies being discussed. I then go on to discuss parts of Professor Cohen's argument that I think are mistaken and conclude with my own views on the proper legal response to these technologies. Since the draft of Article 2B[1] which Cohen attacks is now history, I will ignore the question of whether she has correctly interpreted its terms and concentrate instead on the more important issue of what the law ought to be.

II. THE TECHNOLOGIES

I license software from you and fail, in your view, to meet the terms of our agreement—perhaps I have fallen behind on my monthly payments. Your attempts to persuade me to correct my failure are unsuccessful. You resolve the problem by sending a message over the Internet to your software on my machine, instructing it to cease operation—permanently.

This form of electronic self-help is somewhat misleadingly described, by both Professor Cohen and the authors of the proposed revision to Article 2B, as "repossession."[2] In practice, there is no need to repossess the

1. U.C.C. Article 2B (July 24-31, 1998 Draft).

2. *See* Julie Cohen, *Copyright and the Jurisprudence of Self-Help*, 13 BERKELEY TECH. L.J. 1089 (1998).

software, since you can produce another copy at negligible cost. And, because you have no need to repossess the software, this form of electronic self-help poses much less threat of either violence or breach of privacy than does the repossession of physical goods.

A. Monitoring Use

There is a second form of technological enforcement to which Professor Cohen's privacy concerns are more relevant. Imagine that I am a computer programmer who happens to be an orthodox Jew, with strong views on the subject of working on the Sabbath. Not only am I unwilling to violate the biblical injunction myself, I am unwilling to permit anyone else to use the product of my labors to violate it. I accordingly include in the licensing agreement for my software a term forbidding the licensee from running the software between sunset Friday and sunset Saturday.

In order to enforce the restriction, I design my software—which functions online—to occasionally check date and time; if it discovers that it is being run on the Sabbath, it sends me a message notifying me of that fact and identifying the licensee. I respond—Sunday morning—with a message to the software disabling it and a message to the licensee rebuking him for violating my contract and God's law.

One can imagine many more conventional reasons why a licensor might wish to limit the licensee's use of the licensed software and use technological monitoring of one sort or another to enforce the restriction. Someone licensing a compilation of information, for example, might specify in the contract that the information is to be used only by the licensee and not made available to third parties. Providing the compilation embedded in a program that monitored usage and reported on it to the licensor would be one way of checking that the restriction was being obeyed. It would also be a way of acquiring information about the licensee's activities that he might prefer to keep secret, hence a potential violation of the licensee's privacy.

B. Restricting Use

There is, however, a third form of technological enforcement that provides a simpler solution to the problem faced by the Orthodox programmer—or the database licensor. Instead of monitoring usage, control it. Every time the program boots up, it checks date and time—and shuts down again if it is being used on the Sabbath. Program the database to permit only a fixed number of queries per day. Instead of using technology to monitor and report on usage so that the information may be used to enforce the contract, use the technology to enforce the contract directly.

Technological enforcement is not a new idea; early examples include copy protection of floppy disks and the practice of printing documents in color schemes difficult to photocopy. What is new is the degree of detailed control over use that such technologies, as envisioned by companies such as IBM[3] and InterTrust,[4] promise to make possible. Ideally, such software could make it possible for creators of intellectual property to give away their product in encrypted form, enclosed in a digital container. The container would provide information about its contents, possibly including free samples, and a price list—so many cents per minute to watch a multimedia presentation or per query to access a database. Charges might be conditioned on the form of use as well as the amount—more to print out images than to view them, a higher price for creating a freely accessible user database out of a subset of the information in the encrypted database. Payment would be online using digital cash.

Copy protection was for the most part unsuccessful, in part because it significantly restricted legitimate uses, and in part because of technological difficulties in preventing copying.[5] More sophisticated forms of technological enforcement will face similar problems. If those problems can be overcome, the technology has the potential to provide, for at least some forms of intellectual property, self-protection greatly superior in effectiveness and flexibility to the protection now provided by copyright law—and considerably less costly to enforce.

C. Contract Formation

In addition to technologies associated with enforcement of contracts—shutting down software from off site, monitoring usage, and controlling usage—there is one more online technology important to the background of this discussion—the technology of contract formation. Sellers wish to license their intellectual property under terms of their own devising; doing so requires a contract with the buyer. For mass market software, individual negotiation of terms is prohibitively costly. That problem is solved by

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3. *See* Sam Albert, *Surprise! IBM May Crash the Internet Party*, COMPUTERWORLD, June 10, 1996, at 41; Judith Evans, *Want To Cryptolope?*, NEWSDAY, May 21, 1996, at B23; Whit Andrews, *IBM Retreats on Cryptolope*, WebWeek, (Dec. 15, 1997) (visited Nov. 22, 1998) <http://www.internetworld.com/print/1997/12/15/news/19971215-cryptolope.html> (discussing recent change to the Cryptolope project); IBM Corp., *IBM Cryptolope Technology*, (visited Nov. 22, 1998) <http://www.software.ibm.com/security/cryptolope/>.

4. *See* InterTrust Technologies Corporation, *InterTrust Products and Services* (visited Nov. 11, 1998) <http://www.intertrust.com/products/index.html>.

5. *See* Kory D. Christensen, *Fighting Software Piracy in Cyberspace: Legal and Technological Solutions*, 28 LAW & POL'Y INT'L BUS. 435, 466-67 (1997).

form contracts—but there remains the problem of obtaining legally adequate consent without a lengthy face-to-face transaction.[6]

One possible solution is a shrinkwrap contract—a set of terms to which the buyer is held to have assented by opening the container.[7] The legal validity of such "assent" is uncertain—as reflected in the reluctance of some courts to enforce such contracts.[8] Even if enforceable, shrinkwrap provides an undesirably inflexible set of terms. Both buyer and seller could be better off by customizing the terms to that particular buyer's requirements—if it could be done without unreasonably high transaction costs.

The solution is to move the transaction to the computer, converting shrinkwrap to clickwrap. The seller's software provides terms—if desired, a menu of options with prices. The contracting software—unlike a sticker on a cellophane wrapper—can require explicit consent for the transaction to proceed. It can even require the customer to spend a certain number of seconds with the relevant terms on his computer screen before his assent will be accepted. Hence, clickwrap provides a form of contract formation more flexible and less legally dubious than shrinkwrap.

III. COHEN'S ARGUMENTS

Cohen's argument against permitting a shift in the mechanism for enforcing rights over intellectual property from the public law of copyright to the private alternatives of contract and technological protection depends on three claims:

1. The case for freedom of contract is problematic in the context of mass market form contracts.

2. In any case, freedom of contract is limited in this context because it is preempted by copyright law, and

3. Whether or not it is preempted, it ought to be, because copyright law produces a more attractive result than freedom of contract.

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6. *See generally* LON L. FULLER & MELVIN ARON EISENBERG, BASIC CONTRACT LAW, 628-52 (5th ed. 1990).

7. *See* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449 (7th Cir. 1996) ("The 'shrinkwrap license' gets its name from the fact that retail software packages are covered in plastic or cellophane 'shrinkwrap,' and some vendors ... have written licenses that become effective as soon as the customer tears the wrapping from the package.").

8. A recent case supports enforceability. *See id.* An older case was decided in the opposite direction. *See* Vault Corp. v. Quaid Software Ltd., 847 F.2d 255, 268-70 (5th Cir. 1988). For an extended discussion, see generally Mark A. Lemley, *Intellectual Property And Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239 (1995).

I believe that all three are mistaken.

A. The Efficiency of Form Contracts

Professor Cohen writes, "In the mass market context, however, the argument from consent is far too simple. The market system established by the U.C.C. bears little resemblance to the atomistic market of the neoclassical, libertarian paradigm ...."[9] Later she writes, "In the mass market, consumers are contract takers; they can refuse to buy, or hold out for a lower price, but they generally cannot demand a particular package of contract terms or product characteristics."[10]

Cohen here resurrects the ancient error associated with the term "contract of adhesion"—the idea that the argument for freedom of contract depends on contracts being bargained and thus does not apply to the form contracts common in mass market transactions.

To see why this is an error, consider the situation from the standpoint of a firm drawing up a form contract under a legal regime recognizing freedom of contract. It can specify any terms it likes—but those terms only apply if the other party chooses to sign the contract. The characteristics of what the consumer is buying include the terms of the contract under which he is buying it; the less favorable those terms are to him—the more easily, for example, they permit the seller to repossess the purchased good—the less he will be willing to pay for the bundle consisting of the good and terms of sale.

Suppose that, with a particular draft of the sales contract, the value of the product to the buyer, and hence the highest price he will be willing to pay for it, is $100. The seller[11] considers modifying the draft in his favor by adding a term—perhaps an easy right of repossession—that makes him better off by ten dollars and the consumer worse off by fifteen. Since the value of the product is fifteen dollars less under the modified contract, so is the maximum price the consumer will pay. Adding the term gives the seller a ten dollar gain (lower legal costs if the sales terms are violated and the product must be repossessed) and a fifteen dollar loss (reduction in the price he can get from the buyer), for a net loss of five dollars. He is better off with the original draft.

The generalization of the argument is straightforward. Any term in the contract that provides a net benefit to the two parties also makes the seller

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9. Cohen, *supra* note 2, at 1119.

10. *Id.* at 1125.

11. For convenience, I will not bother to distinguish between sales and licensing agreements.

better off, because gains and losses to the buyer are transferred to the seller through their effect on the price the buyer is willing to pay. Any term that provides a net loss makes the seller worse off. Hence, a rational seller will design an efficient contract—a contract that maximizes the net gain to buyer and seller combined. No bargaining is required.

The argument is a special case of a more general argument—that producers have an incentive to design products with an efficient bundle of characteristics. Putting tires on the wheels of cars, or radios in their dashboards, costs the seller something. Yet cars come equipped with tires and radios—not because of any legal requirement that those features be included, but because sellers recognize the effect of such characteristics on the value of the product to the buyer.

As with any argument for economic efficiency, this one becomes less rigorous as one shifts to a more elaborate picture of market transactions. Consumers may make mistakes. Producers with monopoly power may use product characteristics, including contract terms, as a way of charging a higher price to consumers willing to pay it—an indirect form of discriminatory pricing—at some cost in efficiency.

But none of this has anything in particular to do with intellectual property or digital forms thereof—or, for that matter, mass market contracts. These are qualifications to the general argument for free markets that apply to markets for bread and beer just as to markets for books and multimedia software. One reason the qualifications do not destroy the argument is that a more elaborate picture also allows for ways in which consumers solve problems of imperfect information—via producer reputation, third party evaluations, and other mechanisms familiar to us in the context of cars and computers, and equally relevant in the context of elaborate contracts and technologically protected software.

I do not know if Professor Cohen has considered the empirical question of whether she is more likely to be cheated in the mass market context of buying a car or the individually negotiated contract for fixing it, or whether Microsoft Word is or WYLBUR[12] was more likely to perform as expected. The answer, judging by my experience at least, is that mass market products are more likely to provide me the characteristics I want and believe I am getting than more idiosyncratic products. This is in part because the effect of reputational incentives on the producers of mass market products and economies of scale in the generation of consumer in-

12. WYLBUR is the name of a mainframe text editing program whose misappropriation was the subject of an early computer crime case. *See* U.S. v. Seidlitz, 589 F.2d 152 (1978).

formation more than outweigh any advantage of being able to represent my preferences in one-on-one bargaining.

Professor Cohen's argument, if correct, should apply to product characteristics in general, not just to contract terms. Even a complex contract is a good deal simpler than, say, a computer or automobile. If consumers cannot be trusted to make a sufficiently informed decision about contract terms, and we are therefore better off with the fixed set of terms implied by copyright law, how can they be trusted to make a sufficiently informed decision about whether to buy a car with or without a supercharger or a computer whose CPU does or does not have backside cache?

In arguing against the efficiency of mass market contracts, Cohen sometimes writes as though bargaining is somehow a good thing—an end in itself. Thus, we have "[t]he opposite rule, disallowing electronic self-help unless authorized in a separately-negotiated agreement, probably would encourage more 'bargaining' in that information providers most likely would offer lower prices to consumers willing to agree to electronic monitoring."[13]

This way of putting the argument gets it exactly backwards. The point of choosing as default terms the terms most parties would bargain to is to avoid of the cost of bargaining. If you want to encourage bargaining, the way to do it is to have the legal system set default terms that nobody wants, making it necessary to negotiate and explicitly agree to every detail of every contract. That may be a desirable policy from the standpoint of lawyers and law professors, since it would greatly increase the demand for the services of both, but it is an undesirable policy from the standpoint of everyone else.

B. Is Freedom of Contract Inconsistent with Copyright Law?

Phrases such as "mass-market contracts that are inconsistent with copyright"[14] and "[l]imits on information ownership set by the public law of copyright"[15] reveal a subtle error in Cohen's argument—the belief that copyright law gives consumers the right to use information in certain ways. To see in what sense that is an error, consider Professor Cohen's "fair use" right to quote the most recent draft of this Article immediately after I finished writing it. Such quotation is clearly permitted under the fair use exception of the Copyright Act.[16] But since the only existing copy of the draft was on the hard disk of the computer in my office, Professor

13. Cohen, *supra* note 2, at 1126.
14. *Id.* at 1098.
15. *Id.* at 1090.
16. *See* 17 U.S.C. § 107 (1992).

Cohen could not have accessed it, and thus could not have quoted it, without violating the common law rule against trespass.

What fair use and similar rules provide is not a right to copy information, but a limit to the creator's right to use copyright law to prevent such copying. That distinction is unimportant as long as the only way in which the creator controls his property is through copyright law. But it matters in contexts, such as trade secret law or technological protection, where other forms of protection play an important role. Scientific laws are not patentable—but that does not make it illegal for me to put a lock on the door of my research laboratory, or legal for my competitor to break in.

In a related vein, Cohen writes, "[the Court] has also held that [states] may not grant property-like rights in *un*protectable inventions .... On the same reasoning, nor may they confer property-like rights in unprotectable ... works, or in unprotectable aspects or components of otherwise copyrightable works."[17]

The legal point is correct—states cannot grant their own equivalent of copyright, whether under the guise of unfair competition[18] or in the form of plug mold statutes.[19] But to describe contract as granting "property-like rights" misrepresents the nature of property. The essential feature of a property right—such as copyright—is that it is good against the world.[20] A contract right is good only against the party that signed the contract. A licensor can enforce contractual restrictions only against the licensee.

Technological protection is in a third category, neither property nor contract. The producer of a good may, under ordinary circumstances, design it with whatever characteristics he likes. If I build a car that will only last for five years, and tell you it will only last for five years, I am (from your standpoint) achieving the same result as if I sold you only a five year lease or required, as a condition of selling you the car, that you agree to junk it after five years. But although the result is the same, the mechanism is entirely different—I am controlling my product, not your rights.

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17. Cohen, *supra* note 2, at 1130.

18. *See* Compco Corp. v. Day-Brite Lighting, Inc., 376 U.S. 234 (1964); Sears, Roebuck & Co v. Steiffel Co., 376 U.S. 225 (1964).

19. *See* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141 (1989).

20. *See* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996) ("But are rights created by contract 'equivalent to any of the exclusive rights within the general scope of copyright?' Three courts of appeals have answered 'no.' ... Rights 'equivalent to any of the exclusive rights within the general scope of copyright' are rights established by law—rights that restrict the options of persons who are strangers to the author.") (internal citations omitted).

Similarly, if I give you my intellectual property inside a digital container and inform you that in order to access it you must make online payments according to the attached price list, I am achieving the same result I might have achieved through a contract or (perhaps) a property rule. But I am doing so through a non-legal mechanism. To argue that legal rules designed to make self-enforcement easier are equivalent to the grant of a property right is like claiming that legal rules permitting farmers to use barbed wire are equivalent to land grants.

IV. WHAT COHEN LEAVES OUT

Central to Professor Cohen's paper is the special nature of intellectual property, especially intellectual property in digital form. While she points out special features of such property when their implications strengthen her argument, she sometimes fails to do so when they weaken it. Consider three examples:

A. Public Access Rights

Cohen writes:

> Even the common law of property historically has recognized certain public rights of access to or across the property of another. Most closely analogous is the public trust doctrine, which preserves a right of access across privately-owned land when necessary to reach beaches and other areas that the law considers to be commonly-owned. Similarly, the exceptions and exclusions in copyright law preserve public access to the linguistic, cultural, and scientific commons.[21]

I clear the trees from a piece of land, dig out boulders, pile them into stone walls, and thus make it suitable for farming. The land becomes, in proper Lockean fashion, mine. The obvious justification for my ownership is that it is my work that has given the land value, so it would be unjust—as well as inefficient—to permit someone else to seize it for his use.

There is an important qualification to that argument, from both the ethical and the economic perspective. Although the land was less useful before, it was not entirely useless; other people could walk across it, gather acorns, and—perhaps most importantly—other people could do what I have just done. Now that it is my property, those options have vanished. If I acquire unrestricted control over the land, I am getting more than I have produced—which may be unjust and may also lead to ineffi-

21. Cohen, *supra* note 2, at 1117.

cient rent-seeking as individuals clear land in part to appropriate its pre-existing value.[22]

One possible response to this problem is the Lockean proviso that my acquisition of ownership depends on there being more land— "as much and as good"—left for others to mix their labor with. The implications of that restriction for modern society have been discussed by a number of writers.[23] A second implication is that if my land happens to block the only access to a valuable piece of the common land, other people may have an easement—a right to cross it.

This is a persuasive argument for restricting absolute property rights in real estate. It has at least some application to other forms of property, such as cars, to the extent that they consist in part—perhaps a very small part—of unproduced resources taken from the commons. The one sort of property for which the argument makes no sense at all is intellectual property.

I read Shakespeare and Twain and Dante, and write my own novel—thus mixing my labor with the metaphorical cultural commons. Having written my novel, I tie it up good and tight with contract and technological protection.

Have I taken something out of the commons? No. Shakespeare and Twain and Dante are still there, just as available to the next author or reader as before I wrote my novel. In the case of intellectual property, the Lockean proviso is automatically satisfied—there is always as much and as good, because my use of intellectual property does not leave any less for the next user. The only thing I have locked up tight is my own creation.

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22. *See generally* Terry Anderson & P.J. Hill, *Privatizing the Commons: An Improvement?*, 50 S. ECON. J. 438 (1983) (discussing application to homesteading); David Friedman, *Standards As Intellectual Property: An Economic Approach*, 19 U. DAYTON L. REV. 1109 (1994) (explaining the application to intellectual property), *also available at* <http://www.best.com/~ddfr/Academic/Standards/Standards.html> (visited Nov. 11, 1998); Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies, and Theft*, 5 W. ECON. J. 224 (1967) (discussing the original rent seeking problem).

23. *See generally* ROBERT NOZICK, ANARCHY, STATE AND UTOPIA (1974); Baruch Brody, *Redistribution Without Egalitarianism*, 1 SOC. PHIL. & POL'Y 71 (1983); David Friedman, *Comment on Brody "Redistribution Without Egalitarianism,"* 1 SOC. PHIL. & POL'Y 88 (1983), *also available at* <http://www.best.com/~ddfr/Academic/Comment_on_Brody/Comment_on_Brody.html> (visited Nov. 11, 1998).

B. Temptations to Repossess

Cohen quotes Robert Scott when she writes, "The challenge, then, is to 'design a pattern of reciprocal commitments that effectively constrains the debtor without unduly tempting the creditor.'"[24] She adds:

> There are good reasons to think that electronic self-help would create such risks. As Part I discussed, section 2B-310 would authorize intrusion at the licensor's sole discretion; in this, it resembles the "confession of judgment" clauses that Scott condemns as offering too great a temptation "to evade contractual risks."[25]

In the case of physical goods, there is an obvious reason why creditors may be tempted to abuse their right to repossess—they want the goods. If I have sold you a car and you have paid for it, I may still wish to repossess it (assuming that, by some form of legal trickery, I can get away with doing so) in order to sell it again to someone else. But if I sell you a computer program and you pay me for it, I have no similar temptation—if I want to sell someone else a copy, I can make another one at virtually no cost. Hence the temptation to abuse the right of repossession is less for intellectual property than for other forms, not more, making the argument for restricting that right weaker, not stronger.

Cohen comments on this feature of intellectual property elsewhere in her Article, when she argues that the right to electronic repossession may not permit the producer to charge lower prices,[26] because "the supply of copies is infinite and virtually costless."[27] The premise is correct; the conclusion is not. While repossession gets the producer nothing, the threat of

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24. Cohen, *supra* note 2, at 1122.

25. *Id.* at 1122.

26. *See id.* at 1120 ("First, the 'lost value' attributable to a product whose value lies chiefly in its public good aspect is inherently speculative. Failure to recover a car after the buyer defaults precludes the secured creditor from recovering a portion of its investment; failure to recover a copy of a creative or informational work does not preclude the information provider from realizing a profit on the work. Particularly in the case of digital works, the supply of copies is infinite and virtually costless, and there is no necessary or inevitable relationship between the price charged to consumers and the value invested in each copy.").

Failure to recover a car after the buyer defaults does not preclude the producer from realizing a profit on total sales of that model of car. It does not even guarantee that the producer will not realize a profit on that particular car — the default might have occurred on the last month's payment. But being unable to enforce the terms of the sales agreement does raise the producer's cost or reduce his revenue — whether for cars or for software.

27. *Id.*

repossession may result in his getting paid. The more likely it is that producers will be paid, the lower the price they can and, in a competitive market, will charge for their goods. One of the virtues of electronic self-help is that it lowers the cost of enforcement and thus makes the threat more credible.

C. Enterprise Repo, Inc.

Professor Cohen writes, "Imagine, for example, that a team of high-tech repo men had just used a transporter device to 'beam' your sofa out of your living room and back to the furniture store. It would be difficult for the creditor to convince you that no intrusion had occurred."[28]

How difficult it would be to convince me would depend on how the team managed the repossession—whether by first beaming itself into my living room before beaming the sofa out, by merely inspecting my living room and occupants at long distance in the process of targeting the sofa for removal, or simply by pressing a button that automatically sent the sofa back to the warehouse. The final case is the one corresponding most closely to electronic repossession.[29] While it might be inconvenient, especially if I happened to be sitting on the sofa at the time, the appropriate analogy is not to physical repossession but to a disk crash or software failure "beaming out" my desktop computer by converting it into an oversized paperweight. I have had the experience, more than once, of discovering that a timed demo copy of a computer program had timed out—and while sometimes inconvenient, it did not feel in the least like an intrusion or a violation of my privacy.

Thus, when Cohen writes that "Article 2B sanctions a degree of intrusion into private homes and offices that is unprecedented,"[30] she ignores the fact that what is being sanctioned is a form of virtual "repossession" very much less intrusive than the physical repossession covered by the precedents.

V. IS THE SHIFT TO PRIVATE ORDERING A GOOD THING?

On at least one point, I agree with Professor Cohen.[31] Article 2B reflects an important shift currently occurring in the ways in which creators

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28. *Id.* at 1106.

29. Repossession based on monitoring of activity is more like the intermediate case and raises more serious privacy issues.

30. Cohen, *supra* note 2, at 1101.

31. A second agreement is on the undesirability of law that treats software capable of defeating technological protection as the digital equivalent of burglar's tools. If such laws exist, producers who wish to sell such software openly will embed it in more general

of intellectual property control their works and get paid for their efforts. The shift is from dependence on the public law of copyright to dependence on contract and self-enforcement—from a public to a private ordering. Professor Cohen believes the change is for the worse; I believe it is for the better.

A. Does Private Ordering Threaten Individual Privacy?

One of the arguments Cohen offers is the claim that the shift threatens important values associated with individual privacy. That claim is false with regard to two of the three technologies under discussion. The ability to disable software in response to a perceived breach of the licensing terms poses no more threat to privacy than a building contractor's ability to call up an employee working on a job and tell him that, since the customer is refusing to pay, he should stop working. Software that controls its own usage poses less of a threat to privacy than any alternative mechanism for enforcing contract terms, because it does not require any human being to monitor usage.

The claim is true with regard to a third technology—the use of software to monitor usage and report it to the software's creator. Hence, a producer who embeds such features in his software ought to be obligated to disclose them to the purchaser. Subject to such a disclosure requirement, such software poses precisely the same sort of threat to privacy as any other mechanism by which A acquires information about B with B's consent and knowledge—a frequent and probably inevitable occurrence in modern society.[32]

Cohen appears to recognize the weakness of her privacy argument in the context of software that enforces restrictions on its use, and falls back on the alternative claim that even if such software does not violate privacy in any literal sense, at least it violates autonomy. Thus, she writes, "Privacy protects certain spaces not only to shield personal behaviors from observation by others, but also to preserve a zone of autonomy from interference by others."[33] She adds, "In a sense, the intrusion (or at least its but-for cause) occurred much earlier, when the licensor determined that

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purpose software, making it difficult to enforce the law without hindering legitimate activities. In any case, the nature of the online world makes the enforcement of such laws against covert distribution of the banned software virtually impossible.

32. However, this is an occurrence that can, and perhaps will, be made less frequent in future online transactions by the use of encryption, digital cash, and related technologies. *See* David Friedman, *A World of Strong Privacy: Promises and Perils of Encryption*, 13 SOCIAL PHILOSOPHY AND POLICY 212 (1996).

33. Cohen, *supra* note 2, at 1108.

consumers in their private homes and offices would be allowed to take certain actions but not others."[34]

The problem with these statements is that a producer necessarily determines what his product will or will not do in the process of designing it; it is an odd use of language to describe the failure of a product to do things that I would like it to do as an intrusion or as interference by others in my zone of autonomy.

Professor Cohen responds to this line of argument when she writes:

> The freedom of contract argument for unfettered electronic regulation of performance ... conflates choice with submission and product capabilities with control of behavior. Your vacuum cleaner cannot fly, or clean your oven, and you have no particular right to one that can. However, except in special cases governed by the patent laws, within private spaces you may use a lawfully-acquired vacuum cleaner in any way you see fit.[35]

But applying this to self-enforcing restrictions—my third category of electronic protection[36]—confuses "may use" in the sense of "is not illegal for you to use" with "may use" in the sense of "others must make it possible for you to use." If my software turns itself off on the Sabbath, you still *may* use it on the Sabbath—but you can't.

In Cohen's sense, product capabilities do control behavior—your vacuum cleaner's inability to clean your oven restricts your oven cleaning behavior, just as copy protection built into a computer program restricts your copying behavior. Perhaps the distinction she intends is between restrictions that exist because it would be costly to avoid them—by building a vacuum cleaner with an oven cleaning attachment—and restrictions that exist because the producer of the product does not want you to use his product in certain ways. That might for some purposes be an interesting distinction, but lots of existing products already fit into the second category—and that fact has not in the past been considered legally problematic.

Consider the original Macintosh computer. It was intended as an easy-to-use tool for a mass market, including many people who could not be trusted to work on the machine's internals without injuring either it or

34. *Id.* at 1109.

35. *Id.* at 1115.

36. Professor Cohen makes it clear that this is the sort of protection that she is concerned with when she writes, "My concern here is with the new kind of self-help that digital technologies allow—self-help that consists solely of 'dumb,' hard-wired prevention of unauthorized conduct." *Id.* at 1107.

themselves. Hence, instead of designing the case to fasten with ordinary screws, Apple designed it so that it could only be opened with a set of special tools.[37] This was precisely the real-world equivalent of electronic regulation of performance. I am left wondering whether Professor Cohen believes that Steve Jobs, in designing the computer that way and selling it to me, intruded into my privacy and violated my zone of autonomy.

Again, Professor Cohen writes, "In sum, Article 2B proposes to arrogate to private information providers the power to reach into customers' homes and offices and literally shape their behavior—in many cases without even the courtesy of express contractual notice."[38]

Information providers are not the only ones with that power—Professor Cohen has it too. When she revised the article to which I am replying, she reached out into my office and shaped my behavior—forcing me to remove one of my favorite passages from my response because it no longer applied to her revised version. And she did it, as best I can recall, without any contract at all. Human beings are continually shaping each other's behavior—consider the enormous effect that the inventors of modern computer technology had on both my behavior and Professor Cohen's. The appropriate limit to such shaping is not an elaborate set of rules defining what characteristics products (or journal articles) may have, but the simple rule of mutual consent—if I do not like what she does with her article, I do not have to write a comment on it. If I do not want to use computers, I can forgo a new Mac in favor of an abacus and a box of clay bricks.

Cohen writes: "Yet if reasonable expectations are defined solely by the limits of technological possibility, privacy has a bleak future."[39]

I agree[40]—and that is a good reason to oppose FBI proposals to make mass wiretaps cheap and easy. But the limitations of privacy that Professor Cohen is currently discussing require the consent of the victim, whether explicitly by contract or implicitly in the purchase of a product with known characteristics. Such intrusions will be restricted not merely by the

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37. *See* Richard Spaulding, *Improving the Apple's Core*, SAN DIEGO UNION & TRIB., Mar. 18, 1986, at AA1.

38. Cohen, *supra* note 2, at 1117.

39. *Id.* at 1107.

40. I interpret Cohen as referring to the technology of invading privacy. We would get a more attractive result in a world where it was the protection, not the invasion, of privacy that was limited only by its technology—a world where, for example, strong public key encryption and related technologies were legally unrestricted and widely used. See Friedman, *supra* note 32, at 213-17.

limits of technological possibility but by what consumers are willing to put up with—and at what price.

Nothing in present law prevents me from proposing to a key employee or business partner that he have a small transmitter attached to his leg, even surgically embedded, in order that I can monitor his movements to make sure he is not visiting my competitor or absconding to South America. Such a device is well within the limits of technological possibility. Yet we do not observe such precautions—except in the involuntary relation between convicts and the criminal justice system.[41] We do not observe them because the price I would be willing to pay to buy consent to such an intrusion is, in almost all cases, lower than the price the other party would be willing to accept.

B. Does private ordering provide adequate notice?

Throughout this discussion, I have taken it for granted that the transactions we are considering—in particular, the purchase of software with usage restrictions embedded in it—are voluntary. Cohen might disagree. She writes, "Effectively, section 2B-310 would allow information providers to contract around copyright law without disclosing that fact to users."[42] She adds, "Given the severity of the consequences and the inability of most consumers to evade them, lack of notice of the possibility of electronic self-help is simply unfair."[43]

These and similar passages make it sound as though all she wants is full disclosure by sellers of any restrictions on use built into their products. That seems a reasonable requirement—one whose only cost is a little extra paper and ink reproducing a properly designed paragraph of boiler-plate prose or the still less expensive electronic equivalent.

But Professor Cohen also writes, "It is worth noting, too, that none of the cases concerning electronic self-help has involved a non-negotiated, mass-market contract; thus, no court was required to consider whether the 'notice' afforded consumers by standard-form provisions is enough to validate electronic self-help."[44] She then goes on to devote much of Part IV of her Article to arguing that, in the context of mass market contracts, agreement is not really consent.

So the implication of her argument is not that producers should be free to build electronic self-enforcement into their products, provided they are

41. *See* Clem Richardson, *Jailers Experiment With Electronic Tags*, NEWSDAY, Apr. 10, 1991, at 20.

42. Cohen, *supra* note 2, at 1098.

43. *Id.* at 1112.

44. *Id.* at 1112.

honest with their customers about what they are getting—a position with which I would agree—but rather that no mass market contract the producer can write will provide sufficient notice to justify such products. What is presented as an argument in favor of disclosure is in fact an argument against freedom of contract. As Cohen writes, "The problem here is not lack of 'bargaining' per se, or even lack of knowledge, but rather lack of consent and inability to affect the options on the table."[45]

That might be said with as much, and as little, truth about almost any mass market consumer product.[46] The implication—whether Professor Cohen would accept it I do not know—is that the characteristics of cars, computers, and television sets, as well as those of computer programs, ought to be set by the courts or Congress, not by the market.

C. Is copyright more efficient than private ordering?

So far I have dealt with a line of argument based on issues of privacy, autonomy, and the like. Cohen's other argument is a broad claim that the inflexible mechanism of copyright is superior in its results to the more flexible private alternatives. She writes:

> As I have demonstrated elsewhere, the copyright system promotes the social goals of creative progress and public access to creative works in important ways that the market cannot measure. Because it is difficult to assess creative potential *ex ante*, ... and because current information providers may perceive some works (for example, parodies) as detrimental to their interests, there is no reason to think that giving information providers control over all uses of their information products would result in more or better creative progress. ... In this respect, the enhanced accessibility of creative and informational works under copyright law produces important external benefits that most likely would be underproduced by a private-law market-based regime. In short, the copyright regime of limited rights and user privileges not only serves nonmonetizable and distributional concerns, but those concerns also are central to a particular understanding of creative and social "progress."[47]

The argument has two parts. The first is the claim, surely true, that the market will not produce a perfectly efficient outcome, in part because some of the benefits from intellectual property cannot be captured by the producer and so will be ignored in his calculations of what to produce. The

45. *Id.* at 1126.
46. *See* Friedman, *supra* note 32, at 212.
47. Cohen, *supra* note 2, at 1128.

second is the claim, surely false, that the particular set of legal rules imposed by copyright can be expected to produce a more nearly efficient outcome than the freedom of contract alternative.[48]

The claim is false for two reasons. First, and most obviously, the more flexible regime allows the producer to capture more of the benefit from what he produces—that, after all, is why sellers of intellectual property would choose to use contract and self-enforcement instead of relying entirely on copyright. The higher the return to producing intellectual property the more intellectual property will be produced. Hence, to the extent that the creation of intellectual property is a purpose of copyright law, it is a purpose better served by permitting other options as well.[49]

Second, and less obviously, the private alternatives to copyright result in more, not less, use of such intellectual property as is produced. The standard economic argument against legal protection of intellectual property is that it results in owners of intellectual property charging a positive price for its use even though the marginal cost of one more use is zero. Thus, copyright results in an inefficiently low number of copies.[50]

Private enforcement does not eliminate that problem but it does reduce it. The more flexible the pricing options, the easier it is for the seller to charge a high price to the high-volume, high-value user, and a low price to the low-volume, low-value user, capturing revenue from the former without losing sales to the latter.[51] The seller of a database designed to charge by the query can and will make it available both to the casual user, who uses a few dollars worth of queries a month, and to the commercial user, who uses a few thousand dollars worth a month. The same seller, restricted to the terms of copyright, including the doctrine of first sale, finds

48. Cohen would probably say that the outcome is better, but not necessarily more efficient. She writes, "Allocative efficiency is a poor measure of social welfare, however. Social welfare is in part a function of nonmonetizable values, external effects, and distributional concerns, all of which the allocative criterion ignores." *Id.* at 1127. But this is to misunderstand the concept of economic efficiency. External effects are sometimes ignored by the market, but if so, the result is to reduce the efficiency of its outcome—that is why economists have traditionally proposed Pigouvian taxes as a way of making market outcomes more efficient. It is true that efficiency ignores distributive issues—but, as I point out below in discussing her reference to "distributional concerns," it is hard to see how that limitation can be used to derive an argument for her conclusion.

49. For an analogous argument, see Friedman et al., *Some Economics of Trade Secret Law*, 5 J. ECON. PERSP. 61 (1991), *also available at* <http://www.best.com/~ddfr/Academic/Trade_Secrets/Trade_Secrets.html> (visited Nov. 11, 1998) (defending the efficiency of permitting trade secret as an alternative to patent).

50. While the absence of copyright results in an inefficiently low number of originals available to be copied.

51. See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449-50 (7th Cir. 1996).

that he must charge a single price to all users for unlimited use—and sets that price at a level that eliminates the casual user.

Cohen is concerned that some uses currently permitted by the doctrine of fair use will be prohibited, or at least charged for, under the private alternative. That may well happen. But the doctrine of fair use is constructed in a way that for the most part limits it to uses whose economic value is low—uses which it is in the interest of the producer to permit at a low price. Indeed, one economic justification for the doctrine is that it permits use of intellectual property in contexts where the transaction cost of licensing is higher than the value of what is licensed. If the transaction cost is radically reduced, the size of that category will shrink.

Cohen offers the counterexample of parodies and the like—uses of intellectual property which the owner might want to prevent rather than charge for. It is hard to believe that the effect of technological protection on this class of uses will be significant. Technological protection may prevent me from copying your work, but it cannot prevent me from viewing it and then writing a critique or parody. Conceivably, a product's licensing terms could include an agreement not to publish anything critical about it—but it would then be an adequate critique to simply publish the existence of such a requirement, a fact that any reader could easily verify for himself by trying to license the software.[52]

If the social goal of the copyright system is to promote progress and the useful arts by increasing the quantity and accessibility of intellectual property, that goal is an argument in favor of the shift towards private ordering, not against.

We are left with Cohen's somewhat cryptic references to distributional concerns. Most intellectual property transactions occur between firms; it is hard to see how rules that favor firms that consume intellectual property over firms that produce it (as Cohen apparently believes the current copyright system does, at least relative to the private alternatives) are likely, on average, to make rich people poorer and poor people richer, which I presume is what "serves ... distributional concerns"[53] is supposed to mean.

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52. A political theorist named Andrew Galambos argued that ideas were the primary form of property, claimed a property right in his own ideas, and required his students to agree not to repeat them. That may be one of the reasons you have never heard of him. The tactic does not recommend itself in a commercial context either. *See generally* Synergy Server, *About Andrew J. Galambos* (visited Nov. 11, 1998) <http://www2.banned-books.com/ft/ftpeople/ajg/about.html>; Synergy Server, *What Is Property?* (visited Nov. 11, 1998) <http://www2.banned-books.com/ft/ftpeople/ajg/define/property.html>.

