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University of California
School of Law
3 Law Building
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editor@btlj.org
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CONSIDERING A RIGHT TO REPAIR SOFTWARE

Robert W. Gomulkiewicz[†]

ABSTRACT

The right to repair movement aims to extend the usability of products by allowing a consumer (or a repair professional acting on the consumer’s behalf) to fix broken products. Implicitly, the movement’s focus has been on hardware—on the right to repair cars, tractors, and phones. But as more and more of the functionality of goods comes from software, it is important to consider whether we need a right to repair software. There are practical challenges to software repair. For example, fixing software is more difficult and treacherous than fixing hardware. Complicating matters further, more and more software is embedded in hardware or runs remotely from the cloud, making it difficult, if not impossible, to repair. A right to repair software would also push deep into conflicts with intellectual property rights because repairing software might infringe a copyright holder’s exclusive right to create and distribute derivative works, a patent holder’s right to exclude making and using an invention, or a trade secret holder’s right to protect valuable information.

This Article attempts to reframe the repair issue as it applies to software in two ways. First, it discusses how a robust conversation about software repair is already well underway as part of the software industry’s vigorous debate about the pros and cons of open source software. In other words, right to repair proponents do not need to start a new conversation about the right to repair software; they can and should join the ongoing discussions about open source software. Second, the Article discusses how the most salient issues related to software repair do not involve consumers’ ability to fix software bugs but, instead, their ability to get or refuse updates from software developers and to revert to a prior version of the software if the consumer does not like the updated version. Policymakers should focus on these issues as they consider a right to repair software.

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[†] Judson Falknor Professor of Law and founding Director of the Intellectual Property Law & Policy Graduate Program, University of Washington School of Law. For useful discussions about issues raised in this Article, I thank Ethan Frederic, Mike Halverson, and Xuan-Thao Nguyen. For excellent research assistance, I thank Alice Men.

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I. INTRODUCTION

The right to repair movement wants consumer goods to remain usable for as long as possible.¹ The movement aims to extend the usability of a product by allowing a consumer (or a repair professional acting on the consumer’s behalf) to fix broken products. Implicitly, the focus has been on hardware—on the right to repair cars, tractors, and phones.² As goods have become smart, however, usability must also take software into account.³ Proponents of the

1. More fundamentally, the right to repair movement’s goals touch on consumer protection, economic fairness, sustainability, and environmentalism. *See* Aaron Perzanowski, *Consumer Perceptions of the Right to Repair*, 96 IND. L.J. 361 (2021); Leah Chan Grinvald & Ofer Tur-Sinai, *Smart Cars, Telematics and Repair*, 54 U. MICH. J.L. REFORM 283, 290-93 (2021); Leah Chan Grinvald & Ofer Tur-Sinai, *Intellectual Property Law and the Right to Repair*, 88 FORDHAM L. REV. 63, 73 (2019); *see also* CEM KANER & DAVID PELS, *BAD SOFTWARE: WHAT TO DO WHEN SOFTWARE FAILS* (1998) (discussing consumer protection in software purchases).

2. *E.g.*, Elizabeth Chamberlin, *The Elements of Repairable Design*, WALL ST. J., May 31, 2022, at R5.

3. “[T]oday virtually no one can complete a day’s work without using a computer. Not only do computers exist on your desk, but a ‘computer,’ and consequently software, is present in almost every device we use. . . Software is pervasive . . .” GLENFORD J. MYERS, COREY SANDLER & TOM BADGETT, *THE ART OF SOFTWARE TESTING* 1 (3d ed. 2012); *see* Chris Jay Hoofnagle, Aniket Kesari & Aaron Perzanowski, *The Tethered Economy*, 87 GEO. WASH. L. REV. 783 (2019); Stacy Ann Elvy, *Hybrid Transactions and the INTERNET of Things: Goods, Services, or*

right to repair have addressed this reality to an extent. For example, they have proposed a right to access security code information and diagnostic software, as well as amendments⁴ to the Digital Millennium Copyright Act's prohibitions on tampering with technical protection measures.⁵ But as more and more of the functionality of goods comes from software, it is important to consider a fundamental question: do we need a right to repair software?

To answer that question, this Article examines the repair landscape in the software industry. Understanding this landscape should be useful to policymakers and regulators as they evaluate whether legislative or regulatory intervention is needed and, if so, what its focus should be.⁶ Acting carefully is particularly important for software repairs for at least two reasons.

First, there are practical challenges to providing a right to repair software. Fixing software is often more difficult and treacherous than fixing hardware. Indeed, fixing one software bug can lead to many other bugs.⁷ To complicate matters further, more and more software either comes embedded in hardware or runs remotely from the cloud. Software distributed in these ways is particularly difficult (if not impossible) to access in a manner that would allow a consumer, or even an independent software programmer, to repair the software.

Second, a right to repair software would push deep into conflicts with intellectual property rights.⁸ Repairing software might infringe a copyright

Software, 74 WASH. & LEE L. REV. 77 (2017). Some consumers do not appreciate the trend toward so-called “smart” devices. See Justin Pot, *Stressed By Our Devices*, WALL ST. J., Apr. 16-17, 2022, at D1, D6 (“As so-called ‘smart-tech’ becomes more connected, it’s more prone to unexpected bugs and glitches. That’s why skeptics are turning to ‘dumber’ appliances and gear.”).

4. See 37 C.F.R. § 201.40 (2019).

5. See 17 U.S.C. § 1201; Lindsey Barrington, Comment, *Manufacturers Beware of Right to Repair: An Analysis of the Resurgence of Right to Repair & the Legal Consequences of Third-Party Access to Embedded Software in the ‘Internet of Things’ Era*, 20 SUSTAINABLE DEV. L. & POL’Y 24, 25-26 (2020).

6. See generally Paul Ohm & Blake Reid, *Regulating Software When Everything Has Software*, 84 GEO. WASH. L. REV. 1672, 1686-89 (2016) (highlighting the “complex and interconnected suite of policy issues, values, and law that will often arise when an agency tries to regulate hardware that has shifted to incorporate software” and noting that there are sure to be “growing pains” and “unintended consequences” from any new regulations as a result).

7. As discussed in Section V, *infra*, this concern is reflected in open source software licenses which insist on disclaimers of warranty as the trade-off for freedom to tinker.

8. See generally Leah Chan Grinvald & Ofer Tur-Sinai, *Intellectual Property Law and the Right to Repair*, 88 FORDHAM L. REV. 63, 105 (2019). The recent FTC report on the right to repair noted that “A full discussion of the interplay between intellectual property and repair is beyond the scope of this report.” FTC, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS 26 (2019) [hereinafter “FTC REPORT”]. “[A]ny action taken by industry or regulators to enable independent repair should seek input from such entities and other

holder's exclusive right to create and distribute derivative works, a patent holder's right to exclude making and using an invention, or a trade secret holder's right to protect valuable information. For example, many software developers protect their source code as a crown jewel trade secret, so mandating access to that code could jeopardize a valuable business asset.

Given the intellectual property law challenges presented by a right to repair software, this Article discusses how a right to repair software could be accommodated in intellectual property law, especially copyright law. Other commentators have explored changes to the Digital Millennium Copyright Act that would be congenial to repairing smart goods.⁹ This Article builds on that work by examining how Congress could accommodate software repairs by amending the Copyright Act's § 117, which already provides for computer hardware repairs.

However, even though policymakers *could* amend intellectual property law, *should* they do so? To answer that question, this Article highlights non-legislative avenues for software repair,¹⁰ particularly how software repair fits into existing software licensing practices. The software industry already provides multiple avenues for software repair.¹¹ Software developers regularly supply bug fixes, security patches, and a variety of other updates to their users, often at no charge.¹² In addition, software developers license their source code through various channels to enable software repairs. Most prominently, developers of open source software embrace and, indeed, extoll the right to repair software. Even when source code licensing is not available, courts have consistently recognized a fair use right under copyright law when customers reverse engineer software to discover and use uncopyrightable ideas or information.¹³ Moreover, end user licenses agreements (EULAs) for software

stakeholders and be mindful of existing law and policy supporting IP protection." FTC REPORT, at 53-54.

9. See, e.g., Madison Bower, Comment, *Keeping the DCMA Away From Functional Use*, 35 BERKELEY TECH. L.J. 1067 (2020).

10. According to the FTC: "[S]elf-regulation can help address concerns about repair restrictions in discrete markets. But, no industry sector other than the automotive industry has worked to open repair markets through a self-regulatory framework. Ways to stimulate self-regulation in markets beyond the automotive sector, however, merit further consideration." FTC REPORT, at 46.

11. Moreover, 17 U.S.C. § 117(c) provides that an owner or lessee of a computer may make a copy of a computer program for purposes of maintenance or repair of the computer. *But see* MAI Sys. Corp. v. Peak Comput., Inc., 991 F.2d 511 (9th Cir. 1993) (repair activities in this case are not permitted under copyright law).

12. See Brian X. Chen, *Yes, you can make your tech survive obsolescence*, SEATTLE TIMES, Mar. 26, 2022, at A12-13.

13. Right to repair proponents seem to equate restrictions on reverse engineering with restrictions on repair. See FTC REPORT, at 24.

could also affirmatively address repair and this Article suggests reasons why taking a proactive approach to providing information about software repair in EULAs might make good sense.

Finally, this Article attempts to reframe the repair issue as it applies to software in two ways. First, a robust conversation about software repair is already well underway because it is part of the software industry's vigorous debate about the pros and cons of open source software. In other words, right to repair proponents do not need to start a new conversation about the right to repair software, they can and should join the ongoing discussions about open source software. Second, the most salient issues related to software repair do not involve consumers' ability to fix software bugs. Instead, they involve a consumer's ability to get and refuse updates from software developers and to revert to a prior version of the software if the consumer does not like the updated version. With this reframing in mind, policymakers and regulators can evaluate more clearly and precisely whether legislative or regulatory intervention is warranted, or whether it is best to leave matters to competition in the market.

Following this Introduction, this Article proceeds in several sections. Section II provides a basic background on software forms, storage, and distribution. Section III provides a primer on legal protection for software. Building on that background, Section IV explores the landscape of software repair and links that landscape to legal protection for software. Section V then considers potential new legislative and non-legislative approaches to software repair. Section VI provides some concluding observations and reflections.

II. SOFTWARE FORMS, STORAGE, AND DISTRIBUTION

Today, software is common and ubiquitous, so it is hard to believe that not long ago, software was nearly invisible to us. In the early 1950s, *Fortune* magazine published an article titled "Office Robots," which was one of the first pieces in the popular press to discuss computers.¹⁴ The article focused on computer hardware, however, not software. The "software" nomenclature came into general usage around 1960¹⁵ and the media finally began to recognize the emergence of a discrete software industry in the early 1980s.¹⁶ By 1984 a

14. *Office Robots*, FORTUNE, Jan. 1952, at 87.