53. Cohen, *supra* note 2, at 1128.

Some transactions involve consumption of intellectual property by private consumers—buying and reading a book, for example. But insofar as the shift to a private system has any distributional effect on ultimate consumers, it ought to be in the opposite of the direction Cohen implies. Private enforcement permits a greater degree of price discrimination. Rich people are, on average, willing to pay more for things than poor people, and a well designed set of discriminatory prices requires them to do so.

Cohen's general argument exhibits a feature unfortunately common in arguments opposing changes that substitute private markets for centralized control. When considering the attractiveness of the market alternative, she imposes high standards of proof—any failure of the real world situation to meet theoretical conditions for perfect economic efficiency is adequate reason to ignore the economic arguments for the tendency of private markets to produce efficient outcomes. When considering the alternative ordering—in this case, the one size fits all terms of copyright—no theoretical argument is offered nor, apparently, needed. It is enough to point out that in a world where protection is limited to copyright someone, somewhere, will be able to use some piece of intellectual property for free that he might have to pay for under a system of self-enforcement.

VI. CONCLUSION

We are faced with two alternative approaches to organizing the production and distribution of intellectual property: the public ordering defined by copyright law and the private ordering implied by freedom of contract and the technologies of digital monitoring and self-enforcement.

In a fully efficient world, as that concept is understood by economists, every good, including every possible item of intellectual property, would be produced if and only if the net costs of producing it were less than the net benefits. In the real world, under either approach, that objective is unattainable. Real world markets necessarily omit from their calculations some benefits and some costs, whether because consumers are imperfectly informed about what they are consuming or because producers are unable to internalize all benefits, and are not required to internalize all costs, associated with their production. That will be as true in the market implied by a private ordering of intellectual property as it is true in other markets.

Here, as elsewhere, the argument for the market is not that it is perfect, but that it is less imperfect than the alternatives. Under the public law of copyright, producers are less able than under private contract to internalize the value of what they produce, hence less likely to produce those goods, with those characteristics, that maximize the net benefit from their activi-

ties. Hence the result can be expected to be less, not more, efficient than under the private alternative.

Seen from the economic standpoint, the fundamental justification for the public law of intellectual property is a market failure. That failure is not, as Cohen seems to believe, the failure of producers of intellectual property to take account of external or nonmonetizable or distributional consequences of their activity—if that were the problem, the solution would be not copyright, which suffers from the same problems, but some form of public subsidy.

The market failure that justifies the law of intellectual property is the difficulty of enforcing a producer's rights in what he produces. It is only because, in a world where it is difficult for producers to prevent or observe unauthorized copying, contracts to control the use of intellectual property are to a large degree unenforceable, that modern law provides a form of property protection as an alternative. Insofar as digital technology is eliminating that market failure, we should adapt our legal rules to encourage the change, not to block it. Cohen would prefer to persuade the cripple who has finally been cured that he should retain crutches rather than risk the harebrained adventure of walking.

This final metaphor suggests an important question that neither Cohen nor (for different reasons) those on the other side of the issue have discussed: is copyright law becoming obsolete, and, if so, ought it to be abolished? If the crutch is no longer needed, should we discard it?

My own view is that, in the limited area of online transactions involving intellectual property in digital form, copyright law will, over the next few decades, become increasingly irrelevant, in part because better alternatives will become available, and in part because it will become increasingly unenforceable.[54] I leave to some future conference the further implications of that change.

54. *See generally* Friedman, *supra* note 32.

FREE CONTRACTING, FAIR COMPETITION, AND ARTICLE 2B: SOME REFLECTIONS ON FEDERAL COMPETITION POLICY, INFORMATION TRANSACTIONS, AND "AGGRESSIVE NEUTRALITY"

By David McGowan †

ABSTRACT

The proposed draft of Article 2B attempts to remain neutral regarding conflicts between the potentially competing goals of state contract law and federal intellectual property and antitrust law. A neutral stance seems sensible because federal law would prevail in any conflict with state contract law. However, this Article argues that such neutrality cannot be completely achieved where antitrust and intellectual property doctrines intersect.

This Article concludes that courts deciding antitrust-related disputes based on matters within the scope of Article 2B should distinguish between claims based on the market position of the intellectual property rights and claims grounded in misconduct during contract negotiations or performance. In the former cases, intellectual property law should govern issues relating to the economic strength of the intellectual property right. In the latter, the courts should look first to contract principles and, if a violation of contract law is found, should determine whether normal contract remedies could provide appropriate relief. If no contract violation is found, courts should scrutinize antitrust claims closely to determine whether any harm to allocative efficiency is shown; courts should not allow antitrust allegations to be used simply to obtain leverage in a contractual dispute.

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> "How far the federal policies reach is uncertain in many respects. Article 2B approaches the issue from a posture of aggressive neutrality."[1]

I. Contracts and Contractual Competition Policy

How does contract law differ from laws regulating competition? The answer is less apparent than might appear at first glance. Contract and antitrust deal in part with different sorts of behavior, of course. Contract has not historically sought to prohibit unilateral conduct, for example, and antitrust has not concerned itself with the mechanics of agreement—the statute of frauds, consideration, etc. But there is overlap as well, consideration of which is interesting when reviewing proposed Article 2B of the Uniform Commercial Code and the evolving law of "information" licenses from the perspective of federal competition policy.

Section 1 of the Sherman Act prohibits contracts "in restraint of trade," which was a term of art at common law.[2] As Professor Hovenkamp has emphasized, the common law considered contracts unenforceable as restraints of trade for reasons that reflected theories of liberty and free choice rather than neoclassical conceptions of marginal cost and allocative efficiency.[3] But the common law pertaining to restraints of trade was dy-

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1. U.C.C. § 2B-105, Reporter's Note 3 (Apr. 15, 1998 Draft). As of the August 1998 version, the drafters' comments on the topics which are relevant here referred to Article 2B's "neutrality policy," eliminating any hint of an "aggressive" stance. The adjective was omitted beginning with the draft prepared for the July 1998 NCCUSL annual meeting.

2. *See, e.g.*, State Oil v. Khan, 118 S.Ct. 275, 284 (1997) ("[T]he term 'restraint of trade,' as used in § 1, also 'invokes the common law itself, and not merely the static content that the common law assigned to that term in 1890.'"); Business Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717, 731 (1988) ("The term 'restraint of trade' in the statute, like the term at common law, refers not to a particular list of agreements, but to a particular economic consequence, which may be produced by quite different sorts of agreements in varying times and circumstances.").

3. *See Business Elecs.*, 485 U.S. at 731-32 ("The changing content of the term 'restraint of trade' was well recognized at the time the Sherman Act was enacted .... The Sherman Act adopted the term 'restraint of trade' along with its dynamic potential. It invokes the common law itself, and not merely the static content the common law had

namic. The Sherman Act's adoption of the term and its more liberal rights of action may have absorbed further development of the law of trade restraints, but one could imagine the common law doctrine evolving over time by absorbing the varied economic thinking that has informed Sherman Act jurisprudence.[4] Indeed, Professor Hovenkamp traces the evolution of neoclassical concepts through the common law even after passage of the Sherman Act, concluding that "[t]he development of the modern neoclassical model of perfect competition and of the law's new concern with agreements between competitors were nearly simultaneous events" and that by 1900 "the common law's theory of competition had changed completely."[5]

With respect to substantive matters, it is interesting to ask what federal competition policy adds to a conceivable regime of contract law that might have evolved in the absence of federal antitrust statutes. In the absence of federal statutes, could a contract[6] purporting to preclude a purchaser from

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assigned to the term in 1890."); Dr. Miles Med. Co. v. John D. Park & Sons Co., 220 U.S. 373, 384 (1911) ("With respect to contracts in restraint of trade, the earlier doctrine of the common law has been substantially modified in adaptation to modern conditions."); HERBERT HOVENKAMP, ENTERPRISE AND AMERICAN LAW 1836-1937, at 268-95 (1991) [hereinafter HOVENKAMP, ENTERPRISE]; HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY, THE LAW OF COMPETITION AND ITS PRACTICE 52-54 (1994) [hereinafter HOVENKAMP, ANTITRUST POLICY].

4. *See* PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 104 (rev. ed. 1997) ("[A]lthough the framers of the Sherman Act may have thought in some generalized fashion that they were 'enacting' the common law of trade restraints, the case law that emerged very quickly deviated from common law principles, was far more aggressive against cartels and mergers, and pursued unilateral conduct for the first time. However, in 1890 the common law itself was experiencing significant changes, and in many respects was moving in the same direction that the antitrust laws would go."); HOVENKAMP, ENTERPRISE, *supra* note 3 at 268 ("Antitrust policy has been forged by economic ideology since its inception. But even the common law experienced economic revolutions"). As Professor Hovenkamp notes, one important qualification to this point is antitrust's grant of standing to third parties to bring an action attacking an unlawful agreement. *Id.*; Apex Hosiery Co. v. Leader, 310 U.S. 469, 497 (1940) ("The common law doctrines relating to contracts and combinations in restraint of trade were well understood long before enactment of the Sherman law .... But the ... restraints of trade were not penalized and gave rise to no actionable wrong."). Even the standing question might have been resolved by a corollary to the rule granting intended third-party beneficiaries standing to sue for breach of an agreement to which they were not a party.

5. HOVENKAMP, ENTERPRISE, *supra* note 3 at 284-85; E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 5.3 (1990) (noting usurpation of the common law of restraint of trade by antitrust statutes but noting continuing state review of covenants not to compete).

6. As Professor Lemley has emphasized in his work, whether an agreement by which software should be sold is a contract of sale or a license as defined by U.C.C. §

making an intermediate copy of software to facilitate transformative use (reverse engineering) be enforced?[7] Or an agreement forbidding the owner of a durable good from making a transitory copy of diagnostic software for repair by a third-party service firm?[8] Or a contract calling for payments for an operating system based on the number of microprocessors an original equipment manufacturer uses rather than the number of copies it makes?[9] Could a firm with market power terminate contracts to supply important inputs to a firm in a downstream market?[10] Does a state law recognizing contract terms that are not made available to consumers until after they have tendered payment, as may be the case with some "shrinkwrap" or "click-on" agreements, present an unacceptable risk of reducing nonprice competition on, for example, warranty terms?[11] Will "adhesion" contracts or onerous terms offered by a monopolist be subject to closer scrutiny under contract principles than those same contracts and terms offered by a small player?[12] Would it matter if the market were merely concentrated

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2B-102(29) is a contested point that may vary depending on the economic circumstances of a transaction. *See* Mark A. Lemley, *Beyond Preemption: The Federal Law and Policy of Intellectual Property Licensing*, 87 CALIF. L. REV. 111 , 116 n.11 (forthcoming 1999). The issue appears to be more contested with respect to mass market transactions than others that are likely of more interest to the topics discussed in this Article. I use the terms contract, agreement, and license interchangeably, without wishing to imply any view on the characterization issue.

7. *See* Sega Enters., Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992).

8. *See* Triad Sys. Corp. v. Southeastern Express Co., 64 F.3d 1330 (9th Cir. 1995); Service & Training, Inc. v. Data General Corp., 963 F.2d 680, 687 (4th Cir. 1992).

9. *Cf.* Final Judgment, United States of America v. Microsoft Corp., No. 94-1564 § IV(C) ("Microsoft shall not enter into any Per Processor License.") (July 15, 1994), *available at* <http://www.usdoj.gov/atr/cases/f0000/0047.htm> (visited Nov. 22, 1998).

10. *See* Intergraph Corp. v. Intel Corp., 3 F. Supp. 2d 1255 (N.D. Ala. 1998).

11. The question is based on a memorandum to members of the American Law Institute from Jean Braucher and Peter Linzer suggesting that approval of shrinkwrap or click-on licenses might reduce nonprice competition. *See* Letter from Jean Braucher & Peter Linzer to Members of the American Law Institute (May 5, 1998), *available at* <http://www.ali.org/ali/Braucher.htm> (visited Nov. 22, 1998).

12. *See, e.g.*. Rudbart v. North Jersey District Water Supply Comm'n, 605 A.2d 681, 687 (N.J. 1992) (noting that among considerations pointing toward enforcement of a term in an adhesive contract "no investor was under any economic pressure to buy the notes .... They were not driven to accept the Commission's notes because of a monopolistic market or any other economic constraint."); Rozeboom v. Northwestern Bell Tele., 358 N.W. 2d 241 (S.D. 1984) (voiding damage limitation provision in agreement between advertiser and local telephone company and noting, "[i]t is crucial to understand that this case involves an individual versus a monopoly. We do not have two corporations dealing at arms length or two individuals dealing at arms length. We have a factual scenario where the bargaining power is wholly unequal. As a result of that economic ine-

rather than actually cartelized?[13]

The answer to such questions will depend in significant part on the goals of contract and antitrust. If the goals of contract law include, directly

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quality and monopoly of Bell, the terms of this contract become substantively unreasonable and should not be enforced"); Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 404 (1960) (refusing to enforce disclaimer of implied warranty of merchantability in uniform warranty of Automobile Manufacturer's Association, of which firms producing over 90% of new cars were members: "Chrysler's attempted disclaimer of an implied warranty of merchantability and of the obligations arising therefrom is so inimical to the public good as to compel an adjudication of its invalidity"); Melvin Aron Eisenberg, *The Bargain Principle and Its Limits*, 95 HARV. L. REV. 741, 754 (1982) ("The development and application of specific unconscionability norms is closely related to the manner in which the relevant market deviates from a perfectly competitive market."); Thomas S. Ulen, *Courts, Legislatures, and the General Theory of the Second Best In Law and Economics*, 73 CHI-KENT L. REV. 189, 208 (1998) ("Standard-form contracts, offered on a 'take-it-or-leave-it' basis, may or may not be efficient. If the contract has terms to which the parties themselves ... would have agreed, had there been time and low transaction costs, then the terms may be efficient .... However, if A imposes the terms in a contract of adhesion on B ... because A has a monopoly position with respect to B, then there is no reason to believe that the contract will be efficient."). For the view that monopolists will exercise their power over price rather than in contract terms, see Richard Craswell, *Property Rules and Liability Rules in Unconscionability and Related Doctrines*, 60 U. CHI. L. REV. 1, 39-40 (1993) ("[T]he monopolist's incentive is normally to offer the most attractive non-price terms she can think of, the better to gouge her customers by charging them an even higher price."). Craswell notes, however, that "in some cases a less efficient non-price term might alter the pattern of demand in a way that increases the monopolist's profits, thus giving her an incentive to use a less efficient non-price term." *Id.* *See also* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 102 (3d ed. 1986) (contending that competition should drive contract terms toward an efficient level and that in presence of monopoly power "there is no reason to expect the terms (such as the seller's warranties or the consequences of the buyer's default) to be different under monopoly from what they would be under competition; the only difference is that the monopolist's price will be higher. The problem is monopoly, not bargaining power ....").

13. Arthur Leff's dictionary, for example, distinguishes between terms offered in an effectively cartelized market and those offered in a market with competition on some terms. Arthur Alan Leff, *The Leff Dictionary of Law: A Fragment*, 94 YALE L.J. 1855, 1931-32 (1985) ("One set of legal responses would be proper with respect to 'adhesion contracts' used by all members of a particular industry such that a consumer could not acquire certain goods or services at all except on a particular set of terms. But the same response might not be proper if each member of an industry refused to change the terms of its own contract, but the contracts of each were not identical, such that a consumer could get materially different terms by choosing to deal with one competitor rather than another. To be concrete, the situation in which all automobile manufacturers put a disclaimer of warranty into their unmodifiable contracts would seem different from one in which half disclaim all warranties and half do not, or at least would 'undisclaim' if paid extra.").

or indirectly, facilitating the efficient allocation of society's resources,[14] and if these are also among antitrust's purposes, then one would not be surprised to find considerable similarity of approach to problems involving contracting behavior. Even if contract does not consciously seek the efficient allocation of resources, but merely to facilitate transactions involving those resources by lowering transaction costs, rules designed to achieve this goal, when combined with the assumption that individuals will rationally seek to maximize their wealth,[15] produce a regime aimed at least in part at producing an efficient allocation of resources. If individuals are assumed to act rationally, and transaction costs (including information costs) are assumed to be zero, the Coase Theorem—which in part demonstrates the possibility of allocative efficiency through exchange rather than taxation or subsidy—illustrates this point.[16]

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14. Efficiency is often posited as an animating principle of contract law, though not necessarily the sole animating principle. See, *e.g.*, Seabord Lumber Co. v. United States, 41 Fed. Cl. 401, 417 (1998) (rejecting claim of excuse under doctrine of impossibility of performance on ground that placing the burden of performance "on the party who originally accepted that burden, absent rather limited circumstances ... not only preserves the integrity of freedom of contract, but it also serves economic efficiency by the most rational allocation of risk and performance resources."); Selmer Co. v. Blakeslee-Midwest Co., 704 F.2d 924, 927 (7th Cir. 1983) (Posner, J.) (explaining that the doctrine voiding contract modifications exacted by promisee's threat to refuse to perform by "encouraging people to make contracts promotes the efficient allocation of resources"); Weather Shield Mfg., Inc. v. PPG Indus., Inc, 1998 WL 469913, *3 (W.D. Wis. 1998) (noting that the economic loss doctrine "protects the parties' freedom of contract and promotes economically efficient allocation of risk and insurance against risk"); Rudbart v. North Jersey Dist. Water Supply Comm'n, 605 A.2d 681, 687 (N.J. 1992) (concluding that in competitive securities markets "the principal justification for invalidating terms of a contract of adhesion are simply not present" and noting that, "if the market is working free from improper influence," prices and terms set through private contracting "tend toward an optimum allocation of resources and are an incentive to efficiency." (quoting W. David Slawson, *Standard Form Contracts and Democratic Control of Lawmaking Power*, 84 HARV. L. REV. 529, 553-54 (1971)); Harvey S. Perlman, *Interference With Contract and Other Economic Expectancies: A Clash of Tort and Contract Doctrine*, 49 U. CHI. L. REV. 61, 79 (1982) ("Existing contract doctrine seems designed to promote allocational efficiency by minimizing transaction costs and encouraging nonperformance where efficiency gains result.").

15. For qualifications on this common assumption in the context of contract law, see Melvin Aron Eisenberg, *The Limits of Cognition and The Limits of Contract*, 47 STAN. L. REV. 211 (1995).

16. For elaboration on this point, see JULES L. COLEMAN, MARKETS, MORALS AND THE LAW 69-71 (1988). In part, of course, Coase demonstrated the importance of transaction costs in actual exchange. *See* RONALD H. COASE, THE FIRM, THE MARKET, AND THE LAW 174 (1988); Daniel A. Farber, *Parody Lost, Pragmatism Regained: The Ironic History of the Coase Theorem*, 83 VA. L. REV. 397 (1997).

The law may relax at least strong rational actor assumptions in the consumer context, however,[17] and such assumptions in any event do not solve problems arising from behavior that is individually or bilaterally rational but might be socially suboptimal. Collective action problems, public goods problems, and externalities come to mind. Where such problems exist, the law must take into account the effects of individual behavior on third parties. Contract or, more likely given the historical evolution of the law, antitrust may do this pursuant to a theory of externalities.[18] Copyright may approach similar problems from the public goods perspective, perhaps including mandatory rules designed to overcome what would otherwise be a coordination problem posing a barrier to optimal dissemination and improvement of copyrighted work. Which approach will be preferable depends on the precise nature of the problems and on which body of law best address them, taking into account the methodologies and assumptions underlying the law.

Dwelling on the overlap of competition policy and contract law might seem at best a heuristic exercise in light of the Supremacy Clause,[19] but the recent decision in *Intergraph Corporation v. Intel Corporation*,[20] and a recent private antitrust suit against Microsoft,[21] suggest that contract and antitrust claims may converge in litigation in "copyright industries" more frequently than they have in the past. A single district court decision granting preliminary relief does not establish much in the way of law, new or otherwise. It might not even set a trend in Alabama. As a case study, however, *Intergraph* highlights the difficult issues that arise when contract law, competition policy, and intellectual property law converge.

Intergraph manufactured computer workstations that performed design and drafting functions.[22] Intergraph's early products, built in the 1970s,

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17. *See, e.g., Eisenberg, supra* note 15, at 216-25 (discussing cognitive limitations relevant to contracting behavior generally); Jason Scott Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules*, 100 YALE L.J. 615, 643 n.66 (1990) (noting judicial reluctance to enforce damage limitations in consumer contracts).

18. Externalities are effects of conduct that produce socially suboptimal outcomes. For example, the Antitrust Division's original proceeding against Microsoft worked in part from the premise that Microsoft's per-processor licenses increased the effective cost to original equipment manufacturers of operating systems that competed with Microsoft's products. United States v. Microsoft Corp., 159 F.R.D. 318, 321 (D.D.C.), *rev'd* 56 F.3d 1448 (D.C. Cir. 1995).

19. U.S. CONST. art. VI, cl.2.

20. 3 F. Supp. 2d 1255 (N.D. Ala. 1998). Intel's dispute with Intergraph is, among other things, one of the disputes cited by the Federal Trade Commission in a complaint issued against Intel in June 1998.

21. *See infra* note 25.

22. *See Intergraph*, 3 F. Supp. 2d at 1259.

were based on computers Intergraph purchased from Digital Equipment.[23] In 1986, Intergraph began to produce workstations based on "Clipper" chips manufactured by Fairchild.[24] When Fairchild was sold a year later, Intergraph purchased the division that produced the Clipper technology. Intergraph used this technology until 1993.[25]

In 1993, an Intergraph representative met with Intel's chief executive officer to discuss Intergraph's interest in switching from its own Clipper technology to Microsoft's Windows NT operating system running on Intel chips.[26] The court's treatment of this meeting is extremely interesting from the perspective of both competition policy and contract law. Intergraph submitted a declaration from its founder in support of its motion for preliminary injunction, which described the parties dealings as follows:

> In 1993, I personally met with Andy Grove of Intel to discuss Intel's future development plans. Mr. Grove represented to me that Intel's chips would soon have the necessary computing power and speed for the development of an Intergraph workstation. I also expressed my concern with Intel being the sole source supplier of its chips, but was assured by Mr. Grove that Intel was sensitive to such issues and that Intel treated all of its developers fairly and equally. Based upon such representations, [Intergraph] began development of an Intel-based workstation and discontinued further development of the Clipper and Clipper-based workstations and servers.[27]

Intergraph's witnesses at the injunction hearing qualified this testimony somewhat, conceding that "Mr. Grove did not commit Intel to provide a perpetual supply of chips, pre-released chips, or confidential information,"[28] the latter two items being necessary for Intergraph to bring its

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23. *See id.* at 1263.

24. *See id.*

25. *See id* at 1263. Intergraph's website further states that it "is the world's largest company dedicated to supplying interactive computer graphic systems .... Intergraph is a billion-dollar, Fortune 1000 supplier of hardware, software, and services with sales and support offices in 65 countries." Intergraph, (visited Aug. 19, 1998) <http://www.intergraph.com>. The district court also noted that Intergraph was a global firm with 8,500 employees, 4,500 of whom were located in Huntsville, Alabama. *See Intergraph*, 3 F. Supp.2d at 1261.

26. *See id.* at 1264.

27. *Id.*

28. *Id.*

workstations to market in a timely manner—contemporaneous with the public release of new Intel technology.[29]

Following the 1993 meeting, Intergraph began a transition away from its Clipper technology and toward development of Intel-based workstations in reliance on Intel's "assurances and representations that ... Intel would supply its CPUs to Intergraph on fair and reasonable terms."[30] The district court concluded that Intel's conduct induced Intergraph to abandon Clipper technology, thereby eliminating Intergraph as a competitor in a "high-end microprocessor market," while simultaneously locking Intergraph into using Intel's chips for Intergraph's workstations.[31] The case was decided on Intergraph's motion for preliminary injunction and the parties' evidentiary submissions pertaining to that motion; the court cautioned that its findings were "based on the evidence received to this point and may prove illusory after a full trial on the merits of the parties' contentions."[32]

Intergraph's transition to Intel technology involved the transfer of substantial technical information from Intel to Intergraph, as well as significant support.[33] The court found that in 1993, "it was the practice of Intel to

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29. A variation on this theme has been alleged by Bristol Technology, a small firm marketing a product known as Wind/U, which it describes as "a suite of programs that enables application programs designed to run on the Windows operating system to be adapted to run efficiently under UNIX, Open VMS and OS/390 operating systems." Complaint for Damages and Injunction for Monopolization And Other Tortious Conduct, Bristol Technology, Inc. v. Microsoft Corp., No. 398CV1657 (JCH) (D. Conn. 1998), *available at* <http://www.bristol.com/legal/complaint.htm> (visited Aug. 20, 1998). Bristol alleged that it became a partner in Microsoft's Windows Interface Source Environment ("WISE") program in reliance on public and private assurances by Microsoft that it would provide WISE program members with "continuing access to all Windows source code, details of the Windows programming interface and other data ('compatibility information') necessary to assure that the products offered to consumers by WISE partners would evolve along with future versions of the Windows family of operating systems and assure applications compatibility and performance." Complaint at ¶ 49. Bristol alleged that Microsoft induced Bristol to accept a license for Windows source code, which caused Bristol to modify its business plan in a manner that rendered it completely dependent on access to Windows source code. Bristol further alleged that Microsoft later refused to agree to license Windows source code to Bristol in the future on commercially reasonable terms. Echoing the district court's approach in *Intergraph*, Bristol asserted antitrust claims under essential facilities and monopolization theories as well as a claim based on a promissory estoppel theory.

30. *Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d. 1255, 1264 (N.D. Ala. 1988).

31. *Id.* at 1265.

32. *Id.* at 1259 n.4.

33. The district court described the relationship as follows:

freely share with its OEM customers technical information about its products" but that thereafter Intel simultaneously moved to close its technological architecture and to render Intel technology incompatible with that of other firms.[34] Intel also entered into various agreements giving it greater (and unilateral) control over its technical information. For example, Intel's non-disclosure agreements included a provision "expressly negat[ing] any obligation on the part of either party to supply confidential information," as well as terms providing that the agreement did not constitute a joint venture or partnership and that the agreement could be terminated at any time.[35]

Intergraph asserted patent claims based on its Clipper technology against certain computer manufacturers who were Intel's customers.[36] These OEMs in turn sought indemnity from Intel, prompting Intel to contact Intergraph and propose an agreement to cross-license certain patented technology.[37] The negotiations failed. Intel next sought to include cross-licensing language in further non-disclosure agreements with Intergraph, but Intergraph apparently would not agree to the language. Several months later, Intel "unilaterally canceled all Intergraph's outstanding [non-disclosure agreements] and demanded the return of all confidential information it had provided Intergraph."[38]

The district court found that Intel was "the world's largest designer, manufacturer, and supplier of high-performance microprocessors," that

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> Before mid-1996, Intel and Intergraph enjoyed a mutually beneficial business relationship. As a result of this relationship, Intel regularly provided Intergraph with CPUs, technical information, and support essential for Intergraph to be competitive in its chosen field. Intel regularly supplied Intergraph with early samples of its CPUs for testing and development, often within weeks of their first production. Intel provided motherboard design assistance, and it reviewed Intergraph's design schematics to ensure that any 'bugs' or defects in the Intel CPU or chips were avoided. Intel provided detailed information on its technology and future plans, and it solicited Intergraph information and technology for incorporation into future Intel designs. Intel provided advance information on its own design and development efforts, and it supported Intergraph's development efforts.

Id. at 1269.

34. *Id.* at 1265.

35. According to the court, "other documents signed by the parties also provide that they create no obligation to supply products or confidential information and to engage in future business activities." *Id.* at 1266.

36. *See Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d. 1255, 1266-67 (N.D. Ala. 1988).

37. *See id.*

38. *Id.* at 1267.

Intel earned 88 percent "of the total revenue derived from microprocessors sold for use in desktop computers, laptops, servers, and workstations," and that Intel had 85 percent of the market for "x86" chips.[39] The court concluded there were two chip markets relevant to the case: the market for high performance microprocessors and a separate market for Intel microprocessors. The court found that "[i]t is self-evident, as admitted by Intel's counsel, that Intel has a 100 percent absolute monopoly of Intel CPU's."[40]

Intergraph sought a preliminary injunction that essentially required Intel to continue dealing with Intergraph as the parties had in the past, and to treat Intergraph at least as well as Intel treated its customers who competed with Intergraph.[41] The district court granted the injunction.[42] The district court's opinion is a relentless exercise in alternative reasoning. The opinion proceeds in concentric fashion by asserting, in turn, successively narrower bases for its order requiring Intel to deal with Intergraph. The court concluded that Intergraph had established a substantial likelihood of showing at trial that (i) "Intel's advanced CPUs and Intel's technical information" were essential to Intergraph's ability to compete, and Intel was therefore obliged to deal with Intergraph under the essential facilities doctrine; (ii) Intel was leveraging its chip monopoly into the graphics subsytem market while denying Intergraph essential inputs; (iii) Intel was engaging in coercive reciprocity by demanding that Intergraph cross-license its Clipper technology in exchange for a continued supply" of Intel's chips and technical information; (iv) Intel's "retaliatory enforcement" of its non-disclosure agreements rendered them a part of an anticompetitive scheme and therefore contracts in restraint of trade; (v) Intergraph was entitled to specific performance of a letter the court found sufficiently definite to constitute a contract; (vi) Intel's non-disclosure agreements were unconscionable when made; (vii) Intel's non-disclosure agreements were unconscionable as enforced by Intel; and (viii) Intergraph was entitled to reasonable notice of cancellation.[43] The latter four grounds for decision were based in substantial part on the U.C.C.

Our interest in the district court's opinion is not its antitrust analysis, but the interplay between antitrust and contractual theories. In the district court's view, either antitrust or contractual theories could create an obligation for Intel to deal with Intergraph.[44]

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39. *Id.* at 1263.
40. *Id.* at 1272.
41. *See id.* at 1268.
42. *Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d. 1255, 1288 (N.D. Ala. 1988).
43. *See id.* at 1288-93.
44. *See id.*

The court concluded that Intel's market position, based on a combination of intellectual property rights, scale economies, and network effects, was a monopoly and, given the cumulative effect of these factors on the probability of successful entry, likely a durable monopoly. These same facts, in the district court's view, transformed potentially valid nondisclosure agreements into unconscionable agreements. Use of contractual theory would have fewer collateral effects than the essential facilities theory, which implies that Intel would have had to deal with Intergraph regardless of any conduct by Intel inducing Intergraph to abandon Clipper technology.[45] On facts such as these, is welfare enhanced more by relatively narrow contract theories based on concepts of reliance and assets allocated pursuant to agreement or by concepts of monopolization and leveraging, for which a mandatory dealing obligation might be a remedy and which would entitle Intergraph to treble damages? More generally, in circumstances in which the conduct at issue involves negotiating tactics or strategic conduct in the course of performance under an agreement, are contract or related doctrines, such as estoppel, more likely to produce efficient results than is antitrust, or vice versa?

These questions are explored further in connection with Article 2B itself. Article 2B professes to remain neutral with respect to any issues relating to federal competition or intellectual property policy. Given the Supremacy Clause,[46] this is the only sensible position to take as a matter of general policy, and Article 2B is right to do so. Laws are purposive, and any body of law can remain true only to a limited number of purposes. Attempting to achieve too many goals through one body of law produces either legal schizophrenia or platitudinous irrelevance. Article 2B properly seeks to avoid this fate through its efforts to focus on contract law and remain neutral on matters of federal policy.

In cases in which the allegations are based primarily on the position of an intellectual property right in the market, and by extension the market position of the firm owning such rights, contractual theories are unlikely to provide satisfactory solutions. In such cases, of which we may consider *DSC Communications Corporation v. DGI Technologies*[47] a prototype, the evolving law of copyright misuse is likely to provide a better source of decisions than either contract or antitrust law.

At the intersection of antitrust and intellectual property, however, neutrality cannot be completely achieved. Legal rules designed to shape

45. *See infra* notes 170-77.
46. U.S. CONST. art. VI, cl. 2.
47. 81 F.3d 597 (5th Cir. 1996). *See infra* notes 89-90 for a discussion of the case.

contracting behavior will influence the conduct of parties whose dealings may be significant from the perspective of competition policy. By seeking to lower transaction costs and give force to trade usages and the reasonable expectations of commercial parties, Article 2B might leave (or create) issues for competition policy that could have been resolved under different contractual rules. In addition, particularly to the extent contract pursues goals of efficiency similar and complementary to those pursued by antitrust, the cause of efficiency may be better served by an assertion of contractual primacy over antitrust in some cases. For this category I have in mind cases where the conduct at issue involves assertions by a party to an agreement, or a party seeking renewal of an agreement, of claims based on negotiating behavior or strategic behavior in the course of contractual performance. In such cases, of which *Intergraph* may be considered a model, courts should examine thoroughly the range of contractual rules and remedies. In many such cases, Article 2B's preference for freedom of contract, with its underlying assumption that parties whose interests are at stake in a negotiation are better judges of markets and the effects of contracts than are courts, should be given substantial weight.

II. The Purposes of Article 2B

Under the heading "Nature of a Commercial Statute," Article 2B states that it "supports contractual choice and commercial expansion in information contracting."[48] Under the sub-heading "Freedom of Contract," Article 2B explicitly draws upon a broader U.C.C. paradigm of commercial contracting:

> The U.C.C. is a commercial statute whose basic philosophy builds on two assumptions about *commercial* contract law. The first *commercial* law theme assumes that contract law should preserve freedom of contract. This permeates the U.C.C. as noted in the Article 2A comments: 'This article was greatly influenced by the fundamental tenet of the common law as it as developed with respect to leases of goods: freedom of the parties to contract ....'

48. Earlier drafts stated a "fundamental philosophy [that] ... centers on supporting contractual choice and commercial expansion in information contracting." U.C.C. Article 2B, Preface at 9 (Apr. 15, 1998 Draft). Article 2B also states that it addresses an "important theme" involving "the need to create and preserve as broad as possible a field for expression and communication, commercially and otherwise, of ideas, images, and facts; material that this draft refers to as 'informational content.' *Id.* This additional theme is said to "argue strongly for an approach to contract law in this field that does not encumber, but supports incentives for distribution of information." *Id.* at 10.

> The idea that parties are free to choose terms can be justified in a number of ways. It leads to a preference for laws that provide background rules, playing a default or gap-filling function in a contract relationship.[49]

Article 2B elaborates on the default-rule concept to draw two conclusions of significance here. First, that a

> [d]efault rule should mesh with expected or conventional practice in a manner that projects a favorable impact on contracting *and* that can be varied by the contracting parties. This is in contrast with rules that dictate terms and regulate behavior. As a matter of practice, default rules are common in commercial contexts, while consumer law contains many regulatory rules.[50]

Thus, Article 2B's free contracting philosophy is, at least to some degree, utilitarian. If free contracting were all that Article 2B sought to achieve, the content of default rules would be of no moment; Article 2B's goals would be satisfied if the parties were free to vary its rules. That default rules may be better or worse implies a separate goal, which may be used as a benchmark in evaluating competing rules. Article 2B does not specify this goal, but as language from the April 1998 draft shows, it does derive a methodology from the default rule concept:

> The second *commercial law* premise defines codification as a means to facilitate commercial practice. This is approached in this draft by an effort to identify existing patterns of commercial practice and to follow a presumption that the goal of the drafting is to identify, clarify and, where needed, validate existing patterns of contracting to the extent they are not inconsistent with modern social policy.[51]

Borrowing a term from Grant Gilmore and advancing a concept applied by Lord Mansfield and Joseph Story,[52] the Article 2B explicitly seeks"[t]o be accurate and not original"[53] and thus

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49. U.C.C. Article 2B, Preface at 11-12 (Nov. 1, 1998 Draft).

50. *Id.*

51. *Id.* The second sentence in this quotation was omitted from the July 1998 NCCUSL annual meeting draft.

52. *See, e.g.*, R. KENT NEWMYER, SUPREME COURT JUSTICE JOSEPH STORY: STATESMAN OF THE OLD REPUBLIC 122-23 (1985) (noting Story's use of merchant juries to resolve issues of custom and usage while riding circuit in New England); Robert D. Cooter, *Decentralized Law For A Complex Economy: The Structural Approach To Adjudicating The New Law Merchant*, 144 U. PA. L. REV. 1643, 1648-49 (1996) (noting Lord

> refers to commercial practice as an appropriate standard for gauging appropriate contract law unless a clear countervailing policy indicates to the contrary or the contractual arrangement threatens injury to third-party interests which social policy desires to protect. Uniform contract laws do not regulate practice. They support and facilitate it. The benefits of codification lie in defining principles consistent with commercial practice which can be relied on and are readily discernible and understandable to commercial parties.[54]

In this regard, Article 2B explains that

> In context, the best source of substantive default rules lies not in a theoretical model, but in a reference to commercial and trade practice. This is not simple faith in empirical sources for commercial law. It stems from the reality that, even though we may not know how law interacts with contract practice, decisions about contract law will continue to be made. In those decisions, we should refer for guidance to the accumulation of practical choices made in actual transactions. The goal is a congruence between legal premise and commercial practice so that transactions adopted by commercial parties achieve commercially intended results. Background rules tied to the ordinary, but actual commercial context tend both to provide a legal base that falls within the tacit expectations of the parties and to ameliorate problems from lack of knowledge by supplying common sense outcomes.[55]

I have quoted at length from Article 2B both from a desire to convey the sense of the rich intellectual tradition it seeks to carry forward into the information age and to highlight the degree to which these statements of purpose are incomplete. While Article 2B makes clear that it seeks to enable free contracting and facilitate commercial transactions, it does not fully explain why. The statements that the free contracting philosophy will defer to "modern social policy" heighten the sense that further explanation is needed. Perhaps this is because Article 2B presumes a satisfactory answer to the question of ultimate purpose: there is no need to waste time justifying commercial contracting in a document that would make no

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Mansfield's efforts to derive legal rules from optimal business practice in the relevant trade).

53. U.C.C. Article 2B, Preface at 12 (Nov. 1, 1997 Draft) (quoting Grant Gilmore, *On The Difficulties of Codifying Commercial Law*, 57 YALE L.J. 1341, 1341 (1957)).

54. U.C.C. Article 2B, Preface at 14 (Nov. 1, 1997 Draft).

55. *Id.*

sense had a satisfactory justification not been established. If this is the case, however, why include any statement of "philosophy"? And how could Article 2B defer the question of the "relevant social policy" by which the effects of default rules should be measured, while providing a fairly detailed defense of the manner in which such rules should be derived?

The most reasonable answer to these questions is that Article 2B's free-contracting philosophy is instrumental. Article 2B seeks to benefit society by allowing resources to flow to their most-valued use through exchanges falling within the domain of commercial contract law.[56] In slightly more technical terms, Article 2B seeks to assist the process of exchange and thereby enhance allocative efficiency, or the maximum productive use of resources.[57] Much modern scholarship and some case law ascribes the same purpose to competition policy.[58] It is therefore interesting to note the degree to which Article 2B attempts to distance itself from competition policy and the evident determination with which it undertakes the task. This effort begins with Article 2B's conception of property and extends through its notions of exchange. Speaking of the intellectual property laws, but with later explicit reference to competition policy, the Pref-

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56. Alternative answers could be based in philosophical theories of obligation. *See, e.g.*, CHARLES FRIED, CONTRACT AS PROMISE, A THEORY OF CONTRACTUAL OBLIGATION 1-6 (1981). Such theories, however, are at odds with the overall instrumental structure of both the U.C.C. and Article 2B.

57. Professors Cooter and Ulen define allocative efficiency as that state of affairs in which the allocation of goods and services cannot be altered to improve the position of some people without worsening the position of others. *See* ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 12 (2d ed. 1997); COLEMAN, *supra* note 16, at 71; Herbert Hovenkamp, *Antitrust Policy After Chicago*, 84 MICH. L. REV. 213, 240 (1985) [hereinafter Hovenkamp, *After Chicago*] ("Allocative efficiency refers to the welfare of society as a whole. Situation A is more allocatively efficient than situation B if affected people as a group are somehow better off under A than they are under B.").

58. For a summary of the relevant sources, see RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 4 (1976); Hovenkamp, *After Chicago*, *supra* note 57, at 215 (discussing "Chicago School" emphasis on allocative efficiency); Alan J. Meese, *Price Theory and Vertical Restraints: A Misunderstood Relation*, 45 UCLA L. REV. 143 (1997). The Supreme Court has of course not explicitly adopted any particular school of antitrust thought, though several cases over the last 20 years are at least plausibly consistent with either productive or allocative efficiency goals. *See, e.g.*, State Oil v. Khan, 118 S.Ct. 275 (1997); Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209 (1993); Business Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717 (1988); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (1986); Continental T.V., Inc. v. G.T.E. Sylvania, Inc., 433 U.S. 36 (1977). For simplicity and because one must specify the purpose of any law to engage in meaningful analysis, I here assume that the federal antitrust laws at least accommodate allocative efficiency as a goal.

ace to Article 2B puts the matter as follows: "A contract defines rights between *parties to an agreement*, while a property right creates rights *against all the world*. They are not equivalent."[59]

With respect to competition policy, this premise carries several important implications. The Preface to the April 1998 draft stated that:

> These provisions reflect a policy of correspondence of rules in addition to simple recognition that federal law preempts state law. There are other situations where federal law and policy shapes contract law and practice, but the nature of that role is less clear and typically more controversial. The Draft adopts a position of neutrality on such issues, leaving determinations about their content to be determined under federal law, the appropriate venue for such discussion.
>
> This occurs primarily in respect to federal policies managing competition under antitrust and similar theories of intellectual property misuse and to the application of federal policy about the availability of publicly distributed information for fair use and public domain applications. Typically, in determining whether or when such policies apply, courts accept that contract law generally prevails, but ask whether a particular clause in a particular setting conflicts with federal policies when balanced against the general role of contracts in the economy and the legal system. ...
>
> The issues are questions of federal law and policy. They must be resolved by courts and Congress, rather than through state legislation. Article 2B takes no position on these policy questions, but merely provides a generic contract law framework to augment and bring to modern form the existing complex network of common law, code and general industry practice.[60]

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59. U.C.C. Article 2B, Preface at 11 (Apr. 15, 1998 Draft).

60. *Id.* at 12. The July 1998 NCCUSL draft reworked this language, acknowledging the strong opinion of a number of commentators that Article 2B should embrace certain federal rules, in particular limitations on the scope of the copyright grant, rather than remaining neutral. The July 1998 revision states that

> The basics of the neutrality policy are set forth in section 2B-105, which specifically recognizes federal preemption and that Article 2B does not displace state trade secret law.... Article 2B does not change the law on the enforceability of any restrictive clause that entails copyright misuse or that offends fundamental First Amendment concerns. We expect that, as they do today, courts will continue to reject abusive clauses when they encounter them by applying existing doctrines that preserve the role of information in society.

U.C.C. Article 2B, Preface at 16 (July 24-31, 1998 Draft).

The position stated in the Preface is made explicit in section 2B-105, which first appeared in the September 1997 draft, entitled "Relation To Federal Law"[61] before being changed in the July 1998 NCCUSL draft to "Relation To Federal Law; Transactions Subject To Other State Law." Section 2B-105(a) states that "[a] provision of this article which is preempted by federal law is unenforceable to the extent of such preemption."[62] In response to a motion at the 1998 NCCUSL Annual Meeting,[63] a proposed section 2B-105(b) was added. That proposed provision states that "[a] contract term contrary to fundamental public policy is unenforceable to the extent that the term is invalid under that policy."[64] Reporter's Note 1 to section 2B-105 in the August 1998 draft reiterates that "Article 2B deals solely with contract law, not intellectual property, competition, or trade regulation law."[65]

The history of section 2B-105 suggests that it emerged from disagreement over the question whether Article 2B should specifically address certain issues of federal policy, most prominently copyright issues, but with implications for patent law and competition policy. Many observers have argued that Article 2B should embody, presumably as a mandatory term, rules that reflect what they perceive as the consensus of courts that have ruled in cases involving such issues. The April 1998 draft states that, at its 1997 Annual Meeting, the ALI "after a brief debate and by a narrow vote of 86-82" approved a motion that the section pertaining to mass market licenses (at that time section 2B-308) "be amended to provide that a term inconsistent with federal copyright law does not become part of" a mass market license.[66] Professor Charles McManis, who submitted the

61. Changed in the March 1998 draft to "Relationship To Federal Law."

62. U.C.C. § 2B-105(a) (July 24-31, 1998 Draft).

63. The motion was to amend section 2B-110, addressing unconscionability; the proposed language specified that "[i]f a court as a matter of law finds the contract or any term of the contract to have been unconscionable or contrary to public policies relating to innovation, competition, and free expression at the time it was made, the court may refuse to enforce the contract, or it may enforce the remainder of the contract without the impermissible term as to avoid any unconscionable or otherwise impermissible result." U.C.C. § 2B-105 (Aug. 1, 1998 Draft).

64. The August 1998 draft also proposes a section 2B-105(c), which states that "principles of law and equity supplement this article. Among the laws supplementing, and not displaced by this article are trade secret laws and unfair competition laws." *Id.* § 2B-105(c). This version of Article 2B also contains a section 2B-105(d), providing that unless otherwise specified, "in the case of a conflict between this article and a statute or regulation of this State establishing a consumer protection in effect on the effective date of this article, the conflicting statute or regulation controls." *Id.* § 2B-105(d).

65. *Id.* § 2B-105, Reporter's Note 1 (Aug. 1, 1998 Draft).

66. U.C.C. § 2B-105 (Apr. 15, 1998 Draft).

motion to the ALI, stated that it was intended "to create greater certainty as to the enforceability of mass market licenses by avoiding, or at least reducing, the possibility of conflict with, and consequent preemption by, federal copyright and/or patent law."[67]

The April 1998 draft then recounts that at its 1997 Annual Meeting NCCUSL "adopted by a substantial majority a motion that Article 2B should not deal with federal preemption but should be neutral."[68] The reasoning behind this view may lie in a comment included in the Reporter's Notes to section 2B-105, which states that "[n]othing in Article 2B is intended to alter the balance between federal mandates and contract principles"[69] Nevertheless, section 2B-105 was included in the draft prepared for the 1997 NCCUSL Annual Meeting and has remained and, as noted, has been expanded.[70]

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67. Charles R. McManis, *Motions and Supporting Comments* (visited Nov. 22, 1998) <http://www.ali.org/ali/mcmanis.htm> [hereinafter McManis, *Motions*]. For a detailed statement of Professor McManis' conclusions, see Charles R. McManis, *Intellectual Property Protection and Reverse Engineering of Computer Programs in the United States and the European Community*, 8 HIGH TECH. L.J. 25 (1993).

68. U.C.C. § 2B-105 (Apr. 15, 1998 Draft). Using the signal in its full Leffian sense of "this fits here, but I can't tell how," is Arthur A. Leff, *Unconscionability And The Code—The Emperor's New Clause*, 115 U. PA. L. REV. 485, 530 n.178 (1967) [hereinafter Leff, *Unconscionability*]. *Cf.*, Karl Llewellyn's speech to the Tennessee Bar Association, "Why A Commercial Code?" 22 U. TENN. L. REV. 779, 783 (1953):

> It is an amazing thing to see the difference between the operations of the American Law Institute for example, which is a very distinguished body, and the Commissioners. The difference is that the members of the Institute by and large appraise things from the angle of theory; they love a point of theory. They were trained, I guess, under the theoreticians, and they have come to enjoy points of theory; but you can't do anything with theory on the floor of the Conference of Commissioners.... You find the thing tested against the way it looks in the office when you are dealing with practical affairs, or the way it is going to look in court when you present a case. Since the men come from all over the country and are men of wide experience and shrewd observation, it means that you have a testing of material in terms of its practicality, which I think is what we need.

Id. It may, of course, be the case that Professor Llewllyn spoke with an eye toward an audience of practitioners. Professor Patchell's discussion of Llewellyn's theory of a commercial code, the methodological implications of that theory, and some limitations of the methodology, add some perspective to this quotation. *See* Kathleen Patchell, *Interest Group Politics, Federalism, and the Uniform Law Process: Some Lessons From The Uniform Commercial Code*, 78 MINN. L. REV. 83 (1993).

69. U.C.C. § 2B-105, Reporter's Note 1 (Apr. 1998 Draft).

70. The March 1998 Draft notes that in a February 1998 drafting meeting a motion "to provide that the Article does not change state common law or competition law rules

Professor McManis's motion differed from the language of section 2B-105 at that time in two important respects. The McManis motion specifically referenced several provisions of the Copyright Act, and would have rendered void any contractual term inconsistent with these provisions. The practical effect of the motion would have been to adopt these provisions as mandatory contract rules for mass market licenses.[71] Section 2B-105, however, is not limited to mass market licenses. But consistent with its preference for default terms and free contracting, section 2B-105 also does not impose mandatory contract terms conforming to the statutory grant or limitations on exclusive rights.[72] Professor McManis renewed his efforts with a motion directed at the ALI's 1998 annual meeting calling on the ALI to concur that Article 2B "has not reached an acceptable balance in its provisions concerning mass-market licenses ... and the relationship between Article 2B and federal law."[73] The motion further stated that section 2B-208, the mass market license provision, "reflects a licensor bias that permeates the entire draft" and that "[s]ection 2B-105, while paying lip-service to the supremacy of federal law, does nothing to eliminate or reduce the risk of conflict, nor does it provide contracting parties or the courts with any meaningful guidance about how to avoid such conflicts."[74] This motion was rejected, though a motion stating that Article 2B "has not reached an acceptable balance in its provisions concerning assent to standard form records" and should be fundamentally revised was adopted.[75]

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because Article 2B simply does not deal with these issues" was rejected by a vote of 2-8. U.C.C. § 2B-105, Votes and Action d (Mar. 1988 Draft).

71. As Professor McManis stated following the ALI meeting, he "believe[d] that the use of this unilateral form of contract to contract around these provisions would in effect deprive the entire public of certain federally created user's rights, thus conflicting with the paramount policies of federal copyright and/or patent law." E-mail from Charles R. McManis to 2Bguide (June 16-17, 1997), *available at* <http://www.2Bguide.com/ali.html#mcm> (visited Nov. 22, 1998).

72. Before the language was omitted in the March 1998 Draft, the Reporter's Notes to section 2B-208 made clear Article 2B's general aversion to mandatory terms: "Some argue that law should preclude a vendor from defining the terms under which it markets its product or service. That viewpoint argues that the law should mandate terms, conditions, and risks under which information is distributed. *This regulatory structure is not accepted in Article 2B.*" U.C.C. § 2B-208, Reporter's Note 3 (Nov. 1, 1997 Draft). Though this language is omitted from the March draft and subsequent drafts, it is an accurate description of Article 2B's efforts to adopt default rules that facilitate exchange and avoid mandatory terms to the extent possible.

73. McManis, *Motions, supra* note 67.

74. *Id.*

75. Braucher & Linzer, *supra* note 11.

These debates have produced some revisions to Article 2B that have explicitly acknowledged the role of both federal law and public policy. In the April 1998 draft, for example, Reporter's Note 1 to section 2B-105 stated that "[t]he relationship between federal law and state law is complex," but then offered an apparently straightforward, and certainly correct, solution to any complexity:

> [I]f federal law invalidates a particular contract law rule or its application in a given contract, federal law controls. If federal law precludes a particular contract provision (or its enforcement) in a particular setting, that federal law rule controls.[76]

Thus, reiterating points made in the Preface, the Reporter's Notes stated that

> Article 2B takes no position on the complex competition, social policy and other issues present here .... Article 2B sets out contract principles governing the contractual relationship in information transactions. It governs the contractual relationship; federal law and policy determines whether a particular contract in a particular setting is barred by federal law.[77]

The Reporter's Notes go on to state that Article 2B approaches the relationship of federal policy and state contract law "from a posture of aggressive neutrality. As with contract law today, Article 2B sets out underlying contract law principles and leaves federal policy determinations to federal courts and federal law."[78] "Aggressive neutrality" was a wonderfully suggestive phrase, though perhaps a somewhat murky piece of drafting history.[79] Its deletion from the July 1998 NCCUSL draft was therefore understandable, particularly given the apparent trend toward an iteration of section 2B-105 that states more explicitly its deference to federal policy and that identifies federal policies that presently pose a risk of

76. U.C.C. § 2B-105, Reporter's Note 1 (Apr. 15, 1998 Draft).

77. *Id.* § 2B-105, Reporter's Note 2.

78. *Id.* § 2B-105, Reporter's Note 3.

79. It is indeed something of a defensive term, though a touch of defensiveness is understandable in a document intended for enactment by state legislatures but which is sometimes defined by reference to a federal statute (thus the reference to Article 2B as governing contracts in "copyright industries"), and one containing an express preemption clause at that. *See* 17 U.S.C. § 301 (1995).

conflict.[80] State judges who may be unfamiliar with federal policies will likely find such guidance helpful.[81]

Each iteration of Article 2B has to one degree or another reflected the drafters' apparent determination that the free contracting principle control up to the point where it is decisively truncated by a federal rule.[82] The Reporter's Notes to section 2B-105 in the August 1998 draft therefore suggests that,

> [i]n practice, enforcing private contracts is most often consistent with the fundamentals of these areas of policy. Contract law, freedom of expression, competition and innovation policy are not only consistent, they are most often mutually supportive. Thus, a wide variety of contract terms relating to the use of information present no significant issue under public policy invalidation doctrine.[83]

Article 2B properly characterizes the question as one of balancing. This implies a proper consideration for the costs and benefits of a given rule both in terms of federal policy and in terms of contract's concern with supporting allocative efficiency:

> Information policy thus seeks a balance between two competing interests: the interest of creating sufficient incentives for innova-

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80. Reporter's Note 1 to section 2B-105 in the August 1998 draft states that "Article 2B deals solely with contract law, not intellectual property, competition, or trade regulation law." U.C.C. § 2B-105, Reporter's Note 1 (Apr. 15, 1998 Draft).

81. Professor Llewellyn felt that comments to the code were desirable in part for a closely related reason: "For the fact is that our courts have not the time, in the disposition of single cases, to fathom the handling of a whole field by a whole uniform act or code chapter. They are courts of good will. But they are also courts of general, infinitely varied, jurisdiction, working under severe time pressure on a most heterogeneous assemblage of cases. The bearing of parts of an Act or Code on one another and on the whole the courts are willing to see, glad to see; but counsel do not show that full bearing, and the Conference has not undertaken to show it, either." WILLIAM TWINING, KARL LLEWELLYN AND THE REALIST MOVEMENT 527 (1973) (quoting undated memorandum by Llewellyn entitled "The Reasons for a Uniform Commercial Code").

82. *See* Memorandum from Connie Ring & Ray Nimmer on UCC Article 2B Significant Issues for Committee of the Whole (July 1, 1998), *available at* <http://www.law.upenn.edu/bll/ulc/ucc2b/ucc2bpol.htm> ("Some of the criticisms of Article 2B arise from the desire of some parties for a more regulatory approach. The fundamental premise of the U.C.C. has been freedom of contract and the provision of 'default' rules as gap fillers when the parties have not covered the point. The Drafting Committee does not propose to modify U.C.C. policy.").

83. U.C.C. § 2B-105, Reporter's Note 1 (Aug. 1, 1998 Draft). The Note goes on to reaffirm that, "[i]n some cases, however, a conflict exists and fundamental public policy other than the policy freedom of contract enforcement may over-ride and control." *Id.*

> tion by permitting owners to reap the returns from their innovative activities and the public interest in preserving and expanding information in the public domain in order to provide the store of knowledge on which innovation depends. Striking this balance depends on a variety of contextual factors that can only be assessed on a case by case basis with an eye to national policies. The rule recognized in subsection (b) permits courts in appropriate cases to over-ride contract terms where compelling fundamental public policy should prevail to preserve this balance, while continuing to recognize the fundamental policies that support contract and commercial markets as recognized in the [U.C.C.] and common law.[84]

Neither Article 2B nor the Reporter's Notes provide a clear sense of how this balance should be achieved; nor has the case law definitively resolved the issue. Given the considerable thoughtful effort reflected in Article 2B, it would be unfair to criticize it for gaps also found in its source material. Recalling some of the history of section 2B-105, the Reporter's Notes in the August draft state that, "[a]s urged by a near unanimous 'sense of the house' vote at the NCCUSL 1997 annual meeting, the approach of Article 2B has been to correspond state law to clear rules of federal law and to take no position on controversial rules whose application cannot be predicted but must await determination as a general federal policy question."[85] In the following sections, I suggest that, while this stance is the most sensible approach for Article 2B, the structure of contract rules, including their intersection with competition policy, will invariably influence economic outcomes in licensing transactions. Further, if used judiciously in the proper context, contract rules might resolve disputes in a manner more closely aligned with allocative efficiency concerns than would antitrust rules.

III. The Contours of the Draft's Neutrality Policy

Having examined Article 2B's purpose, we can begin exploring its relationship to federal competition policy. I will use Article 2B's statements regarding the familiar question whether federal copyright law permits intermediate copying of software code for "reverse engineering" as the principal example of this intersection. The analytical approach applicable to this question should be useful for others as well, however. The Reporter's Notes to section 2B-105 in the November 1997 draft stated that "[t]o un-

84. *Id.*
85. *Id.*

derscore" its position of neutrality, "the comments [to section 2B-105] will point to existing case law on several potentially important questions."[86] As an example, Reporter's Note 5 stated that

> [M]odern copyright case law holds that in certain circumstances, making intermediate copies of copyrighted technology for the purpose of 'reverse engineering' and understanding that technology constitutes fair use as a matter of copyright law. The scope of the fair use concept here is not clear and it is similarly unclear to what extent a contract term can alter the analysis of the fair use policy. However, it is clear that [in] some contexts contractual bars on reverse engineering are enforceable. In others, they may not be enforceable.[87]

The Reporter's Notes to section 2B-105 in the February draft added a new distinction:

> The scope of fair use here is not clear and it is also unclear to what extent a contract term alters the analysis. It is clear in reference to limited distribution information that contracts barring disclosure or reverse engineering are enforceable. In the mass market the issue in respect to reverse engineering is not settled under federal law.[88]

The Reporter's Notes to section 2B-105 in the March draft omitted this language, settling on the statement that "[t]he scope of fair use here is not clear and it is also unclear to what extent a contract term alters the analysis."[89] However, the distinction persisted in the March draft in Reporter's Note 6 to section 2B-208, pertaining to mass market licenses:

> In some contexts contractual bars on reverse engineering are clearly enforceable in that they create confidential or other requisite relationships. In others, they may not be enforceable as a matter of federal policy. In the mass market, the issue is in dispute. It involves a decision about federal policy, rather than contract law. That federal policy if applicable, is not affected by this Article.[90]

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86. U.C.C. § 2B-105, Reporter's Note 5 (Nov. 1, 1997 Draft).
87. *Id.*
88. U.C.C. § 2B-105, Reporter's Note 5 (Feb. 1, 1998 Draft).
89. U.C.C. § 2B-105, Reporter's Note 3 (Mar. 1, 1998 Draft).
90. *Id.* § 2B-208, Reporter's Note 6. This Note also stated:

> Exactly where and how these themes interface and what limits they may place on particular contractual relationships is clearly a question

The March draft did not explain what it meant by "confidential or other requisite relationships."[91] The proximity of this notion to a citation to *Sega Enters., Ltd. v. Accolade, Inc.*[92] prompts the speculation that the drafters might have had in mind transactions in which licensees agree to allow a licensor to manufacture work the licensee produced. This was the license Sega offered Accolade and which Accolade refused, preferring to assert what it believed were its fair use rights.

This formulation remained essentially constant in section 2B-208 through the July 1998 NCCUSL annual meeting. The August 1998 draft moves the discussion back to section 2B-105, and modifies it such that no clear distinction is drawn between mass market and limited distribution agreements. Reporter's Note 3 to the August 1998 draft states:

> In part because of the transformations caused by digital information, many areas of public information policy are in flux and subject to extensive debate. One debate deals with when a party may reverse engineer a product to discover and use technology for competitive purposes. U.S. law holds that the buyer of a product sold on an unrestricted basis in an open market may disassemble it to obtain insights into the operations of the product and its technology. Even in mass markets, however, the public policy balance is less clear when reverse engineering involves acts that may infringe exclusive property rights of the information rights owner with respect to digital products. Reverse engineering to examine software code may require reproducing (copying) the code to examine it; this may violate the copyright owner's exclusive right to make copies of its work, an issue that does not arise in reverse engineering ordinary goods. Several

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> of federal policy, rather than state contract law. With the transition from print to digital media as a main method of conveying information, major policy disputes have erupted concerning the redistribution of rights in light of the fact that the media of distribution allows many different and potentially valuable (for users or authors) uses of information products. The difficulty of balancing policies in this context is demonstrated by the fact that disputes about underlying social policy have erupted and been left unresolved in numerous contexts in the U.S. and internationally. State law that conflicts with the resolution of those questions in federal law may be preempted if that is the policy choice made in federal law. Indeed, currently pending in Congress are proposals dealing with these questions specifically as a matter of federal policy.

Id.

91. *Id.*
92. 977 F.2d 1510, 1515 (9th Cir. 1992).

> cases, not involving license restrictions, hold that making intermediate copies of copyrighted technology for "reverse engineering" and understanding technology constitutes fair use in some circumstances associated with, among other things, the need for the information to achieve interoperability and the extent of the copying involved. The scope of fair use here is not clear and it is also unclear how a contract term alters the analysis. Doctrines other than fair use may also apply. For example, an anti- reverse-engineering clause that in effect attempts to monopolize a different product market may constitute copyright misuse under U.S. law in some cases .... Article 2B does not address or alter this area of public policy which is properly left for resolution in other venues.[93]

An echo of the March draft's distinction remained, however, in an earlier comment in the same Reporter's Note. Reaffirming its core free-contracting principal, the Reporter's Notes to the August 1998 draft also state that:

> A term or contract that results from an informed private agreement between commercial parties should be presumed to be valid and a heavy burden of proof should be imposed on the party seeking to escape the terms of the agreement under subsection (b) [of Section 2B-105]. On the other hand, this Article recognizes the commercial necessity of also enforcing mass market transactions that involve the use of standard form agreements. The terms of such forms may not be available to the licensee prior to the payment of the price and typically are not subject to affirmative negotiations. In such circumstances, courts must be more vigilant in assuring that limitations on use of the informational subject matter of the license are not invalid under fundamental public policy.
>
> However, even in mass market transactions, limitations in a license for software or other information that prohibit the licensee from making multiple copies, or that prohibit the licensee or others from using the information for commercial purposes ... would in most circumstances be enforceable.[94]

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93. U.C.C. § 2B-105, Reporter's Note 3 (Aug. 1, 1998 Draft).

94. *Id.* At a November 1998 drafting session, the Article 2B drafting committee "adopted a proposal that expressly safeguards fundamental public policies, including those that deal with innovation, competition and free expression, against potential overreaching through contracting practices." Press Release, *Committee Drafting New Article 2B of Uniform Commercial Code Makes Major Changes To Protect Consumers and*

The reverse engineering question is one to which much attention has been devoted and on which strong views have been expressed.[95] Reverse engineering is of importance here both as a vehicle for examining Article 2B's neutrality policy and as an issue of concern regarding competition policy.[96] Having endorsed decisions permitting reverse engineering from

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Small Businesses, and to Safeguard Public Interests in Free Speech and Fair Criticism in the Electronic Age, (visited Nov. 22, 1998) <http://www.2Bguide.com/docs/prsr1198.html>. A summary of actions at the drafting session written by Carlyle C. Ring, Jr. characterizes the proposal as providing:

> Terms of an agreement can be overridden (not enforced) if fundamental public policy clearly outweighs the interests of enforcement of the agreement made by the parties. By this provision, terms (particularly in non-negotiated agreements) such as restrictions on freedom to comment, fair use, archival use, interactivity engineering etc. may in appropriate cases be overridden by a court. This provision is in addition to the unenforceability of unconscionable terms (2B-110); the proscription on bad faith enforcement or performance of duties and obligations under the contract or Article 2B (2B-102(23) and 1-203); and the supplemental rules of law and equity (such as fraud, misrepresentation, duress, coercion, etc.) under Section 1-103 of Article 1.

Carlyle C. Ring, Jr., *Summary of Actions At Article 2B Meeting Nov. 13-15 1998*, (visited Nov. 22, 1998) <http://www.2BGuide.com/docs/cr1198sum.html>.

95. For a broader discussion of this debate, see Anthony L. Clapes, *Confessions of An Amicus Curiae: Technophobia, Law, and Creativity in Digital Arts*, 19 U. DAYTON L. REV. 903 (1994); Julie Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of 'Lock Out' Programs*, 68 S. CAL. L. REV. 1091 (1995); Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479 (1998) [hereinafter Lemley & McGowan, *Network Effects*]; David McGowan, *Regulating Competition in the Information Age: Computer Software as an Essential Facility under the Sherman Act*, 18 HASTINGS COMM. & ENT. L.J. 771, 847-48 (1996); Arthur R. Miller, *Copyright Protection For Computer Programs, Databases and Computer-Generated Works: Is Anything New Since CONTU?*, 106 HARV. L. REV. 977 (1993) (opposing reverse engineering rights); David A. Rice, *Sega and Beyond: A Beacon for Fair Use Analysis ... At Least As Far As It Goes*, 19 U. DAYTON L. REV. 1131 (1994) (all favoring reverse engineering rights). It is possible that the importance of legal rules facilitating reverse engineering has been exaggerated. A software firm recently alleged in connection with antitrust (essential facilities) and contract claims brought against Microsoft that "[w]hile it is possible to derive most compatibility information through a laborious process of reverse engineering, the cost of doing so would be prohibitive and the time required would be too great to permit effective competition. The target would have moved again by the time the information had been reverse engineered." *Bristol Technology*, *supra* note 29, at ¶ 83.

96. These competition policy concerns focus on the probability that competitive programs will be introduced into a market and the cost (and therefore probability) of consumers moving from one product "standard" to another. *See* Lemley & McGowan, *Network Effects*, *supra* note 95, at 525-27; McGowan, *supra* note 95, at 833-35, 847-48.

the perspective of competition policy,[97] I have no claim to neutrality on the issue. That being said, the issues addressed in the section 2B-105 are important and deserve an objective evaluation.

The November 1997 draft did not explain its view that in "some contexts contractual bars on reverse engineering are enforceable."[98] That draft cited three cases as bearing on the reverse engineering question. The first two, *Sega Enterprises Ltd. v. Accolade, Inc.*,[99] and *Atari Games Corp. v. Nintendo of America, Inc.*,[100] involved intermediate copying by "transformative users"—companies that sought to market their own intellectual property and copied the software at issue only to make their programs compatible with hardware manufactured by their (vertically integrated) competitors.[101] These cases bear a functional relationship to the cross-software copying at issue in *Lotus v. Borland*,[102] and particularly to Judge Boudin's concurrence, which rested at least implicitly on fair use grounds. All three cases endorsed reverse engineering as a potentially fair use, depending on the circumstances, though none addressed the issue in terms of contract law.

Sega and *Atari* are only distantly related to the case with which they were joined in the November 1997 draft, *Triad Systems Corp. v. Southeastern Express Co.*[103] *Triad* dealt with an assertion of copyright by a manufacturer of computers and software designed to allow auto parts stores to control their sales, inventory, and accounting functions.[104] Triad wrote both operating system and diagnostic software for its computers and, after initially selling the software with the computers, began licensing the software to computer purchasers.[105] Southeastern was an independent service organization (ISO) that offered repair service on Triad computers and, in this connection, sought to use the diagnostic software (as well as

97. *See* Lemley & McGowan, *Network Effects*, *supra* note 95, at 847-48; Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of A Proprietary Standard*, 43 ANTITRUST BULL. (forthcoming 1998) [hereinafter Lemley & McGowan, *Java*].

98. U.C.C. § 2B-105, Reporter's Note 5 (Nov. 1, 1997 Draft).

99. 977 F.2d 1510 (9th Cir. 1992).

100. 975 F.2d 832 (Fed. Cir. 1992).

101. Atari, in fact, acquired Nintendo's object code from the Copyright Office under false pretenses. *See Id.* at 836. Because its purpose was to render its games compatible with Nintendo's consoles, rather than to free ride, I treat the use as transformative here, though it did not involve the sort of decompilation at issue in *Sega*.

102. 49 F.3d 807, 821 (1st Cir. 1995), *aff'd*, 165 S.Ct. 804 (1996).

103. 64 F.3d 1330 (9th Cir. 1995).

104. *See id.* at 1333.

105. *See id.*

the operating system) Triad had licensed.[106] Triad brought an infringement action to enjoin Southeastern from making copies of this software and prevailed.[107] If one limits the term to transformative users, as I do here, *Triad* is not a reverse engineering case it all. Yet it was the only authority cited in the November 1997 draft that could have supported enforcement of terms prohibiting reverse engineering. Indeed, Judge Sneed's opinion for the Ninth Circuit distinguished *Sega* on the grounds that Accolade's use was transformative, whereas Southeastern sought to copy Triad's software and use it commercially in its entirety for the purpose of repairing hardware.[108]

The February 1998 draft's omission of any reference to *Triad,* therefore, helped clarify Article 2B's discussion of reverse engineering. In place of *Triad*, however, the Reporter's Notes to section 2B-105 in the February draft introduced a distinction between contracts involving "limited distribution information," in which limitations on reverse engineering presumably are permissible, and transactions in the "mass market."[109] No cases drawing this distinction were cited. And, as we will see in a moment, the distinction presents very difficult economic and interpretive issues.

The Reporter's Notes to section 2B-105 in the February draft also cited *DSC Communications Corp. v. DGI Technologies, Inc.*[110] DSC manufactured telephone switching systems containing embedded microprocessors.[111] DSC sold the telephone switches but licensed the operating system software that ran the switches.[112] DGI attempted to develop and manufacture a competing microprocessor that would operate in DSC switches. Because its chips would have to interface with DSC's operating system, however, DGI obtained permission from one of DSC's customers to use a DSC switch to test DGI chips.[113] DGI copied DSC's operating

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106. *See id.*

107. *See id.* at 1332.

108. *See* 64 F.3d at 1336. According to the court,

> Southeastern's activities are wholly unlike the reverse- engineering in Sega. Southeastern did not make a minimal use of Triad's programs solely to achieve compatibility with Triad's computers for Southeastern's own creative programs. Rather, Southeastern has invented nothing of its own; its use of Triad's software is, in the district court's words, 'neither creative nor transformative and does not provide the marketplace with new creative works.

Id.

109. U.C.C. § 2B-105, Reporter's Note 5 (Feb. 1998 Draft)

110. 81 F.3d 597 (5th Cir. 1997)

111. *See id.* at 398.

112. *See id.* at 599.

113. *See id.*

system code by downloading the code onto a laptop computer and by modifying a DSC card to retain operating system code after the card was removed.[114] When DSC learned of this activity it sued DGI for copyright infringement. The district court precluded DGI from taking copies of DSC's code from the premises of DSC's customers, but allowed DGI to test its chips on the customer's switch.[115] This latter ruling was supported by the court's conclusion that DGI was likely to prevail on its copyright misuse defense to DSC's infringement claim.[116] According to the court, "DSC seems to be attempting to use its copyright to obtain a patent-like monopoly over unpatented microprocessor cards."[117] This language is reflected in the August 1998 draft's reference to "an anti-reverse-engineering clause that in effect attempts to monopolize a different product market."[118] *DSC* counsels caution in concluding that contractual prohibitions on reverse engineering may be enforced. Because the parties to the license agreement were commercial entities and the transaction presumably did not take place in a mass market, the case offers little direct support for a distinction between enforceable commercial agreements and questionable mass market agreements.

Analyzing the distinction between mass market and limited distribution agreements included in the Reporter's Notes to section 2B-208 in the March-July 1998 drafts and in Reporter's Note 3 to the August 1998 draft clarifies the circumstances in which contract terms restricting transformative use might or might not be enforceable. Assume that a confidential or other requisite relationship within the meaning of the March draft exists only with respect to limited distribution agreements. According to the Reporter's Notes, such a relationship would "clearly" allow enforcement of a prohibition on reverse engineering.[119] Two potential justifications for a distinction between limited distribution and mass market agreements come immediately to mind: differing probabilities of deliberative (as opposed to presumed) assent to contractual terms and the differing economic characteristics of products distributed in the retail market and products reserved for limited distribution.

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114. *See id.*

115. *See id.* at 599-600.

116. The court stated that the defense "'forbids the use of the copyright to secure an exclusive right or limited monopoly not granted by the Copyright Office,' including a limited monopoly over microprocessor cards." *Id.* at 601 (quoting Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 977 (4th Cir. 1990)).

117. 81 F.3d at 601.

118. U.C.C. § 2B-105, Reporter's Note 3 (Aug. 1, 1998 Draft).

119. *See id.*

The first justification relies on bargaining or other evidence that a party assented to a term after deliberation and invokes such welfare interests as may be implicated by deliberative rather than presumed assent. The second justification views copyright grants as embodying a rate of return calculus that sets both a floor and a ceiling on revenues an author may extract from the market.[120] The first possible justification is discussed here; the second is discussed in Part IV. In brief, I have serious doubts whether, as a matter of contract law, either construction can justify a distinction between agreements arising from confidential relationships and agreements formed in the mass market. Copyright principles might enable the second argument to create such a distinction, though I am skeptical there as well, but neither bargaining nor other purely contract law theories, nor principles of antitrust law, can do the necessary work.

As defined in section 2B-102(32), a "mass market transaction" refers to "a consumer transaction and any other transaction in information or information property rights directed to the general public as a whole under substantially the same terms for the same information with an end-user licensee."[121] In substance, mass market transactions are those in which consumers or business entities (an extension of protection relative to a consumer/merchant dichotomy) enter into software agreements in a retail context. They entail low-volume transactions in which negotiations are unlikely and assent to a particular term is likely to be presumed from the structure of the transaction and the parties' conduct rather than established through negotiation and deliberation on terms.

Neither limited distribution agreements nor confidential relationships were defined by section 2B-102. As used in the February and March 1998 drafts, however, the terms appeared to contemplate situations in which the parties, presumably commercial firms, deal directly with each other outside the retail context. In such cases, parties are more likely to have deliberated before agreeing to a particular term than they would in a retail transaction.[122] Since the August 1998 draft, the Reporter's Notes to section

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120. On the latter point, see Dennis S. Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 DAYTON L. REV. 511 (1997); Robert A. Kreiss, *Accessibility and Commercialization In Copyright Theory*, 43 U.C.L.A. L. REV. 1 (1995); McGowan, *Regulating Competition*, *supra* note 95, at 773.