15. See FREDRICK P. BROOKS, *THE MYTHICAL MAN MONTH: ESSAYS ON SOFTWARE ENGINEERING* 4 (1975) (this book is considered one of the classic works on software development).

16. See MARTIN CAMPBELL-KELLY, *FROM AIRLINE RESERVATIONS TO SONIC THE HEDGEHOG: A HISTORY OF THE SOFTWARE INDUSTRY* (2004); MICHAEL A. CUSUMANO, *THE BUSINESS OF SOFTWARE: WHAT EVERY MANAGER, PROGRAMMER, AND*

Business Week headline proclaimed software “The New Driving Force” of the U.S. economy.¹⁷

A. FORMS OF SOFTWARE

Software consists of statements or instructions that are executed by a computer to produce a certain result.¹⁸ Or, to put it another way, software is digital information that performs a function on a computer. A software developer would say that software comes in two basic forms: source code and object code.¹⁹ Source code refers to the code written by software programmers in a computer language such as BASIC, C/C++, or Java. Source code is human-readable code—it can be understood by any programmer proficient in the language in which it is written.

Object code is derived from source code using a software tool called a compiler. Object code consists of a series of ones and zeros, so it is sometimes called binary code. Object code is stored on a computer-readable medium, such as a hard drive or CD-ROM, and executes (i.e., runs) on the computer hardware. Because of this, it is sometimes referred to as executable code or machine-readable code.

You can also think of software from the user’s point of view. The software’s visual displays and its ability to accept user input (through keyboard, mouse, touch, voice, etc.) is known as the user interface. Another aspect of software is the user’s experience or the service it provides. Software publishers sometimes call this “software as a service.” Software code in this sense remains largely invisible to the user (at least so long as the software is working properly). The world is on the verge of the computer revolution foreseen by World Wide Web creator Tim Berners-Lee, where computers, the network, and the software that drives them are invisible to the user.²⁰

ENTREPRENEUR MUST KNOW TO THRIVE AND SURVIVE IN GOOD TIMES AND BAD (2004); see also TRACY KIDDER, *THE SOUL OF A NEW MACHINE* (1981) (Pulitzer Prize winning popular book focusing on computer and software development).

17. *Software: The New Driving Force*, BUS. WK., Feb. 27, 1984, at 54.

18. See 17 U.S.C. § 101.

19. See ROBERT W. GOMULKIEWICZ, *SOFTWARE LAW AND ITS APPLICATION* 4-7 (2d ed. 2018). Code can take other forms as well, but it is sufficient to focus on source and object code for purposes of this Article.

20. See Tim Berners-Lee, James Hendler & Ora Lassila, *The Semantic Web*, SCI. AM., May 17, 2001.

B. SOFTWARE STORAGE AND DISTRIBUTION: FROM PUNCH CARDS TO THE CLOUD

Software needs a way to provide its instructions to the computer hardware. To do this, software instructions must be stored on some type of media and then retrieved by the hardware at the opportune time. At one point, software programs were stored on punch tapes or stacks of punch cards that were fed into the computer.²¹ By the 1980s, object code was stored and distributed on diskettes (8-inch and then smaller 5 ¼ and 3 ½ inch floppy disks).²² By the 1990s, object code was often stored and distributed on computer hard drives²³ as well as on CD-ROMs (compact read only memory), which had greater storage capacity than diskettes.²⁴ Today, many devices—from heart monitors to refrigerators—have become platforms capable of storing and running software. Software is distributed by hard wiring, burning, or otherwise embedding object code into the structure of these devices.²⁵ Increasingly, however, software is not stored on a local device but is accessed and run from software stored remotely, including the web of computer servers that we call “the cloud.”²⁶

III. LEGAL PROTECTION FOR SOFTWARE

The United States does not have a *sui generis* law that protects software. Instead, software developers rely on copyright, patent, trade secret, and contract law.²⁷ Copyright law protects software in its source and object code forms as well as the visual displays that it generates.²⁸ Copyright law gives the software developer the exclusive right to copy, distribute, and create derivative works of the software.²⁹ Software-related inventions may be protected by

21. See MICHAEL J. HALVORSON, CODE NATION: PERSONAL COMPUTING AND THE LEARN TO PROGRAM MOVEMENT IN AMERICA 65-66, 79-80 (2020).

22. See generally EDWARD TEJA, THE DESIGNER'S GUIDE TO DISK DRIVES (1985).

23. See THOMAS HAIGH & PAUL E. CERUZZI, A NEW HISTORY OF MODERN COMPUTING 222 (2021) (“Even the slowest hard drives transferred data far more rapidly than floppy disk drives and, for most users, could hold a complete collection of programs and working data.”).

24. *Id.* at 304-05.

25. Sometimes referred to as “firmware.”

26. HAIGH & CERUZZI, *supra* note 23, at 360-71.

27. See GOMULKIEWICZ, *supra* note 19, at 7-12.

28. See *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183 (2021); *Apple Comput., Inc. v. Microsoft Corp.*, 35 F.3d 1435 (9th Cir. 1994) (visual displays); *Apple Comput., Inc. v. Franklin Comput. Corp.*, 714 F.2d 1240 (3d Cir. 1983) (source and object code).

29. 17 U.S.C. § 106.

patent law,³⁰ although granting patents for software is currently a hotly debated topic in patent law.³¹ A patent gives the patentee the right to exclude others from making, using, or selling products that embody the patented invention.³² Software source code that is guarded from discovery using reasonable measures may be protected under trade secret law.³³ And finally, contracts work in tandem with intellectual property laws,³⁴ such as by contributing to the measures required for trade secret protection.³⁵

IV. THE LANDSCAPE OF SOFTWARE REPAIR

When software developers discuss software repairs, they talk about fixing “bugs.”³⁶ All software has bugs, even the highest quality code.³⁷ So, in a sense, software is always broken and in need of repair. This section provides an overview of how software repair has unfolded in the software industry. Some things have changed but many things have remained the same. To provide some context, however, it is useful to present a few fundamentals about software development and repair.

A. SOME FUNDAMENTALS OF SOFTWARE DEVELOPMENT AND REPAIR

A fundamental principle of software development is that the software program does not stop changing when it is delivered to the customer. Programmers call this program maintenance, which includes adding new

30. See *Alice Corp. v. CLS Bank Int'l*, 134 S.Ct. 2347 (2014); see generally 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. (Oct. 18, 2019).

31. See Andrew A. Toole & Nicholas A. Pairolo, *Adjusting to Alice: USPTO Outcomes After Alice Corp. v. CLS Bank*, in OFFICE OF THE CHIEF ECONOMIST IP DATA HIGHLIGHTS 1, 5–6 (Apr. 23, 2020); Mark A. Perry & Jaysen S. Chung, *Alice at Six: Patent Eligibility Comes of Age*, 20 CHI.-KENT J. INTELL. PROP. 64, 73 (2021).

32. See *Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523 (2017).

33. See GOMULKIEWICZ, *supra* note 19, at 10–11.

34. See generally Raymond T. Nimmer, *Breaking Barriers: The Relation Between Contract and Intellectual Property Law*, 13 BERKELEY TECH. L.J. 827 (1998). Historically, contracts have always been a significant part of the intellectual property protection equation. See Robert W. Gomulkiewicz, *Contracts Mattered as Much as Copyrights*, 66 J. COPYRIGHT SOC'Y U.S.A. 441 (2019).

35. See Robert W. Gomulkiewicz, *Fostering the Business of Innovation: The Untold Story of Bowers v. Baystate Technologies*, 7 WASH. J. L. TECH. & ARTS 445, 450–51 (2012).

36. Popularization of the word “bug” for software defects is often traced to computer pioneer Grace Hopper. When Hopper was released from active military duty, she joined the Harvard faculty at the Computation Laboratory where she continued her work on the Mark II and Mark III computers. Operators traced an error in the Mark II to a moth trapped in a relay. This bug was carefully removed and taped to the logbook. The logbook can be found in the Smithsonian’s National Museum of American History.

37. See generally MYERS ET AL., *supra* note 3, at 5–18; CEM KANER, JACK FALK & HUNG Q. NGUYEN, *TESTING COMPUTER SOFTWARE* 17–54 (2d ed. 1999).

functions and fixing defects.³⁸ The cost and complexity of software program maintenance are related to the size of the program and the number of users—the bigger the program and the more users, the larger the number of defects that will be found and in need of repair.³⁹ A distinct challenge with program maintenance is that fixing a bug creates a substantial chance of introducing another bug. Often this means that fixing a bug is two steps forward and one step back.⁴⁰ But as a large software program evolves, the cumulative effect of all the changes tends to degrade the structure of the program so that, as time goes by, the software becomes less and less well ordered. At some point, repairing a defect can become one step forward and one step back.⁴¹

A corollary to this fundamental principle of software repair is that fixing software is different and more complex than repairing hardware.⁴² As Frederick Brooks explains in his classic work on software development, *THE MYTHICAL MAN MONTH*:

Software entities are more complex for their size than perhaps any other human construct, because no two parts are alike. . . In this respect, software systems differ profoundly from computers, buildings, or automobiles, where repeated elements abound. Digital computers are themselves more complex than most things people build; they have very large numbers of states. This makes conceiving, describing, and testing them hard. Software systems have orders of magnitude more states than computers do. . . . Many of the classic problems of developing software derive from this essential complexity and its nonlinear increases with size.⁴³

B. SOFTWARE REPAIR AVENUES

1. *Early Source Code Licensing*

In the early days of software development, programmers shared their source code with other programmers to enable repairs and other modifications.⁴⁴ Sometimes the right to repair the software was captured in a

38. BROOKS, *supra* note 15, at 120.

39. *Id.* at 121.

40. *Id.* at 122.

41. *Id.* at 122-23. *See also* PASCAL ZACHERY, *SHOW STOPPER!: THE BREAKNECK RACE TO CREATE WINDOWS NT AND THE NEXT GENERATION AT MICROSOFT* (1994) (describing Microsoft's race against bugs in releasing its next generation operating system, Windows NT, including "show stopper" bugs revealed late in the development process).

42. BROOKS, *supra* note 15, at 120-21.

43. *Id.* at 183.

44. *See* ROBERT W. GOMULKIEWICZ, XUAN-THAO N. NGUYEN & DANIELLE M. CONWAY, *LICENSING INTELLECTUAL PROPERTY: LAW AND APPLICATION* 458-59 (4th ed. 2018).

written license contract, but often the right arose by implication, course of dealing, or custom. As time went by, many businesses acquired software to improve their operations, but most of the customers did not have the expertise to repair the software themselves.⁴⁵ Consequently, a customer might enter into a service contract with the developer of the software to maintain and repair the code, or a customer might hire an independent contractor who specialized in software repair. If a customer decided to hire a contractor to make software repairs, then the customer (or the contractor) had to acquire the source code from the original developer along with a license to copy and create derivative works of the software.