121. U.C.C. § 2B-102(32) (Aug. 1, 1998 Draft).

122. The February draft appeared to place importance on the probability that a term would actually have been studied by the parties and adopted by mutual consent, which is presumed to be higher in the limited distribution context than in the mass market context. The February draft section 2B-208(a)(2) (mass market licenses) replaced a reference to "negotiated terms" with a reference to "terms to which the parties have expressly agreed," a change the Reporter's Note indicates was made to avoid any inference that

2B-102(31) have described a mass market agreement as "a standard form that is prepared for and used in a mass-market transaction." The Notes state that mass market transactions involve "non-negotiated terms" in "relatively small dollar value, routine and anonymous transactions that occur in a retail market." Such transactions typically involve agreements with "an end user rather than a purchaser who plans to resell the acquired product." The Reporter's Notes contrast these transactions with "ordinary commercial" transactions and those involving "specialty software, information for specially targeted limited audiences, commercial software distributed in non-retail transactions, or professional use software."[123]

Transactions occurring between definable parties, perhaps with relationships apart from the transaction at hand, are more likely to involve negotiation and deliberation than would be the case in the retail market. It is therefore possible to interpret Article 2B's distinction in a manner that recalls certain conceptions of unconscionability, which, in Professor Leff's famous characterization, embodies both procedural and substantive limitations on the set of contracts the law recognizes.[124] In particular, the

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"dickering is a precondition to the licensee protection contemplated under this Section." U.C.C. § 2B-208(a)(2) (Feb. 1, 1998 Draft). The point that negotiations are desirable as a proxy for deliberative agreement rather than as such (in the abstract they are transaction costs) is a fair one, which applies conceptually to section 2B-105 as well.

123. U.C.C. § 2B-102(32), Reporter's Note 28 (Aug. 1, 1998 Draft).

124. *See* Leff, *Unconscionability*, *supra* note 68. Article 2B echoes this distinction somewhat, with the Reporter's Note to section 2B-208 stating that the doctrine traditionally "blends questions about the contracting process with questions about the substantive character of the terms themselves. It is aimed at preventing abuse and unfair surprise." U.C.C. § 2B-208, Reporter's Note 3(b) (Aug. 1, 1998 Draft). The March draft restates the point in slightly more Leffian terms: "Traditionally, unconscionability doctrine blends questions about the contracting process (procedural) with questions about the substantive character of the terms (substantive)." U.C.C. § 2B-208, Reporter's Note 4(b) (Mar. 1998 Draft). Professor Craswell and others have questioned whether this dichotomy is a sensible explanation of unconscionability theory or doctrine. *See e.g.*, Craswell, *supra* note 12, at 17. Professor Craswell's use of property and liability rules to analyze unconscionability problems leads him to conclude that in some cases (liability rules) both "procedural" and "substantive" unconscionability would be required to avoid enforcement of a term. *Id.* at 12. Standard-form contracts are one such case, as to which Professor Craswell suggests the law seeks to avoid increasing transaction costs that would result if every term in an agreement was voidable unless it had been specifically explained. To counterbalance enforcement of agreements that likely have not been read, the law enforces only reasonable terms, as judged by the type of transaction and other relevant circumstances. The March 1998 draft makes the latter point explicit in terms of consumer protection, stating that the doctrine "prevents abuse and unfair surprise in standard form contracts. In a [] non-bargained market where purchasers make choices mainly about price and about whether or not to enter into a transaction, this doctrine provides an important safeguard against over-reaching." U.C.C. § 2B-208, Reporter's Note 4(b) (Mar. 1998 Draft).

March draft's former distinction between limited distribution agreements and mass market agreements might be read as locating restrictions on reverse engineering within the realm of procedural unconscionability. One reading of the March draft's suggestion is that such restrictions may be void if imposed in the take-it-or-leave-it retail market, but will be enforced if embodied in an agreement reflecting deliberative assent in a commercial setting. This construction would conform to Professor McManis's focus on the mass market, and his subsequent statement of concern regarding the effect of unilateral form contracts.[125]

To test whether this dichotomy makes sense as a compromise between freedom of contract and intellectual property policy, and to see its implications for competition policy, we may first evaluate what implications bargaining and deliberative assent would have for competition policy in a commercial setting.[126] Suppose the bargaining goes something like this, a modified version of the facts reported in *Sega*:

Accolade:	"I'd like to buy a copy of your computer game, how much is it?"
Sega:	"No Deal. We don't sell copies, we only license the right to use the game on terms we set."[127]
Accolade:	"Well, all I really want is the code so that I can identify the non-copyrightable interfaces so I

125. *See* Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239, 1292 (proposing that terms prohibiting transformative use be deemed void in mass market licenses and leaving open the question of enforceability in negotiated transactions) [hereinafter Lemley, *Shrinkwraps*]. *See also* e-mail from Charles R. McManis to 2Bguide, *supra* note 71 (noting that such contracts deprive the public of work to which federal law provides rights).

126. The following approach is, of course, borrowed from Leff, *Unconscionability*, *supra* note 68, at 544-45.

127. In point of fact, video game cartridges are often actually sold. According to the Ninth Circuit, "Accolade explored the possibility of entering into a license agreement with Sega" to obtain access to game code, "but abandoned the effort because the agreement would have required that Sega be the exclusive manufacturer of all games produced by Accolade." *Sega Enters Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1514 (9th Cir. 1992). I couch the sale of cartridge as a license here for the sake of simplicity. One can, of course, view the terms Sega actually offered as a form of exclusive dealing in an effort to obtain market power, using the console as a bottleneck. It is, however, not clear whether demanding such terms would tend to enhance or diminish power: being refused a Sega license Accolade might have focused its energies on writing games for Sega's competitors, such as Nintendo, which apparently licensed its code and charged royalties. *See* Michael L. Katz and Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 103 (1994).

	can produce games that work on your consoles. How much would it be for that kind of license?"
Sega:	"No deal. We don't make any money on our consoles and the games are cheap enough to write that we can come out with our own version of any game you can write before we lose console market share. And we don't let anyone free-ride on our investment in console technology."
Accolade:	"Well, suppose we divide revenues from our game so that we recover our opportunity cost of capital and split any revenues over that with you?"
Sega:	"No deal. You want to sell games? Go talk to Sony or Atari or Nintendo. Go talk to Bill Gates. Better yet, build your own console."

If Accolade acceded to Sega's terms after such a discussion, there could be no doubt that the result would have been the product of actual bargaining and deliberative assent. Absent some alteration of the parties' entitlements prior to bargaining, or a substantive rule of law that would either negate Sega's ability to impose the term altogether or cast doubt on Sega's ability to enforce such a term, Accolade would likely accede if the license terms on balance were more attractive than any available alternative.[128] If we assume that reverse engineering furthers copyright's goal of promoting the dissemination and improvement of intellectual property, that reverse engineering does not deprive authors of returns necessary to induce investment,[129] and that Accolade would have preferred the license terms it requested in our hypothetical bargaining to those Sega would offer if terms prohibiting transformative use are enforceable, then competition policy would favor reverse engineering as a device to lower the cost of transition among standard products (thereby enhancing allocative efficiency) without infringing on copyright goals or methodology. Whether a provision precluding reverse engineering was the result of deliberative assent rather than the assent presumed with a shrinkwrap license is essentially irrelevant to these issues.

128. One can imagine a copyright rule approving contracts in which Sega agreed to the opportunity cost/revenue splitting counteroffer, but crafting such a rule would not alter rational bargaining strategies without the additional rule, wherever located in the law, that flat prohibitions on reverse engineering were unenforceable. In other words, if Sega could enforce a flat ban while offering Accolade revenues greater than Accolade could earn from available alternatives, Sega would have no reason to accept the counteroffer.

129. This very important assumption is discussed in detail in Part V.

From the perspective of competition policy, introduction of bargaining to *Triad*[130] presents a different case. Imagine the following:

Firm:	"That's an impressive computer you have there. How much is it?"
Triad:	"$500,000."
Firm:	"That's a lot of money. Is it reliable?"
Triad:	"Absolutely. And it comes with a license for diagnostic software that we wrote just for this machine; it can identify any problems so they can be fixed quickly."
Firm:	"A license? Doesn't the software just come with the machine?"
Triad:	"No. We used to do that. But at $500,000 per machine we're barely covering our costs. We make our money on service; you can't service the machine without the diagnostic software, and only you, the Firm, and we have the right to run the software."
Firm:	"But I can't fix the machine myself. Couldn't I just hire an ISO like Southeastern to look at the diagnostic results and fix the machine?"
Triad:	"No. The only reason you would want to hire an ISO is that they charge less than us because they are free-riding on our investment in the machine and the software, which means their costs are lower. If you hire an ISO they will have to run the software to fix the machine. Running the software means making a copy and if they do that we will sue them within and inch of their lives and enjoin them from copying our software."
Firm:	"That seems unfair. How much more will that cost me over the life of the machine?"
Triad:	"We don't know and its not our problem. You don't like it, go talk to IBM or DEC; go talk to Bill Gates."

As with *Sega*, if Firm agreed to the terms offered after such a discussion, there would be no question that the terms were the result of deliberation and negotiation and, at least from the perspective of procedural unconscionability, no reason to withhold legal force from the bargain.

130. 64 F.3d 1330.

Assuming that the equipment market in which Triad operated was competitive, however, the fact of bargaining has different implications for competition policy in these two cases. With respect to *Sega* and transformative use, the problems with which competition policy are concerned are largely, if not entirely, unaffected by bargaining. It is the result (and, as discussed below, the effect of the result on third parties and society at large) that matters. With respect to *Triad*, in which transformative use was not at issue, bargaining is important because the problem with which competition policy might be concerned—opportunistic exploitation of consumers who have purchased expensive equipment—is primarily one of information that can be cured through deliberative assent evidenced by bargaining.[131] Installed-base opportunism is worrisome from the perspective of allocative efficiency only if consumers are unaware of the risk of such opportunism at they time they purchase equipment; indeed, that is why any question of opportunism arises at all. Assuming antitrust is legitimately concerned with such problems, evidence of deliberative *ex ante* assent lessens and may eliminate these concerns.[132]

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131. *Cf.* Eastman Kodak Co. v. Image Technical Servs., 504 U.S. 451, 474, 476 (1992) (advancing information-based failure in primary market as one potential basis for tying claim in aftermarket). The *Kodak* court also posited the cost of switching from one copier to another as a market imperfection potentially warranting antitrust intervention. *See id.* To the degree the Court had in mind inefficiencies relating to unanticipated costs, bargaining with complete information in a competitive primary market would alleviate this concern as well. For those who believe *Image Technical* was wrongly decided, the hypothetical is unlikely to present any question relevant to competition policy at all. *See, e.g.*, Daniel J. Gifford, *The Damaging Impact of the* Eastman Kodak *Precedent upon Product Competition: Antitrust Law in Need of Correction*, 72 WASH. U. L. Q. 1507 (1994).

132. *See, e.g.*, E. THOMAS SULLIVAN AND HERBERT HOVENKAMP, ANTITRUST LAW, POLICY, AND PROCEDURE 1997 Supp. 34-35 ("The contracting system encourages market participants to take rational risks at the time of contracting. Antitrust intervention providing *ex post* 'fixes' for contracts that have become unfavorable to one party or the other would not only exceed antitrust's mission, it would also undermine the market for assessing risks by providing post-hoc relief to those who lost, thus reducing or destroying the incentives to those who win as well. But the entrepreneurial market depends on parties' willingness to take risks"). Sullivan and Hovenkamp conclude, with respect to installed-base opportunism cases, that "[e]ven if the basic 'lock-in' thesis is plausible, it applies only to situations where the consumer buys the original product at time T1, and then is caught by surprise when required to pay a high price for a repair part o[r] aftermarket component at time T2. It has no application whatsoever when both products are purchased at the same time." *Id.* at 37-38. For further analyses along these lines, see McGowan, *supra* note 95, at 801-02; Carl Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of Kodak*, 63 ANTITRUST L.J. 483, 496 (1995).

It is important to note here that copyright principles might compel a different result than competition policy even if the parties bargained with complete information in a competitive primary market. As discussed in Part V, *infra*, copyright might well find that an author's efforts to preclude copying in aftermarkets exceeded the bounds of copyright. Thus, a court might decline to enjoin Southeastern from using Triad's software even though transformative use was not at issue and even if fully-informed bargaining occurred. With respect to competition policy, however, in *Triad*-like cases, free contracting is the right prescription, and steps designed to facilitate contracting by lowering its costs are welcome as a matter of both contract law and competition policy.

To the extent the distinction between limited distribution and mass market agreements stated in the March draft rests on the assumption that deliberative assent is relatively more likely to be given to limited distribution agreements than to mass market agreements, the distinction is incomplete because it does not address third party effects. Even a fully-negotiated agreement between commercial parties may affect third parties or society as a whole in a manner the law seeks to avoid, without regard to assent or other formation issues between the parties.[133] Using Professor Leff's terminology, it is a mistake to locate the distinction on the procedural side of unconscionability; particularly where transformative use is concerned, the law addressing such issues will be substantive. The presence or absence of third party effects alone is too crude a distinction to provide an answer to when contract terms should be enforced (the agreements in both *Sega* and *Triad* affected third parties), but it is useful to be clear about the realm of contract law in which the Article 2B is operating.

This conclusion also holds for contracts in the mass market. Many who contest the legitimacy of shrinkwrap agreements, or their online click-on counterparts, point to the adhesive nature of such agreements and particularly those used in the mass market.[134] A typical shrinkwrap or click-on agreement is considered a classic boilerplate-ridden, take-it-or-leave-it proposal written by the vendor to tip every benefit in its direction while

133. *Cf.* Lemley, *Shrinkwraps*, *supra* note 125, at 1277 ("Agreements between private parties to expand the licensor's rights beyond those provided by patent law affect third parties as well.").

134. *See, e.g.*, Karjala, *supra* note 120, at 527-30 (arguing in connection with preemption analysis that the bargain principle provides little justification for enforcement of mass market licenses); Lemley, *Shrinkwraps*, *supra* note 125, at 1286-89 (noting that "the 'fiction' of blanket assent has given way to fantasy in the case of shrinkwrap licenses.").

shunting all possible risk to the consumer.[135] By design, the chance that any term contained in such mountains of minutiae will be important enough to an average purchaser to warrant prolonged study, or even cursory review, is trivial.[136] Accepting such points as accurate, it is not clear that they compel the conclusion that such agreements should not be recognized as contracts,[137] particularly where doctrines such as unconscionability and unfair surprise exist to police abuse. Nor is it clear that such points establish harm to the broader social interests often invoked by commentators concerned that shrinkwrap or click-on agreements will diminish social welfare.

Any analysis that seeks to determine whether form software agreements should be enforced must take into account the costs of practical alternatives. Form agreements generally are enforced on the utilitarian

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135. Professor Llewellyn, among many others, discussed such terms; from the perspective of free contracting, he considered such terms at least potentially problematic:

> when a contract ceases to be a matter of dicker, bargain by bargain, and item by item, and becomes in any field or any outfit's business or any trade's practice a matter of mass production of bargains, with the background (apart from price, quantity, and the like) filled in not by the general law but by standard clauses and terms, prepared often by one of the parties only — then what?

Karl N. Llewellyn, *Book Review*, 52 HARV. L. REV. 700 (1939).

136. *See* Thorton v. Shoe Lane Parking, Ltd., 2 Q.B. 163 (Eng. C.A. 1970) (noting, in case involving parking garage tickets, and in reference to precedent involving railways, steamships, and cloakrooms, that "[t]hese cases were based on the theory that the customer, on being handed the ticket, could refuse it and decline to enter into the contract on those terms. He could ask for his money back. That theory was, of course, a fiction. No customer in a thousand ever read the conditions. If he had stopped to do so, he would have missed the train or the boat"); Eisenberg, *supra* note 15, at 243 ("The verbal and legal obscurity of preprinted terms renders the cost of searching out and deliberating on these terms exceptionally high.").

137. The case for considering form agreements generally to be enforceable finds support in the RESTATEMENT (SECOND) OF CONTRACTS § 211 (1981) (standardized agreements) as well as Professor Llewellyn's later work. *See* KARL N. LLEWELLYN, THE COMMON LAW TRADITION: DECIDING APPEALS 370 (1960), noting:

> Instead of thinking about "assent" to boiler-plate clauses, we can recognize that so far as concerns the specific, there is no consent at all. What has in fact been assented to, specifically, are the few dickered terms, and the broad type of transaction, and but one thing more. That thing is a blanket assent (not a specific assent) to any not unreasonable or indecent terms the seller may have on his form ....

Id. See also, 1 CORBIN ON CONTRACTS §1.4 p.14 (rev. ed. 1993) ("Although the flourishing existence of the contract of adhesion and other standardized contracts is a challenge to much contract theory, the contract of adhesion is part of the fabric of our society."). For a general discussion of the problem of forms in contract law generally, exploring limitations on the rational-actor model, see Eisenberg, *supra* note 15, at 240-48.

ground that they lower costs for common transactions. As Professor Leff rightly said, "the use of form contracts is a social good; it is the contract-processing component of the mass transaction, and the mass sales transaction has exceeding economic utility."[138] The *average* software consumer probably does not decide whether to buy based on terms pertaining to transformative use rather than on factors such as price, compatibility, or brand loyalty.[139] If this conjecture is correct, then deliberative assent to terms prohibiting reverse engineering could be obtained in an average transaction[140] though only by incurring the sorts of costs that form agreements are designed to reduce.[141] Suppose every consumer who purchased

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138. Leff, *Unconscionability*, *supra* note 68, at 504. Leff also noted, however, that the process of adhesion contracting "is not one of haggle or cooperative process but rather of a fly and flypaper." Arthur Alan Leff, *Contract As Thing*, 19 AM. L. REV. 131, 143 (1970). Professor Llewellyn, whose concerns regarding form agreements we noted earlier, also recognized that standardized agreements could:

> save trouble in bargaining. They infinitely simplify the task of internal administration of a business unit, of keeping tabs on transactions, of knowing where one is at, of arranging orderly expectation, orderly fulfillment, orderly planning. They ease administration by concentrating the need for discretion and decision in such personnel as can be trusted to be discreet. This reduces human wear and tear, it cheapens administration, it serves the ultimate consumer. Standardizing contracts is in this a counterpart of standardizing goods and production processes, as well as a device for adjustment of law to need.

Llewellyn, *Book Review*, *supra* note 135, at 701; *see also*, RESTATEMENT, SECOND, OF CONTRACTS, § 211 comment a. ("Standardization of agreements serves many of the same functions as standardization of goods and services; both are essential to a system of mass production and distribution. Scarce and costly time and skill can be devoted to a class of transactions rather than to details of individual transactions").

139. *See* Maureen A. O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms*, 45 DUKE L.J. 479, 516 (1995) ("[it] is questionable whether the end user wishes to purchase anything more than the functionality that is obtained by running the object code"). *Cf.* Mark A. Lemley, *The Economics of Improvement In Intellectual Property Law*, 75 TEX. L. REV. 993, 1027 (1997) (noting that "improvers are more likely to be motivated by commercial purposes than many classes of users, such as teachers and reporters").

140. *Cf.* Karjala, *supra* note 120, at 519 (noting that many software purchasers might willingly contract away rights they were granted under the Copyright Act); O'Rourke, *supra* note 139, at 532 ("if, in the mass market context, transaction costs were such that the parties would bargain, they might agree to a decompilation prohibition").

141. *See* Craswell, *supra* note 12, at 9-10 ("[the] costs of obtaining Y's 'proper' consent depend heavily on just what is necessary for Y's consent to be proper. In some cases, it may be appropriate to spare X that task by adopting a liability rule."); O'Rourke, *supra* note 139, at 495 ("In the case of mass market software ... licensors cannot practically incur the huge transaction costs that would be involved if they attempted to negotiate with every licensee"). Craswell discusses the tradeoff between contract terms and price in

software in a retail outlet was met at the cashier's station with a small card bearing two plain-English sentences informing the purchaser that she would be precluded from reverse-engineering the software as a condition of her purchase, and asking her to initial the card. I would conjecture that the *average* purchaser almost certainly would comply. But, on these facts, there would be little room to argue that assent had been given for purposes of contract formation. The same would be true of the on-line equivalent of this procedure, in which a licensee is shown a screen of contract terms and required to click on an icon to proceed with the transaction.

In each of these cases, consumers would be faced with a take-it-or-leave-it choice. Depending on the state of competition in the software vendor's market, the consumer might have substantially inferior bargaining power. But as scholars have noted for some time, it is too strong to say that such conflicts preclude the formation of *any* binding agreement between a consumer and a vendor.[142] Even monopolists are allowed to compete aggressively on the merits of price and functionality,[143] and will almost inevitably enter into contracts with consumers in doing so. If these two points are accepted, there is relatively little to be gained by stressing

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some detail. *See id.* at 29-30 and n.60 (collecting sources discussing this point). Robert Gomulkiewicz has consistently emphasized the value of shrinkwrap agreements in minimizing transaction costs. Robert W. Gomulkiewicz, *The License Is The Product: Comments on the Promise of Article 2B For Software Licensing*, 13 BERKELEY TECH. L. J. 891 (1998); Robert W. Gomulkiewicz & Mary L. Williamson, *A Brief Defense of Mass Market Software License Agreements*, 22 RUTGERS COMPUTER & TECH. LAW J. 335, 338-41 (1996).

142. *See, e.g.*, Craswell, *supra* note 12, at 35 (noting that "if Y's only alternative is so bad that it invalidates his consent to X's contract, it should also invalidate his consent to the terms selected [as 'reasonable'] by the court"); W. David Slawson, *Mass Contracts: Lawful Fraud in California*, 48 S. CAL. L. REV. 1, 47-48 (1974) ("When General Motors deals with me, it will always have the superior bargaining power. If disparity of bargaining power were sufficient to invalidate a contract, General Motors and I could never make a valid contract.").

143. *See, e.g.* Alaska Airlines, Inc. v. United Airlines, Inc., 948 F.2d 536, 547 (9th Cir. 1991) ("A firm may acquire a monopoly simply by virtue of being a better competitor .... Because this type of monopolist behaves in an economically efficient manner, the antitrust laws do not stand as an obstacle to its existence."); Olympia Leasing Co. v. Western Union Tele. Co., 797 F.2d 370, 375 (7th Cir. 1986) ("the lawful monopolist should be free to compete like everyone else; otherwise the antitrust laws would be holding an umbrella over inefficient competitors") (Posner, J.); Foremost Pro Color, Inc. v. Eastman Kodak Co., 703 F.2d 534, 543-44 (9th Cir. 1982) ("[T]he Sherman Act ... does not render unlawful all monopolies .... A monopolist, no less than any other competitor, is permitted and indeed encouraged to compete aggressively on the merits."); Sargeant-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701, 712 (7th Cir. 1977) (monopolist "is not for-bidden from improving his efficiency in manufacturing or marketing, even though the effect of doing so will maintain or improve his sales").

the lack of negotiation of shrinkwrap agreements, for presumed rather than deliberative consent likely does the average consumer no harm. On average, consumers would probably assent to limitations relating to reverse engineering, their assent would be rational, and requiring evidence of deliberative assent therefore would increase transaction costs without yielding corresponding benefits that are relevant to federal policy concerns. Indeed, if a majority of contracting parties would agree to limitations on reverse engineering, a case could be made on that ground for adopting such restrictions as a majoritarian default rule, if Article 2B favors such rules.[144]

The collective product of such atomistic acts of assent, however, would pose the same risks for social welfare that advocates of legal rules facilitating reverse-engineering (myself included) would like to ameliorate—lethargic transition among standard products and diminished pro-

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144. Article 2B's statement of methodology is ambiguous regarding its favored defaults. It states that it seeks "an intermediate or ordinary framework whose contours are appropriate, but whose terms will be altered in the more sophisticated environments" rather than explicitly seeking to adopt majoritarian rules in either some or all cases. U.C.C. Article 2B, Preface at 9 (Aug. 1, 1998 Draft).

The scholarship on derivation of optimal default rules has grown quite large. For a discussion of majoritarian and alternative default rules and issues pertaining to the choice, see, for example, Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 91-94, 101-104 (1989) [hereinafter Ayres & Gertner, *Filling Gaps*] (questioning desirability of majoritarian rules and suggesting employment of "penalty defaults" to induce bargaining in appropriate circumstances); Ian Ayres, *Preliminary Thoughts On Optimal Tailoring Of Contractual Rules*, 3 S. CAL. INTERDIS. L.J. 1 (1993); Ian Ayres & Robert Gertner, *Strategic Contractual Inefficiency and the Optimal Choice of Legal Rules*, 101 YALE L. REV. 729 (1992) (arguing that strategic contracting behavior can undermine efficiency of majoritarian default rules) [hereinafter Ayres & Gertner, *Optimal Choice*]; Jason S. Johnston, *Bargaining Under Rules Versus Standards*, 11 J. LAW ECON. & ORG. 256 (1995); Jason S. Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules*, 100 YALE L.J. 615, 624 n.33 (1990) (noting scholars' use of majoritarian default concept as a way to minimize transaction costs); Ian Ayres, Book Review, *Making A Difference: The Contractual Contributions of Easterbrook and Fischel*, 59 U. CHI. L.REV. 1391 (1992).

Article 2B's citation to Ayres & Gertner's 1992 article, U.C.C. Article 2B, Preface at 13, n.14 (Aug. 1, 1998 Draft), is interesting because Ayres & Gertner cast a skeptical eye on majoritarian defaults. *See* Ayres & Gertner, *Optimal Choice, supra*, at 765 (concluding that "[t]he settings in which strategic contractual behavior can undermine the use of majoritarian defaults, however, are not negligible"). Article 2B, while not explicitly endorsing majoritarian defaults, does specifically eschew "tailored" defaults in favor of "an intermediate or ordinary framework." U.C.C. Article 2B, Preface at 14 (Aug. 1, 1998 Draft). While an intermediate, ordinary default may not be a majoritarian default, Article 2B does not clarify any differences it may have in mind.

duction of works building upon ideas embedded in object code.[145] The social welfare problem, in other words, is not a lack of deliberation.[146] Bargaining is itself a transaction cost; to the extent it might be valued, it is valued as evidence of actual assent, or as indirect evidence that one party does not exert power over another in a fashion objectionable to contract law (whether by asserting "market power" in an antitrust sense or through some other means). If actual assent cannot solve the welfare problems related to contracting and copyright law, bargaining cannot do so either. And if I am correct to speculate that the average consumer would consent to a term precluding reverse engineering if the parties took the time to negotiate it, there is no reason to minimize the presumed assent of the form simply because it is presumed. Indeed, if I am right to speculate that average purchasers are unlikely to engage in transformative use, and therefore likely to exchange the right to do so, approaches based in hypothetical bargaining or other variants of consent are unnecessary to resolution of the issue: straightforward application of the rational actor assumption will produce the same result.[147] In this respect Article 2B is correct to take the position that the relevant question is one of federal policy; whether Article 2B is right to go further and assert the enforceability of a certain class of agreements within the shadow of (unclear) federal law is a more difficult question.

IV. External Effects, Externalities, and Efficiency

Particularly since Coase rebutted Pigou's view that taxation was necessary to reach a socially optimal allocation of resources in the presence of external effects, the process of exchange has enjoyed considerable support as a mechanism for enhancing social welfare.[148] Coase's parable[149] posited

145. *See* Lemley & McGowan, *Network Effects*, *supra* note 95, at 525-26.

146. Though his concentration on preemption leads him to focus on bargaining as an important variable, Professor Karjala frames the welfare problem in similar terms, stating that it arises because "the public interest implemented by the federal limitations [on copyright] is not represented in the contracting process." Karjala, *supra* note 120, at 519. Both Professor Karjala and Professor O'Rourke, *supra* note 139, at 523-24, argue that the case for statutory copyright preemption is more compelling in mass market transactions than negotiated transactions. Whatever one thinks of the preemption question, however, it is not clear as a matter of contract policy or social welfare that bargaining is a desirable basis for distinguishing between enforceable and unenforceable agreements.

147. *See* JULES COLEMAN, RISKS AND WRONGS 169 (1992) (noting that "there appears to be nothing expressed by the concept of hypothetical consent that is not already captured in the idea of rational self interest").

148. *See* Ronald H. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960).

149. *See* ROBERT ELLICKSON, ORDER WITHOUT LAW 1 (1991).

results that would obtain absent transaction costs and, in so doing, directed our attention toward the importance of such costs as impediments to the ability of exchange to enhance social welfare.[150]

Third-party effects are another classic impediment. As Professor Coleman puts it, "[e]xternal effects are byproducts of an activity that influence the production of other goods or the welfare (or utility) of other individuals."[151] Coleman distinguishes between external effects and "externalities," reserving the latter term for cases in which the effects of an agreement on nonparties "result in inefficient production or nonoptimal distributions of welfare,"[152] and I employ that usage here.[153]

Because a contract might create third-party effects harmful to social welfare, modern contract scholarship routinely qualifies a preference for contracting by specifying that contracts are presumptively efficient only in the absence of external effects or transaction costs. Article 2B follows this approach as well, qualifying its method of being "accurate not original," for example, with the statement that this policy applies unless "the contractual arrangement threatens injury to third-party interests which social policy desires to protect."[154] Simply qualifying the potential efficiency of exchange by limiting the endorsement to contracts without third-party effects, however, is uninformative. As Professor Trebilcock has noted, "[t]he problem of third-party effects from exchange relationships is pervasive and not aberrational."[155] Depending on one's perspective and goals, some third-party effects that harm individuals or specific firms may be desirable. For example, if I open a shop that produces goods more efficiently than that of a nearby competitor, exchanges with my customers

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150. See RONALD H. COASE, THE FIRM, THE MARKET, AND THE LAW 174 (1988); Farber, *supra* note 16.

151. COLEMAN, *supra* note 16, at 76.

152. *Id.*

153. *See also,* Lemley & McGowan, *Network Effects*, *supra* note 95, at 482 n.5. Professors Liebowitz and Margolis have stressed this distinction in writings about network effects. *See* S.J. Liebowitz & Stephen Margolis, *Network Externality: An Uncommon Tragedy*, 8 J. ECON. PERSP. 133, 135 (1994) (distinguishing between third-party effects and externalities).

154. U.C.C. Article 2B, Preface (Aug. 1, 1998 Draft). The efficiency presumption is further qualified by the stipulation that consent to the agreement must not be obtained improperly. *See* Craswell, *supra* note 12, at 34-44 (discussing normative basis of consent concept).

155. MICHAEL J. TREBILCOCK, THE LIMITS OF FREEDOM OF CONTRACT 58 (1993); RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 12 (3d ed. 1986) (noting that most transactions have effects on third parties, if only by changing the price of other goods); Hovenkamp, *After Chicago*, *supra* note 57 at 244 ("Today we know that externalities are pervasive in almost every market transaction.").

may come at my competitor's expense and he may be driven out of business. Competition policy might favor that result because it directs trade towards more productively efficient firms and frees up resources (the former competitor's retail space, etc.) for more highly-valued uses, thus enhancing allocative efficiency.[156] My exchanges with my customers would, under this view and this goal, produce external effects but not externalities.[157]

The difficult questions, therefore, are when to conclude that an external effect is of the sort that is harmful to society in general and, importantly, whether there is anything the law can do to stop the harm.[158] Application of competition policy to "copyright industries" produces a good and difficult example of such questions. Particularly if one assumes that allocative efficiency is the principal aim of antitrust, the methodology of copyright differs in important ways from that of competition policy. Rather than seeking to ensure that resources find their most productive use, copyright seeks to induce investment in the creative arts by preserving such returns as may be gained from the set of rights and limitations conferred by the relevant statutes. This policy is instrumental, seeking to expand both the store of creative works and the public's access to it.[159] The

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156. On the distinction between these two concepts of efficiency, see Hovenkamp, *After Chicago*, *supra* note 57, at 238-40. The example in the text would meet the Kaldor-Hicks criterion of efficiency but not that of Pareto superiority. *See id.*

157. *See, e.g.*, Herbert Hovenkamp, *Antitrust's Protected Classes*, 88 MICH. L. REV. 1, 12 (1989) [hereinafter Hovenkamp, *Protected Classes*] ("Competition is by nature exclusionary, and we do not want to penalize companies for engaging in efficient competition").

158. *See* TREBILCOCK, *supra* note 155, at 58-59. Professor Coase states that "the fact that there are transaction costs and that they are large implies that many effects of people's actions will not be covered by market transactions. Consequently, 'externalities' will be ubiquitous. The fact that governmental intervention also has its costs makes it very likely that most 'externalities' should be allowed to continue if the value of production is to be maximized." COASE, *supra* note 150, at 26.

159. *See, e.g.*, Harper & Row Publishers, Inc. v. The Nation Enters., 471 U.S. 546 (1985) ("The rights conferred by copyright are designed to assure contributors to the store of knowledge a fair return for their labors"); Mark A. Lemley, *Book Review*, *Romantic Authorship and the Rhetoric of Property*, 75 TEX. L. REV. 873, 889-90 (1997) (collecting cases, statutes, and commentary to this effect); William W. Fisher, III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1661, 1687 (1988) ("[T]he elaborate combination of grants and reservations that comprise the Copyright Act is designed to advance the public welfare by rewarding creative intellectual effort sufficiently to encourage talented people to engage in it, while at the same time making the fruits of their genius accessible to as many people as possible as quickly and as cheaply as possible."); Karjala, *supra* note 120, at 515 ("The immediate effect of our copyright law is to secure a fair return for an 'author's' creative labor. But the ultimate aim is, by this incentive, to

underlying notion is that, without legal protection, these goals will not be achieved, which may be interpreted as a Congressional assumption of imperfections in copyright markets.

The ultimate goals of antitrust and copyright do not necessarily conflict—one would hope that the combination of these two regimes would produce the optimal amount of creative work at the smallest cost, and that the work would flow to its most highly-valued use—but their approaches differ and conflict in certain respects.[160] From a legal perspective, once copyright policies become part of the standard against which actions are to be judged, copyright's incentive structure and balance must be considered in addition to efficiency concerns. Copyright might produce inefficient results in some cases, but that fact would not allow us to override the copyright grant.

The relationship between copyright policy and contract law may be analyzed by framing the reverse engineering issue in exchange-based terms. To do so we cast reverse engineering as a limited right to copy for the purpose of engaging in conduct that will expand the available store of

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stimulate artistic creativity for the general public good."); Karjala, *supra* note 120, at 515 n.7 (listing cases noting that the ultimate aim of copyright law is to stimulate artistic creativity); Robert A. Kreiss, *Accessibility And Commercialization In Copyright Theory*, 43 UCLA L. REV. 1 14 (1995) ("The copyright system seeks to promote the public benefit of advancing knowledge and learning by means of an incentive system. The economic rewards of the marketplace are offered to authors in order to stimulate them to produce and disseminate new works"); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989); Lemley, *supra* note 139, at 1043 (noting need for balance between incentives to innovate and interest in distribution); Lemley, *Shrinkwraps*, *supra* note 125, at 1275; McGowan, *supra* note 95, at 773-75; O'Rourke, *supra* note 139, at 483-84 ("American law historically has cited an economic rationale as the theoretical underpinning of the copyright clause set forth in the Constitution. In its simplest terms, this rationale may be described as a response to market imperfections caused by a public goods problem.").

160. Thus, Professor Kaplow notes the conflicting approaches of antitrust and patent law, see Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813, 1817 (1984)), while suggesting that conflicts between antitrust and patent law may be easier to resolve than conflicts between antitrust and other legal regimes because "the primary competing issues can be translated into a 'common denominator'—economic welfare loss—to a far greater degree than one could hope for in most other areas of the law." *Id.* at 1888. *See also* Lemley, *supra* note 139, at 996 ("intellectual property rights must permit prices to rise above marginal cost in some cases to have their intended effect of providing an incentive to create"); Ramsey Hanna, Note, *Misusing Antitrust: The Search For Functional Copyright Misuse Standards*, 46 STAN. L. REV. 401, 419 (1994)("While both antitrust and intellectual property laws ultimately aim to enhance public welfare, the paths these two bodies of law chart in promoting that ultimate objective diverge.").

creative work—a transformative use. This definition excludes free riders, a group I will simply assume may be readily identified at low cost by their meager contributions relative to the copied work.

The problem of third-party effects arises from the nature of the copyright grant and its interplay with the public interest. Does copyright confer this right to reverse engineer jointly to the public at large,[161] or severally to each individual? Defining the rule as a right owned by each member of the public implies that any member of the public may exchange the right for something a particular person or firm values more. Such a conception fits comfortably with the Article 2B's free-contracting philosophy. Indeed, if the copyright rule pertaining to reverse engineering is a right vested in each individual, then all agreements to refrain from reverse engineering, including those in the mass market, would be potentially enforceable. Conversely, defining the fair use right as one held collectively by the public implies that the right is inalienable—neither an individual nor the public of a given state may exchange the right, and no author could legally bind anyone to a promise to abstain from reverse engineering.[162] If the copyright rule pertaining to reverse engineering is cast as a collective right, then the Reporter's Notes to section 2B-208 are misleading because an agreement precluding transformative use would be void under all circumstances.[163]

These all-or-nothing conclusions are unsatisfactory. Conceiving of a right to reverse engineer held severally leaves little room for the notion of a general public interest in the accumulation and dissemination of knowledge. On the other hand, a collective right implies that prohibitions on re-

161. *Cf.* O'Rourke, *supra* note 139, at 480 ("The [Copyright] Act confers fair use rights nonexclusively on the public without explicitly indicating whether or not the public or its members are free to contract away those rights.").

162. One could attempt to use Professor Craswell's analysis to characterize the reverse engineering right in the middle of the continuum as a property right that could not be taken unless true assent had been gained. *See* Craswell, *supra* note 12, at 36. However, because assent does not address the third-party effects at the heart of the problem, the property rule construction will not provide an answer to the problem.