2. *Object Code Patches*

By the 1980s, software had become a mass market product. Some businesses continued to license source code from the original software developer for repair purposes. However, many customers did not have the inclination or the resources to manage software repairs, so software developers established channels to provide their bug fixes to customers. Sometimes this took the form of a maintenance contract, where the developer agreed to provide bug fixes in object code form directly to a customer for a certain period of time. But other channels for repair emerged as well. For example, companies such as Electronic Data Systems and Perot Systems became experts in hosting and maintaining software infrastructure for large customers.⁴⁶ These companies took on the responsibility of either using source code to repair the customer's software or acquiring and installing object code patches. Value-added-resellers (VARs),⁴⁷ systems integrators, and a variety of software services firms⁴⁸ provided maintenance and repair services for smaller end users.

As customers began to connect to the internet, software companies used that channel to provide repairs directly to customers. Initially, object code patches were simply available for download from the software developer's website. Then developers began to "push" object code to customers—the customer could choose to install the repair code with the click of a button or, to the consternation of some, the repair code just installed automatically.

45. Expertise to repair software is different, of course, than basic programming skills. *See generally* HALVORSON, *supra* note 21.

46. *See generally* JEFFERY R. YOST, MAKING IT WORK: A HISTORY OF THE COMPUTER SERVICES INDUSTRY (2017).

47. *E.g.*, *Ariz. Retail Sys., Inc. v. Software Link, Inc.*, 831 F. Supp. 759 (D. Ariz. 1993).

48. *E.g.*, *Asset Mktg. Sys., Inc. v. Gagnon*, 542 F. 3d 748 (9th Cir. 2008) (independent contractor providing software services d/b/a "Mister Computer").

3. *Software Subscriptions*

In recent times, many software developers have moved away from a business model that emphasizes distributing object code copies of their software. Now, many developers use a subscription model where software is provided remotely via the cloud.⁴⁹ In a subscription model, the customer automatically receives the most up-to-date software available during the subscription period, so repairs are simply part of the subscription's value proposition.⁵⁰

4. *Confidential Source Code Licensing and Reverse Engineering*

As discussed above, software developers often license their source code. Many software developers hold their source code as a trade secret, which adds complexity and sensitivity to source code licenses. The license contract must contain features of both a copyright and trade secret license, including the delineation of measures to protect the secrecy of the source code. And, as a practical matter, the more licenses the developer grants, the greater the risk that trade secrets will be lost. Thus, even though confidential source code licensing is common, it is not ubiquitous.

So, what happens if a customer wants but cannot get a source code license for repairs? The customer (or its contractor) can reverse engineer the object code to discover the source code.⁵¹ This is accomplished by running the object code through a software tool that reverses the compilation process, taking the software from machine-readable object code back to human-readable source code.

The Supreme Court has characterized reverse engineering as an “essential part of innovation.”⁵² Trade secret law considers reverse engineering a proper means of discovering information.⁵³ Several courts have ruled that making intermediate copies of software to uncover unprotectable ideas may amount to a defensible “fair use” under the Copyright Act.⁵⁴

49. See, e.g., Sarah E. Needleman, *Sony Videogame Unit Plan To Combine Two Services*, WALL ST. J., Mar. 30, 2022, at B4; Matt Day, *Office 365 Beats Sales of Old Office*, SEATTLE TIMES, July 21, 2017, at B15.

50. HAIGH & CERUZZI, *supra* note 23, at 383-84.

51. See generally Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575 (2002).

52. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 160 (1989).

53. See RESTATEMENT (FIRST) OF TORTS § 757 cmt. f; RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 43; UNIFORM TRADE SECRETS ACT § 1, official cmt.

54. See, e.g., *Sony Comput., Inc. v. Connectix Corp.*, 203 F.3d 596 (9th Cir. 2000); *Atari Games Corp. v. Nintendo of Am., Inc.*, 975 F.2d 832 (Fed. Cir. 1992).

However, software developers often distribute software in object code form under a license contract that prohibits reverse engineering. Thus, even though reverse engineering may not infringe a copyright, it may breach a contract. These contractual prohibitions on reverse engineering have inspired a great deal of scholarly scorn⁵⁵ but have been largely upheld by courts.⁵⁶ Even so, courts ensure that the software developer take the necessary steps to form an enforceable contract and have noted that the damages for breach of contract in many instances would be *de minimis*.⁵⁷

Moreover, as a practical matter, reverse engineering object code to discover source code can be very time consuming and may not yield that much useful information.⁵⁸ So, even though reverse engineering may be possible and legal, it may not yield the information that the customer actually needs to repair the software.

5. *Open Source Software*

In common parlance, “open source” simply refers to a philosophy of freely sharing ideas, research, or materials. In the software industry, however, open source refers to a specific software development model.⁵⁹ In that model, a programmer creates some software, posts the source code on the internet, and a community of developers grow up around the software as the community tinkers with the code.⁶⁰ As the discussion, *supra*, illustrates, software is protected by intellectual property law, so an intellectual property license is

55. See, e.g., David A. Rice, *Copyright and Contract: Preemption After Bowers v. Baystate*, 9 ROGER WILLIAMS U. L. REV. 595, 644 (2004); Jonathan Wilson, Comment, *Can a Copyright Holder Prevent Reverse Engineering - The Federal Circuit Court Holds that the Federal Copyright Act Does Not Preempt No Reverse Engineering Clauses*, 8 COMPUT. L. REV. & TECH. J. 467 (2004); Sara Bressman, Comment, *Restricting Reverse Engineering through Shrink-Wrap Licenses: Bowers v. Baystate Technologies, Inc.*, 9 B.U. J. SCI. & TECH. L. 185 (2003).

56. See Gomulkiewicz, *supra* note 35.

57. See *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1326 (Fed. Cir. 2003), *cert. denied*, 123 S. Ct. 2588 (2013).

58. See Andrew Johnson-Laird, *Reverse Engineering in the Real World*, 19 U. DAYTON L. REV. 843 (1994); Andrew Johnson-Laird, *Reverse Engineering of Software: Separating Legal Mythology from Actual Technology*, 5 SOFTWARE L.J. 331, 342-43 (1992).

59. Some programmers prefer to use the term “free software” because it connotes *freedom* rather than simply open access and liberal use. See RICHARD M. STALLMAN, *Why “Free Software” is Better than “Open Source,”* in FREE SOFTWARE, FREE SOCIETY: SELECTED ESSAYS OF RICHARD M. STALLMAN 55-56 (Joshua Gay ed. 2002). The practical distinction is explored, *infra*, in Section V, as it relates to differences in requiring the sharing of derivative works. For purposes of this Article, however, I will use the term “open source” to encompass “free software” except in instances where the two approaches diverge.

60. See generally CHRISTOPHER M. KELTY, TWO BITS: THE CULTURAL SIGNIFICANCE OF FREE SOFTWARE (2008); STEVEN WEBER, THE SUCCESS OF OPEN SOURCE (2004).

needed to facilitate open source software development.⁶¹ Specifically, a license must grant unfettered access to the software source code, an unlimited right to copy the software, and permission to create and distribute derivative works of the software.⁶²

The open source software movement has its roots in the hobbyist and scientific communities where software developers routinely distribute source code so they can collaborate on projects.⁶³ The principles of free modification and distribution of source code were institutionalized in 1985 by Richard Stallman who founded the Free Software Foundation and created the General Public License (GPL) to distribute his software.⁶⁴ The open source movement burst onto the public stage in 1998 when Netscape announced that it would license the source code of its popular Navigator web browser (which was renamed “Mozilla” and then “Firefox”).⁶⁵ Subsequently, open source programs such as the Linux kernel and Apache web server became common software technologies and large computer companies such as IBM and Intel embraced open source software. Over time, the open source movement spread to

61. See HEATHER J. MEEKER, *THE OPEN SOURCE ALTERNATIVE: UNDERSTANDING RISKS AND LEVERAGING OPPORTUNITIES* (2008); LAWRENCE ROSEN, *OPEN SOURCE LICENSING: SOFTWARE FREEDOM AND INTELLECTUAL PROPERTY LAW* (2005); Robert W. Gomulkiewicz, *How Copyleft Uses License Rights to Succeed in the Open Source Software Revolution and the Implications for Article 2B*, 36 Hous. L. Rev. 179 (1999). An organization called the Open Source Initiative (OSI) certifies licenses as “open source” if the license complies with its Open Source Definition. While OSI has approved dozens of licenses, in practice most programmers use either the Free Software Foundation’s *General Public License* (the “GPL”) or some variation of a license known as the *BSD License* (so named because it was first used to license U.C. Berkeley’s variant of UNIX, the Berkeley Software Distribution). See generally Robert W. Gomulkiewicz, *Open Source License Proliferation: Helpful Diversity or Hopeless Confusion*, 30 WASH. U. J. L. & POL’Y 261 (2009); Robert W. Gomulkiewicz, *De-Bugging Open Source Software Licensing*, 64 U. PITT. L. REV. 75 (2002).

62. See generally Brian W. Carver, *Share and Share Alike: Understanding and Enforcing Open Source and Free Software Licenses*, 20 BERKELEY TECH. L.J. 443 (2005); Josh Lerner & Jean Tirole, *The Scope of Open Source Licensing*, 21 J.L. ECON. & ORG. 20 (2005); Daniel B. Ravicher, *Facilitating Collaborative Development: The Enforceability of Mass-Market Public Software Licenses*, 5 VA. J.L. & TECH. 11 (2000).

63. See Gomulkiewicz, *How Copyleft Uses License Rights*, *supra* note 61, at 182-83.

64. See Robert W. Gomulkiewicz, *General Public License 3.0: Hacking the Free Software Movement’s Constitution*, 42 Hous. L. Rev. 1015 (2005).

65. See Jim Hamerly, Tom Paquin & Susan Walton, *Freeing the Source: The Story of Mozilla*, in *OPEN SOURCES* 197 (Chris DiBona et al. eds. 1999).

governments around the world⁶⁶ and captured even early skeptics⁶⁷ such as Microsoft, which is now heavily involved in supporting open source software.⁶⁸

In open source software development, tinkering goes far beyond software repair, of course. However, fixing bugs is always specifically mentioned as one of the core purposes and comparative advantages of open source development. In open source development, a community of programmers from around the world can constantly identify problems and create patches that fix the problems. As prominent hacker Eric Raymond puts it: “given enough eyeballs, all bugs are shallow.”⁶⁹ Thus, the basic goals of the right to repair movement coincide with the goals of the open source software movement.

V. LEGISLATING A RIGHT TO REPAIR SOFTWARE?

A. FRAMING SOFTWARE REPAIR LEGISLATION

As noted, a right to repair software would touch on a copyright holder’s exclusive right to create and distribute derivative works, a patent holder’s right to exclude making and using an invention, and a trade secret holder’s right to protect valuable information.⁷⁰ Consequently, state legislation providing for a

66. See European Commission, *Open Source Software 2020-2023: Think Open* (Oct. 21, 2020); European Commission, *The impact of Open Source Software and Hardware on technological independence, competitiveness and innovation in the EU economy* (2021) (Final Study Report); Meaghan Tobin, *China wants to build an open source ecosystem to rival GitHub*, REST OF WORLD (Jan. 19, 2021), <https://restofworld.org/2021/china-gitee-to-rival-github/>; Lauren Dobberstein, *Beijing wants to level up China’s software industry, with an emphasis on FOSS*, REGISTER (Dec. 1, 2021), https://www.theregister.com/2021/12/01/china_five_year_software_plan/.