163. In place of a collective right terminology one could frame the same argument by interpreting the Copyright Act as positing a public interest in reverse engineering and define harm to that interest as an external effect of prohibitions on reverse engineering. This is, for example, the substance of Professor Karjala's argument. *See* Karjala, *supra* note 120, at 518. Further, it is only a slight modification of Professor Lemley's earlier argument. *See* Lemley, *Shrinkwraps*, *supra* note 125, at 1277 ("Agreements between private parties to expand the licensor's rights beyond those provided by patent law affect third parties as well"). Imposing copyright's rate of return regime as background allows the conversion of the effect into an externality: an agreement that creates losses not within the scope of losses imposed by the Copyright Act.

verse engineering are always, or at least almost always, void. Yet there will likely be cases in which a restriction on reverse engineering would be reasonably necessary to conclude an agreement that enhances social welfare,.[164] As discussed above, bargaining or other evidence of deliberative assent between the parties cannot provide a compromise between these extremes because the problem arises from the risk that contracting behavior optimal for the contracting parties will create social welfare losses when the copyright balance is taken into account.[165] In light of these complex and contradictory considerations, Article 2B's frequent reformulations of the problem are understandable.

This brings us back to the second potential justification for the distinction drawn in the Reporter's Notes to section 2B-105—copyright as embodying a mandatory ceiling on an author's rights, as well as a floor. In a recent article discussing copyright preemption, Professor Karjala suggests that Professor Kreiss's distinction between commercial and noncommercial assertions of copyright power might be employed to analyze these issues[166] in a manner that avoids both of the extremes discussed above. Professor Kreiss posits "a quid pro quo at the heart of the copyright system: if an author seeks benefits by commercializing a work, then the public should be able to benefit by having access to the work."[167] Conversely, "[f]or a work that is not commercialized, the exchange is fair: the public receives no access and hence nothing of value; similarly, the author receives no economic return from a copyrighted work that is not commercialized."[168] This dichotomy properly focuses on the rate-of-return implicit in copyright structure, and the correlation between the scope of copyright protections and returns to an author.[169] The distinction suggested in the March 1998 draft of section 2B-208 might be interpreted along these lines,

164. Thus, as Professor Lemley has said, the truly "fundamental question regarding contracts and intellectual property" is "whether signed, bargained contracts that alter intellectual property rights can or should be enforced." Lemley, *Shrinkwraps*, *supra* note 125, at 1292.

165. I believe Professor O'Rourke is correct to say that an agreement reached by bargaining between sophisticated parties with respect to reverse engineering is likely to be priced in light of the rights conveyed. *See* O'Rourke, *supra* note 139, at 524. However, pricing between parties does not guarantee an efficient outcome if the copyright background is interpreted as embodying third-party interests affected by such an agreement.

166. *See* Karjala, supra note 120.

167. Kreiss, supra note 120, at 5; Lemley, *Shrinkwraps*, *supra* note 125, at 1280 (noting that "the public's 'reward' for copyright" is "access to the ideas in the public domain").

168. Kreiss, *supra* note 120, at 6.

169. *See* McGowan, *supra* note 95, at 775-77; 827-32.

with provisions prohibiting reverse engineering being enforceable where the contract does not commercialize the product but void otherwise.

Any defense of the distinction raised in the Reporter's Notes creates at least two important and difficult issues. The first is a definitional question. Professor Kreiss defines "commercialization" of copyrighted work as "any act that is likely to produce a direct economic return."[170] This formulation appears too broad for Article 2B's commercial contracting framework, which in its February draft assumed that limited distribution agreements occur only in a commercial context.[171] A line must therefore be drawn between contracts that contemplate some profitable business exchange for the parties but in which prohibitions will be enforced and profitable exchanges in which prohibitions are void under the mandatory copyright ceiling. Professor Karjala suggests that the "commercialization" concept may be employed to inform federal preemption analysis by modifying the definition to encompass products that are widely distributed.[172] Under this conception, wide distribution would void any agreement restricting transformative use of the distributed code, even if the agreement was negotiated between commercial parties in a commercial setting. Under the commercial/ noncommercial conception, an author could choose to market her work to derive revenues, and thereby become bound by both copyright's revenue floor and its ceiling, or choose to abstain from market exploitation and retain freedom of contract in noncommercial settings.[173]

My intuition, is that firms likely to engage in exchanges limiting or prohibiting transformative use will also likely seek to maximize their profits at some point through the greatest possible commercialization of their work. Unlike J.D. Salinger, firms are unlikely to assert copyrights (or engage in contracting) regarding work they hope never sees commercial light of day. If this is correct, then almost any agreement should be viewed as "commercialization" or a step toward it, and therefore fall on the widely-distributed side of Professor Karjala's dichotomy, with the end result being another all-or-nothing rule.

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170. Kreiss, *supra* note 120, at 5 n.13, 14-19.

171. *See* U.C.C. § 2B-105, Reporter's Note 5 (Feb. 1988 Draft).

172. Karjala, *supra* note 120, at 513 n.2.

173. One could conceive of this as a choice whether to opt into copyright's revenue-generating regime, and to that extent the model casts copyright as a default that may be modified subject to certain conditions. As Professor Karjala rightly concludes, however, Professor Kreiss's model would not support a choice to opt in to only certain portions of copyright's revenue-generating regime (i.e., the floor) while contracting around others (i.e., the ceiling). *See* Karjala, *supra* note 120, at 518.

The second issue arising from a defense along these lines concerns information costs and lost gains from trade attributable to any mandatory rule that a material number of licensees would contract around if allowed to do so.[174] To say that copyright imposes a ceiling on an author's returns is to say that, however defined, there is a domain in which a provision precluding reverse engineering will not be enforced. It is not hard under such circumstances to envision a possible pooling equilibrium that would create welfare losses.[175] Software vendors presumably will price their licenses to account for the expected cost of competition that might arise through reverse engineering of their own products. We may assume that purchasers are divided into four types: those who have no ability to reverse engineer, those who have the ability but not the intention, those who have the intention but lack the ability, and those who have both.

If these various types of purchasers cannot be bound to an agreement in which they promise to forbear from reverse engineering code as a condition of receiving it, the vendor will be deprived of the best method of credibly distinguishing among types. If the vendor is unable to separate the different types of purchasers through enforceable agreements, it will rationally set the price of its licenses to account for the expected cost of reverse engineering generated by purchasers collectively. This collective price will presumably be higher than the price that would be set for purchasers who could credibly show that they would not engage in reverse engineering if contractual restrictions were binding but who could not credibly make such a showing if such restrictions were not enforceable. Some purchasers who would pay the lower price made possible by the

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174. This issue of course pertains as well to the mandatory rule implied by the collective rights concept discussed above. As Professors Baird, Gertner, and Picker put it,

> [T]he willingness of a party to agree voluntarily to a term in a contract may signal the parties' type. Imposing a mandatory term may prevent this signaling and thereby reduce the amount of information transferred .... A contract term based on an observable event can communicate information only if parties have a choice about whether to include such a term in their contract. Every mandatory term potentially brings with it a hidden cost because it may prevent parties from revealing nonverifiable information to one another.

DOUGLAS G. BAIRD ET AL., GAME THEORY AND THE LAW 147 (1994).

175. On pooling equilibria generally, see *id.* at 145, 154-57 (noting possibilities and limitations of contracts to separate among different types of contracting parties); Ayres & Gertner, *Filling Gaps*, *supra* note 144, at 111-112; Johnston, *supra* note 145, at 625 and n.36.

separating effect produced by enforcing the terms might not pay the higher price produced by refusing to enforce the terms.[176]

Article 2B seeks to reduce precisely this sort of loss by embracing freedom of contract as its goal and seeking to employ a methodology that lowers transaction costs while preserving bargaining flexibility. It is therefore not surprising that Article 2B seeks to preserve a domain in which free contracting may operate.[177] Nor is it surprising that Article 2B has consistently insisted on a sphere in which commercial parties are free to negotiate agreements containing terms that might be held inconsistent with the Copyright Act if made the predicate of an infringement claim.

The pooling analysis may be extended to say that such losses are unlikely to be offset by gains to society at large. If mass market purchasers are unlikely to be transformative users, then a rule voiding mass market terms prohibiting transformative use would either increase transaction costs (if an exception were created for actual assent) or impede agreements that would satisfy demand without, in at least many cases, depriving society of transformative works. In contrast, enforcing prohibitions in cases involving sophisticated commercial parties who are able to reverse engineer and might desire to do so, but who might also accede to terms precluding transformative use if the overall license was sufficiently attrac-

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176. *See* BAIRD ET AL., *supra* note 174, at 145 ("A rule that mandates particular actions or particular contract terms imposes a cost on the party who would, in fact, bargain for a different term."); O'Rourke, *supra* note 139, at 516 ("A program that includes the Atari/Sega right to decompile would probably cost the end user more than one that did not"). For a similar application of this concept to the classic case of shippers and carriers in the context of Hadley v. Baxendale, 9 Ex. 341, 156 Eng. Rep. 145 (1854), see BAIRD ET AL., *supra* note 174, at 147-52; Johnston, *supra* note 144, at 630-31; Ayres & Gertner, *Filling Gaps*, *supra* note 144, at 94-95, 112-113. As Ayres and Gertner emphasize, contracting around a default rule may enhance efficiency by revealing information but also increase transaction costs. Both effects must be taken into account in assessing the desirability of any given default rule.

177. A similar concern underlies Judge Easterbrook's reasoning in ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449 (7th Cir. 1996) (arguing that prohibition on commercial use of software facilitated price discrimination); Karjala, *supra* note 120, at 538-39 (agreeing that price discrimination could yield benefits to software vendor but arguing that legislation rather than contract is the appropriate method of deciding the issue). Judge Easterbrook makes a related point using the pricing of academic journals as an example, in which he argues that rampant copying in academia (on which see ELLICKSON, *supra* note 149, at 258-64) has induced publishers to raise subscription costs to prohibitive levels as a form of "advance fee for photocopying." Frank H. Easterbrook, *Cyberspace and The Law of the Horse*, 1996 U. CHI. LEGAL F. 207, 209 (1996). Readers interested in Judge Easterbrook's opinion in ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996), may find in his article at least a partial elaboration of the principles on which the opinion rests.

tive, might create copyright externalities. In other words, if my assumptions regarding the relative probability of transformative use are correct, third-party effects (welfare losses) might well be greater in the circumstances in which the Reporter's Notes suggest prohibitions on reverse engineering will be enforced than in the circumstances about which the Notes express uncertainty.

That being said, these concerns are relatively abstract. The question whether the store of creative works is, on balance, increased or diminished by restrictive terms in agreements actually negotiated by sophisticated commercial parties is an empirical question that would be difficult to answer. Absent hard data on the subject, which may be very difficult to obtain in an industry in which firms may assert that nondisclosure agreements are themselves trade secrets, courts should hesitate to conclude that agreements between presumptively rational commercial actors are sufficiently suboptimal to warrant invalidation on public policy grounds. Almost by definition, given the assumptions of actual assent and sophisticated parties, objections to such agreements will be purely substantive in nature and resolution of such objections will depend on specific facts. Reporter's Note 3 to section 2B-105 is right to say that the tension between maintaining incentives to create and expanding the store of information available to the public must be resolved in light of "contextual factors that can only be assessed on a case by case basis with an eye to national policies."[178] Antitrust or principles of copyright misuse might well play a useful role in such cases, depending on the parties' market position and the theories presented to a court, that contract law would perform less well. This conclusion is particularly true for cases such as *DSC*, in which the principal concern is with the market position of the intellectual property right (and, by extension, that of its holder) rather than the behavior of a firm in contract negotiations or performance over the life of a contract, such as *Intergraph*. In cases such as *DSC*, Article 2B's neutrality policy is appropriate as a general matter. Further, if the public policy exception recently added as section 2B-105(b) is applied in light of principles of copyright misuse and competition policy,[179] Article 2B will have done all it can

178. U.C.C. § 2B-105, Reporter's Note 3 (Aug. 1, 1998 Draft).

179. Reporter's Note 3 to section 2B-105 recommends that courts follow this approach: "Under the general principles in subsection (b), courts also may look to federal copyright and patent laws for guidance on what types of limitations on the rights of owners of information ordinarily seem appropriate, recognizing, however, that private parties may have sound commercial reasons for contracting for limitations on use and that enforcing private ordering arrangements in itself reflects a fundamental public policy enacted through the [U.C.C.] and common law." *Id.* This statement reflects as well can be

reasonably be expected to do in furtherance of allocative efficiency. With respect to the sorts of claims presented in *Intergraph*, however, there is a fair question whether efficiency would be better served by greater reliance on contract theories and principles than on antitrust, a question explored in Part V.

V. Evaluating Claims at the Intersection of Contract, Intellectual Property, and Antitrust

That a mandatory rule might impose social costs does not, in and of itself, imply that freedom of contract should trump copyright. Nor does the fact of losses in the volume of creative works in the public domain created by the copyright's grants of power imply that the copyright laws should be repealed. Copyright deliberately creates losses in exchange for gains as measured by a particular vision of social welfare (at least when compared to a hypothetical world without copyright but with a constant amount of copyrighted work available for distribution).[180] Copyright ideally would set the boundaries of suppression so that society as a whole gains as much as possible while losing as little as possible,[181] though there are good reasons to believe that this balance is poorly struck with respect to software. The important point, as Professor Kaplow has shown in the patent context, is that the scope of rights granted affects both the reward to the licensor and the social loss incurred. One cannot change the scope of rights granted without altering the balance, just as one cannot change the risk associated

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expected the difficulties Article 2B faces in reconciling its free contracting philosophy with social interests that might be implicated by such contracting.

180. *See* Karjala, *supra* note 120, at 515, 518-20; Lemley, *Economics of Improvement*, *supra* note 139, at 996 ("[I]ntellectual property rights must permit prices to rise above marginal costs in some cases if they are to have their intended effect of providing an incentive to create. This means that in many cases fewer people will buy the work than if it were distributed on a competitive basis, and they will pay more for the privilege."). *Cf.* Kaplow, *supra* note 160, at 1514 ("[T]he very purpose of a patent grant is to reward the patentee by limiting competition, in full recognition that monopolistic evils are the price society will pay.").

181. *See* Landes & Posner, *supra* note 159, at 326. To the degree copyright is analogous to patent law, there is little reason to have confidence that the optimal balance has been struck, or even that the optimal balance is knowable. *Cf.* Kaplow, *supra* note 160, at 1833 ("[O]ur knowledge is inadequate to inspire great confidence even in the desirability of having a patent system at all, much less in the ability to make the subtle measurements of marginal effects that determine the ratio implicit in the optimal patent life.").

with investment in creative works without changing investment behavior.[182]

Copyright thus creates a structure from which an implicit rate of return may be derived using the scope and duration of the copyright grant.[183] In practice, such derivations would be heuristic exercises because actual returns and social costs will depend on competition by products that likely also will enjoy copyright protection. Simply knowing that *Time* enjoys copyright protection, in other words, tells you nothing meaningful about its returns relative to those of as *Newsweek* or the cost of providing protection to either.[184] Still, copyright provides tools with which this type of analysis may be undertaken: the statutory rights granted, limitations imposed, and term. Antitrust does not provide such tools, at least not directly, though the rules defining its intersection with copyright will affect social gains and losses.[185]

Concepts of competition and efficiency will tell us some things useful to analyzing the exchange of outputs involving copyright industries. But, if we are to give full effect to the instrumental structure Congress has en-

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182. *See id.* at 1825 n.29 (discussing risk associated with innovation and concomitant need for increased potential of returns under plausible assumption of increasing marginal costs and decreasing marginal benefits to extended patent term); *id.* at 1831 ("Every patent life implies a specific ratio. The ratio implicit in a given patent life simply refers to the ratio of incremental reward to incremental loss that results from marginal adjustment of the patent life"); *id.* at 1840 ("[S]etting the patent life and determining patent-antitrust doctrine are interdependent endeavors"); McGowan, *supra* note 95, at 830-32 (noting effects of risk adjustments on incentives to invest).

183. *Cf.* Kaplow, *supra* note 160, at 1825 ("The optimal patent life is that length of time at which the marginal social cost of lengthening or shortening the patent life equals the marginal social benefit.").

184. *See* Jefferson Parish Hosp. No. 2 v. Hyde, 466 U.S. 2, 37-40 (1984) (O'Connor, J., concurring); PHILLIP AREEDA & LOUIS KAPLOW, ANTITRUST ANALYSIS 441-42 (1988); HOVENKAMP, ANTITRUST POLICY, *supra* note 3, § 8.3 at 219; Lemley, *Economics of Improvement*, *supra* note 139, at 996 and n.26.

185. One analogue in antitrust would be its favorable view of certain economic arrangements, such as vertical integration or mergers, that enhance productive efficiency—the ratio between a firm's inputs and production. Hovenkamp, *After Chicago*, *supra* note 57, at 237-38. As Professor Hovenkamp points out, the notion that firms should be allowed to enhance their own productive efficiency is not generally controversial. Favoring steps that maximize production for a given level of inputs, however, is only tangentially related to the dominant copyright question of how strong intellectual property rights should be to strike the optimal balance between production and dissemination of copyrightable work. There is also a relationship between antitrust and copyright returns in the sense that antitrust, like contract, is part of the legal background against which copyrighted work is exploited. A change in antitrust doctrine at its intersection with copyright would therefore at least potentially change the effective scope of the copyright grant and therefore the returns available to the copyright holder and the social costs created.

acted, optimal or not, the copyright grant's adjustment of the parties' background entitlements must be respected. This statement must be qualified by the interrelationship between copyright and antitrust, which I discuss below. The point for now is merely to note that the different methodologies embodied in the two statutes counsel against reflexive invocation of antitrust principles to tailor the copyright balance. Courts interested in enhancing efficiency must be sensitive to the context in which a claim arises and the legal theories asserted by the parties. As suggested above, *DSC* and *Intergraph* provide examples of the importance of context in this analysis.

A. Claims Based On The Market Position Of Intellectual Property Rights

DSC involved the assertion of copyright in operating system code that worked on a microprocessor embedded in local telephone switching equipment—a technological bottleneck within equipment at the heart of what was long regarded as a natural monopoly.[186] DSC claimed a right under the Copyright Act to preclude copying of its operating system, and, on the facts as described by the court, DSC sought to use this right to foreclose competition for microprocessors, which were useful to the local telephone provider only if they could operate with DSC's code. One could view *DSC* as presenting the purest of antitrust issues: creating a strategic bottleneck to obtain (preserve) a monopoly in a distinct market.[187] The conduct involved, however—assertion of the right to limit copying of software code—lies at the heart of copyright's grant of power. To proceed immediately to antitrust analysis would bypass the copyright rate-of-return analysis and thus ignore the social costs copyright willingly tolerates to create the opportunity for such returns.

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186. Technological advances have rendered the natural monopoly conclusion less certain and less stable than it once was, and network theory has assisted in directing our attention to interfaces and standards as points of concern as well. *See* Lemley & McGowan, *Network Effects*, *supra* note 95, at 549-51; Jim Chen, *Titanic Telecommunications*, 25 SOUTHWESTERN UNIV. L. REV. 535, 542 (1996) ("The accelerating pace of the technical revolution in telecommunications" may produce a paradigm shift). As of this writing, however, competition in local telephony has yet to emerge. *See* Bart Ziegler, *Whatever Happened to Competition for Local Phone Service? It's Simple Economics*, WALL ST. J., Sept. 21, 1998, at R6 (noting little change in local telephone competition in wake of 1996 Telecommunications Act).

187. Alternatively, one could conceive of the case as a tying claim. In either event, the problem involves use of economic power in one market to derive revenues from an adjacent but distinct market.

Suppose, in other words, the copyright ceiling allows holders to preclude copying even where preclusion would affect competition in an adjacent market, and therefore that copyright willingly tolerates the corresponding social losses. On what ground consistent with the Copyright Act could a judge applying the antitrust laws lower the ceiling? Unless we are willing to construe the antitrust laws as mandating cost-justified federal legislation generally, the court presumably could not rest on the ground that the ceiling was too high (that its marginal costs exceeded marginal benefits). And if we conclude that preclusion exceeds the copyright ceiling, engaging in a comparison of DSC's conduct relative to copyright parameters, in what sense could this be called an "antitrust" decision? The legal violation would not be the imposition of social costs, about which antitrust could be of assistance, but in imposing losses greater than those tolerated by the Copyright Act. Antitrust cannot perform such measurements and, if what a court decides is that a particular use of copyright would impose costs greater than Congress intended, it would be better to hold explicitly that assertion of copyright in such circumstances exceeds the scope of the copyright grant.

Simply pointing to the use of copyright authority to inflict social losses therefore provides an insufficient basis to invoke antitrust remedies. The question in such a case will be one of balancing the costs and benefits of deliberate disruption of competition, and antitrust is not a balancing jurisprudence in this sense. In cases like *DSC*, involving construction of core copyright grants and limitations, copyright-based theories such as the emerging doctrine of copyright misuse are likely to resolve disputes with less collateral doctrinal distortion than would be the case if antitrust were applied directly. If a court applying copyright principles concludes that an assertion of copyright exceeds the statutory ceiling, then the assertion would presumably be held invalid and injunctive relief or damages would be denied, as occurred—at least in part—in *DSC*.[188] At this point there would be little reason to invoke antitrust, as the impediment to competition would be eliminated and whatever economic "power" remained would presumably be within copyright's parameters.

Because copyright's grants and limitations imply a rate of return structure that antitrust lacks, I doubt that antitrust theory or doctrine will provide much direct assistance to courts, particularly if direct application of copyright principles yields indeterminate answers.[189] The argument that

188. *See, e.g.*, Lasercomb Am. v. Reynolds, 911 F.2d 970, 973 (4th Cir. 1990).

189. *See* O'Rourke, *supra* note 139, at 542 ("It is impossible to know where the balance between creativity and competition would settle if either rule—preemption or non-preemption of decompilation provisions—were adopted."). For Professor O'Rourke the

antitrust and copyright are both designed to remedy market failure, and that the principles of the former may therefore be employed to inform application of the latter, does not take these methodological differences into account. If employed by courts or state legislatures in cases involving interpretation of the statutory rights and limitations from which the copyright rate of return is derived, dual application could lead to frustration and confusion. The two regimes seek to ameliorate different sorts of market failure. As I discuss below, this does not mean there is no role for antitrust in cases that happen to involve intellectual property. But the methodological differences do suggest a heightened degree of caution in invoking antitrust principles to settle disputes in copyright industries: the closer a case comes to requiring construction of statutory rights and limitations, the more hesitant courts should be to resort to antitrust for a remedy.

One conclusion that follows from this analysis is that the copyright misuse defense should be developed as an independent doctrine based on copyright principles and should not require a party to establish an antitrust violation as an element of the defense.[190] The Fourth and Ninth Circuits have adopted this approach, and future courts should do the same.[191] Thus,

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inconclusive nature of copyright principles as applied to these problems suggests the invocation of antitrust and, in particular, the essential facilities doctrine. For an alternative view, see Hanna, *supra* note 160, at 318 ("Antitrust doctrine does not provide the tools necessary to judge whether a particular mode of exploitation exceeds the permissible bound of the statutory copyright monopoly conferred. Antitrust doctrine does not define the scope of copyright privileges. It looks to *copyright law* to ascertain what degree of anticompetitive conduct is permissible.") (emphasis added). Hanna concludes that "[i]n weighing claims of copyright misuse, courts must develop a functional delineation of the scope of the exclusive privileges inherent to a copyright grant that is compatible with the intellectual property statutes' goal of promoting the development and diffusion of innovative works. Antitrust law is of little aid in this regard." *Id.* at 418 n.110.

190. Professor O'Rourke states a legitimate concern that it is "unclear whether a copyright misuse defense grounded in an antitrust violation requires the usual detailed antitrust proof of that violation" while noting that "the quantum of proof is somewhat less." O'Rourke, *supra* note 139, at 550. On the debate generally, see Lemley, *Beyond Preemption*, *supra* note 6; AREEDA & KAPLOW, *supra* note 183, at 183.

191. *See* Practice Management Info. Corp. v. American Med. Ass'n, 121 F.3d 516, 521 (9th Cir. 1997) ("We agree with the Fourth Circuit that a defendant in a copyright infringement suit need not prove an antitrust violation to prevail on a copyright misuse defense"); Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 978 (4th Cir. 1990) ("So while it is true that the attempted use of a copyright to violate antitrust law probably would give rise to a misuse of copyright defense, the converse is not necessarily true—a misuse need not be a violation of antitrust law in order to comprise an equitable defense to an infringement action. The question is not whether the copyright is being used in a manner violative of antitrust law (such as whether the licensing agreement is 'reasonable'), but whether the copyright is being used in a manner violative of the public policy embodied in the grant of a copyright.").

a party asserting a copyright misuse defense to an agreement requiring the simultaneous purchase of two distinct products should not be required to demonstrate either market power in the tying product or a dangerous probability of acquiring power in the market for the tied product that should be demanded of a tying claim under the antitrust laws.[192] If the Copyright Act does not allow firms to capture revenues from adjacent markets, adding these elements to a misuse defense would be superfluous.[193]

Similarly, a simple refusal to grant a license would likely be better addressed under a misuse theory than through application of antitrust's essential facilities doctrine.[194] That line of authority is traditionally based in the feasibility of replicating a competitor's product or infrastructure. The

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192. Professor O'Rourke, for example, states that application of tying principles in software markets is appropriate because "the Copyright Act grants a limited monopoly that is not intended to permit the copyright owner to leverage its statutory monopoly into another market." O'Rourke, *supra* note 139, at 548. If the Copyright Act reflects this policy, that fact alone should preclude conduct that might escape sanction under antitrust tying principles.

193. Conversely, one could conceive of a regime in which the producers of *Titanic* owned the copyright in the film but could not assert it to squelch derivative products that competed in distinct markets—such as books about the making of the film that incorporate its footage, T-shirts or posters with photographs of the stars, and the like. Or one could conceive of a what Professor Lemley has called a "blocking copyrights" regime in which creators of derivative works owned rights in their improvement but would have to negotiate with the owner of rights in the original work to avoid infringement claims. *See* Lemley, *Economics of Improvement*, *supra* note 139, at 1074-76. Even if both alternatives would enhance social welfare relative to the status quo, it does not follow that a manufacturer of a derivative work may (or should be able to) assert an antitrust counterclaim to an infringement action.

194. Professor Areeda referred to this instead as "an epithet in need of limiting principles." Phillip Areeda, *Essential Facilities: An Epithet In Need Of Limiting Principles*, 58 ANTITRUST L.J. 841 (1990). Professor Hovenkamp favors elimination of the doctrine accompanied by adjustments in the rules governing a monopolist's refusal to deal. HOVENKAMP, ANTITRUST POLICY, *supra* note 3, at § 7.7. Professor O'Rourke has suggested the doctrine as of potential use in informing copyright fair use analysis. *See* O'Rourke, *supra* note 139, at 546. For the reasons stated in the text, I am skeptical of the ability of the essential facilities doctrine to provide efficient answers in such cases, particularly given the significant incursion into intellectual property law the doctrine implies. Development of antitrust doctrine relating to refusals to deal by monopolists that entail anticompetitive effects outweighing any benefits—Professor Hovenkamp's suggestion—would seem to be a better course to follow. *See* Image Technical Servs. Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1209-11 (9th Cir. 1997) (rejecting the argument that a claim based on unilateral refusals to deal by monopolist must be controlled by the essential facilities doctrine and holding that section 2 "prohibits a monopolist from refusing to deal in order to create or maintain a monopoly absent a legitimate business justification"); Data Gen. v. Grumman Sys. Corp., 36 F.3d 1147, 1183-84 (1st Cir. 1994) (holding that a section 2 refusal-to-deal claim need not conform to the essential facilities doctrine).

cases have tended to involve bottlenecks such as railroad facilities,[195] local electric power wires,[196] and local telephone switching facilities.[197] The doctrine does not require anticompetitive conduct as such; a monopolist's denial of access to the facility to a competitor and economic infeasibility of replication are sufficient.[198] Subject to certain limitations, however, copyright deliberately seeks to make replication—copying—infeasible. Application of the essential facilities doctrine, therefore, would represent a significant intrusion on the core statutory right of a vendor to control copying of its code. The same problems with such an application of antitrust principles that we examined in the case of *DSC* would apply to such an essential facilities claim as well.[199] Competition policy has in certain circumstances been able to analyze the cost structure of relevant markets for the purpose of assessing the feasibility of replication and compelling access. Yet even if one concluded that reverse engineering would be prohibitively expensive in a given case, it is not clear why that conclusion

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195. *See* United States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912).

196. *See* Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

197. *See* HOVENKAMP, ANTITRUST POLICY, *supra* note 3, at 275 ("The courts have generally interpreted the essential facilities doctrine to require a showing that no practical alternatives are available, including alternatives that entail cost disadvantages."). *See* MCI Communications Corp. v. AT&T Co., 708 F.2d 1081 (7th Cir.), *cert. denied* 464 U.S. 891 (1983).

198. *See* Carribean Broad. Sys. v. Cable & Wireless PLC, 148 F.3d 1080, 1088 (D.C. Cir. 1998) ("[T]he elements of an antitrust claim for denial of access to an essential facility are: (1) a monopolist who competes with the plaintiff controls an essential facility; (2) the plaintiff cannot duplicate that facility; (3) the monopolist denied plaintiff the use of the facility; and (4) the monopolist could have granted the plaintiff use of the facility."); Blue Cross & Blue Shield United of Wis. v. Marshfield Clinic, 65 F.3d 1406, 1412 (7th Cir. 1995) (Posner, J.) ("[T]he concept of essential or bottleneck facilities has been used from time to time to require a natural monopolist to cooperate with would-be competitors."); Alaska Airlines Inc. v. United Airlines, Inc., 948 F.2d 536, 544 (1991) ("A facility that is controlled by a single firm will be considered 'essential' only if control of the facility carries with it the power to eliminate competition in the downstream market" and such power is "relatively permanent" rather than momentary.); *MCI v. AT&T*, 708 F.2d at 1132-33.

199. That is to say, because compulsory access doctrines go to the heart of the core statutory right to control copies, invocation of the doctrine would alter the implied statutory structure of returns and costs. McGowan, *supra* note 95, at 834. Because the copyright grant itself is the barrier to replication in such cases the question whether software is a natural monopoly is of heuristic interest and may be necessary to interpretation of the doctrine in the view of some judges, but is not necessary to resolution of these issues. The court in *David L. Aldridge Co. v. Microsoft Corp.*, 995 F. Supp 728, 751-55 (S.D. Tex 1998), appeared to assume that operating system software could be an essential facility; the court granted summary judgement for Microsoft on the essential facilities claim without addressing copyright rate of return issues.

should truncate copyright's grant of control over replication. An evaluation of the returns and costs contemplated by Congress—a misuse analysis, for example—would be required before such a conclusion could be reached.

One might argue that, from a deterrence perspective, the Clayton Act's provision of treble damages and attorneys' fees[200] might be considered useful if software vendors are likely to assert copyright claims in circumstances constituting misuse unless the penalty for such behavior decisively outweighed potential gains. This argument would have particular appeal if one also believed that consumers will often acquiesce in the face of such assertions rather than litigate or that courts would frequently err in adjudicating such claims. The problem of optimal deterrence is a difficult one for antitrust, however, even assuming allocative efficiency is its goal. It is not clear that treble damages create the optimal antitrust deterrence structure,[201] though the law requires that they be awarded, nor is there any necessary reason to believe treble damages would achieve the proper level of deterrence for copyright misuse. If the prospect of treble damages chilled assertions of rights contemplated by the Copyright Act, then the prospect of treble-damage liability would effectively lower the copyright rate-of-return ceiling. The difficult question of deterrence suggests that it would be desirable for courts or, better still, Congress, to empower copyright with remedies designed to diminish the degree to which firms might perceive excessive assertions of copyright to be a rational business strategy. Such measures might include, at a minimum, disgorgement of profits obtained through misuse. This approach would allow deterrence to operate within copyright's rule structure and thus preserve a theoretical benchmark against which "excessive" costs or returns could be measured.

Distinguishing between cases explicitly based on a core copyright grant and cases involving copyrighted goods but which are based on some other ground, such as the method of pricing the good, is to some degree artificial. As Professor Kaplow has shown in the patent context, the costs and returns implied by patent law are in part a function of the contours of the patent-antitrust intersection.[202] It follows that no true economic dis-

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200. *See* 15 U.S.C. § 15.

201. *See, e.g.*, SULLIVAN & HOVENKAMP, *supra* note 132, at 166-68; Hovenkamp, *Protected Classes*, *supra* note 157; Herbert Hovenkamp, *Treble Damages Reform*, 33 ANTITRUST BULL. 233 (1988).

202. *See* Kaplow, *supra* note 160, at 1840 ("In general, setting the patent life and determining patent-antitrust doctrine are interdependent endeavors; in other words, the system of equations that defines the optimization process must be solved simultaneously.").

tinction between antitrust rules and patent gains and losses is possible. The same general points are true of copyright, which seeks related ends through a different set of incentives and limitations.[203] To complicate matters further, as Professor Kaplow has shown in the patent context, we have inadequate information to derive the optimal scope of copyright protection. Nor, as noted above, do we have any realistic chance of deriving systematically the parameters of the gains and losses flowing from the statutory scheme Congress has enacted.[204]

Thus, while copyright deliberately imposes social losses that correspond in some manner to social gains, without knowledge of the social cost Congress intended to allow we cannot, as a practical matter, determine directly whether a given activity imposes costs in excess of the statutory boundary. When the relationship between the antitrust intersection and copyright returns is added to the mix, economic indeterminacy results. The inability to draw a true economic distinction does not alleviate the need for legal distinctions, however. In this regard the rule of thumb mentioned above is relevant: the closer a case involving copyrighted work comes to requiring construction of the Copyright Act's rights and limitations, the more hesitant courts should be to apply antitrust as a remedy. Though we cannot in actual practice ascertain the parameters of the returns and losses Congress sought to create, we know the statutory rights and limitations used to create them. Claims requiring construction of such rights and limitations are therefore more likely to involve, at bottom, a contention that the social costs permitted by the Copyright Act have been

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203. I would speculate that a greater number of patents create market power in an antitrust sense than do copyrights, as the example of *Time* and *Newsweek* suggests, though I cannot prove the speculation and, as software becomes an integral part of more goods than it has in the past, the economic strength of at least software copyrights may be increasing relative to the implied economic power of copyrights in other products. The increasing number of software copyright misuse case may reflect the increasing ability of copyright to create barriers to competition previously seen only in patents. *Cf.* Reed-Union Corp. v. Turtle Wax, Inc., 77 F.3d 909, 913 (7th Cir. 1996) (Easterbrook, J.) ("[C]opyrights do not exclude independent expression and therefore create less market power than patents.").

204. *Cf.* Kaplow, *supra* note 160, at 1834 (noting that "there is ... insufficient information to determine any component of the patent-antitrust doctrine unless one also knows the ratio [of gains to patentees and social losses] implicit in the optimal patent life. Yet our knowledge is inadequate to inspire great confidence even in the desirability of having a patent system at all, much less in the ability to make the subtle measurements of marginal effects that determine the ratio implicit in the optimal patent life"); *id.* at 1888 ("[T]here is no way of knowing whether the current level of reward provided by the combination of the patent system and the patent-antitrust doctrine is anywhere near the optimal level.").

exceeded. Claims contesting the scope or application of copyright's methodology, in other words, are best resolved using copyright's methodology.[205]

Because the legal distinction I suggest does not correspond with a true economic distinction, my rule of thumb is open to the criticism that it is in some ways quite formal, a criticism Professor Kaplow applies to several efforts to resolve patent-antitrust issues.[206] This criticism is correct to some degree. Take Microsoft's former practice of charging for copies of its operating system by the processor rather than by the copy. Microsoft probably could not have obtained OEM agreement to per-processor terms without its copyrights; indeed the market position that prompted the Antitrust Division's concern could not have been achieved without such rights.[207] The returns Microsoft earned on its copyrighted operating system software might well have been higher without antitrust intervention, and the social costs of its returns might well be lower in light of such interven-

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205. To some extent, of course, this distinction is semantic. If a court could measure social costs and benefits directly and conclude that a given practice imposes greater marginal costs than benefits, and if both copyright and antitrust sought to maximize production of creative work at the lowest cost, one could classify the analysis within the taxonomy of the law either as one of either copyright or antitrust. Different classifications would be meaningful for purposes of standing to bring an action and damages, which might well effect the degree to which a decision achieved an optimal outcome, but the core methodology might well be the same. This is one implication of conceiving of copyright as a method of ameliorating market failure (public goods) limited in scope such that marginal benefits exceeded costs. Analysts might well differ, however, on the question whether the copyright regime we actually have matches these parameters, or is even intended to approximate them.

206. *See* Kaplow, *supra* note 160, at 1848-49. The approach in the text, which is one of Professor Kaplow's examples of a formal approach, is analogous to Professor Baxter's inquiry into whether a premium derived from patent exploitation "constitute[s] income of the kind contemplated by the patent system." William F. Baxter, *Legal Restrictions On Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L.J. 267, 343 (1966).

207. In other words, if competitors and consumers had the right freely to copy or manipulate Microsoft's products. For more on the per-processor example, *see* United States v. Microsoft Corp., 159 F.R.D. 318, 323 (D.D.C.), *rev'd* 56 F.3d 1448 (D.C. Cir. 1995). For alternative interpretations of this issue, see Kenneth C. Baseman et al., *Microsoft Plays Hardball: The Use of Exclusionary Pricing and Technical Incompatibility to Maintain Power in Markets for Operating System Software*, 40 ANTITRUST BULL. 265, 267-68 (1995) (criticizing per-processor licenses); Robert J. Levinson, *Efficiency Lost?: The Microsoft Consent Decree*, *in* THE ECONOMICS OF THE ANTITRUST PROCESS 175, 182-85 (Malcolm B. Coate & Andrew N. Kleit eds., 1996) (suggesting that willing acceptance of such terms by some OEMs vitiates inference of competitive harm).

tion.[208] Both cases involved simultaneous assertions both of the copyright grant and strategic license terms; without the former the latter would likely not be of much concern. The point that copyright's social costs and benefits are affected by the acts the antitrust laws permit or forbid to be done with copyrighted work cannot be avoided. That said, however, the per-processor dispute was based on a method of pricing and not directly on the right to exclude.