67. See Joseph Scott Miller, *Allchin’s Folly: Exploding Some Myths about Open Source Software*, 20 CARDOZO ARTS & ENT. L.J. 491 (2002).

68. See Steven J. Vaughan-Nichols, *Open source has won, and Microsoft has surrendered*, COMPUTERWORLD (Nov. 28, 2016), <https://www.computerworld.com/article/3144063/open-source-has-won-and-microsoft-has-surrendered.html>; Asha Barbaschow, *Why open source is so important to Microsoft*, ZDNET (Feb. 28, 2018), <https://www.zdnet.com/article/why-open-source-is-so-important-to-microsoft/>.

69. ERIC S. RAYMOND, *THE CATHEDRAL AND THE BAZAAR* (1999). Raymond calls this “Linus’s Law” in honor Linus Torvalds who developed the popular Linux software. However, some people question whether open source development’s “many eyeballs” approach is better at debugging software than stringent review by a smaller group of developers. See ROBERT L. GLASS, *FACTS AND FALLACIES OF SOFTWARE ENGINEERING* (2003); Eric Schmidt & Frank Long, *Protect Open-Source Software*, WALL. ST. J., Jan. 28, 2022, at A15 (discussing security vulnerabilities in open source software and proposing a federal government center to facilitate improved security).

70. The MODEL RIGHT TO REPAIR LAW § 5(a) requires disclosure of trade secrets to the extent “necessary to provide documentation, parts, and tools on fair and reasonable terms.”

right to repair may be preempted by federal copyright and patent law.⁷¹ Trade secret law might be different because it is still largely state law, but the state legislature would have to reconcile and integrate the right to repair legislation with its trade secret statute⁷² and take into account the federal Defend Trade Secrets Act, which operates concurrently with state trade secret law.⁷³

With that said, of course, Congress could amend copyright and patent law to account for a right to repair, as some have proposed. For copyright, Congress has a prior model⁷⁴ in 17 U.S.C. 117(c)-(d).⁷⁵ That provision, focused on computer hardware, could be revised to provide for a right to software repair as follows:

(x) Software Maintenance or Repair.—Notwithstanding the provisions of section 106, it is not an infringement for the owner, lessee, or licensee of a copy of a computer program to (i) copy or authorize the copying or (ii) make or authorize the making of a derivative work, solely for purposes of repair of that computer program, if—

(1) the new copy or derivative work is for use only by the owner, lessee or licensee; and

(2) any new copy or derivative work is used in no other manner.

However, some proposed right to repair laws do not require disclosure of trade secrets. *See, e.g.*, H.R. 1649, 29th Leg., Reg. Sess. § 8 (Haw. 2018); H.R. 3030, 100th Gen. Assemb., Reg. Sess. § 35 (Ill. 2017). *See also* Ofer Tur-Sinai & Leah Chan Grinvald, *Repairing Medical Equipment in Time of Pandemic*, 52 SETON HALL L. REV. 484 (2021) (discussing trade secrets in the context of the Critical Medical Infrastructure Right to Repair Act).

71. *See* Bonito Boats, Inc. v. Thundercraft Boats, Inc., 89 U.S. 141 (1989). *See generally* Leah Chan Grinvald & Ofer Tur-Sinai, *Intellectual Property Law and the Right to Repair*, 88 FORDHAM L. REV. 63, 105 (2019); Nicholas A. Mirr, Comment, *Defending the Right to Repair: An Argument for Federal Legislation Guaranteeing the Right to Repair*, 105 IOWA L. REV. 2393 (2020).

72. States do this, for example, with their freedom of information and public records laws which mandate transparency but account for trade secrets. *See* John Delaney, Comment, *Safeguarding Washington's Trade Secrets: Protecting Businesses from Public Records Requests*, 92 WASH. L. REV. 1905 (2017). Another example is California's law prohibiting covenants-not-to-compete which has to be reconciled with its trade secret statute. *See* Robert W. Gomulkiewicz, *Leaky Covenants-Not-to-Compete as the Legal Infrastructure for Innovation*, 49 U.C. DAVIS L. REV. 251, 291-94 (2015).

73. 18 U.S.C. §§ 1831-39 (2016).

74. Congress could also look to the example of the European Union's software directive, specifically Articles 4(1) and 5(1). Directive 2009/24/EC of the European Parliament and of the Council on the legal protection of computer programs, 2009 O.J. (L 111).

75. *See generally* Alan Galloway, Comment, *Preserving Competition for Computer Maintenance in the DMCA Era: 17 U.S.C. Sec. 117(c) and Sec. 1201(a)(1) after StorageTek*, 22 BERKELEY TECH. L.J. 293 (2007).

(z) Definitions.—For purposes of this section—

(1) the “repair” of a computer program is the restoring of the computer program to the state of working in accordance with its original specifications and any changes to those specifications authorized by the author of the computer program.

Patent law has developed a right to repair doctrine as part of its exhaustion doctrine.⁷⁶ Patent’s exhaustion doctrine (in contrast to copyright’s) is based on common law rather than federal statute.⁷⁷ However, there is no reason why Congress could not add a right to repair into the Patent Act.

If Congress decides to permit a right to repair software, then it should also consider addressing the availability of repair information. For software repairs, this would mean that a customer could distribute its bug fixes and security patches for anyone to use. This distribution touches on a right granted by the Copyright Act—the exclusive right to control the distribution of a work, including any derivative work. By touching on the distribution right as well as the right to create derivative works, the legislation would push deeply into fundamental copyrights.⁷⁸ In addition, as described in the next Section, lawmakers would be wading into a heated debate in the open source community about whether distribution of derivative works should be mandatory or voluntary.

B. REFRAINING FROM SOFTWARE REPAIR LEGISLATION?

Congress *could* act—but *should* Congress act? Arguably, the software industry is well down the road in considering a right to repair software because software repair has been subsumed in the ongoing evaluation of the pros and cons of open source software. Indeed, state and federal governments in the United States and overseas have been deeply involved in the conversation

76. See *Wilson v. Simpson*, 50 U.S. 109, 123 (1850); *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 345 (1961); *Jazz Photo Corp. v. Int’l Trade Comm’n*, 264 F.3d 1094, 1102 (Fed. Cir. 2001); *Husky Injection Molding Sys. v. R&D Tool & Eng’g Co.*, 291 F.3d 780, 784-85 (Fed. Cir. 2002). See generally Mark D. Janis, *A Tale of the Apocryphal Axe: Repair, Reconstruction, and the Implied License in Intellectual Property Law*, 58 MD. L. REV. 423, 427 (1999); Natali Richter, Comment, “Substantial Embodiments” and “Readily Replaceable Parts”: A Contemporary Understanding of the Doctrine of Permissible Repair, 59 U. LOUISVILLE L. REV. 333 (2021).

77. *Impression Prods., Inc. v. Lexmark Int’l, Inc.*, 137 S. Ct. 1523, 1531-32 (2017). See Robert W. Gomulkiewicz, *Is the License Still the Product?*, 60 ARIZ. L. REV. 425 (2018) (comparing copyright’s statutory approach to patent’s common law approach to the exhaustion doctrine).

78. This would also touch on trade secret rights at both the state and federal levels as discussed, *supra*, in Section III.

about utilizing open source,⁷⁹ with some opting to privilege procurement of open source software at least in part because it provides the right to repair. The issues are nuanced and evolving as large companies such as Alphabet (Google), Amazon, Apple, IBM, Intel, Meta Platforms (Facebook), and Microsoft incorporate open source into their business models. Many companies now use a combination of binary use and open source code in their operations, leading some to observe that “mixed source” may be the best approach.⁸⁰

All this suggests that legislative action may be premature or even unnecessary. Perhaps it is best to let the software industry’s approach to repair evolve and mature, particularly because the government has a good seat at the table through its procurement power.⁸¹ Two issues illustrate the prudence of legislative caution.

First, software repairs raise the question of who should be liable if damage or injury occurs due to the repair. This is a core issue in software transactions⁸² and has particular resonance because of the cascading effect that is created when fixing one bug leads to other (sometimes more problematic) bugs.⁸³ The open source community has well settled and deeply held views on that issue. The open source community believes that anyone who contributes to open source development should not bear liability for those contributions. As the author of the Open Source Definition, Bruce Perens, puts it: “If free software authors lose their right to disclaim all warranties and find themselves getting sued over the performance of the programs that they’ve written, they’ll stop contributing free software to the world. It’s to our advantage as users to help

79. See, e.g., EUROPEAN COMMISSION, ECODESIGN PREPARATORY STUDY ON MOBILE PHONES, SMART PHONES AND TABLETS: FINAL REPORT 419-20 (Feb. 2021).

80. See Greg R. Vetter, *Commercial Free and Open Source Software: Knowledge Production, Hybrid Appropriability, and Patents*, 77 *FORDHAM L. REV.* 2087 (2009). See generally Ronald J. Mann, *Commercializing Open Source Software: Do Property Rights Still Matter?*, 20 *HARV. J.L. & TECH.* 1 (2006); Jonathan Zittrain, *Normative Principles for Evaluating Free and Proprietary Software*, 71 *U. CHI. L. REV.* 265 (2004).

81. See THE PEOPLE’S CODE, (Aug. 8, 2016), <https://obamawhitehouse.archives.gov/blog/2016/08/08/peoples-code> (“As agencies across the Federal Government take steps to improve access to their source code, the amount of available Federal open source software will grow. In the coming months, we will launch a new website – Code.gov – so that our nation can continue to unlock the tremendous potential of the Federal Government’s software.”); U.S. Dept. of Com., OPEN SOURCE CODE, <https://www.commerce.gov/about/policies/source-code>; U.S. Dept. of Def., DOD OPEN SOURCE SOFTWARE FAQ, (Oct. 28, 2021), <https://dodcio.defense.gov/Open-Source-Software-FAQ/>. State governments are also active procuring open source software. See, e.g., *Code California Playbook*, CAL. DEPT. OF TECH. LETTERS, TL 18-02, <https://codecagov-playbook.readthedocs.io/en/latest/policy/>.

82. See generally GOMULKIEWICZ ET AL., *supra* note 44.

83. See generally MYERS ET AL., *supra* note 3, at 5-18.

the author protect this right.”⁸⁴ That stance is instantiated in all open source licenses, including the GPL and the BSD License.

Second, the open source community holds distinct views on whether sharing (i.e., making available⁸⁵) modifications should be voluntary or mandatory. Indeed, some of the most fervent debates by hackers⁸⁶ involve a debate about this proposition because it raises the issue of software “freedom.” On one side of the freedom debate, the developers who follow the approach of Richard Stallman and the Free Software Foundation believe that developers should be *required* to share modifications because that will lead to the most code being available for free use.⁸⁷ In other words, the more free code made available, the more freedom. This mandatory “share alike” is enforced through the terms and conditions of the GPL and other so-called copyleft licenses.⁸⁸ On the other side of the debate, some developers believe that true freedom means the right to choose whether or not to share a modification. They agree that sharing code is often a good thing, but they think it is wise and fair to let developers pick and choose when to do so. Developers who follow this philosophy use so-called “permissive licenses” such as the BSD License.⁸⁹

The main point is that the software industry has well vetted views on liability for repairs and on the distribution of repairs. Thus, lawmakers should tread carefully before legislating in this arena.⁹⁰ As suggested in the next section, it may be prudent to reframe and even rename what a “right to repair” should mean in the context of software repairs.

84. Bruce Perens, *The Open Source Definition*, in OPEN SOURCES, *supra* note 65, at 171, 181.

85. For software repair, “making available repair information and tools” (as urged by right to repair proponents) would usually mean providing access and rights to use source code.

86. The dual meaning of the word “hacker” provides a useful reminder that tinkering with software can be done for both constructive and destructive purposes. In common parlance “hacker” refers to programmers who create or use software for malicious purposes. See ERIC S. RAYMOND, *THE NEW HACKER’S DICTIONARY* 233-34 (3d ed. 1999). However, many in the software industry use the term “hacker” to refer to serious programmers who enjoy tinkering with code, as in “I’m hacking some code to fix that bug.” *Id.* at 231. See also STEVEN LEVY, *HACKERS: HEROES OF THE COMPUTER REVOLUTION* (1984).

87. See RICHARD M. STALLMAN, *What is Copyleft?* in FREE SOFTWARE, FREE SOCIETY: THE SELECTED ESSAYS OF RICHARD M. STALLMAN 89 (Joshua Gay ed. 2002).

88. See Richard A. Stallman, *The GNU Operating System and the Free Software Movement*, in OPEN SOURCES, *supra* note 65, at 53, 59-60.

89. See HEATHER J. MEEKER, *THE OPEN SOURCE ALTERNATIVE: UNDERSTANDING RISKS AND LEVERAGING OPPORTUNITIES* (2008); LAWRENCE ROSEN, *OPEN SOURCE LICENSING: SOFTWARE FREEDOM AND INTELLECTUAL PROPERTY LAW* (2005).

90. With that said, however, Europe has already passed legislation addressing software repair. See Directive 2009/24/EC of the European Parliament and Council on the protection of computer programs, arts. 4(1), 5(1), 2009 O.J. (L 111).

C. RE-FRAMING AND RE-NAMING A “RIGHT TO REPAIR” SOFTWARE?

As mentioned above, consideration of a right to repair software has already been subsumed in the ongoing consideration of open source software. Over the past two decades in particular, the discussion of the pros and cons of open source has been robust and nuanced. However, it might also be fair and more useful to reframe and rename a “right to repair” software as a right to: (1) *revert* to prior versions of a software product; (2) *refuse* updates; and (3) *receive* repairs for a certain period of time.⁹¹ In the context of software repairs, these “three R’s” make the most sense.⁹²

(i) *Reverting*—Software programmers have an insatiable appetite for updating their code. But not every *update* is an *upgrade* from the user’s point of view. Instead, some updates actually degrade the useability of the software, at least for some users. When that is the case, some users want the ability to revert back to a prior version of the software. This ability to revert would include both access to and the right to use the prior version as well as any information necessary to restore the user’s system to the prior condition and could address restoring support for applications and hardware devices that interface with the software.

(ii) *Refusing*—As mentioned earlier, many software companies now automatically install bug fixes, security patches, and other updates via the internet. On the one hand this is convenient for software users. On the other hand, customers do not welcome every new update or find the timing of the update disruptive. An ability to refuse updates could address both these concerns.

(iii) *Receiving*—Software programmers’ drive to improve code also presents a business opportunity: the ability to sell updates. Software businesses give

91. Indeed, these “rights” are often the focus of policymakers in Europe. *See, e.g.*, EUROPEAN COMMISSION, EXPLANATORY MEMORANDUM FOR THE ECODESIGN CONSULTATION FORUM: ECODESIGN AND ENERGY LABELLING—MOBILE PHONES, CORDLESS PHONES AND TABLETS 8 (2021) (“Software updates of the operating system shall be provided for 5 years, comprising security updates and for at least the first 3 years also functionality updates; Such updates shall be provided within a reasonable time after the market introduction of a related release; Updates shall not have an adverse effect on device performance, or the user has to have the option to downgrade to the prior version of the operating system . . .”); EUROPEAN COMMISSION, PREPARATORY STUDY FOR THE ECODESIGN AND ENERGY LABELLING WORKING PLAN 2020-2024, at 8-29 (Feb. 2021); EUROPEAN COMMISSION, PREPARATORY STUDY ON MOBILE PHONES, SMART PHONES, AND TABLETS: FINAL REPORT 418-20 (Feb. 2021).

92. Related to repair, many software power users and tinkerers appreciate the ability to customize their software in various ways. *See* HALVORSON, *supra* note 21, at 169-83. Customization could be included in the repair zone when considering a right to repair software.

away some updates for free and charge for others, especially major upgrades to a product. From the consumer's point of view, the decision to pay for an upgrade is basically a decision to buy a new product. Consumers vary in their appetite for investing in upgrades, with some always upgrading to the "new and improved" and others sticking with the "tried and true." For consumers in the latter category, support for the prior version is critical. But, of course, software businesses have every incentive to move on from old versions—it is expensive and often increasingly complicated to continue to repair old versions. For this reason, software companies want to sunset repairs, but consumers want the software company to continue to make and provide repairs.

Should legislators intervene by mandating the three R's: a right to revert to a prior version, refuse updates, and/or to receive repairs for a certain period of time? Is this a matter of consumer protection? Fair competition? Good environmental stewardship? Or would such a mandate be unwarranted government intervention in normal business practices best left to market forces⁹³ because business models provide a variety of value propositions that depend on ongoing maintenance obligations and rights to new versions?⁹⁴ Whatever the answers to these questions, a better framing (and naming) of the issue than calling it a "right to repair" should enable crisper legislative decision making.

One idea would be for legislators or regulators to mandate or to nudge software companies to disclose what the consumer will receive by way of reversion rights as well as any rights to receive and refuse repairs. For example, this could be a separate section in the EULA that specifically addresses software repairs. Many EULAs do address repair issues as reflected in Appendix I, which provides excerpts from a variety of software EULAs. However, the content and clarity of this information could be improved

93. See Sarah E. Needleman, *Sony Videogame Unit Plans To Combine Two Services*, WALL ST. J., Mar. 30, 2022, at B4 (describing competition between Sony and Microsoft in video game subscription services). Cf. Ann-Marie Alcantara, *More Join Subscription Bandwagon*, WALL ST. J., Mar. 31, 2022, at B4 (describing how a variety of industries, including the restaurant and airlines industries, are experimenting with subscription business models).

94. Microsoft's EULA for Windows Server, for instance, provides the right to downgrade to a prior version. See also Nicole Nguyen, *That New Chromebook Has an Expiration Date*, WALL ST. J., Mar. 8, 2022, at A16 (describing the implications of Google's Auto Update Policy, which guarantees software updates and security support for a certain number of years, on the useful life of Chromebook computers); Brian X. Chen, *supra* note 12, at A12-13.

dramatically.⁹⁵ Improving disclosure is important because it supports consumer choice and could also improve competition on license terms.⁹⁶

VI. CONCLUSION

Software is pervasive and plays an increasingly large role in the value of consumer products, so should a right to repair include software repair? A right to repair software must take into account the complexity of software repairs, especially as more software is embedded in goods or accessed from the cloud. Fortunately, the software industry has a long history of providing software repairs—bug fixes, security patches, and updates—through a variety of channels. Of particular note is the software industry’s embrace of open source software which facilitates the ability of software developers to find and fix bugs and software subscriptions which include software repairs. As policymakers consider whether government intervention is warranted, the current landscape of software repair provides a useful point of departure, perhaps narrowing the focus to whether legislative or regulatory intervention would be warranted for providing the right to revert to a prior version of a software program, to refuse updates, or obligating a software developer to provide bug fixes and security patches for a certain period of time.

95. See generally Robert W. Gomulkiewicz, *Getting Serious About User-Friendly Mass Market Licensing for Software*, 12 GEO. MASON L. REV. 687 (2004).

96. Cf. Emily G. Brown, Comment, *Time to Pull the Plug? Empowering Consumers to Make End-of-Life Decisions for Electronic Devices Through Eco-Labels and Right to Repair*, 2020 U. ILL. J.L. TECH. & POL’Y 227, 249-50 (2020); Rita Imran, *EU votes for Right to Repair law, France to label products with repairability ratings from 2021*, ITHINKDIFFERENT, (Nov. 27, 2020), <https://www.ithinkdiff.com/eu-right-to-repair-france-repairability-ratings/>.

APPENDIX: Updates and Reversions in EULA

Software Product	“Updates”	“Reversion”
Microsoft Windows Server	<p>The software periodically checks for system updates and may install them for you. You may obtain updates only from Microsoft or authorized sources, and Microsoft may need to update your system to provide you with those updates. By accepting this agreement, you agree to receive these types of automatic updates without any additional notice.</p>	<p>Downgrade Rights. Instead of creating, storing, and using the software, for each permitted instance, you may create, store, and use an earlier version of the software for so long as Microsoft provides support for that earlier version as set forth in (aka.ms/windowslifecycle). This agreement applies to your use of the earlier versions. For the avoidance of doubt, by electing this downgrade option: (i) you will not have the right to create, store, or use a greater number of instances of the software than are permitted under this agreement, and (ii) you will need to acquire licenses for all cores in the physical server in accordance with Section 3 of this agreement. If the earlier version includes different components not covered in this agreement, the terms that are associated with those components in the earlier version of these editions apply to your use of them. Neither the manufacturer or installer, nor Microsoft is obligated to supply earlier versions or other editions to you. At</p>

		<p>any time, you may replace an earlier version or edition with this version and edition of the software.</p>
Adobe	<p>Updating. The Software may cause Customer's Computer, without additional notice, to automatically connect to the Internet (intermittently or on a regular basis) to (a) check for Updates that are available for download to and installation on the Computer and (b) notify Adobe of the results of installation attempts.</p>	<p>Subject to the Permitted Number of Computers for the Subscription Edition, Adobe may allow Customer to install and use the most recent prior version of the Subscription Edition and the current version of the Subscription Edition on the same Computer during the License Term.</p> <p>If the Software is an Update to a prior version of Adobe software (the "Prior Version"), then Customer's use of this Update is conditional upon its retention of the Prior Version. Therefore, if Customer validly transfers this Update pursuant to Section 4.6, the Customer must transfer the Prior Version along with it. If Customer wishes to use this Update in addition to the Prior Version, then Customer may only do so on the same Computer on which it has installed and is using the Prior Version. Any obligations that Adobe may have to support Prior Versions during the License Term may end upon the availability of this Update. No other use of the Update is permitted.</p>