This approach does not argue that either social gains or losses attributable to the copyright system may be ignored. Rather, it suggests circumstances in which application of principles from within copyright, such as misuse, may produce outcomes more consistent with the gains and losses Congress enacted than would application of antitrust. I suggest this distinction primarily on the ground that our imperfect knowledge of the economic parameters of the Congressional copyright mandate renders direct analysis impracticable. We must work with what we have, which are the statutory grants and limitations, and some separation between legal doctrine and economic effects is therefore inevitable. The approach suggested here seeks to minimize the degree of separation given the legal tools available.[209]

B. Cases Involving Alleged Misbehavior With Respect to The Contracting Process or Performance

As *Intergraph* shows, some cases involving antitrust claims and intellectual property defenses are based on the process of negotiating agreements or disputes over the performance of agreements. Where the dispute involves a party with a large share of a market, and perhaps market power, the importance of contractual doctrines such as unconscionability is heightened. So is the importance of antitrust principles. This is particularly true where a court finds one or more relevant markets based on the product of a single firm, such as the *Intergraph* court's holding that a market

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208. OEM's, for example, would have had no incentive to accede to license terms that, after all, reduced their ability to play competitors off against one another, if they could have freely copied Microsoft's code. Of course, if that were the case OEMs would have had no incentive to agree to any terms at all, in which case Microsoft might have had no incentive to write the code, bringing us back to fundamental copyright principles.

209. One additional caveat is in order. Given the realities of the legislative process it may well be that under the current copyright regime marginal social costs exceed marginal social benefits. As noted above, at least with respect to software, copyright protections are suspect on this count. But if Congress has enacted legislation creating losses disproportionate to gains, I do not believe antitrust claims may be employed to move copyright protection away from the regime Congress gave us, even if such moves enhance social welfare.

for "Intel CPUs"exists in addition to the market for high-performance CPUs, or the *Image Technical Services* court's recognition of aftermarkets for parts and services for Kodak machines. Such cases may turn on informational deficiencies that could have been corrected through negotiation or the purchase of aftermarket goods and services at the same time a durable good is purchased in the primary market. Or, as was alleged and accepted by the district court in *Intergraph*, a case may involve statements made during discussions between parties that induce a firm to invest its resources in a manner that leaves it vulnerable to strategic conduct by its contracting party.

In these sorts of opportunism cases, particularly those in single-firm markets or aftermarkets, there is at least a chance; and perhaps a good chance, that application of contract principles will yield more efficient outcomes than application of antitrust principles. Courts seeking to promote efficiency should at least consider the possibility and evaluate the costs and benefits of proceeding under each type of theory. For example, suppose Intel had told Intergraph from the outset of their discussions that Intel reserved the exclusive right to terminate Intergraph's access to technical support information at any time and that Intergraph could have no assurance of a continued supply of Intel's advanced product information, or even of its chips. If Intergraph decided that its savings from ceasing development of the Clipper technology justified the risk that Intel would cut off Intergraph's supply of information and technology, it is hard to see how a claim of opportunism could be stated in terms of diminished allocative efficiency. And unless antitrust policy is willing to decree that firms holding a monopoly by virtue of intellectual property rights are essential facilities, it is hard to see how an antitrust claim based on a refusal-to-deal claim could rest solely on such facts, either.[210]

Many variations on such facts are imaginable. One element of *Intergraph* was a claim that Intel's business strategy had shifted from open to closed architecture, effectively increasing the degree to which firms such

210. For those courts that appear to view essential facilities claims as requiring the presence of a natural monopoly, see, for example, Blue Cross & Blue Shield United of Wis. v. Marshfield Clinic, 65 F.3d 1406, 1412 (7th Cir. 1995); an essential facilities claim against a firm whose market position rests on intellectual property rights would be particularly troubling. If intellectual property rights create a monopoly one might well argue that it was socially constructed—instrumental rather than natural. A court might understandably be more reluctant to reach a natural monopoly conclusion regarding firms whose market position rested on rate-of-return statutes such as the patent or copyright laws than it would with respect to firms such as local power distributors or local telephone companies.

as Intergraph were "locked-in" to Intel technology.[211] Similarly, a recent claim against Microsoft alleges that Microsoft gave public assurances of continued access for software firms that joined a program designed to produce software beneficial to Microsoft's Windows NT operating system. The gist of the claim is that after firms joined the program and became dependent on Microsoft for their businesses, Microsoft reneged on these assurances and refused to provide needed technology on commercially reasonable terms.[212] One can imagine a case in which Intel assured Intergraph of continued supply so long as Intergraph fulfilled its obligations, presented Intergraph with written nondisclosure agreements giving Intel unilateral rights to terminate all dealings with or without cause, and verbally assured Intergraph that the language was meaningless boilerplate to satisfy the lawyers. Or perhaps Intel might have verbally assured Intergraph of a continued supply but drafted writings that limited the obligation to the current generation of technology and disclaimed any obligation with respect to future generations of technology. As every practitioner will recognize, the possible variations on this theme are almost endless.

What the variations have in common is an origin in a process of negotiation and exchange that is squarely within the traditional domain of contract law and is the domain Article 2B claims as its own. They are variations on a theme in which antitrust claims are used as negotiating tactics to obtain leverage.[213] If a claim is based not on the misconduct of a monopolist but upon the failure of a plaintiff to read the terms it was given, to think of contingencies it might want specified, or simply on buyer's remorse, principles of free contracting suggest that courts are unlikely to enhance efficiency by intervening *ex post* to reform the relevant agreement using antitrust law.[214] If a claim is based on bad-faith exercise of contractual rights, principles of good faith and fair dealing might provide the most tailored remedy for the misconduct at issue. If a claim is based on the sort of assurances Intel was found to have given Intergraph, and which Microsoft is alleged to have given Bristol, principles of equitable or promissory estoppel or implied contract might provide relief.[215]

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211. *See Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d 1255, 1262 (N.D. Ala 1998).

212. *See Bristol Technology, supra* note 29, at ¶¶ 49-60.

213. *See, e.g.*, Digital Equip. Corp. v. Uniq Digital Tech., Inc., 73 F.3d 756, 763 (7th Cir. 1996) (Easterbrook, J.) ("This is a mundane commercial case, in which a buyer has used the antitrust laws to postpone paying its debts.").

214. *See* SULLIVAN & HOVENKAMP, *supra* note 132, at 34.

215. *Cf. Olympia Equiptment Leasing Co v. Western Union Telegraph Co.*, 797 F.2d 370, 376 (7th Cir. 1986) ("If a monopolist does extend a helping hand, though not required to do so, and later withdraws it ... does he incur antitrust liability? We think not.

In each of these cases, contract would provide relief more tailored to the misconduct alleged—which in these cases would fall within contract's ordinary domain—than would antitrust. This is particularly true of the more sweeping antitrust theories, such as essential facilities, which pose significant conflicts with intellectual property policy. It is the difference between addressing misconduct with a scalpel or a sledgehammer. Courts facing such "lock-in" and installed-base opportunism claims should first determine whether any contract rules have been violated in the conduct alleged and whether any contract remedies could solve any problems identified. Contract should be considered before antitrust, which should only be used where there is reason to believe the net effect on allocative efficiency would be more favorable than outcomes achieved using contract-based theories. With respect to this category of cases, courts should not view Article 2B's sensible neutrality policy as a suggestion that remedies under federal law are necessarily preferable to state contract law options.[216]

VI. CONCLUSION

Article 2B seeks, for very good reasons, to promote free contracting and commercial transactions and in particular to lower the cost of transacting while preserving contractual flexibility, thereby enhancing allocative efficiency and benefiting society. These are laudable goals and should be encouraged. The extensive and thoughtful work reflected in Article 2B is to be applauded, as are the extensive efforts concerned parties have made to understand and assess the practical aspects of conducting business in the industries that will be effected by Article 2B. The U.C.C. process has produced significant debates in which a wide variety of participants have gained a hearing for a wide array of views. Though as in any process of this type many participants will be disappointed, such disappointments do not negate the valuable advances in understanding the process has produced.

Conceivably, he may be liable in tort or contract law, under theories of equitable or promissory estoppel or implied contract ....").

216. To reiterate, none of this suggests that cases in which a claim is based in part on negotiating tactics or contract terms are immune from antitrust scrutiny. Some claims, such as the coercive reciprocity theory alleged in *Intergraph*, as well as tying and exclusive dealing theories, are of course based on economic consequences produced by contract terms. In such cases the economic consequence must be evaluated under antitrust law (using an allocative efficiency standard) regardless whether the concerns of contract law are satisfied.

Where intellectual property rate-of-return concerns are not implicated by a rule, the free contracting principle should govern, and default rules should be chosen in a way that facilitates efficient transactions at the lowest cost. Because the relevant principles involve third-party effects of agreements and copyright's concern for creation and dissemination of works, any line dividing enforceable from unenforceable agreements should be drawn using copyright principles. Because commercial contract law and competition policy share similar goals, though they work at different levels of abstraction and apply in part to different sorts of behavior, both are in a position of deference to copyright methodology in cases involving construction of copyright grants and limitations. Antitrust principles are therefore an unlikely source of guidance for resolving the principal intellectual property questions Article 2B identifies, which do involve construction of the rights and limitations granted and imposed by copyright law.

With respect to terms that do not involve construction of copyright grants and limitations, however, such as the per-processor pricing term precluded in the Microsoft consent decree, antitrust should play a role in circumstances where it may enhance efficiency. Courts charged with interpreting agreements under Article 2B should distinguish between claims based on the market position of an intellectual property right and its holder and claims based on misconduct in contractual negotiations or performance. With respect to the latter class of cases, courts should look first to contract principles to determine whether the conduct alleged violates any rule of contract law. If a violation is found, the court should seriously consider whether application of a contract remedy would be more efficient than proceeding to invoke antitrust principles. If no violation is found, the court should grant the normal presumption of efficiency that attaches to negotiated agreements between commercial parties and review the antitrust theories with this presumption in mind. While antitrust violations still may be found in appropriate cases, proceeding in this fashion should help courts remain true to the efficiency concerns that are common to contract law and antitrust.

LICENSE WITH CONTRACT AND PRECEDENT: PUBLISHER-LICENSOR PROTECTION CONSEQUENCES AND THE RATIONALE OFFERED FOR THE NONTRANSFERABILITY OF LICENSES UNDER ARTICLE 2B

By David A. Rice †

ABSTRACT

Several provisions of the proposed draft of Article 2B of the Uniform Commercial Code have the aim and effect of prohibiting transfer of software and information copy use licenses without consent of the copy publisher. This is inconsistent with the increasing emphasis on freedom of transferability in modern contract law, and has the effect of indirectly amending trade secret law, impairing security in debt financing, and undercutting the balances struck in copyright law. Important unintended consequences include a substantial increase in burdens and costs on parties to mergers and acquisitions, business reorganization, and even individual charitable donation transactions. The primary benefit, and purpose, of these rules is statutory and contractual protection of software and information publishers against competition in both the primary and resale markets. Several rationales, not including trade restraint, have been presented as the foundation for the rules. The most prominent of these suggest that the rules are consistent with those of other U.C.C. articles and that they reflect, are constrained by, or are even dictated by federal patent and copyright law. The article shows that these and other rationales do not withstand scrutiny of claimed authority. It is the author's view that the provisions and their rationales have been presented in a manner designed to deflect such scrutiny, and to induce acceptance of the rules without notice and weighing of their extraordinary consequences.

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I. INTRODUCTION

Rules governing transfer of rights are among the most important in any body of contract law. Those contained in Part 5 of proposed Article 2B of the U.C.C. are particularly notable for the fact that they reject the strong concern in modern commercial law for the interests of good faith purchasers, a fact which implies a rejection of concern for the vitality of markets and commerce. The Article 2B rules systematically manifest that legal recognition of third party rights, or even a capacity to acquire rights, arising from a transfer of a copy of software or information obtained under a nonexclusive license is anathema to software and information copy publishers. The rules secure for information publishers both statutory and contractual protection of content not protected by copyright or other intel-

lectual property law, and they allow software and information publishers to erect contractual barriers against competition.

Until recently, Article 2B constructed this protection around a pair of rights transferability provisions and related special rules governing financier acquisition of rights in software and information copy use licenses as collateral. One of the two rights transferability provisions was eliminated by vote of the Drafting Committee at its March 1998 meeting.[1] The other provision remains, recombined with vestiges of the rejected section and reframed in a manner that maximizes the objectives served by the original package.

Part II of this article introduces the current version of these rights transferability provisions. The article then identifies consequences of these measures that, while perhaps not unintended by some, will likely be very unexpected by most who find themselves faced with doing business or advising clients under Article 2B. Part III emphasizes how Article 2B rules affect the interests of third parties in dealings with licensees: one statutory contract rule significantly changes trade secret law; other rules impose new burdens and risks for common business and other transactions; and yet another rule uses state contract law to override specific federal statutory protection of the right of a copy owner to transfer ownership of her copy of a copyright protected work. Part IV discusses potential liability for those who run afoul of the Article 2B rules, and Part V explains how these rules insulate information providers from competition.

Finally, Part VI examines the rationales advanced in support of the relevant rules. First, it demonstrates that the presented rationales do not affirmatively support Article 2B adoption of transferability rules which, contrary to general contract law and other U.C.C. rules, make nontransferability of contract rights the norm. Second, it shows that the Reporter's Notes systematically misuse general contract law principles, other uniform law, and federal intellectual property law decisions to superficially rationalize outcomes desired by publisher-licensors.

Neither the assessment of consequences nor the critique of proffered rationales is intended to suggest that bargaining parties might not contract out of results which the Article 2B rules would otherwise produce. The author's concern is with the discussed provisions as rules of general application. Their identified consequences would be problematic even if Article 2B did not generally make standard form records and their terms enforce-

1. *See infra* note 13.

able. That it does so[2] makes the rules and their consequences especially important.

II. THE ARTICLE 2B ANTI-TRANSFER PROVISIONS

A. Modern Commercial Law Benchmarks

Transferability of contract rights is the established norm in modern contract law, and under the U.C.C.[3] The general rule is stated in section 317(2) of the Restatement (Second) Contracts which states:

> A contractual right can be assigned unless:
>
> (a) The substitution of a right of the assignee for the right of the assignor would materially change the duty of the obligor, or materially increase the burden or risk imposed on him by his contract, or materially impair his chance of obtaining return performance, or materially reduce its value to him, or
>
> (b) the assignment is forbidden by statute or is otherwise inoperative on grounds of public policy, or
>
> (c) assignment is validly precluded by contract.[4]

Subsection (2)(c) is elaborated in section 322 which provides that a term that generally prohibits assignment of a contract is to be treated as prohibiting only the delegation of the performance of a duty or condition,[5] and a contract term that more specifically prohibits assignment of contract rights makes its violation a breach, but does not render the transfer ineffective.[6]

Section 2-210 of the U.C.C. basically adopts the same principles.[7] Similarly, while section 2A-303 recognizes that transfer of the possession and use of leased goods adversely affects the lessor's residual ownership

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2. *See* U.C.C. §§ 2B-207, 2B-208 (Aug. 1, 1998 Draft).

3. One of the major themes in modern commercial law is the steady expansion of freedom to alienate interests in property. This principle has moved from operating primarily within real property into tangible personal property law and, more recently, into the law governing choses in action and other intangible personal property. See E. ALLEN FARNSWORTH, FARNSWORTH ON CONTRACTS § 11.2 (2d ed. 1998) and ARTHUR LINTON CORBIN, CORBIN ON CONTRACTS § 856 (1952) for discussions of this history, the public purposes furthered by legally facilitating commerce, and the factors and rationales considered in choosing to favor freedom to alienate over original proprietary interests.

4. RESTATEMENT (SECOND) OF CONTRACTS § 317(2) (1981).

5. *Id.* § 322(2)(a).

6. *Id.* § 322(2)(b).

7. *Compare* U.C.C. § 2-210(2)-(3) (1996) *with* RESTATEMENT (SECOND) OF CONTRACTS §§ 317(2), 322(2)(b) (1981).

interest, its provisions generally track those of section 2-210 and the Restatement. Recognition of the lessor's interest is expressed in a rule that makes enforceable a lease term that prohibits transfer of the lessee's right to possess and use the lease property.[8] This reflects that such a transfer necessarily delegates the performance of material duties or obligations with respect to the leased goods, and thus tracks section 2-210 and the Restatement in a manner specified to the particular type of transaction. The general rule of section 2A-303(2) makes it clear, however, that a transfer of rights in breach of an express term prohibiting transfer is effective even though it constitutes a breach by the lessee.

Modern commercial law reflects, in essence, preference for transferor and transferee freedom to contract over seller or lessor freedom of contract. Statutory restriction of transferor and transferee freedom to contract has been shrunk to near nothing. Violation of a contractual prohibition of transfer does not, except in a truly exceptional case, render a transfer ineffective. The remedy is against the transferor for damages resulting from its breach. Indeed, the strength of the policy favoring transferability or alienability of contracts and contract rights is underscored by judicial decisions establishing limited exceptions because failure to do so would frustrate the purposes of a particular statute that creates rights but does not pronounce on their transferability.[9]

B. General Anti-Transferability Rules

Section 2B-502 states a general rule which, at first glance, substantially tracks the prevailing rule in general contract law and commercial law as expressed in the various articles of the U.C.C.[10] and the Restatement (Second) of Contracts.[11] It provides:

> (1) A contractual interest can be transferred unless the transfer:
>
> (A) is prohibited under other applicable law; or
>
> (B) would materially change the duty of the other party, materially increase the burden or risk imposed on the other party, disclose or threaten to disclose the other party's trade secrets, confidential information or information that is subject to an enforceable non-disclosure agreement, or materially impair the

8. *See* U.C.C. § 2A-303(3) (1996).
9. *See infra* Part VI.B.
10. *See, e.g.*, U.C.C. §§ 2-210(2), 2A-303(5)(b) (1996).
11. *See* RESTATEMENT (SECOND) OF CONTRACTS § 317 (1981).

> other party's property or its likelihood or expectation of obtaining return performance.[12]

This rule originally was stated in the former section 2B-502, which was eliminated by vote of the Drafting Committee in March 1998.[13] Its inclusion in a section which otherwise deals primarily with contractual prohibition of transfer was explained by the Reporter's Notes to be essential in order to maintain consistency with the general rule set forth in Article 2 of the Commercial Code, and to avoid the risk of any negative inference being drawn from a failure to include in Article 2B a rule comparable to the general rule statement found in other articles of the code.

Section 2B-502(1)(B) goes well beyond mirroring the rules set out in other U.C.C. articles, however. It adds to the universally recognized limitations on the transferability of rights a new rule that a contract is not transferable if its subject matter embodies trade secret or confidential business information of the publisher-licensor.

The hidden significance stems from the fact that transfer of a trade secret constitutes a disclosure under trade secret law. Sale or other transfer of an article of manufacture that embodies a trade secret ordinarily will not itself constitute disclosure of that secret unless mere observation of the product reveals it.[14] Information, other than software,[15] presents a special case in that its content is self-revealing. Its transfer therefore either discloses, or threatens to disclose, any trade secret or confidential information that it contains. This applies to some subject matter encompassed within the narrower definition of software which is defined to include informational content of a computer program and supporting information, such as documentation, provided with a computer program.[16] The manufactured product paradigm better fits only the residual, knowhow or other trade secrets embodied in computer program object code and discernable only through direct observation of the operation of the program or reverse en-

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12. U.C.C. § 2B-502 (Aug. 1, 1998 Draft).

13. *See* U.C.C. § 2B-502, Committee Vote (Apr. 15, 1998 Draft) ("Voted 8-0 to delete provision that invalidated a prohibition on transfer in a mass market license. ... Voted 10-0 to delete rule on transferability in the absence of relevant contractual terms").

14. Some decisions have stated that the sale itself is a disclosure for purposes of trade secret law. *See, e.g.*, Roboserve Ltd. v. Tom's Foods, Inc., 940 F.2d 1441, 1445-1455 (11th Cir. 1991) (applying Georgia law). The better view, more accurately stated in the same decision, is that sale or other introduction into commerce exposes the secret to discovery by reverse engineering. *See id.* at 1455.

15. It is necessary to draw this distinction in dealing with Article 2B since section 2B-102(a)(24)'s definition of "information" includes software even though the latter is separately defined in more limited terms in section 2B-102(a)(44).

16. *See* U.C.C. § 2B-102(a)(44) (Aug. 1, 1998 Draft).

gineering of the object code. Transfer in this instance does not itself necessarily disclose trade secret or confidential business information. Whether it threatens to disclose depends on the meaning given to the language of section 2B-502(1)(B).

One fair interpretation of the language is that transfer of a program copy from which a trade secret can be discerned is a transfer that threatens disclosure. Trade secret law speaks only of actual disclosure.[17] Disclosure can be threatened only if the transfer exposes a trade secret to discovery by some other means. Reverse engineering is the most obvious, and perhaps the only, means of discovery that is facilitated by a transfer which does not actually disclose.[18] The author concludes that this is just what the provision is intended to foreclose, given that this seems to be the most plausible interpretation, and that the use of Article 2B contract rules to preclude reverse engineering of computer programs has been a matter of contentious debate throughout the drafting process.

Section 2B-502(1)(B) leverages this by making any disclosing transfer a breach of contract and ineffective as a matter of law,[19] whereas liability exists under trade secret law only where there was knowledge or reason to know that a disclosure or receipt of a trade secret violated a duty of confidence.[20]

The other primary rule in section 2B-502 is found in subsection (2). It states:

> a contractual term prohibiting transfer of a party's interest is enforceable and a transfer made in violation of that contract term is a breach of contract and is ineffective except to the extent:
>
> (A) the transfer is permitted by Section 2B-503; or
>
> (B) the contract is a license that was granted for the purpose of incorporation or use of the licensed information or informational rights with information or informational rights from other sources in a combined work for public distribution or public performance and the transfer is of the completed combined work.[21]

---

17. *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40(b) (1995); UNIF. TRADE SECRETS ACT § 1(2)(ii) (1985).

18. Independent discovery, the other principal basis for loss of trade secret protection, must be eliminated from consideration in this discussion since it results from independent efforts rather than a transfer.

19. *See* U.C.C. §§ 2B-502(3), 2B-507(a)(1) (Aug. 1, 1998 Draft).

20. *See* UNIF. TRADE SECRETS ACT § 1 (1985); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40 (a)-(b) (1995).

21. U.C.C. § 2B-502(2) (Aug. 1, 1998 Draft).

Section 2B-502(2) is particularly significant for its declaration that a transfer in violation of contractual prohibition is not simply a breach, but ineffective. This is a departure from general contract law and the rule that obtains under other articles of the U.C.C.[22] The full impact of the rule can be appreciated only by its consideration in the light of sections 2B-207 and 2B-208, which make standard form records and their terms enforceable.[23] Widespread use of standard forms, shrinkwrap or otherwise, inclusive of terms that read on section 2B-502(2) makes it impossible for a third party to acquire a software or information copy from any person without the consent of the publisher-licensor.

C. Anti-Transferabililty in Secured Financing

Part 5 establishes a special subset of rules applicable to the creation, perfection, and enforcement of a financier's interest in Article 2B subject matter. The principal rules set forth in sections 2B-503, and 2B-502 clearly state that its rules are subject to any exception created by section 2B-503. The specific concern in this article is with licensee creation of a financier's interest that otherwise would be considered a simple security interest in a debtor's business assets.

Section 2B-102(a)(21) defines "financier" as

> a person other than a provider of licensed information which provides a financial accommodation to a ... licensee in a transaction otherwise governed by Article 9 or 2A and which obtains an interest in a license or a related contract right of the party to which the financial accommodation is provided.[24]

The definition includes secured parties and lessors. It excludes publisher-licensors that finance acquisition of their own products. The provisions apply only when the transaction's subject matter is contract rights, and not when it consists of intangible intellectual property rights.[25] In

22. The differences are discussed in more detail *infra* Part III.A.

23. *See* U.C.C. §§ 2B-207, 2B-208 (Aug. 1, 1998 Draft).

24. *Id.* § 2B-102(a)(21).

25. Section 2B-503(b)(2) makes it clear a licensee may not create a financier's interest in any intellectual property rights of the licensor, unless the licensor expressly consents to the creation and perfection of that interest in the license or another record. *See also* U.C.C. § 2B-102, Reporter's Note 19 (Aug. 1, 1998 Draft). Some changes in section 2B-503 may occur in the process of conforming Article 2B to Revised UCC Article 9. Votes taken with respect to revised section 9-408 during the Final Reading and the vote to approve Revised Article 9 at the July 1998 Annual Meeting of the National Conference of Commissioners on Uniform State Laws will require conforming changes to be made in section 2B-503 due to the close interaction between the sections.

summary, section 2B-503 deals with the instance of licensee creation of a financing party interest in a copy of software or information, or in a contract governing use of such a copy.

Article 2B has evolved from originally making the creation of any such interest wholly ineffective to its present position of permitting its creation and perfection, but regulating its enforcement. The current version of section 2B-503 provides in relevant part:

> (b) The following rules apply to the creation, perfection, and enforcement by a financier, other than the licensor, of an interest in a licensee's rights under a non-exclusive license:
>
> (1) A financier's interest may be created and perfected notwithstanding Section 2B-502(1) or any contrary provision of the license. The interest thus created or perfected:
>
> (A) does not entitle the financier to make an actual change of use, possession or control ...;
>
> (B) does not place any obligations on or alter the rights of the licensor; and
>
> (C) is subject to all terms and conditions of the license.
>
> ...
>
> (3) The financier may not enforce its interest by taking possession or control, using, selling or taking any other action with respect to the licensed information, the informational rights, or the contractual rights without the licensor's express consent in the license or another record ....[26]

Consistent with section 2B-502, this section makes a precluded transfer, made to enforce a financing agreement, a breach of contract and ineffective.[27]

The most significant rule of section 2B-503(b) is the negation of a financier's right to take possession and control of a use-licensed copy in enforcing its interest in a license or the software or information copy to which it relates. Such a transfer can occur only with the express consent of the licensor in a record. Publisher-licensor consent may be obtained in advance, either in the license or a separate record, or after the fact in a separate record. Advance authorization or consent is given primarily when financing is provided by a financing subsidiary or an agreed upon independent source.[28]

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26. U.C.C. § 2B-503 (Aug. 1, 1998 Draft).

27. *See id.* § 2B-503(c).

28. This is exemplified by an equipment lease finance company that finances the lease of computer hardware and peripherals together with the licensed acquisition of op-

III. (UN)INTENDED CONSEQUENCES OF ARTICLE 2B ANTI-TRANSFER PRINCIPLE

A. Indirect Amendment of Uniform Trade Secrets Act

It is seldom noticed or remarked that section 2B-502(1)(B) states:

> (1) A contractual interest can be transferred unless the transfer:
>
> ...
>
> (B) would ... disclose or threaten to disclose the other party's trade secrets, confidential information or information that is subject to an enforceable non-disclosure agreement ....[29]

This contract law provision appears to indirectly change state trade secret law in three significant respects. First, it makes any transfer which discloses or threatens to disclose a licensor's trade secrets or confidential information a breach irrespective of whether the licensee-transferor knows[30] that the transfer will result in or risk such a disclosure. Second, it precludes a transferee from acquiring any rights, inferentially making any use by the transferee a misappropriation of trade secrets or confidential information, regardless of whether the transferee knows that the software or information copy embodies trade secrets or confidential information. Third, an ineffective transfer makes a resulting acquisition of a software copy an acquisition by improper means for purposes of trade secret law, implying that reverse engineering of a software or information copy acquired from a licensee is impermissible unless the licensor gives its express consent in a record.

1. *Article 2B Removes the Knowledge Requirement of the Uniform Trade Secrets Act*

Section 2B-502(1) holds a licensee-transferor of contract rights in breach when the copy transferred therewith embodies publisher-licensor trade secrets.[31] It creates liability even when the licensee-transferor has no knowledge of the existence of a trade secret. Trade secret law, on the other hand, requires that a trade secret actually exist before protection can be

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erating system and other application software. Where the licensor or its subsidiary is the financing source, control over disposition of collateral is inherent. This is recognized by exclusion of licensors from the definition of financier. *See id.* § 2B-102(a)(21).

29. *Id.* § 2B-502.

30. To make the following exposition more readable, I use "know" and "knowledge" to include also "reason to know."

31. *See supra* Part II.B.

claimed,[32] and it conditions liability on a defendant's knowing that a trade secret actually existed at the time of making a disclosure by transfer or otherwise.[33]

Admittedly, many licenses contain terms warning the transferee against misuse of trade secrets. However, universal use of "top secret" notices in standard form records is not a means for creating, or evidencing the existence of, knowledge that trade secret or confidential information is in fact embodied in a particular copy. It provides no factual basis for an informed determination of rights, or appraisal of potential consequences or alternatives. The significance of this inadequacy is apparent from considering the specific consequences that would result from treating ambient notice as distinct and distinguishing.

Giving legal effect to such notices would entrench section 2B-502(1)(B) as a back-door, de facto statutory prohibition against transfer of any copy. This contravenes the spirit, if not the letter, of the Drafting Committee's decision in March 1998 to cleanse the draft of any such rule. It also would strip from trade secret law the liability condition that a transferor know that the transferred information includes a trade secret or confidential business information. Finally, it would exalt form over substance with respect to the trade secret law requirement that the person who claims trade secret ownership must show that reasonable measures have been taken to protect against disclosure or discovery by improper means.[34] A routinely included notice should not be considered a reasonable measure; it does not evidence that some particular matter was considered a trade secret, nor does it provide any factual basis for inferring that a third party improperly obtained access to a claimed trade secret.

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32. *See* IMAX Corp. v. Cinema Technologies, Inc., 152 F.3d 1161, 1164 (9th Cir. 1998); MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 522 (9th Cir. 1993); Integrated Cash Management Services, Inc. v. Digital Transactions, Inc., 920 F.2d 171, 173 (2d Cir. 1990).

33. Liability exists only when a person knows or has reason to know that she is disclosing trade secret information in violation of an duty or obligation to not disclose. *See* UNIF. TRADE SECRETS ACT § 1(2)(ii)(B)(II) (1985); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40(b)(1) (1995).

34. *See* SI Handling Systems, Inc. v. Heisley, 753 F.2d 1244, 1256 (3d Cir. 1985) (considering reasonable protective measures as a factor with respect to whether a trade secret existed at the relevant time, and in determining whether the means of acquisition was improper). *See also* UNIF. TRADE SECRETS ACT § 1(4)(ii) (1985) (taking of reasonable security measures a factor in determining whether a protectable trade secret existed at the relevant time).

2. *Liability of Transferee is Unclear under Article 2B*

Facially, section 2B-502 establishes absolute liability for the ostensible transferee of trade secret-bearing information, while unknowing or innocent receipt and use of trade secrets is not actionable under the common law or the Uniform Trade Secrets Act.[35] Section 2B-507(b) is intended to resolve this conflict by deferring to the rule of trade secret law. It states: "Except as otherwise provided under trade secret law, a transferee that acquires information that is subject to the informational rights of a third party acquires no more rights than the contractual rights its transferor was authorized to transfer."[36]

What remains, however, is a drafting failure. Section 2B-502 leaves the limitation to be unearthed by a diligent lawyer or judge. Even then, section 2B-507(b) is little help. It vaguely refers to trade secret law as an exception to its general rule without indicating how and to what extent

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35. The relevant provisions of section 1(2) of the Uniform Trade Secret Act state that "misappropriation" means:

(i) acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means; or

(ii) disclosure or use of a trade secret or another without express or implied consent by a person who

...

(B) at the time of disclosure or use, knew or had reason to know that his knowledge of the trade secret was

(I) derived from or through a person who had utilized improper means to acquire it;

(II) acquired under circumstances giving rise to a duty to maintain its secrecy or limit its use; or

(III) derived from or through a person who owned a duty to the person seeking relief to maintain its secrecy or limit its use; or

(C) before a material change of his [or her] position, knew or had reason to know that it was a trade secret and that knowledge of it had been acquired by accident or mistake.

UNIF. TRADE SECRETS ACT § 1(2) (1985).

Sections 40, 41 and 43 of the Restatement (Third) of Unfair Competition somewhat differently define what constitutes actionable conduct, but are intended to be comparable in substance. *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40, cmt. a (1995). Under either the Restatement or the UTSA, liability is based upon culpable conduct, and the stated conditions are specifically drawn to protect innocent third parties from liability. *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40, cmt. d (1995).

36. U.C.C. § 2B-507(b) (Aug. 1, 1998 Draft). The same result might be reached through section 2B-105(c), which provides that "principles of law and equity supplement this article" and further states that "laws supplementing, and not displaced by this article are trade secret laws and unfair competition laws." *Id.* § 2B-105(c).

trade secret law is a constraint.[37] Thus, even the diligent are sent by the subsection to a wholly different body of law to determine the significance of a few unilluminating words set forth in section 2B-507(b).

3. Right to Hack

The third way in which section 2B-501(1) appears to change trade secret law specifically concerns the reverse engineering defense to a claim of misappropriation. If a transfer of a copy that embodies a trade secret is ineffective, then no transferee can claim that a copy it obtained and subjected to reverse engineering was one that it lawfully acquired. Lawful acquisition of a copy is a factual predicate to the legal defense that the claimant's trade secret was acquired through reverse engineering,[38] a proper means of discovery under trade secret law.[39] Section 2B-501(1) precludes even truly clean room reverse engineering, an effect that invites a very credible federal preemption attack.[40]

B. Business Reorganizations, and Mergers and Acquisitions

The anti-transfer approach of Article 2B does not only affect the law of trade secrets. It also indirectly prescribes substantial changes in common, long-standing and well-established business law practices.

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37. Reporter's Note 3 to section 2B-507 does provide explanation and guidance, and its substance undoubtedly will be reflected in the yet-unwritten Official Comment to the section. The Reporter's Notes state:

> The rule stated in subsection (b) allows for a bona fide purchaser in reference to trade secret claims. ... If a party takes without notice of such restrictions, it is not bound by them; it is in effect a good faith purchaser, free of any obligations regarding infringement except as such exist under copyright, patent and similar law.

Id. § 2B-507, Reporter's Note 3.

This is a statement that will prove helpful to the untutored, yet an affirmative statement in the black letter rather than use of an "[e]xcept as otherwise provided" leader seems feasible and warranted.

38. *See* Chicago Lock Co. v. Fanberg, 676 F.2d 400, 405 (9th Cir. 1982).

39. *See id.* at 404; Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 160 (1989).

40. *See Bonito Boats, Inc.*, 489 U.S. at 160 (holding that state legislative prohibition of most efficient means for copying unpatented boat hull design is preempted by patent law); Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 476, 490 (1974) (explaining that state law recognition of reverse engineering as lawful means of discovery distinguishes trade secret from patent law, and is important to determination that trade secret law is not preempted by patent law).

1. *Business Reorganization*

Change of a business from a sole proprietorship or partnership to a corporation is frequent in the business world and common fare in supporting business law practice. It often is not a complex matter, but it involves at a minimum two important elements. One is the creation of a corporation. The other is transfer of proprietorship or partnership assets and obligations to the corporate entity. The obligations include Article 2B software contracts and licenses of information, and the assets include software and information copies used in the conduct of the business enterprise.

Even a fairly small sole proprietorship or partnership is likely in today's world to have several personal computers, perhaps linked by a local area network through a shared network server. The installation alone requires licensed use of operating system and network software. Yet there is little utility to the setup unless the business also obtains and uses licensed copies of, at least, word processing, database, spreadsheet, communications, and other very fundamental application software. More likely than not, the system also will be the means for use of information system management, project management, and other software programs and, increasingly, utilization of one or more digital information products. Other information bases may be accessed only on-line.

Publisher-licensor contracts drawn to section 2B-502(2) commonly, though not invariably,[41] will require publisher-licensor consent to sole proprietorship or partnership transfer to the corporation for each license and each software or information copy. Section 2B-501(1)(B) tacitly requires an inquiry of licensors in all other cases to ascertain whether the copy of their software or information embodies any trade secrets, and obtaining consent to transfer if the answer is affirmative. This will require making a full inventory of all software contracts and information licenses, reviewing license terms to ascertain transfer and use restrictions, making trade secret inquiries, and obtaining publisher-licensor consents in records as necessary before going forward to complete an otherwise routine business and legal matter.

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41. Licenses sometimes authorize transfer in certain circumstances. *See, e.g.*, Applied Info. Management, Inc. v. Icart, 976 F. Supp. 149, 151 (E.D.N.Y. 1997) (interpreting a software license whose terms allowed its transfer in connection with transfer of system acquired from plaintiff); Microsoft Corporation, *End-User License Agreement for Microsoft Software, Microsoft Windows 95* (expressly authorizing transfer of the license in connection with the sale or other disposition of the computer) (on file with Berkeley Technology Law Journal).

The costs and risks associated with this process are not trivial. The ultimate risk is that, despite good faith and substantial effort, an item is missed. Completion of the principal transaction—the reorganization of the business—followed by use of the overlooked software or information will make the corporation liable in damages,[42] the software's continued use subject to injunction,[43] and the entire enterprise potentially held hostage to terms offered for quick settlement of a publisher-licensor's claim.

2. *Mergers and Acquisitions*

Consider first a case not uncommon in the lore of technology development. An individual believes that she has an idea for the design, creation, and marketing of a new and more efficient product. The product is built and demonstrated in prototype, production capability is established, and distribution and marketing are undertaken. By the end of its fifth year, the business outgrows its original garage workshop space and becomes profitable. It and its fifteen employees move into substantially larger new quarters, and the business continues to grow in revenue, profits, employees, and its use of computers, peripherals, software, and information products acquired in the marketplace.