		Additional Updates may be licensed to Customer by Adobe with additional or different terms.
Corel Draw (General)	<p>You acknowledge that We have no express or implied obligation to announce or make available any updates, enhancements, modifications, revisions, or additions to the Software and that this EULA does not give You any rights in or to any of the foregoing. We may also offer additional support and/or maintenance services for certain Software under the terms of a separate agreement. If You purchase such support and/or maintenance services with the Software, such services will be provided to You pursuant to the terms and conditions of that separate agreement. We reserve the right to amend, modify, suspend, or terminate Our support and/or maintenance policies at any time.</p> <p>We may, from time to time, download and install Software updates, bug fixes, feature enhancements, or improvements ("Updates") automatically on the devices under Your control or possession unless You decline such Updates beforehand. If You do not want to receive Updates, You must notify Us of Your choice, and, where the Software permits, disable the function that allows for automatic Updates. Otherwise, You agree to receive such Updates from Us as part of Your use of the Software. If the Update is not installed, You may not receive full benefit of the Software or</p>	<p>If You are an Entity that is acquiring, or allowing the acquiring of Perpetual Licenses or OEM Licenses for use of the Software on or through Your Assets, and want to use, or are allowing the use of, different (downgraded or upgraded) versions of such Software on or through Your Assets, then You must purchase: (a) a Subscription License for the business edition of the Software, where available, under the terms of the BULA, and/or (b) a Perpetual License for the business edition of the Software, where available, under the terms of the BULA along with maintenance and support services for such Software in accordance with Our terms for providing such services. Without such purchase You cannot use, and must not allow the use of, any different versions of the Software (other than the version associated with the Perpetual License and/or OEM License) on or through any of Your Assets.</p>

the Software may not perform properly. We have no obligation to provide any support to the Software without the installation of such Updates. We also have no obligation to create Updates on any schedule and retain sole discretion to make Updates available. If an Update is necessary to comply with applicable law, to address a threatened or actual security breach in the Software under license, to replace technologies that may infringe third-party intellectual property rights, or for any other reason of similar significance to Us ("**Mandatory Updates**"), We will deliver such Mandatory Update to You along with a notice that the Update is a Mandatory Update. You shall promptly install the Mandatory Updates, but in any event no later than ten (10) business days after receipt. Your failure to timely install Mandatory Updates may result in the termination or suspension of Your license(s) for affected Software.

We may also, from time to time, perform scheduled maintenance of the infrastructure and programming used to provide the Software, during which time You may experience some disruption to that Software or access to any associated accounts or services. Whenever reasonably practicable, We will provide You with advance notice of such maintenance. You acknowledge that, from time to time, We may need to perform emergency maintenance without providing You advance notice, during which time We may temporarily suspend Your access to, and use of, the Software or any

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Riot Games	<p>In an effort to constantly improve the Riot Services, evolve our games and keep the Riot Services, safe, fun,</p>	N/A

	<p>and secure, you agree that we may change, modify, update, suspend, “nerf,” or restrict your access to any features or parts of the Riot Services, including Virtual Goods (e.g., we might change some features of Virtual Goods for regulatory or legal reasons or to improve the game experience), and may require that you download and install software and updates to any software required to support the Riot Services, at any time without liability to you. You also understand and agree that any such changes or updates to the Riot Services might change the system specifications necessary to play our games, and in such a case, you, and not Riot Games, are responsible for purchasing any necessary additional software or hardware in order to access and play our games. You also understand and agree that we may use background patching to automatically update our games and software with or without notice to you.</p>	
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Evernote	<p>In connection with any modification of the Evernote Service, Evernote may automatically download software updates on your computers and devices from time to time with the intention of improving, enhancing, repairing and/or further developing the Evernote Service. Evernote will endeavor to provide you with the option of whether or not to install the update; however, in certain circumstances (e.g., security risks), Evernote may require you to</p>	N/A

	<p>install the update to continue accessing the Evernote Service. In all cases, you agree to permit Evernote to deliver these updates to you (and you to receive them) as part of your use of the Evernote Service.</p>	
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SHANE RATTENBURY, THE PRODUCTIVITY COMMISSION, AND THE RIGHT TO REPAIR: INTELLECTUAL PROPERTY, CONSUMER RIGHTS, AND SUSTAINABLE DEVELOPMENT IN AUSTRALIA

Matthew Rimmer[†]

ABSTRACT

This Article tells the story of the fight for the right to repair in Australia. It is intended to complement comparative research elsewhere, looking at the right to repair in the United States and Canada; the United Kingdom, Switzerland, and the European Union; and other jurisdictions, such as South Africa. Part II of this paper considers the politics of the right to repair in Australia. It explains how Australian Capital Territory (ACT) Attorney-General Shane Rattenbury has sparked a larger law reform inquiry by the Productivity Commission into the right to repair. It highlights how Australia is particularly promising in terms of law reform—due to an unusual consensus amongst the major political parties across the usual divides. Part III focuses on the debate over intellectual property and the right to repair in Australia, and the recommendations of the Productivity Commission. It argues that there needs to be more than just copyright law reform; there should be matching reforms in designs law, trade mark law, patent law, trade secrets, and data protection. Part IV considers the recommendations of the Productivity Commission regarding consumer law and competition policy. It highlights the need for further law enforcement action to protect the right to repair. Part V explores the discussion about the right to repair in the context of sustainable development—looking at submissions on e-waste, the circular economy, and sustainable development. It contends that there should be greater law reform in these areas (going well beyond the limited recommendations of the Productivity Commission in this area). Part VI concludes by noting that the Productivity Commission has asked for action in particular markets in respect of automobiles, agricultural machinery, and tablets. The Article calls for the Australian Parliament

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† Dr. Matthew Rimmer (BA/LLB ANU, PhD UNSW) is a Professor in Intellectual Property and Innovation Law at the Faculty of Business and Law in the Queensland University of Technology (QUT). His research on the right to repair has been supported by the Australian Research Council Discovery Project, “Inventing the Future: Intellectual Property and 3D Printing” (2017–2021) (DP 170100758). This paper builds upon, expands, and distils the author’s submission to the Australian Productivity Commission during its inquiry into the right to repair. This paper was presented at the University of California, Berkeley School of Law conference on the emergent right to repair. Earlier versions of the work have been presented at Australian events in 2020, 2021, and 2022. The author is grateful to the convenors of the event, Professor Aaron Perzanowski and Professor Pamela Samuelson, and to the symposium participants for their guidance and inspiration. He is thankful for the help and patience of the Symposium Editors, Rutuja Deshpande, Peyton Sharp, and Joanna Leung, and the Article Editors, Nikki Seichepine, Elizabeth Oh, and Ross Moody.

to go further and recognise a more broadly based right to repair. Such a recognition will require a holistic approach, involving reforms to intellectual property laws, consumer rights and competition policy, and regulation of the environment and sustainable development. It maintains that it is necessary that the jurisdiction of Australia keep pace on the right to repair with its comparative partners.

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I. INTRODUCTION

Historically, there was a strong tradition of repair and recycling and tinkering in colonial Australia—especially given the distance from the imperial center of the United Kingdom.¹ There has also been a significant history of the use of repair by Indigenous communities—particularly in remote and regional Australia. The 2001 television show *Bush Mechanics* has highlighted the ingenuity of Indigenous car mechanics in Australia.² The right to repair, accordingly, could be seen as part of the larger framework of issues in respect of Indigenous intellectual property.³

With the development of a modern economy, the traditional culture of independent repair has come under threat in Australia. The Australian Productivity Commission has observed: “There are growing concerns in Australia and overseas that repairs of consumer products are becoming more difficult (sometimes impossible), resulting in costly and wasteful outcomes for consumers and the broader community.”⁴ The Productivity Commission has explained that there are a range of barriers and obstacles to the right to repair:

Increasing product complexity means that consumers often have to rely on the manufacturer of the product (or the manufacturer’s authorised repairer) to fix or maintain their product. Manufacturers are typically the main and sometimes only provider of repairs for their products. This has contributed to widespread concerns that some manufacturers are using their strong position in repair markets to restrict competition. Many participants made claims of manufacturers refusing to supply independent repairers with the parts, tools and information they need to do repairs.⁵

The Productivity Commission acknowledged that the right to repair is a multi-faceted issue, raising questions of “consumer and competition law, intellectual property protections, product design and labelling standards, and environmental and resource management.”⁶ The law reform body noted that there are a variety of definitions of the right to repair (sometimes depending

1. KATHERINE WILSON, *TINKERING: AUSTRALIANS REINVENT DIY CULTURE* (2019).

2. *Bush Mechanics—The Series* (Warlpiri Medi Association 2001); *Bush Mechanics: The Exhibition*, NATIONAL MOTOR MUSEUM, <https://motor.history.sa.gov.au/events/bush-mechanics-the-exhibition/> (last visited March 22, 2023).

3. MATTHEW RIMMER, *INDIGENOUS INTELLECTUAL PROPERTY: A HANDBOOK OF CONTEMPORARY RESEARCH* (2015); TERRI JANKE, *TRUE TRACKS: RESPECTING INDIGENOUS KNOWLEDGE AND CULTURE* (2021).

4. PRODUCTIVITY COMM’N, *RIGHT TO REPAIR: INQUIRY REPORT NO. 97 3* (2021) <https://www.pc.gov.au/inquiries/completed/repair/report/repair-overview.pdf>.

5. *Id.* at 3.

6. *Id.*

upon the disciplinary lens from which one viewed the topic). The Productivity Commission commented that the recognition of the right to repair would affect a range of stakeholders—including “balancing the (sometimes competing) interests of consumers, manufacturers, suppliers[,] and repairers.”⁷

As acknowledged by the Productivity Commission, the topic of the right to repair is a prominent issue in a number of fields of industry and technology. There has been a longstanding debate over access to spare parts for motor vehicles in Australia. There has also been an intense discussion over the repair of agricultural machinery and vehicles. Developments in respect of consumer electronics have also raised issues in respect of repair.⁸ For example, the information and communications technology revolution has created new contexts for discussions around repair.⁹ In the sphere of telecommunications, there has been a lot of discussion in respect of fixing mobile phones and tablets. The public health crisis in respect of COVID-19 has highlighted the importance of medical repairs.¹⁰ The rise of “Industry 4.0” technologies—such as 3D printing, robotics, and advanced manufacturing—have provided new contexts in which to consider the topic of repair.¹¹ Indeed, it could be said that the right to repair is growing in importance as a result of the evolution of a number of forms of technology.

This Symposium paper tells the story of the fight for the right to repair in Australia. It is a work of contemporary history, which seeks to represent the multivocal debate over the right to repair in Australia. It is intended to complement comparative research elsewhere, looking at the right to repair in

7. *Id.* at 4.

8. *Id.* at 73–76.

9. *Apple Founder Steve Wozniak Backs Right-To-Repair Movement*, BBC NEWS (July 8, 2021), <https://www.bbc.com/news/technology-57763037>.

10. Jorge Contreras, *Research and Repair: Expanding Exceptions to Patent Infringement in Response to a Pandemic*, 7 J.L. & BIOSCIENCES 1, (2020).

11. DINUSHA MENDIS, MARK LEMLEY & MATTHEW RIMMER, *3D PRINTING AND BEYOND: INTELLECTUAL PROPERTY AND REGULATION* (2019).

the United States,¹² Canada,¹³ the United Kingdom,¹⁴ Switzerland,¹⁵ the European Union,¹⁶ and other jurisdictions such as South Africa.¹⁷ Part II of

12. Chris Jay Hoofnagle, Aniket Kesari & Aaron Perzanowski, *The Tethered Economy*, 87 GEO. WASH. L. REV. 783, 783–874 (2019); Leah Chan Grinvald & Ofer Tur-Sinai, *The Right to Repair: Perspectives from the United States*, 31 AUSTL. INTELL. PROP. J. 98, 98–110 (2020); see generally AARON PERZANOWSKI, *THE RIGHT TO REPAIR: RECLAIMING THE THINGS WE OWN* (2022).

13. An Act to amend the Copyright Act (diagnosis, maintenance or repair) 2021, HC Bill [C-272] (Can.) <https://parl.ca/DocumentViewer/en/43-2/bill/C-272/first-reading>; HC Deb; The Hon. Bryan May, Copyright Act, PRIVATE MEMBERS BUS. (15 Apr. 2021) (150) col. 1825, <https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239176>; Anthony Rosborough, *If a Machine Could Talk, We Could Not Understand It: Canadian Innovation and the Copyright Act's TPM Interoperability Framework*, 19 J.L. & TECH. 141, 141–71 (2021) [hereinafter Rosborough, *If a Machine Could Talk*]; Anthony Rosborough, *Canada needs Right-to-Repair Legislation*, POL'Y OPTIONS—POLITIQUES (May 14, 2021), <https://policyoptions.irpp.org/magazines/may-2021/canada-needs-right-to-repair-legislation/> [hereinafter Rosborough, *Canada needs Right-to-Repair Legislation*]; Navneet Alang, *A Phone Call Canada Must Take: The Right to Repair our Digital Devices Jibes with Environmental Responsibility*, TORONTO STAR (July 17, 2021), <https://www.thestar.com/business/opinion/2021/07/17/a-phone-call-canada-must-take-the-right-to-repair-our-digital-devices-jibes-with-environmental-responsibility.html>; Meera Nair, *Canadians Should Have a Right to Repair Their Own Devices*, EDMONTON J. (May 4, 2022), <https://edmontonjournal.com/opinion/columnists/opinion-canadians-should-have-a-right-to-repair-their-own-devices>.

14. CHRISTOPHER HEATH & ANSELM KAMPERMAN SANDERS, SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS (2009); THE MANCHESTER DECLARATION 2018, <https://manchesterdeclaration.org/> (last visited March 22, 2023); Osborne Clark, *UK Poised to Require 'Right to Repair' Information for Consumers*, LEXOLOGY (Apr. 15, 2021), <https://www.lexology.com/library/detail.aspx?g=8b139876-7f92-4695-918b-0e8262bf6621>.

15. NICOLAS NOVA & ANAIS BLOCH, DR. SMARTPHONES: AN ETHNOGRAPHY OF MOBILE PHONE REPAIR SHOPS (2020); *Swiss Consumers want Repair Label on Electronic Appliances*, SWISSINFO.CH (Oct. 21, 2020), <https://swissinfo.ch/eng/business/swiss-consumers-want-repair-label-on-electronic-appliances/46111198#.YPZ4KnN4Mfg.twitter> [hereinafter *Swiss Consumers*].

16. Estelle Derclaye, *Repair and Recycle Between IP Rights, End User License Agreements, and Encryption*, in SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS 21–56 (Christopher Heath & Anselm Kamperman Sanders eds., 2009); Anthony Rosborough, *Unscrewing the Future: The Right to Repair and the Circumvention of Software TPMs in the EU*, 11 J. INTELL. PROP., INFO. TECH. & E-COM. L. 26, 26–48 (2020); Taina Pihlajarinne, *European Steps to the Right to Repair: Towards a Comprehensive Approach to a Sustainable Lifespan of Products and Materials?*, 31 Austl. Intell. Prop. J. 111, 111–19 (2020); Taina Pihlajarinne & Rosa Ballardini, *Paving the Way for the Environment: Channelling 'Strong' Sustainability into the European IP System*, 42 EUR. INTELL. PROP. REV. 239, 239–50 (2020); Sahra Svensson-Hoglund, Jessika Luth Richter, Eléonore Maitre-Ekern, Jennifer D. Russell, Taina Pihlajarinne & Carl Dalhammar, *Barriers, Enablers and Market Governance: A Review of the Policy Landscape for Repair of Consumer Electronics in the EU and the U.S.*, 288 INT'L INST. FOR INDUS. ENV'T ECON. 125488, (2021); Sean O'Neill, *European Union Puts Teeth in Right to Repair*, 7 ENGINEERING 1197, 1197–98 (2021).

17. See the proposal for a right to repair in South Africa as part of the response to the COVID-19 crisis. *Health Justice Initiative Submission to the Parliamentary Portfolio Committee on Trade and Industry on the Copyright Amendment Bill [B13B-2017]*, HEALTH JUST. INITIATIVE (July 9,

this paper considers the politics of the right to repair in Australia. It contends that there is an opportunity for law reform—given support for the policy initiative across the major political parties in Australia. Part III focuses on the debate over intellectual property and the right to repair in Australia, and the recommendations of the Productivity Commission. Part IV considers the recommendations of the Productivity Commission regarding consumer law and competition policy. Part V explores the discussion about the right to repair in the context of sustainable development—looking at submissions on e-waste, product stewardship, repair labelling, and the circular economy. Part VI concludes by noting that the Productivity Commission asked for action in particular markets in respect of automobiles, agricultural machinery, and tablets. The Conclusion then calls for the Australian Parliament to go further and recognize a more broadly based right to repair. It maintains that it is necessary that the jurisdiction of Australia keep pace on the right to repair with its comparative partners—such as the United States of America, Canada, the United Kingdom, the European Union, and elsewhere. Accordingly, the Australian Parliament should adopt a comprehensive package of reforms for a right to repair to promote innovation, consumer welfare, competition policy, and sustainable development.

II. THE AUSTRALIAN POLITICS OF THE RIGHT TO REPAIR

Australian politics are often highly polarized; in many policy areas, it has been very difficult to achieve support across the spectrum of political ideologies for substantive law reform. There was a rare consensus in Australian politics between 2021 and 2022 to support a broad inquiry by the Productivity Commission into the right to repair. To provide a brief overview of the stances taken by the major political parties: The Australian Greens have been champions of the right to repair—pushing for legislative change at a territory, state, and Federal level.¹⁸ The Australian Labor Party has shown a strong interest in the right to repair—particularly in the context of automobile repairs.¹⁹ The National Party of Australia has expressed concerns about limitations and restrictions being placed on repairs in respect of agricultural

2021), <https://healthjusticeinitiative.org.za/2021/07/09/health-justice-initiative-submission-on-copyright-amendment-bill-b13b-2017/>.

18. Hon. Shane Rattenbury, *Can We Fix It? Yes We Can. ACT secures National Agreement on a 'Right to Repair'*, ACT GREENS (Aug. 30, 2019), <https://greens.org.au/act/news/can-we-fix-it-yes-we-can-act-secures-national-agreement-right-repair>.

19. Hon. Andrew Leigh MP, Speech at the Australia Automotive Dealer Associate Conference, Gold Coast Convention Centre (Sept. 4, 2018), http://www.andrewleigh.com/driving_a_better_deal_for_auto_dealers.

machinery and equipment.²⁰ The Liberal Party of Australia has responded to community concerns about the right to repair at a Federal level, with some action by the Treasury in relation to sharing repair information about motor vehicles, and a reference from the Federal Treasurer to the Productivity Commission to more broadly investigate the field.²¹

The Productivity Commission has carried out a comprehensive review of the topic of the right to repair. The Coalition Government led by Scott Morrison received the report of the Productivity Commission—but Parliament was prorogued before they had an opportunity to respond to the recommendations. The next Australian Parliament, formed after the Federal election in 2022, will deliberate upon the recommendations of the Productivity Commission in respect of the right to repair. The Australian Labor Party, led by Anthony Albanese, has formed the government and holds a majority of seats in the House of Representatives; but they will need to negotiate with the Australian Greens, community independents, the National Party, and the Liberal Party to pass legislation in the upper house of the Senate.²²

A. THE AUSTRALIAN GREENS

It has often taken remarkable politicians to progress the debate on the right to repair.²³ In the case of Australia, the Canberra politician Shane Rattenbury has been instrumental in pushing for the Productivity Commission to conduct an inquiry into the right to repair.²⁴ He has called upon the Federal Government, as well as the States and Territories, to work in a collaborative approach to provide for a common framework to recognize the right to repair.

20. Jennie Bremmer, *Nationals call for Consumer Rights to Repair Electronics*, WEST AUSTRALIAN (Oct. 16, 2018), <https://thewest.com.au/business/agriculture/nationals-call-for-consumer-rights-to-repair-electronics-ng-b88991358z>. The West Australian is a daily newspaper published in Perth, Western Australia.

21. Commonwealth, *Parliamentary Debates*, House of Representatives, 24 Mar. 2021, 7 (Hon. Michael Sukkar, Assistant Treasurer), <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansardr%2Fd64bba7e-9b55-427c-ae1f1-2c98b347651d%2F0014%22>.

22. Antony Green, *Federal Election: Australia Votes 2022 Party Totals*, ABC NEWS, <https://www.abc.net.au/news/elections/federal/2022/results/party-totals>; Antony Green, *Federal Election: Australia Votes 2022 Senate*, ABC NEWS, <https://www.abc.net.au/news/elections/federal/2022/results/senate>.

23. The Berkeley Law Conference on the Emergent Right to Repair highlighted the role of Senator Ron Wyden in the United States as a champion of the right to repair—as a co-sponsor of the Fair Repair Act of 2022 (US) and the Critical Medical Infrastructure Right-to-Repair Act of 2020 (US). See Sen. Ron Wyden, Closing Remarks at the Berkeley Law Conference on the Emergent Right to Repair (Apr. 29, 2022) <https://www.law.berkeley.edu/research/bclt/past-events/2022-events/the-emergent-right-to-repair/>

24. Rattenbury, *Can We Fix It?*, *supra* note 18.

Shane Rattenbury is the leader of the Australian Greens in the Australian Capital Territory and is part of a coalition government with the Australian Labor Party in the Australian Capital Territory Government. His current positions include Attorney-General; Minister for Consumer Affairs; and Minister for Water, Energy, and Emissions Reduction. He has previously been the Minister for Climate Change and Sustainability (2016 to 2020) and the Minister for Justice, Consumer Affairs and Road Safety (2012 to 2020). Before his career in politics, Shane Rattenbury had various roles in Greenpeace—including Greenpeace International, Greenpeace Southeast Asia, and Greenpeace Australia Pacific. He was also a public servant in the Department of Industry, Science, and Tourism. Rattenbury was trained in law and economics. This combination of portfolios and interests made Rattenbury well-equipped to become the champion of the right to repair in Australia.