At this point, its founder and sole owner decides to cash out and seek new challenges. Her business now utilizes twenty-five desktop and notebook computers, a network server, a scanner, twenty computer programs (in addition to operating system software for each computer), twelve licenses of CD-ROM information bases, two on-line independent service provider contracts, and six on-line information base subscriptions. The total investment in software and CD-ROM information bases is $125,000 expended in single payment license fees, $50,000 expended and contract obligations for $10,000 per year in periodic payments under long-term software, information database, and system maintenance contracts, and $500 per month in on-line access contracts. All are contracted pursuant to agreements called a license, and many of the licenses contain a prohibition against transfer of the license without obtaining consent of the licensor in a record.

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42. *See infra* Part IV.B.

43. In the case of a computer program protected by copyright, use would constitute infringement. *See id.* Infringement may be enjoined under 17 U.S.C. § 502 (1998). The effects of an injunction with respect to a business usually will not be contained to inability to use a software or information copy in the performance of a particular task. Interdependence of functions is the norm, not the exception, and disruption in one area typically has ripple effects in others.

Section 2B-502(2) makes the transfer prohibitions enforceable, and any attempted transfer a breach of contract and ineffective. In order to transfer the licenses in connection with the sale of the company, publisher-licensor approvals must be obtained for every nonexclusive copy use license that contains such a prohibition.[44] This is necessary whether the deal is to be accomplished by a sale of assets or the transfer of a majority stock interest.[45] Alternatively, the business may be disposed of at a discount which reflects the acquiring party's cost of reviewing all licenses, identifying licensors whose consent to transfer must be obtained, inquiring of licensors whether products embody any trade secrets, and obtaining each necessary consent or new license.

> Consider next a merger or acquisition involving two sizable business entities, or a leveraged buyout of a business or one of its divisions. The anti-transfer rules in sections 2B-502(1) and (2) significantly complicate and financially burden the transaction. The problems created are the ones described above, but their number and magnitude now are far greater. Additional problems also may be encountered. One possible efficiency gain from a merger is a cost saving resulting from the use of one entity's information processing system, including its previously licensed software, to provide all information management and processing services for the post-merger entity. Use of software to process data of entities other than the licensee has been found to breach a license use restriction,[46] and this suggests the possibility that use of software to perform information processing functions for an entity distinctly different in size and character might also violate current or yet-to-be fashioned use restrictions.

The rule allows any software or information publisher providing a nonexclusive license containing a transfer prohibition to act as a toll collector on wholly unrelated business transactions. It favors and facilitates publisher-licensor engrossment of the market for software and information copies. This power to regulate and collect a toll on business transactions

44. This a minimum requirement. If section 2B-502(1)(B) is to be given full effect, it also seems prudent—and perhaps necessary—to inquire of all other software and information copy licensors to determine if copies of their products embody any trade secret or confidential business information.

45. *See generally* PPG Indus., Inc. v. Guardian Indus. Corp., 597 F.2d 1090, 1095 (6th Cir. 1979). *See also* Unarco Indus., Inc. v. Kelley Co., 465 F.2d 1303, 1306 (7th Cir. 1972), *cert. denied* 410 U.S. 929 (1973) (acquisition of business and its assets).

46. *See* National Car Rental Systems, Inc v. Computer Associates Int'l, Inc., 991 F.2d 426 (8th Cir. 1993), *cert. denied*, 510 U.S. 861 (1993) (finding that use of software copy to process data of other firms, in violation of restriction, constituted a breach of contract, but not copyright infringement).

that only incidentally involve transfer of Article 2B contract rights reduces the cost of monitoring for unauthorized copying, but it has nothing to do with the transfer of intellectual property rights. Article 2B licenses transfer no interest in intellectual property or other informational rights.[47]

In any event, compliance with the rules of section 2B-502 requires an investment of substantial time and effort. Transfer of copies is incidental to the primary purpose of the affected transactions, and the relevance of Article 2B to the transactions is only due to the anti-transfer rules of section 2B-502. The attendant requirements, and the burdens and costs that they impose, will surprise most professionals experienced in these matters.[48] Indeed, the import of section 2B-502 for mergers, acquisitions, corporate reorganizations, leveraged buyouts, and other corporate enterprise transactions is so little recognized that neither the fact, significance, nor rationale for imposing these costs has been discussed by the Article 2B Drafting Committee, or the membership of the National Conference of Commissioners on Uniform State Laws (NCCUSL) or The American Law Institute (ALI).

C. Business Loan Financing

Section 2B-503 and the cross references from section 2B-502 to section 2B-503 superficially suggest that creation of financier interests is less restricted than creation of third party interests through other types of Arti-

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47. *See* U.C.C. § 2B-501(b)(1) (Aug. 1, 1998 Draft). Indeed, with respect to mere information, no such underlying rights exist at this point in time. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991). Legislation proposed in Congress may eventually regulate use of information acquired from another, and in some sense therefore create rights in information that are not currently recognized in copyright or patent law, and for which protection must be through regulation pursuant to the Commerce Clause rather than legislative articulation of rights under the Patent and Copyright Clause. *See* H.R. 2281, 105th Cong. (1998).

48. The literature demonstrates awareness of the need to identify, review, and determine the transferability of intellectual property licenses, and does not indicate that it is common practice to similarly identify, review, and determine the transferability of non-exclusive software and information copy use licenses. *See, e.g.*, Henry Less, *Some Practical Suggestions for the M&A Due Diligence Process, in* ADVANCED DOING DEALS: A STRATEGIC APPROACH TO COMPLETING THE TRANSACTION, PLI CORPORATE LAW AND PRACTICE COURSE HANDBOOK SERIES 403 (1998) (Due Diligence Checklist ¶ 11); Catherine H. Stockwell, *A Primer on Due Diligence Reviews of Intellectual Property Assets, in* HANDLING MERGERS & ACQUISITIONS IN A HIGH-TECH AND EMERGING GROWTH ENVIRONMENT, PLI CORPORATE LAW AND PRACTICE COURSE HANDBOOK SERIES 303 (1997). Attention to copy use licenses is suggested in Diane W. Savage, *Intellectual Property Due Diligence in Acquisitions of Technology Companies, in* HANDLING MERGERS & ACQUISITIONS IN A HIGH-TECH AND EMERGING GROWTH ENVIRONMENT, PLI CORPORATE LAW AND PRACTICE COURSE HANDBOOK SERIES 329 (1997).

cle 2B transfers. It does not require close examination to ascertain that this is an illusion. Section 2B-503(b)(3) states that a financier "may not enforce its interest by taking possession or control ... with respect to the licensed information ... without the licensor's express consent in the license or another record ...."[49] This provision severely limits the financier's collection leverage, effectively requiring publisher-licensor consent to financier enforcement by any means other than an action for damages resulting from breach of the financial accommodation agreement.

Rules that limit the utility of secured credit will undoubtedly limit its availability. Granted, the economic effect of this is difficult to assess. If, as Professor Mann suggests, debt financing of sizable businesses is not dependent on the availability of security,[50] the impact of the anti-transfer rules of section 2B-503(2) may be trivial in that sector.[51] In addition, the importance, or unimportance, of secured credit for small businesses is one of the many issues in the continuing law and economics debate about the role and need for preference of secured over unsecured creditors.[52] Yet to the extent that secured credit is significant to the establishment, operation, and growth of small businesses, section 2B-503(b) stifles economic growth and vitality by compromising the availability and affordability of credit. The tradeoff (or benefit) is that publisher-licensors enjoy enhanced short-term economic gains, exploiting their license to collect tolls on numerous transactions that are peripheral to the core Article 2B transactions.

The financier interest rules do indirectly enhance protection against infringement of intellectual property rights. Precluding realization of a use-licensed copy as collateral restricts competitor opportunities to legally acquire a computer program copy for the purpose of subjecting its code to reverse engineering in order to ascertain embodied trade secrets. Pub-

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49. U.C.C. § 2B-503(b)(3) (Aug. 1, 1998 Draft).

50. Ronald J. Mann, *The Role of the UCC in Facilitating the Financing of Software Licenses,* (unpublished manuscript, on file with *Berkeley Technology Law Journal)* (Mar. 30, 1998).

51. Furthermore, larger enterprises may be more likely to acquire expensive, high-end software financed under arrangements in which the publisher-licensor is a participant, thus avoiding the effects of section 2B-503.

52. The literature is extensive and growing. Rather than gather and list numerous citations to various symposia and articles, I direct attention to recent *University of Virginia Law Review* and *Cornell Law Review* symposium issues for their inclusion of diverse views, and to one of many contributions to the dialogue by Professor Ronald J. Mann, a contributor to this symposium. *Symposium on the Revision of Article 9 of the Uniform Commercial Code*, 80 VA. L. REV. 1783 (1994); *Symposium on the Priority of Secured Debt*, 82 CORNELL L. REV. 1279 (1997); Ronald J. Mann, *The Role of Secured Credit in Small Business Lending*, 86 GEO. L.J. 1 (1997).

lisher-licensor preference for such a rule is understandable since introduction of useful articles into commerce does increase the risk of loss of secrecy through reverse engineering of a product unit that was lawfully acquired. Yet this is a risk in all product markets, and no compelling reason has been shown for changing trade secret law for the particular benefit of software and information publishers. If the Uniform Law Commissioners and the ALI in fact intend to effect such a change, this should be made explicit and be effected by changes in the Uniform Trade Secrets Act and the Restatement (Third) of the Law of Unfair Competition.

A secondary intellectual property protection that may result from section 2B-503 is a reduction in costs of monitoring compliance with use restrictions, and policing against the making of unauthorized copies. Using contract, and the regulatory rules of Part 5, to assure that every user is a direct licensee assures that the knowledge base of identifiable users is more complete and accurate. This would aid licensors in monitoring for license term compliance and unauthorized copying. Although this may be seen as a public as well as a private benefit, it nevertheless is but one factor to consider in determining whether state law should externalize those industry-specific costs and require them to be borne by users in particular, and society more generally. Neither this question, nor questions of the kind, have been addressed within the Drafting Committee or in the Reporter's Notes.

D. Other Common Transactions

Section 2B-102(a) broadly defines "information" to mean "data, text, images, sounds, mask works, or works of authorship"[53] and "license" to mean "a contract that authorizes access to or use of information or of informational rights and expressly limits the contractual rights or permissions granted, expressly prohibits, limits, or controls uses, or expressly grants less than all informational rights in the information ... whether or not the contract transfers title to a copy."[54] Section 2B-103 declares that Article 2B applies to:

> (1) any transaction that creates a software contract, access contract, or license; and
>
> (2) any agreement to provide support for, maintain, or modify information related to a contract within the scope of this article.[55]

53. U.C.C. § 2B-102(a)(24) (Aug. 1, 1998 Draft).
54. *Id.* § 2B-102(a)(28).
55. *Id.* § 2B-103(a).

Nothing in the definitions of information, license, or software contract and nothing in the statement of scope limits application of Article 2B to digital electronic subject matter or transactions. Article 2B therefore establishes the basis for extension of copy use licensing into book and all other forms of information publishing or distribution.

In short, section 2B-502(2) contemplates distribution of a book accompanied by a standard form license, perhaps kept with the book by use of a shrinkwrap. The license may state that use of the book is pursuant the license's terms, and that the book may not be transferred to any person or organization in any manner and by any means without first obtaining consent of the publisher in a record. This has particularly interesting implications for, among others, college and university textbook distributors. Because many texts are rather expensive when purchased new, reasonably clean used copies are quite marketable. Bookstores thus set out previously used copies of books repurchased from prior owner-users alongside new copies ordered from book publishers. Article 2B presents publishers with a means to use contractual prohibitions against transfer to preclude bookstores from offering used books for sale in competition with new copies. Section 2B-502(2) makes original purchaser-licensee resale in violation of a contractual prohibition against transfer a breach, and declares that any such attempted transfer gives no rights to the ostensible transferee, whether a bookstore or an individual. Ineffectiveness of a transfer to another individual prevents a bookstore from acting merely as consignee for sale of used texts that original purchaser-licensees wish to dispose of through the marketplace.[56]

The statute does not discriminate between different types of transactions. It equally includes the disposition of the course textbook and a library of books. It comprehends transfer by gift as well as in exchange for payment or other consideration. Turning back to software contracts, which very often contain transfer restrictions, the law makes ineffective the sale of an old desktop computer system to the extent that the "sale" includes a licensed copy of operating system software and, perhaps, a word process-

56. In fact, the definition of "license" in section 2B-102(a)(28) and "nonexclusive license" in section 2B-102(a)(34) both explicitly include consignments. This would make consignment of a copy by the licensee an attempted creation of a sublicense. The definition of "transfer" in section 2B-102(a)(48) offers some basis for claiming that consignment is not a transfer, but that is limited to cases in which the consignee is exercising contractual rights of its consignor. Transfer of the license and copy to a third party is something which the example specifically makes an act outside the scope of the license.

ing application program if the license prohibits its transfer.[57] It has exactly the same effect if the system and software are donated to a school or a charitable organization. Perhaps the latter consequence will lead the Internal Revenue Service to become the agent for eventually bringing to public attention the import and consequences of the Article 2B transfer rules.

E. Sections 109 and 117 of the Copyright Act

Section 117 of the Copyright Act expressly qualifies the copyright owner's rights in a computer program and declares that the owner of a computer program copy may make or authorize the making of a copy for archival purposes or in connection with adaptation of the computer program.[58] Any such copy "may be leased, sold, or otherwise transferred, along with the copy from which such copies were prepared, ... as part of the lease, sale, or other transfer of all rights in the program."[59] The lease, sale, or other transfer of the owned copy to which section 117 refers is a transaction which is the subject matter of section 109(a) of the Copyright Act. It states:

> Notwithstanding the provisions of section 106(3), the owner of a particular copy ... is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy ....[60]

Prior sections 2B-502(2)(B)(iii) and 2B-503 operated together to expressly prevent even the owner of a copy of software or information from transferring it in violation of a contractual prohibition against transfer, making such an attempt a breach of contract and ineffective.[61] The current version of section 2B-502(2) produces the same effect without so directly reading against the language of the federal statute. Section 2B-502 now makes no express reference to the owner of a copy. It simply provides that

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57. It is to be noted that my Microsoft Windows 95 license does expressly authorize transfer of the license in connection with the sale or other disposition of my computer, provided that I do not make or retain a copy of the software. Microsoft Corporation, *supra* note 41.

58. 17 U.S.C. § 117 (1998).

59. *Id.*

60. *Id.* § 109(a).

61. Curiously, the provision in former section 2B-502 was touted as recognizing and effectuating the copy owner's right under section 117 of the Copyright Act. *See* U.C.C. § 2B-502, Reporter's Note 3(a) (Mar. 10, 1998 Draft). More importantly, it stated that this rule applied in the absence of a contract term to the contrary, and elsewhere directly provided that such a contractual prohibition is enforceable and a transfer made in violation of the term is a breach and ineffective. U.C.C. § 2B-503(2)-(3) (Mar. 10, 1998 Draft).

a contractual prohibition against transfer of a nonexclusive license is enforceable against both a licensee-transferor and a transferee. However, Article 2B's definition of "license" includes a contract under which ownership of a copy is transferred,[62] and "licensee" is defined to include any transferee of information or informational rights regardless of whether the contract is a license.[63] This indirectly makes a sale of a copy subject to a contractual prohibition of transfer a license rather than a sale for purposes of state law.

In this instance, it is posited that state contract law controls with respect to characterization. Hence, the transfer is not a sale for purposes of section 109(a), and a copy owner—who has no right under state law to transfer the copy—is not the kind of owner contemplated by section 117. This legerdemain suffices in the minds of many, but it by no means precludes judicial determination that contractual prohibition of what section 109 expressly permits and section 117 contemplates is preempted by federal law.[64]

Assertions that federal law does, or may, preempt state contract law enforcement of prohibitions against transfer of owned copies have been challenged on two grounds. The first ground is that contract terms and their enforcement under state law are not preempted by section 301(a) of the Copyright Act. The second is that an original conveyance subject to a contractual restriction is merely a license, not a sale, irrespective of whether title to a copy is thereby acquired.

The more specific of the two arguments made in support of enforceability of contractual prohibitions against sale of a copy is the second: a license is not a sale, and the first sale doctrine expressed in section 109(a) therefore is inapplicable. This often-discussed claim is not here revisited,[65] except to note that a belief that form controls over substance in this matter

62. U.C.C. § 2B-102(a)(28) (Aug. 1, 1998 Draft).

63. *Id.* § 2B-102(a)(29).

64. Preemption in this instance more likely would be based in the Supremacy Clause, not section 301(a) of the Copyright Act. It is arguable that state law is creating rights in copyright subject matter equivalent to those created by federal law, in that contract is used to expand the rights created by section 106 through elimination of one of the statutory limitations to which those rights are expressly subject. This would make section 301(a) applicable. Still, the more general argument based on state law intruding into a domain created and defined by federal law, and altering the operation of express provisions of a federal statute, seems the more direct approach. For a discussion of constitutional preemption, see P. GOLDSTEIN, COPYRIGHT § 15.3.3 (2d ed. 1996).

65. The author published one of the early papers on the subject: David A. Rice, *Licensing the Use of Computer Program Copies and The Copyright Act First Sale Doctrine*, 30 JURIMETRICS J. 157 (1990) [hereinafter Rice, *Licensing*].

is the veritable and vulnerable cornerstone of Article 2B. The other position advanced in support of section 2B-502(2) is that federal law permits contractual alteration of sections 107 to 120 as limitations on copyright owner rights created by section 106. The decision of the Seventh Circuit Court of Appeals in *ProCD v. Zeidenburg*[66] on the issue of copyright preemption of contractual restrictions of copy use provides substantial new support for this view; however, the new round of debate kindled by the decision has raised the profile of the issue instead of settling it. It thus far is a shaky foundation for widespread state enactment of section 2B-502(2).[67]

IV. LIABILITY CONSEQUENCES

A. Licensee's Liability for Breach of Contract

The applicable liability rules for licensee breach of contract are found in Part 7 of Article 2B, and particularly sections 2B-707 and 2B-708. Section 2B-708 does not provide a particularly apt remedy, except in that the residual measure of damages in Subsection (a)(1)(D) and (2) provide that breach of contract by a licensee entitles the licensor to

> (a) ... recover compensation for the loss resulting in the ordinary course from the particular breach or, if appropriate, as to the entire contract, the following ...:
>
> (1) damages measured in any combination of the following ways but not to exceed the contract fee and market value of consideration required under the contract for the performance that was the subject of the breach: ...
>
> (D) damages calculated in any manner that is reasonable; and
>
> (2) subject to 2B-707(b), any consequential and incidental damages.[68]

Subsection (b)(2) of section 2B-707 precludes consequential damages in this context to the extent that they are speculative.

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66. 86 F.3d 1447 (7th Cir. 1996) (holding that standard form license terms not available for review until after purchase are nonetheless enforceable).

67. The law journal case comments, notes, and articles on the *ProCD* decision substantially outnumber citations to the decision in published judicial decisions. It appears that the commentators generally supporting the court's reasoning and outcome are substantially fewer than those who are critical of either or both the enforceability of standard form agreements or copyright preemption issues.

68. U.C.C. § 2B-708(a) (Aug. 1, 1998 Draft).

Section 2B-708(a)(1)(D) appears to make the licensee-transferor liable in damages for any injury resulting directly from the ostensible transferee's use of copy-embodied trade secrets. It does so without regard to whether the third-party use was innocent or knowing, and irrespective of whether the licensee-transferor knew of the existence of the trade secrets. This is contrary to general trade secret law.[69] Although modern trade secret law treats a transfer of trade secret subject matter as a disclosure,[70] not every disclosure or receipt of trade secret or confidential business information is actionable. Transferor liability attaches only when the transferor knows at the time of transfer that she is disclosing the trade secret of another, and doing so in breach of a duty of confidence owed to another.[71] Section 2B-502(1)(B) goes well beyond this by legislating that a transfer made without knowledge that a software or information copy embodies a publisher-licensor trade secret is an actionable disclosure.[72] It compounds this by substituting a mere contract relationship, which often will be quite remote, for a relationship giving rise to a duty of confidence as the source of obligation whose breach is actionable. The *coup de grace* is delivered by section 2B-708, which attaches a tort-law-influenced measure of damages for any resulting harm. This outcome is not trivial, probably is neither understood nor intended by most Drafting Committee members, and may be just what proponents of the section 2B-501(1)(B) trade secret provision seek.

B. Ostensible Transferee's Liability Risk

Superficially, the outcome for the ostensible transferee is that she gets nothing from the licensee-transferor and has a claim against the licensee-transferor to recover any amount paid. A closer look at the statute shows that this is wrong. Serious copyright liability exposure is created by Article 2B when a transfer of copyright-protected software is not permitted under section 2B-502(1) or is contractually prohibited pursuant to section

69. *See supra* Part III.A.1.

70. It is clear that transfer of trade secret information constitutes a "disclosure." *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40, cmt. a (1995). The liability of a transferee who subsequently uses or discloses that information turns on whether she knew or had reason to know at the time of the transfer that the information was transferred or disclosed in breach of a licensee-transferor duty not to disclose, or that the licensee-transferor utilized improper means to acquire the trade secret. *See* UNIF. TRADE SECRETS ACT § 1(2)(ii)(B) (1985); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40(b)(3) (1995).

71. *See* UNIF. TRADE SECRETS ACT § 2(b)(2)(B)(ii) (1985); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 40(b)(1) (1995). Comment c indicates that disclosure is a "use," but not the contrary. *Id.* § 40 cmt. c.

72. *See* discussion *supra* Part III.A.

2B-502(2). This is because each instance of the program's use involves making a copy of the program for the purposes of copyright law.[73] Since an ostensible transferee acquires none of the licensee-transferor's rights to use the program,[74] every use by the transferee constitutes an infringement of the publisher's copyright. The Copyright Act provides that any further use of the program may be enjoined,[75] and that the publisher may recover its actual damages and the transferee's profits attributable to the infringement.[76] Alternatively, the publisher may elect to recover statutory damages of not less than $500 or more than $20,000.[77] Finally, irrespective of whether the relief sought is equitable or legal, it is within the court's discretion to award full costs and a reasonable attorney's fee.[78]

Different rules apply if the information content is not protected by copyright. The action in that case most likely would be in tort for conversion. Cases decided to date under section 301(a) of the Copyright Act indicate that this state law cause of action generally is preempted,[79] but this holding offers little solace for those who cannot afford litigation, the only means by which to assert this defense. More to the point, creating a problem in a uniform law and then deliberately handing it off to the courts for later correction is to fall far short of the sponsoring organizations' high standards.

A licensor also might seek injunctive relief and damages for misappropriation of trade secrets under state tort and unfair competition law or, in an increasing number of states, under sections 2 and 3 of the Uniform Trade Secrets Act.[80] Sections 2B-507(b) and 2B-105(c) probably preclude

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73. *See* MAI Systems Corp. v. Peak Computing, Inc., 991 F.2d 511, 518 (9th Cir. 1993) (holding that loading a program into memory constitutes making a copy for purposes of copyright law. Such copying is a necessary antecedent to running any program in a modern computer.).

74. *See* U.C.C. § 2B-507(a)(1) (Aug. 1, 1998 Draft).

75. *See* 17 U.S.C. § 502 (1998).

76. *Id.* § 504(a)(1), (b).

77. *Id.* § 504(a)(2), (c).

78. *Id.* § 505.

79. *See* United States *ex rel.* Berge v. Board of Trustees of the University of Alabama, 104 F.3d 1453, 1462-65 (4th Cir. 1997), *cert. denied* 118 S.Ct. 301 (1997); Taquino v. Teledyne Monarch Rubber, 893 F.2d 1488, 1501 (5th Cir. 1990); Patrick v. Francis, 887 F. Supp. 481, 482-484 (W.D.N.Y. 1995).

80. Section 2(a) of the Uniform Trade Secrets Act states that "[a]ctual or threatened misappropriation may be enjoined ...." Section 3(a) states that "[e]xcept to the extent that a material and prejudicial change of position prior to acquiring knowledge of reason to know of misappropriation renders a monetary recovery inequitable, a complainant is entitled to recover damages for misappropriation ...."
UNIF. TRADE SECRETS ACT § 3(a) (1985).

the damages action, but continued possession and use still would be enjoinable on the ground that the transfer was wholly ineffective. As previously noted, however, the conclusion that damages are not recoverable because trade secret law trumps Article 2B is reachable only through unguided search of several sections and further research in trade secret law.[81]

V. THE PRINCIPAL EFFECT: UNIFORM STATE LAW PROTECTION OF PUBLISHER-LICENSORS FROM COMPETITION

Common to the described particular effects of the anti-transfer rules of Article 2B is the protection of publisher-licensors against competition. The benefits to publisher-licensors consist of limiting direct competition from other publisher-licensors, and protection against competition in the secondary resale market.

A. Direct Competition

Article 2B makes back-door changes in trade secret law for the purpose, and with the effect, of protecting publisher-licensors against competition from other publisher-licensors, including potential new entrants into competition. Use of trade secret law, or its modification by state law, to accomplish this end falls squarely within *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*,[82] in which the Supreme Court struck down a Florida boat hull plug molding statute because it extended beyond traditional trade secret law by excluding competition rather than regulating conduct.

Limitation of direct competition is the aim and effect of Article 2B enhancement of trade secret and know-how protection. Trade secret protection is an important element of a software publisher's competitive strategy and success. Historically, software copy use licensing depended heavily on the existence of embodied trade secrets as a foundation for crafting contract-based protection of software at a time when patent protection appeared unavailable and copyright protection was doubtful.[83] Currently, trade secret misappropriation claims sometimes are the primary claims, or are coupled with copyright infringement claims, in software protection litigation.

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81. *See supra* Part III.A.2

82. 489 U.S. 141 (1989).

83. *See* David A. Rice, *Public Goods, Private Contract, and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543, 552-55 (1992) [hereinafter Rice, *Public Goods*]; Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239, 1245 (1995).

Given judicial limitation of copyright protection for computer programs,[84] it is unsurprising that publisher-licensors, as sources of technology-rich articles of commerce, would support efforts to strengthen trade secret law or seek enactment of contract rules that enhance trade secret protection. The identified Article 2B reinforcement of trade secret protection goes too far, however. Article 2B's approach would do much to make trade secret and related law more a barrier, and less a sieve.[85] It also would do much to change its character and the balance of interests it effects.

Trade secret law, like other intellectual property law, expresses an accommodation of interests. Its rules have evolved over time, deliberated on by judges and scholars and within the NCCUSL and the ALI.[86] Broadly speaking, trade secret law functions within well-established limits to encourage innovation by providing protection against certain information-seeking conduct of others, while leaving open diverse other means for wider diffusion of knowledge and know-how developed through investment in innovation.[87] Paramount among those lawful means for wider diffusion is reverse engineering of a lawfully acquired article of commerce in which the trade secret or know-how is embodied.

Heretofore it has been perfectly lawful to overtly acquire an article of commerce in the marketplace and ascertain trade secrets which it embodies through reverse engineering.[88] Section 2B-502(1)(B) introduces into contract law a totally new rule, the primary effect of which is to preclude

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84. *See* Computer Assoc. Int'l, Inc. v. Altai, Inc., 982 F.2d 693 (2d Cir. 1992) and Lotus Dev. Corp. v. Borland Int'l, Inc., 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided Court*, 116 U.S. 804 (1996).

85. The Supreme Court has contrasted patent and trade secret law in these terms, stating, "[w]here patent law acts like a barrier, trade secret law functions relatively as a sieve." Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 490 (1974).

86. Congress recently made a limited entry into the field when it enacted the Economic Espionage Act of 1996, 18 U.S.C. § 1831 (1996).

87. *See generally* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39, cmt. a (1995).

88. *See, e.g.*, SI Handling Systems, Inc. v. Heisley, 753 F.2d 1244 (2d Cir. 1985); Chicago Lock Co. v. Fanberg, 676 F.2d 400 (9th Cir. 1982). State trade secret law recognition of this principle was a key consideration in the Supreme Court's rejection of the argument that state trade secret law conflicts with and is preempted by federal patent law. *See Bonito Boats*, 489 U.S. at 160; *Kewanee*, 416 U.S. at 476, 490. Whether, or to what extent, various rules of Article 2B may be preempted by federal law has been vigorously disputed throughout the Article 2B drafting process, and provisions related to trade secret law have been one of the topics in this continuing debate. It is beyond the scope of this comment to describe the various issues and debates or to identify and assess the legal arguments. Analyses and expressions of the author's views on the topic include Rice, *Public Goods*, *supra* note 83, and David A. Rice, *Digital Information as Property and Product*, 22 U. DAYTON L. REV. 623, 646 (1997).

reverse engineering of a computer program copy by a third-party transferee of a copy use license. Equally, statutory validation of contractual prohibition against transfer to forestall reverse engineering creates grounds for arguing that otherwise legally permitted reverse engineering is unlawful because the transferee had no legal right to possess the copy subjected to study through reverse engineering.

B. Secondary Competition

The other major effect of the Article 2B anti-transfer rules is to exclude licensee competition with publisher-licensors in the distribution of lawfully acquired copies of software and information. Under Article 2B, competition through secondhand distribution of an infinitely reusable copy is statutorily foreclosed in some instances and subject to contractual foreclosure in any event. The actual effect on the primary retail market may be insubstantial even if the volume of neighbor-to-neighbor and flea market transactions in used software and information product copies is numerically sizable. Monitoring transactions and collecting transfer fees, or tolls, in this diffuse market is difficult, costly, and not likely to produce revenues that exceed costs.

Quite a different case is presented by transactions in which the focus is transfer of the ownership of a business. Transfer of rights in various individually licensed software and information copies, and even site licenses, is ancillary to the primary purpose of transferring business ownership. Yet transferability is the key to recovery of the residual value of copy use licenses for which payment has been made or, in the case of periodic payment licenses, is current. This value is transferred in whole or in part to the publisher-licensor when, on the authority of sections 2B-502(1) and (2), a publisher-licensor conditions consent to transfer on payment of a fee or insists on purchase of a new license. Nontransferability of use licenses provides a means to price discriminate by effectively terminating the useful life of the original license and exacting a new price for a future use license.[89] Indeed, high switching costs create the potential for setting the new price substantially higher than that charged for the original license.[90]

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89. The point owes much to a recent discussion with Professor Wendy Gordon. Concerning copyright ownership itself conferring the ability to price discriminate by making arbitrage by licensees of statutory rights profitless, see Wendy Gordon, *Price Discrimination Redux*, 73 CHI.-KENT L. REV. (forthcoming 1998).

90. Switching costs, inclusive of those for a license to use an alternative computer program, migration of systems and data, and retraining of personnel will be substantially higher than payment for the transfer or a new license. *See, e.g.*, Mark A. Lemley & David McGowan, *Legal Implication of Network Economic Effects*, 86 CALIF. L. REV. 479, 532-

The market effect is that publisher-licensors are insulated against competition in the market for copies of their products. Article 2B's bold characterization of a sale as a license so long as the contract prohibits transfer is directed to contracting around the statutory expression of the venerable first sale doctrine,[91] which is based on the notion that the first sale of a copy exhausts all of the copyright owner's rights in the particular copy.[92] Federal copyright law creates a monopoly over first distribution of a copy according to this principle, and not over further resale or other transfer except as the statute otherwise expressly provides.[93]

Public policies favoring individual freedom to contract and to alienate personal property are implicated, as is competition policy to which the limited monopolies created by copyright and patent law are exceptions.[94] It is these policies that section 2B-502(2) rejects. It empowers publisher-licensors to extend control over transfer of copies as a primary, not an ancillary, restraint on competition from copy resale or other transfer. This copy distribution monopoly achievable through use of contract is the private benefit that section 2B-502(2) holds out as the return for the loss which nontransferability visits on copy use licensees. The end result is publisher capture of consumer surplus, a reallocation of gains resulting from the merger or other business transaction to publishers of software and information copies.

VI. THE RATIONALE ... AND A BRIEF CRITIQUE

The rationale advanced for the anti-transfer rules is substantively unfounded. Its presentation is superficially convincing, but its assertion of authority does not withstand scrutiny. The Reporter's Notes represent that

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34 (1998); Peter S. Menell, *An Analysis of the Scope of Copyright Protection for Application Programs*, 41 STAN. L. REV. 1329, 1357-58 (1987).

91. *See* Rice, *Licensing*, *supra* note 65.

92. The landmark decision is Bobbs-Merrill Co. v. Straus, 210 U.S. 339 (1908), but the principle was followed in lower federal courts prior to that decision. Quality King Distributors, Inc. v. L'anza Research Int'l, Inc., 118 S.Ct. 1125, 1128 n.4 (1998).

93. Prohibition of computer program rental by the owner of a copy is a primary example of such an exception. *See* 17 U.S.C. § 109(b)(1)(A) (1998).

94. Patent and copyright are instrumental exceptions to the competition-favoring policy expressed in antitrust laws. *See, e.g.*, United States v. Paramount Pictures, Inc., 441 U.S. 1, 157-58 (1948) (holding block booking to be illegal because, among other things, it added to or extended the statutory copyright monopoly); United States v. Singer Mfg. Co., 374 U.S. 174, 196 (1963) (finding no exemption from antitrust law and policy beyond the limits of the patent monopoly); Simpson v. Union Oil Co., 377 U.S. 13, 24 (1964) (clarifying that patent laws are to be construed together with antitrust laws and modify them to the extent necessary).

the anti-transfer rules reflect existing law (or are even prescribed by it), rather than a reasoned choice among alternatives. Resort to this characterization effectively forecloses identification and weighing of unintended, and even untoward, consequences in the course of Drafting Committee, NCCUSL, and ALI deliberations.

A. Divergence of Section 2B-501(1)(B) from Sections 2-210, 2A-303, and Other Contract Law

Section 2-210(2) of the U.C.C. states, with respect to contracts for the sale of goods, that:

> all rights of either buyer or seller can be assigned except where the assignment would materially change the duty of the other party, or increase materially the burden or risk imposed on him by his contract, or impair materially his chance of obtaining a return performance.[95]

This language reflects established contract law as stated in the Restatement (Second) of Contracts section 317(2), and it echoes U.C.C. section 2A-303(5)(b).[96]

The Reporter's Notes indication of uniform law sources for section 2B-502(1) reference section 2A-303 but not section 2-210. Reporter's Note 1 to section 2B-502, however, states that the language of subsection (1) "follows existing Article 2."[97] The Reporter's Notes generally characterize the stated limitations on transfer as ones determined "by reference to standards that protect the non-transferring party's interest"[98] and further state:

> The concepts here seem especially relevant to licensing where, in many transactions outside retail markets, important reliance and confidentiality interests are involved that may be compromised by a transfer of the contract. In practice, under federal law, many

95. U.C.C. § 2-210(2) (1996).

96. Section 2A-303(5)(b) provides that, in the case where a personal property lease is silent with respect to the right to transfer, the transferor is liable in damages for loss suffered by the other lease party if the transfer "materially impairs the prospect of obtaining a return performance ..., materially changes the duty of [the aggrieved party], or materially increases the burden or risk imposed on [the aggrieved party] ...." U.C.C. § 2A-303(5)(b) (1996).

97. U.C.C. § 2B-502, Reporter's Note 1 (Aug. 1, 1998 Draft).

98. *Id.*

> licenses may not be transferable without licensor consent even in the absence of a contract provision to that effect.[99]

This explanation indicates no legal authority or rationale for adoption of section 502's statutory declaration that a transfer of contract rights to use subject matter that embodies a trade secret or confidential business information of the publisher-licensor is a breach of contract and ineffective as a matter of law. There is, in fact, no non-federal law authority for addition of trade secret and business information protection to the restated general contract law and other U.C.C. articles' limitations on transferability of rights.[100]

That the concepts "seem" relevant is scant justification, and empty authority, for insinuating into contract law a statutory prohibition against transfer of contract rights to possess and use a copy if it embodies trade secret or confidential business information. This is especially so given that it clearly is lawful under trade secret and general contract law to acquire an article of commerce in which a trade secret or confidential business information is embodied.[101]

The basic contract rules expressed in sections 2-210 and 2-303 of the U.C.C. and section 317 of the Restatement recognize that commerce and trading in articles of commerce is the norm. They establish immutable limits on transferability only for the purpose of assuring that a transfer of contract will not defeat party-specific expectations for performance or materially increase the performance burdens or risks of nonperformance of the other party to the contract.[102] Courts typically seek on the facts and law to avoid imposing limitations on transfer even under these rules.[103]

The prototypical case, put forth by comment 4 to section 2-210, is an output or exclusive dealing contract in which personal discretion with respect to performance is implicated, but even then the comment indicates a transfer is not ineffective so long as good faith conditions established by

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99. *Id.*

100. Further, the general statement that federal law may in fact prohibit transfer which lacks at least implied consent is erroneous. *See* discussion *infra* Part VI.B.

101. *See supra* Part V.A.

102. Article 9 in fact adopts a far stronger pro-transfer rule in providing that the debtor's rights in collateral may be voluntarily or involuntarily transferred "not withstanding a provision in the security agreement prohibiting any transfer or making the transfer constitute a default." U.C.C. § 9-311 (1996). The function is to make the transfer effective, even though possibly actionable as a breach.

103. *See generally* FARNSWORTH, *supra* Note 3, § 11.4; CALAMARI & PERILLO, THE LAW OF CONTRACTS §§ 18.2 & 18.12 (4th ed. 1998).

section 2-306 are met.[104] In fact, commercial contract law has so dramatically moved away from negation of transfer that delegation of performance is generally permitted "unless the other party has a substantial interest in having the original promisor perform or control the acts required by the contract."[105]

These provisions strongly evidence modern disfavor of statutory, and even contractual, restraints on the alienability of contract rights. Section 2B-501(1), in contrast, ingeniously transforms these limitations on the enforceability of contractual prohibitions against transfer into statutory prohibitions against transfer. Addition of the new rule proscribing transfer if a licensed copy embodies a trade secret is independently remarkable, as discussed earlier, for the way in which it indirectly amends trade secret law.[106] The whole is a sophistic *tour de force.*

Neither rejection of well established commercial law principles nor back-door statutory revision of trade secret law can be based on mere assertion that the license model of transactions requires or justifies this. Equally, it is wholly insufficient simply to declare that divergence from both general contract and trade secret law is called for because Article 2B contracts are affected with "important reliance and confidentiality interests ... that may be compromised by a transfer of the contract."[107] It is unspecified, and unclear, what constitutes or gives rise to the reliance interest or confidentiality interest. There surely is no interest based upon action taken in reliance on offers or promises made by others with intention or expectation of inducing action. Moreover, an open market transaction in which the licensor and licensee have no direct relationship, and in which the contract is a widely used standard form, is not one in which an obligation of confidentiality inheres or can be contractually prescribed by mere recitation that it exists.[108]

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104. *See* U.C.C. § 2-210, cmt. 4 (1996).

105. *Id.* § 2-210(a). In the case of a personal property lease, transfer is allowed except when "an actual delegation of a material performance" is effected by a lessee's violation of a contract term that prohibits creation of a security interest in its leasehold interest. *Id.* § 2A-303(3).

106. *See supra* Part III.A.

107. U.C.C. § 2B-502, Reporter's Note 1 (Aug. 1, 1998 Draft).

108. It is interesting to observe that the quoted Reporter's Notes justify the rule by reference to characteristics of non-retail transactions and that the rule itself applies to all transactions, retail and non-retail alike.

B. (Mis)Use of Intellectual Property Exception to General Contract Law As Justification, or Prescription, for Section 2B-502(2)

Preemptive prescription by federal intellectual property law previously was explicitly stated as the source of the rules contained in former section 2B-502.[109] It now is alluded to in the Reporter's Notes to current section 2B-502 as a determinant and it is stated in the Reporter's Notes to section 2B-503 to be that section's foundation. Specifically, the Reporter's Notes to original section 2B-502 and current section 2B-503 present that *Everex Systems, Inc. v. Cadtrak Corp.*,[110] and kindred federal court decisions preclude transfer of a nonexclusive software or information copy use license without obtaining the consent of its publisher-licensor.[111] Examination of the decisions demonstrates that they have nothing to say about transfer of nonexclusive copy use licenses. They create and narrowly apply a federal rule governing only the transfer of a nonexclusive license of federally-created patent and copyright rights. This departure from the freedom-to-transfer norm of modern commercial law is explained as essential to, and solely for the purpose of, preserving the limited monopoly rights created by the patent and copyright statutes.

Everex, *Harris v. Emus Records Corp.*,[112] and other decisions relied upon at various times in the Reporter's Notes hold that a nonexclusive license of rights created by federal patent or copyright law is not transferable.[113] The soundness of the decisions so far as they concern only transfer of rights, or hypothecation of rights, created by federal statute is itself questioned by Professor Rochelle Cooper Dreyfuss.[114] Further, one recent

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109. *See* U.C.C. § 2B-502, Reporter's Note 3 (Mar. 10, 1998 Draft).

110. 89 F.3d 673 (9th Cir. 1996).

111. The limited extent to which Article 2B permits any such transfer without first obtaining express consent apparently is grounded in surmise that implied consent exists in certain types of transactions unless a contract term expressly provides that the copy use license is not transferable.

112. 734 F.2d 1329 (9th Cir. 1984).

113. *See Everex*, 89 F.3d at 679-80 (patent); *Harris*, 734 F.2d at 1333-34 (copyright); Unarco Indus., Inc. v. Kelley Co., 465 F.2d 1303, 1306 (7th Cir. 1972), *cert. denied* 410 U.S. 929 (1973) (patent); *In re* Patient Educ. Media, Inc., 210 B.R. 237, 242 (S.D.N.Y. 1997) (copyright).

114. *See* Rochelle Cooper Dreyfuss, *Do You Want to Know a Trade Secret? Licensing Under Article 2B of the Uniform Commercial Code*, 87 CALIF. L. REV. 191 (forthcoming 1999). This article does not address whether *Everex* and related decisions are correct in concluding that the usual state contract law rule of free transferability must be supplanted by a contrary federal law in certain instances. It assumes, solely for the sake of argument, their substantive correctness. It shows, even so, that the courts' opinions and the Constitution strictly limit application of the nonassignability rule to nonexclusive licenses of property rights created by federal statute. These authorities offer no guidance

decision has limited their application by holding that transfer of assets as a step essential to corporate reorganization does not require a patent rights licensor's consent where there is substantial identity of ownership of the licensee-transferor and its transferee.[115] Yet, it is clear that the federal common law decisions generally apply to transfers of nonexclusive patent and copyright licenses in merger and acquisition cases.[116]

Far more importantly, *Everex* and other cases relied upon by the Reporter's Notes recognize that the patent and copyright license transactions with which they deal are different in fact and law than the vast majority of transactions that will be governed by Part 5 of Article 2B. They clearly and carefully limit application of the federal common law rule which they adopt to contracts involving the transfer, without licensor consent, of a nonexclusive license of federally-created copyright and patent rights.[117] Indeed, the only justification for judicially creating the rule is to assure that the state contract law that makes contract rights transferable does not compromise the intellectual property rights scheme created by a federal statute.

The courts explain that state contract law ordinarily governs construction and interpretation of agreements involving transfer of rights created by the patent and copyright statutes.[118] This is a product of constitutional law as expressed in *Erie Railroad Co. v. Tompkins*.[119] *Everex*, *Harris*, and related decisions identify two exceptions to this rule. The first is that state

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for—let alone prescribe the content of—Article 2B rules governing the transfer of nonexclusive licenses to use a software or information copy.

115. *See* Institut Pasteur v. Cambridge Biotech Corp., 104 F.3d 489, 494-95 (1st Cir. 1997), *cert. denied*, 117 S. Ct. 2511 (1997). Facially, this seems a sufficient response to one of the previously identified consequences of the Article 2B anti-transfer rules. *See supra* Part III.B.1. However, it merely offers potential relief in select cases and does not deal with the fact that the relied upon federal court decisions have nothing to do with mere copy and use license transfers on their facts or as a matter of law.

116. *See* PPG Indus., Inc. v. Guardian Indus. Corp., 597 F.2d 1090 (6th Cir. 1979); *see also Unarco*, 465 F.2d at 1306 (acquisition of business and its assets).

117. *See Everex*, 89 F.3d at 677 (citing McCoy v. Mitsuboshi Cutlery, Inc., 67 F.3d 917, 920 (Fed. Cir. 1995)); *Unarco*, 465 F.2d at 1306; *In re Patient Education Media*, 210 B.R. at 242 (citing Bourne v. Walt Disney Co., 68 F.2d 621, 631 (2d Cir. 1995), *cert. denied*, 517 U.S. 1240 (1996)).

118. *See, e.g.*, *Everex*, 89 F.3d at 678; *Unarco*, 465 F.2d at 1305; *In re Patient Educ. Media*, 210 B.R. at 242.

119. 304 U.S. 64 (1938). Several of the cases expressly refer to *Erie* as the foundation for the rule that state law ordinarily governs interpretation and construction of patent and copyright licenses, and in stating that exceptions created in order to deal with conflict between state contract law and federal law and policy are special and specific exceptions. *See, e.g.*, *Everex*, 89 F.3d at 678; *Unarco*, 465 F.2d at 1305; *In re* Alltech Plastics, Inc., 71 Bankr. 686, 689 (W.D.Tenn. 1987).

contract law does not apply if the underlying federal statute specifically states an applicable federal rule.[120] The second is that state contract law is inapplicable if it would conflict with patent or copyright law or be inconsistent with the underlying federal policy.[121] If the federal statute is silent, a court first must determine whether a substantive federal common law rule must be created in order to avoid conflict between state contract law and federal law or policy.[122] If a rule is judicially created, it supersedes state contract law only to the extent necessary to resolve the identified conflict.[123] The judicially created rule is one of federal common law which the courts have only limited power to create in order to assure that "a federal statute may not be set at naught, or its benefits denied, by state statutes or state common law rules."[124]

Licensing of software or information copy use is a transaction wholly different in subject matter and purpose. A license governed by Article 2B may include a nonexclusive license of a federal intellectual property right, but section 2B-501(b)(1) makes it clear that this is not what Article 2B is about. It declares that "[t]ransfer of a copy does not transfer ownership of informational rights in the information."[125] This has two obvious implications. First, federal law does not control: the transaction does not transfer or hypothecate any right created by federal statute, nor does it authorize a licensee to engage in any activity expressly reserved to a patent or copyright owner. Second, federal patent and copyright policy is not even illuminating, as it concerns the creation, scope, and limits of a statutory monopoly created by Congress as an exception to the norm of competition and freedom to contract.[126]

The monopoly-focused rationale for the federal anti-transfer rule is unique to the patent and copyright statutes and it has no application to the

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120. *See Everex*, 89 F.3d at 679; *Unarco*, 465 F.2d at 1306.

121. *See* Lear, Inc. v. Adkins, 395 U.S. 653, 661-62 (1969).

122. *See Everex*, 89 F.3d at 679.

123. *See id.* (criticizing the opinion in *Unarco* for not taking care to make clear that application of a federal common law rule is limited, and that state contract law otherwise governs construction of patent licenses).

124. Sola Elec. Co. v. Jefferson Co, 379 U.S. 173, 176 (1942). *See also* O'Melveny & Myers v. Federal Deposit Ins. Corp., 512 U.S. 79, 87 (1994).

125. Notably, the distinction is made clear in cases relied upon in the Reporter's Notes for the proposition that the federal patent and common law rule that a license of federal rights is nonassignable. *See Harris*, 734 F.2d at 1334; SQL Solutions, Inc. v. Oracle Corp., No. C-91-1079 MHP, 1991 U.S. Dist. LEXIS 21097, at *15 (N.D. Cal. Dec. 18, 1991).

126. Monopoly in most other contexts is, of course, anathema and its creation or preservation by contract is generally unlawful. This is the essence of the Sherman Antitrust Act, 15 U.S.C. § 1 (1998).

transfer of Article 2B contract rights. Federal law grants the owner of a patent or copyright the right to exclude others from doing those things that the respective statutes expressly reserve to the owner. The owner of a patent in an article of manufacture has the exclusive right to make, use or sell that article, and a person who obtains a nonexclusive license to manufacture the article is but one of many to whom such a license might be granted.[127] Allowing a licensee to transfer its nonexclusive license would encroach upon the exclusive statutory right of the patent owner to license others to make, use, or sell, since that would permit any licensee to compete against the patent owner in licensing the right. This would undercut the patent owner's statutory monopoly rights. Similarly, the Copyright Act gives a copyright owner the exclusive right to make copies and distribute, or authorize others to make or distribute copies.[128] Permitting a nonexclusive licensee of the reproduction or distribution right to transfer that license to another would undermine the statutory right of the copyright owner alone to determine who may make or distribute copies.

Everex and other federal court decisions thus reason that a rule permitting transfer of a nonexclusive license to make, use or sell an article or to make or distribute copies[129] would transform the statutory rights of the patent or copyright owner from exclusive into nonexclusive.[130] Since this would directly conflict with the express language and the clear intent of the federal statutes, the courts hold that a nonexclusive license to make, use or sell an article, or to make and distribute copies, is nontransferable absent the consent of the patent or copyright owner.[131] No similar trade secret, informational content, or copy use monopoly exists under federal or state law, and section 2B-501(b) makes it clear that an Article 2B license conveys no patent, copyright, or other informational right that is not expressly granted.

Article 2B's adoption of the federal rule would in fact conflict with the public policy favoring competition. State enactment of contract rules,

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127. *See* 35 U.S.C. § 271(a) (1998).

128. *See* 17 U.S.C. § 106(1), (3) (1998).

129. The author's intention is to use "make or distribute copies" as illustration of the more numerous exclusive rights of a copyright owner under section 106 of the Copyright Act. The limited purpose is to avoid cumbersome repetition of an exhaustive listing of statutory rights in the text.

130. *See Everex*, 89 F.3d at 679. *See also Unarco*, 465 F.2d at 1305 (where the would-be transferee of licensed patent rights was in fact a party to whom the patent holder had consistently refused to grant a license).

131. *See, e.g.*, *Everex*, 89 F.3d at 679 (patent); *Insitut Pasteur*, 104 F.3d at 492 (patent); *Harris*, 734 F.2d at 1333 (copyright); *In re Patient Educ. Media*, 210 B.R. at 242 (copyright).

whose purpose is to prevent licensee competition, uses state law to create a publisher-licensor monopoly in the distribution of software and information copies. The subject matter of the monopoly is not limited to patent and copyright. Patent and copyright are themselves limited statutory exceptions to the policy favoring competition and freedom to compete,[132] and even federal legislative authority to protect subject matter within the scope of patent and copyright is constitutionally limited.[133] This suggests something far different than what has been claimed. Instead of being prescribed or supported by federal patent and copyright law, the Article 2B anti-transfer rules in fact run afoul of federal intellectual property and competition law and policy. The Reporter's Notes draw upon *Everex* and kindred decisions by highlighting superficial similarities; for instance, contracts governed by Article 2B are characterized as licenses and the subject matter of Article 2B contracts sometimes, but not always, are intellectual property. This ignores how the courts' limit application of the substantive federal common law rule that they have created, and that intellectual property is legally distinct from intellectual property rights.[134] The Reporter's Notes do not heed the constitutional limitations imposed by the *Erie* doctrine and its definition of the provinces of federal and state law, nor do they heed the careful judicial explanation that the rule being adopted differs from otherwise applicable state contract law under which contract rights are transferable.[135] Quite to the contrary, the Reporter's Notes once went so far as to assert that an earlier draft provision that made mass market licenses transferable so clearly conflicted with federal law and policy expressed in *Everex* that this consumer interest provision risked preemption.[136]

Reporter's Notes to more recent drafts have moderated the strong claim that federal patent and copyright law dictate the content of Article 2B rules. The rules themselves, however, remain substantially unchanged

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132. *See supra* note 94.

133. *See, e.g.*, Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991).

134. This is the essential point of section 202 of the Copyright Act, 17 U.S.C. § 202, which provides that transfer of a copy of a book, computer program, or other work conveys no rights in the copyrighted work itself.

135. This failure is particularly striking because *Everex*, the decision most heavily relied upon and even extensively quoted in Reporter's Notes when representing that federal law requires or supports Article 2B adoption of anti-transfer rules, is the case that most carefully and fully develops this point. *See Everex*, 89 F.3d at 678.

136. This is the position presented in Reporter's Note 2 to former section 2B-502 and echoed in Reporter's Note 2 to former section 2B-504 of the February and March 1998 Drafts. It is to be noted that this provision was made expressly subject to any contract term that prohibited transfer. *See* U.C.C. § 2B-502(c) (Mar. 10, 1998 Draft).

except that they no longer make nonexclusive copy use licenses nontransferable as a matter of law. The Reporter's Notes still draw upon *Everex* and other decisions as support for Article 2B's remaining anti-transfer rules. In that respect, misuse of the federal cases originally secured adoption of statutory and contractual transfer prohibition rules favorable to publisher-licensors. It now provides window dressing and rationalization for the retention of the anti-transfer rules. *Everex* has served particularly well in that it provided very quotable language that could be used in Reporter's Notes to show how federal law preemptively prescribed anti-transfer rules, without disclosing that the nonexclusive license at issue was not the stuff of Article 2B. Alas, it simply does not serve.

C. (Mis)Use of Freedom of Contract as A Rationale for Making Contractual Prohibitions Against Transfer Enforceable

Reporter's Note 2 to section 2B-502 propounds that making contractual prohibitions against transfer of nonexclusive software and information copy licenses enforceable "is consistent with ... the underlying theme of this article recognizing contractual choice ...."[137] This is sheer rationalization, or at best a bizarre rationale. Section 2B-502, after all, *restricts* freedom of licensees and others to contract.

Article 2B may be about contract, although many argue that it is about transactions and their terms rather than bargained-for exchange. A non-drafting party who objects to a standard form term at the time it is made available for review has limited choices under Article 2B. The three options are (1) request the drafting party to eliminate or amend the term, (2) refuse the entire deal, or (3) accept the term in order to obtain the software or information. In practice, the only real choices are the second and third.

In the immediate case, the relevant term would be a contractual prohibition of transfer. Transfer is not the use for which most licensees acquire software and information copies, so the significance—as opposed to existence—of the term may not seem clear at the time of product acquisition. Yet a person who has no hope of being able to bargain over this or any other non-price term of the license is further surrendering under the non-transferability term the freedom to contract with others. Contractual choice is first illusory and then killed.

Statutory validation of contractual restraint on alienation is antithetical to competition policy and individual autonomy. It is totally blind to modern commercial contract law, represented by a long line of judicial decisions and other uniform laws, which makes prohibitions against the as-

137. U.C.C. § 2B-502, Reporter's Note 2 (Aug. 1, 1998 Draft).

signment or other transfer of contract rights, real property, or tangible personal property unenforceable. "Contractual choice" and "freedom of contract" are perhaps even more the foundation of these rules than they are the basis for contract law's giving parties freedom to shape delivery, performance, and other terms. More generally, competition and other public policies have come to trump the policy favoring contractual choice in this area. Contract terms that prohibit assignment or otherwise restrain alienation ordinarily are not enforced, or are narrowly construed, even when set forth in non-standard form contracts of parties who are known to and directly dealing with each other.[138] To dismiss this by ritual recital that section 2B-502(2) expresses recognition of the principle of contractual choice is to hollow that principle.

D. (Mis)Use of Authority in Rationale for Anti-Financing Rules

The first rationale presented for section 2B-503(b)(2)'s divergence from the Article 9 model is the same as that given for the prior section 2B-502's statutory prohibition against transfer of a nonexclusive license. Financier enforcement by taking possession for use is barred because (1) a license authorizes use of intellectual property, (2) a copy embodies intellectual property, and (3) *Everex* and related federal patent and copyright decisions prevent transfers of intellectual property rights without consent.[139] This argument's illusory quality and lack of legal merit already have been discussed and demonstrated.[140]

One section 2B-503 Reporter's Note presents a further rationale for the rule stated in section 2B-503(b)(3). It advances an analogy between personal property leases and Article 2B licenses as an additional and independent reason for the rule stated in section 2B-503(b)(3). It reasons that restriction of transferability

> is also constrained by a general state law policy, reflected in Article 2A, that in three party transactions of this type, the rights owner is entitled to protection. Article 2A-303(3) limits the enforceability of lease provisions restricting security interests, stating: "[The] lessor is entitled to protect its residual interest in the goods by prohibiting anyone other that the lessee from pos-

138. *See generally* FARNSWORTH, *supra* note 3, § 11.2.

139. Section 2B-503, Reporter's Note 2 states: "For non-exclusive licenses, the transferability of a licensee's rights is constrained in law by federal policy limitations that presume non-transferability without licensor consent." U.C.C. § 2B-503, Reporter's Note 2 (Aug. 1, 1998 Draft). *See id.* § 2B-502(1); *Everex*, 89 F.3d at 673. *See also In re Patient Educ. Media*, 210 B.R. 237 (copyright license).

140. *See supra* Part VI.B.

> sessing or using them." Article 2A-303, *Comment* 3. As in Article 2A, the licensor has a right to control who is in effective possession (including use and access) of the subject matter of the license. This policy has been enforced by a number of courts in reference to assignments of a licensee interest to third parties, either by contract or by operation of law.[141]

The first difficulty with this statement is that section 2A-303(c) does not preclude transfer of an interest in leased property as a matter of law. Indeed, as the Reporter's Note correctly states, "Article 2A-303(3) limits the enforceability of lease provisions restricting security interests" in the subject matter of the license.[142] It limits enforcement of a contract term restricting transfer to those cases in which the lessee's transfer of interest includes transfer of actual possession or use of the leased goods to another.

The second problem with the stated reason is that personal property leases and licenses differ in important respects. Their principal commonality is that both lessors and licensors retain a residual interest in the original transaction's subject matter. Yet, a lease requires a series of payments, and establishes other continuing performance obligations of an affirmative nature concerning matters such as maintenance and insurance. In contrast, many software and information copy use license transactions involve single payments and create continuing obligations of only a negative nature, such as not using a copy for any purpose other than those permitted by the terms of the license.

In summary, this review indicates that section 2A-303 is not authority for legislating a general statutory prohibition against financier enforcement by taking possession and disposing of a licensed copy. It also shows that section 2A-303 is not compelling authority for Article 2B adoption of such a rule. Section 2A-303 presents a relevant model for consideration, together with the Article 9 model and perhaps others. Relevance and application ought not to be determined, however, based solely on the preferences expressed by one of several classes of persons whose interests may be at stake.

VII. CONCLUDING OBSERVATIONS

The National Conference of Commissioners on Uniform State Laws and The American Law Institute launched the Article 2B project in recog-

141. U.C.C. § 2B-503, Reporter's Note 2 (Aug. 1, 1998 Draft).
142. *Id.*

nition of the importance of software and information as the subject of commerce. Drafting Committee meetings have been heavily attended by observer-participants, and their active participation in discussion of drafts has aired differences on many issues. Even so, the process is as much political as participatory.[143] Industries and interests whose principal activities involve subject matter and transactions within the scope of Article 2B have been well represented, and those whose core activities fall outside its scope were not at the table.

Many of the unrepresented are destined to discover that they will be significantly affected. Awareness of potential effects has been expressed by some during annual meetings of the NCCUSL and ALI. Concerns about pro-licensor imbalance were expressed as early as the 1996 Annual Meeting of the NCCUSL, at its 1997 Annual Meeting, and in floor motions presented at its 1998 Annual Meeting and at the 1997 and 1998 Annual Meetings of the ALI. The basic importance and persistence of some concerns is manifested by the fact that issues presented to the full membership of the sponsoring organizations typically are ones raised and vigorously debated, and then rejected, at Drafting Committee meetings. Most are positions that have been rejected by the Drafting Committee in the face of strong opposition expressed by representatives of directly affected industries. Some industry representatives who have fought hard and prevailed on these issues at Drafting Committee meetings sometimes view this oversight or scrutiny as "above-the-fray tinkering."[144]

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143. The drafting process is inherently political, and the more so because Drafting Committee meetings are open. Success of the project ultimately turns on the enactability of the final product, so the views of industry representatives and other observer-participants have great sway. Predictably, the meetings are attended primarily by representatives of affected interests, and especially publisher-licensor representatives. Lawyers and others primarily involved in practice areas such as general business or mergers and acquisition are not a presence because software and information copy distribution is not central to their work.

Participation, its nature, and its effects recently have been the subject of several significant law review articles dealing with the U.C.C. drafting process. A selective sample includes Kathleen Patchell, *Interest Group Politics, Federalism, and the Uniform Laws Process: Some Lessons from the Uniform Commercial Code*, 78 MINN. L. REV. 83 (1993); Edward L. Rubin, *Thinking Like a Lawyer, Acting Like a Lobbyist: Some Notes on the Process of Revising UCC Articles 3 and 4*, 26 LOY. L.A. L. REV. 743 (1993); Donald J. Rapson, *Who is Looking Out for the Public Interest? Thoughts About the UCC Revision Process in the Light (and Shadows) of Professor Rubin's Observations*, 28 LOY. L.A. L. REV. 249 (1994); Alan Schwartz, *The Political Economy of Private Legislatures*, 143 U. PA. L. REV. 595 (1995).

144. American Law Institute 1998 Annual Meeting motions and votes were so characterized in a July 15, 1998 memorandum addressed to the members of the National Con-

Review in this article of the Article 2B rules governing the transfer of contract rights demonstrates that oversight, and even tinkering, by the co-sponsoring organizations is essential. Article 2B's rejection of modern contract and commercial law rules that strongly favor the transferability of contract rights is so striking that it would be surprising if it did not attract attention. Representation that fidelity to the principle of contractual choice underlies statutory regulation, and contractual prohibition, of the freedom of licenses and others to contract with one another in fact begs scrutiny. It is widely recognized that the generally prevailing rule that Article 2B rejects, like the anti-transfer view which it adopts, impinges on the contractual freedom of one or another class of persons. It is empty to argue in this instance that the principle of contractual choice points toward one rule rather than the other, or justifies rejection in this particular instance of the policy choice and resulting rule that otherwise generally obtains. The burden of justifying departure from the established norm is on those who would change how the law regulates contractual choice, a burden clearly not met by claiming the policy favoring contractual choice as a justification.

Likewise, crafting changes in trade secret law in the guise of legislating contract law rules, and doing so without expressly disclosing that purpose and effect, warrants inquiry and debate within the organizations that produced the Uniform Trade Secrets Act and the Restatement (Third) of the Law of Unfair Competition. External review is equally begged when federal court decisions that are factually and constitutionally limited in their application to the transfer of nonexclusive patent and copyright licenses are represented to compel state contract law to restrict or prohibit transfer of contract rights in copies of software and information.

Spotting and addressing differences between Article 2B and other contract law is made difficult because of differences between the subject matter, transactions, and language of Article 2B and its antecedents. A compounding difficulty is that Article 2B has been a moving target, a lengthy and complex document that has gone through a minimum of eight drafts and considered at more than one dozen Drafting Committee meetings since January 1996. Focusing on why a provision states a particular rule has been compounded by frequent shifts in offered rationales. For example, the anti-transfer rules have been presented as prescribed by federal patent and copyright law, later explained in terms of federal law con-

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ference of Commissioners on Uniform State Laws by the Business Software Alliance, Software Publishers Association, and Information Industry Association. The memorandum is available on the 2B Guide at <http://www.2BGuide.com/docs/amemo981.html> (visited Nov. 5, 1998).

straining choice of a rule more favorable to licensees and third parties, and still later presented—albeit wrongly—as modeled on other U.C.C. rules and consistent with the federal law which no longer is claimed to be prescriptive. Most remarkable is that outcomes tend to remain very much the same, even after a vote to remove a rule. Publisher-favoring rules whose ostensible legal foundations are questioned tend to survive, sometimes moved elsewhere and, more generally, accompanied by a different supporting explanation.

It is not just instrumental misuse of legal principles, precedent and reasoning that commands attention. Propounding rules directed to limiting contractual choice and freedom of those who, in this information age, contribute to expansion of the information sector by their productive use of software and information products, invites challenge. Rules that impose substantial new transaction costs on other business transactions, and loss of value on businesses and individuals, in order to secure protection against competition and maximum returns for publishers ought to be debated on their merits. One cannot fault publisher-licensors for seeking such gains through new contract 2B rules. It would be surprising if they did not do so. This does not answer whether it is wise for the projects' sponsoring organizations and state legislatures to satisfy that quest. The author trusts that, in this, the membership of the sponsoring organizations will indeed stand tall—and, if necessary, tinker—above the fray.

ARTICLE 2B AND MASS MARKET LICENSE CONTRACTS: A JAPANESE PERSPECTIVE

By Tsuneo Matsumoto †

ABSTRACT

In Japan, a concrete plan to enact legislation similar to Article 2B does not exist. The enactment of Article 2B in the United States may have a significant impact on the general rules of electronic contracting and on informational transactions in Japan. As such, Japanese scholars are closely monitoring the progress of Article 2B.

I. INTRODUCTION

In Japan, a plan to enact comprehensive legislation comparable to Article 2B does not exist. Currently, such issues are addressed only by piecemeal legislative initiatives. The Japanese Ministry of Justice has proposed the enactment of a law relating to digital signatures and certification authorities.[1] In addition, various governmental agencies have been discussing methods for protecting uncopyrightable data, such as a *sui generis* right as provided by an European Union (EU) directive, an amendment to the Unfair Competition Law, or an extension of protection under the Copyright Law of Japan.[2]

Despite the lack of a concrete plan to enact sweeping legislation similar to Article 2B in Japan, Article 2B is gaining more attention. Recently, several articles that discuss various provisions of Article 2B have been published.[3] For the past two years, the Software Information Center of Ja-

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1. *See* HŌMUSHŌ MINJI-KYOKU, DENSHI TORIHIKI HŌSEI NI KANSURU KENKYŪKAI (SEIDO KANKEI SHO-IINKAI) HŌKOKUSHO [MINISTRY OF JUSTICE, CIVIL AFFAIRS BUREAU, RESEARCH GROUP REPORT ON LAW RELATING TO ELECTRONIC TRANSACTIONS (SUBCOMMITTEE ON SYSTEMS)] (Mar. 1998) *reprinted in* 1138 JURISUTO 14 (1998).

2. *See generally* CHITEKI ZAISAN KENKYŪSHO, DATABASE NO HŌTEKI HOGO NO ARIKATA NI KANSURU CHOSA KENKYŪ HOKOKUSHO [INSTITUTE FOR INTELLECTUAL PROPERTY, RESEARCH REPORT ON LEGAL PROTECTION OF DATABASES] (1998).

3. *See, e.g.*, Seiji Nakajima, *Shrinkwrap Keiyaku no Yūkōsei [Enforceability of Shrink Wrap Contracts]*, (pts. 1 & 2), 634 NBL 22 (1998), 637 NBL 53 (1998); Hideaki Serizawa, ProCD v. Zeidenberg *no Bunseki [An Analysis of* ProCD v. Zeidenberg], 61 HOGAKU 189 (1997); Hiroo Sono, *Jōhō Torihiki ni Okeru Keiyaku Hōri no Kakuritsu ni*

pan (SOFTIC) has been sponsoring an Article 2B Research Group, of which I currently serve as chair. In November 1997, SOFTIC held its 6th International Symposium on Protection of Computer Software, entitled *A Balance Between Protection and Exploitation of Digital Content*. Professor Ray Nimmer, chair of the Article 2B drafting committee, delivered the keynote speech. An international panel, which included guests from the United States, engaged in a heated debate over the implications of Article 2B.

One reason for the intense debate is the perceived impact that Article 2B may have on U.S. software products imported into Japan. Computer software products that are developed in the United States and then modified for the Japanese market currently dominate in Japan. These products even dominate the Japanese word processing software import market.[4] I myself use—or rather, I am forced to use—Microsoft Word. Following the enactment of Article 2B, a large proportion of computer software products sold in the Japanese mass market will be sold just like in the U.S. mass market.

II. THE ENFORCEABILITY OF SHRINK WRAP AND MASS MARKET LICENSE CONTRACTS UNDER JAPANESE LAW

Shrinkwrap contracts, in a strict sense, bind a user even if the user did not read the contractual terms prior to breaking the seal and opening the software package. Under current Japanese law, shrinkwrap contracts are likely to be unenforceable. This leads to some uncertainty for the Japanese user. For instance, without an enforceable license, can a consumer use the program legally? Two plausible arguments can be made for the legality of such use. The predominant argument is that a sale of software technically represents a sale of a copy.[5] As such, the owner of the copy may use it freely unless he or she infringes the copyright of the copyright holder. Article 47bis of the Copyright Law of Japan allows the owner of the program copy to reproduce the program to the extent deemed necessary for the pur-

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Mukete (Chūkan Hōkoku) [*Toward Principles of Contract in Information Transactions (an Interim Report)*], (pts. 1 & 2), 626 NBL 24 (1997), 627 NBL 32 (1997).

4. *See* Japan Electronic Industry Development Association, *Statistics of Software (Export/Import)*, (visited Sept. 30, 1998) <http://www.jeida.or.jp/toukei/software/1997/soft1997.html> (statistics only in Japanese); Japan Electronic Industry Development Association, *Statistics of Software (Export/Import)*, (visited Sept. 30, 1998) <http://www.jeida.or.jp/toukei/software/soft1.gif> (statistics in Japanese and English).

5. *See* NOBUHIRO NAKAYAMA, SOFTWARE NO HŌTEKI HOGO (SHIN-BAN) [LEGAL PROTECTION OF SOFTWARE] 78 (2d ed. 1988); YOSHIYUKI TAMURA, CHOSAKUKEN HŌ [TEXTBOOK ON COPYRIGHT LAW] 188 (1998).

pose of exploiting that work on a computer by the user.[6] Therefore, even installation of the software onto the hard drive by the user, which involves reproduction, is legal. In contrast, a second argument relies on the premise that the sale of software at a retail outlet creates an implied-in-fact contract between the copyright holder and the consumer. However, since an agreement over the terms of the license does not take place in this scenario, a default set of rules under copyright law will govern the license contract. Both arguments inevitably lead to the same result: a user may legally use software in any manner as long he or she does not violate copyright law.

Box top licenses provide another interesting dilemma. In this type of license, the terms of the licensing contract are printed on the exterior of the box. The visibility of the contract provides the opportunity for the user to read and consent to the terms before deciding to purchase the item at a retail store. In this case, the licensing contract will likely *prima facie* bind the consumer. It is important to note, however, that the terms of a box top licensing contract are standardized; consumers may take it or leave it. If a term in a standard form contract is unfair to the non-drafting party, Japanese courts may strike the offending term.

In January 1998, the Consumer Policy Section of the Social Policy Council, an advisory committee to the Prime Minister of Japan, proposed enactment of the Consumer Contract Law.[7] The proposed law provides that any term in a consumer contract that is unreasonably unfavorable to the consumer is unenforceable. Member countries of the EU already have similar laws based on the EU Directive on Unfair Terms in Consumer Contracts.[8] The proposed Consumer Contract Law of Japan, like the EU Directive, will include an indicative and non-exclusive list of unfair terms. However, none of the proposed terms listed seem to address whether a contract may limit the users' rights, which copyright law would ordinarily permit.

III. MANDATORY LAW

Since Japan does not have a federal system, controversial issues of federal preemption do not arise as they would in the United States. How-

6. *See* Article 47bis of the Copyright Law of Japan (1985).

7. *See* KOKUMIN SEIKATSU SHINGIKAI SHOHISHA SEISAKU BUKAI, (SHÔHISHA KEIYAKU HÔ (KASHÔ) NO GUTAITEKI NAIYÔ NI TSUITE) [INTERIM REPORT BY THE CONSUMER POLICY COMMITTEE OF THE SOCIAL POLICY COUNCIL, THE CONCRETE CONTENTS OF CONSUMER CONTRACTS LAW (TENTATIVE NAME)] (1998).

8. *See* 1993 O.J. (L 95) 29.

ever, Japan has a system of both mandatory rules [kyoko hoki—*ius cogens*] and default rules [nin'i hoki—*ius dispositivum*]. Contracting parties may not void mandatory rules.[9] If copyright law establishes a set of mandatory rules based upon public policy, any contractual licensing term that limits the user's right to use the software product will be judged unenforceable. Case law regarding the establishment of mandatory rules under copyright law does not presently exist. In my view, most provisions of copyright law are not mandatory. Moreover, in Japan, individually negotiated license contracts, especially development contracts, often limit users' rights. These limitations have not been criticized by scholars as violating public policy. In spite of this freedom to negotiate contract terms, if mandatory rules do exist under copyright law, any term that is inconsistent with the mandatory provision will be unenforceable whether the term is individually negotiated or standardized.

In Germany, the theory that default rules should be transformed into mandatory rules is quite popular. Some Japanese scholars also subscribe to this principle.[10] The premise underlying this theory is that default rules may act as guidelines in determining the fairness of any particular term in standard form contracts.[11] Thus, in the case of a mass market license via standard form contracts, a term may be voidable if it would limit rights that copyright law originally would allow users.

The following hypothetical illustrates such a case. A user buys packaged software and brings it home. There, he or she finds a license contract document inside the package. The document states that if the user agrees to the conditions listed, permission is granted to unseal the envelope containing the CD-ROM and install it on the computer. If the user does not agree to the terms, he or she may return the product and receive a refund. The latter alternative is burdensome; the consumer must expend time and effort to return the software product to the retail store or manufacturer if he or she is not prepared to agree to the licensing terms. Users who choose to use the program may be bound by the license, but may claim as unenforceable those terms which are unreasonably unfair to the user.

Another difficult question is whether Japanese courts would enforce a choice of law clause in the licensing contract stating that, for example, the law of the state of California should govern the license. In this case, con-

9. Article 91 of the Civil Code provides that if the parties to a juristic act have declared an intention which differs from any provisions of laws or ordinances that are not concerned with public policy, such intention shall prevail.

10. *See, e.g.*, SHŌJI KAWAKAMI, YAKKAN KISEI NO HŌRI [THE THEORIES FOR CONTROL OF STANDARDIZED CONTRACTS] 383 (1988).

11. *See id.* at 386-87.

siderations of consumer protection may intervene. However, consumer protection is generally weak in Japan.[12]

In conclusion, there is a growing interest in the Article 2B project in Japan. Japanese legal scholars will continue to closely monitor the development of Article 2B because of its potential impact on the general rules of electronic contracting and on contracts pertaining to informational transactions.

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12. *See generally* Jason F. Cohen, Note, *The Japanese Product Liability Law: Sending a Pro-Consumer Tsunami Through Japan's Corporate and Judicial Worlds*, 21 FORDHAM INT'L L.J. 108, 112-13 (1997) (discussing the history of Japanese product liability protection in the context of the Japanese legal system and culture); Wendy A. Green, Comment, *Japan's New Product Liability Law: Making Strides or Business as Usual?*, 9 TRANSNAT'L LAW. 543, 544-57 (1996) (discussing the development of product liability law in Japan).