In 2019, Rattenbury sent a manifesto to his Federal, State, and Territory colleagues about the right to repair.²⁵ In his missive, Rattenbury emphasized a number of economic themes in his advocacy for a right to repair. In particular, he highlighted the importance of consumer rights, competition policy, as well as matters of intellectual property and international trade. As a Minister for Consumer Affairs, Rattenbury was worried: “Consumers who wish to maintain, rather than discard, a faulty or damaged product often do not know how that is possible, or what the cost might be.”²⁶ Rattenbury was concerned that Australian competition law had been insufficient in dealing with repair restrictions and limitations, and “premature product obsolescence.”²⁷ He expressed concern that intellectual property was being used to impose repair restrictions: “Manufacturers often use digital rights management (based on intellectual property, copyright, and safety arguments), to compel consumers to repair their broken devices with the manufacturer, rather than allow third-party repairers to provide this service.”²⁸ Rattenbury also flagged that there could be larger questions about whether a right to repair could be challenged under international trade and investment agreements.²⁹

Shane Rattenbury also suggested that there were various positive environmental outcomes, which could be obtained from a right to repair. In

25. The Hon. Shane Rattenbury, *Submission on the Right to Repair*, ACT GOV'T (Jan. 28, 2021), https://www.pc.gov.au/__data/assets/pdf_file/0007/273382/sub133-repair.pdf.

26. *Id.* at 2.

27. *Id.*

28. *Id.* at 5.

29. See EDSON BEAS RODRIGUES, JR., *THE GENERAL EXCEPTION CLAUSES OF THE TRIPS AGREEMENT: PROMOTING SUSTAINABLE DEVELOPMENT* (2012); JUSTIN MALBON, CHARLES LAWSON & MARK DAVISON, *THE WTO AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS—A COMMENTARY* (2014).

particular, he highlighted the cost of e-waste and abandoned consumer goods. Rattenbury noted that there were limits to what could be achieved by state and territory governments, observing that: “A national framework would enhance consumer repair rights, promote competition in the repair economy and embed requirements for ‘designing out waste’ in products to keep them in the economy for longer.”³⁰ Rattenbury also called for a focus on product stewardship as “a response to market failures that lead to environmental damage.”³¹ He commented that there was a need to correct such industry failures: “[w]ithout the driver of regulated targets and outcomes there is often no incentive for product manufacturers to design products to be durable, reusable or recyclable or to ensure they are collected for recycling at their end-of-life.”³² Rattenbury also saw the right to repair as a means of promoting the U.N. Sustainable Development Goals—in particular, Goal No. 12, which focuses on responsible production and consumption.³³ Moreover, having been a minister with responsibilities for climate change, energy, and emissions reduction, Rattenbury saw the right to repair as a complementary measure to promote climate action—through reducing emissions, particularly bound up with the making of new products in consumer capitalism. In an interview, Rattenbury emphasized the right to repair was a “silent partner” for climate action.³⁴

Rattenbury also highlighted key comparative and international developments in relation to the right to repair. He was impressed by various state and federal efforts in the United States to recognize a right to repair.³⁵ Rattenbury was also conscious of the struggles over copyright law, technological protection measures, and the right to repair in the United States Copyright Office.³⁶ As an environmentalist, the Australian Greens politician

30. Rattenbury, *Submission on the Right to Repair*, *supra* note 25, at 8.

31. *Id.* at 9.

32. *Id.*

33. *United Nations Sustainable Development Goals*, U.N. DEP'T OF ECON. & SOC. AFFAIRS, <https://sdgs.un.org/goals> (last visited March 22, 2023) [hereinafter *SDG 2015*; *United Nations Sustainable Development Goals, Goal 12, Ensure Sustainable Consumption and Production Patterns*, U.N. DEP'T OF ECON. & SOC. AFFAIRS, <https://sdgs.un.org/goals/goal12> (last visited March 22, 2023) [hereinafter *SDG Goal 12*]; G.A. Res. 70/1, *Transforming our World: the 2030 Agenda for Sustainable Development* (Oct. 21, 2015).

34. Interview by Matthew Rimmer, with Hon. Shane Rattenbury, in ACT Legislative Assembly, Canberra (Feb. 12, 2020).

35. See Kylie Wiens, Nathan Proctor, Blake Reid, Kerry Sheehan & Matthew Williams, United States presentations at the Berkeley Law Conference on the Emergent Right to Repair (Apr. 29, 2022), <https://www.law.berkeley.edu/research/bclt/past-events/2022-events/the-emergent-right-to-repair/>.

36. See Pamela Samuelson, Robert Gomulkiewicz, Leah Grinvald, Josh Sarnoff & Kit Walsh, United States presentations at the Berkeley Law Conference on the Emergent Right to

drew inspiration from developments in the European Union in respect of consumer law, eco-design, energy labeling, and the right to repair.³⁷ He highlighted that Sweden had opened the world's first shopping mall dedicated to recycled, reused, and repaired goods: ReTuna Recycling Galleria.³⁸

Rattenbury has skillfully brought together an otherwise diffuse range of stakeholders and community groups to support the push for a right to repair in Australia. After the Productivity Commission received a reference from the Treasurer to investigate the right to repair, Rattenbury appeared before the public hearings. He was positive about the findings of the study:

[C]onsumers should be able to use an independent repair or access the resources needed to repair a product themselves, and that goes to that heart of the definition of a right to repair. This is really central to reducing waste, particularly where there is that deliberate shortening of a product's lifespan.³⁹

Rattenbury was supportive of the mission of the Productivity Commission and encouraged them to tackle not only the economic dimensions of the right to repair but the environmental ramifications of a right to repair.

The Federal leader of the Australian Greens, the Hon. Adam Bandt, supported the initiative of his Canberra colleague Rattenbury, telling the Federal Parliament: “You could also start making other corporations responsible for taking back some of their products—either take them back to recycle them or have them required, by law, to repair them.”⁴⁰ He observed: “That would be a good thing to do to ensure that products that were produced by corporations had to be looked after at the end of their life as well.”⁴¹ Bandt concluded that “you'd have some laws that required corporations to look after the waste product at the end, either by taking it back or fixing it, or by finding

Repair (Apr. 22, 2022), <https://www.law.berkeley.edu/research/bclt/past-events/2022-events/the-emergent-right-to-repair/>.

37. See also Estelle Derclaye, Kessika Richter & Anthony Rosborough, European Union presentations at the Berkeley Law Conference on the Emergent Right to Repair (Apr. 29, 2022), <https://www.law.berkeley.edu/research/bclt/past-events/2022-events/the-emergent-right-to-repair/>.

38. *RETUNA RECYCLING GALLERIA*, <https://www.retuna.se/english/> (last visited March 22, 2023).

39. The Hon. Shane Rattenbury, Right to Repair—Public Hearings, 59 (July 21, 2021), <https://www.pc.gov.au/inquiries/completed/repair/public-hearings/transcripts/all-repair-transcript.pdf>.

40. Commonwealth, *Parliamentary Debates*, House of Representatives, 26 Oct. 2022, 8169, (Adam Bandt, Greens Leader), <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansardr%2Fa8f5f6c7-7a97-4b2e-9b8f-4e1e306fed69%2F0172%22>.

41. *Id.*

a way to turn it into something else.”⁴² The Australian Greens hold the balance of power in the Australian Senate. The Australian Labor Party, who has formed the new the Australian Government in 2022, will ideally need the support of the Australian Greens to pass legislation.

B. THE AUSTRALIAN LABOR PARTY

As a result of the tyranny of distance between locations, there is a strong culture in Australian society of fixing, repairing, modifying, and customizing automobiles (which is well represented in the Mad Max film franchise).⁴³

The Hon. Andrew Leigh MP of the Australian Labor Party has long complained of problems in respect of the right to repair in the field of motor vehicles.⁴⁴ He has been agitating for law reform for several years. On Mother's Day 2018, at JAX Tyres in Essendon, Melbourne, Leigh and the then Leader of the Opposition, the Hon. Bill Shorten MP, announced Labor's “Your Car, Your Choice” policy.⁴⁵ They declared that Labor would put in place a mandatory code requiring manufacturers to share with independent mechanics the information they need to fix modern cars. Leigh explained: “Labor will ensure that Australian motorists have access to independent mechanics, will keep independent mechanics alive, make it cheaper for people to fix their cars, and to ensure that a vital sector of small business is able to continue.”⁴⁶ The Hon. Bill Shorten observed: “Labor is going to draw a line in the sand, we are not going to see the independent family businesses, the small mechanic operations, disappear.”⁴⁷ (It should be noted that Australia's local automobile manufacturing industry in Victoria and South Australia has collapsed, and Australia is now wholly dependent on importing cars from overseas.) Shorten stressed that “Labor is going to keep pushing so that we save the independent car repair industry in this country.”⁴⁸ Stuart Charity of the Australian Automotive Aftermarket Association endorsed the policy proposal. It will be interesting to see whether the new Australian Labor Party government led by Anthony Albanese will take further action on repair restrictions in the motor vehicle industry.

42. *Id.*

43. Kieran Tranter, *Mad Max: The Car and Australian Governance*, 5 NAT'L IDENTITIES 67, 67–81 (2003).

44. Hon. Andrew Leigh MP, *supra* note 19.

45. Hon. Bill Shorten & Hon. Andrew Leigh, Press Conference on *Your Car, Your Choice* for the Australian Labor Party (May 13, 2018), https://www.andrewleigh.com/your_car_your_choice_transcript_press_conference.

46. *Id.*

47. *Id.*

48. *Id.*

The Treasury of the Federal Government held an inquiry into the sharing of motor vehicle information for the purposes of repair.⁴⁹ The Federal Government passed the *Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Act 2021* (Cth). Australian Labor Party Representative, the Hon. Andrew Leigh was pleased by the passage of the regulatory scheme for sharing motor vehicle information in 2021.⁵⁰ Leigh discussed the significance of the scheme, particularly for independent repairers in regional and rural Australia: “Many Australians like to get their car fixed at a mycar, a JAX, an Ultra Tune, a Bridgestone or a Pedders—or, indeed, at a non-chain independent mechanic, such as Island Auto Repairs in Bongaree.”⁵¹ Leigh lamented that the scheme had not been passed in a more expeditious fashion.⁵²

In 2022, Leigh was appointed Assistant Minister for Competition, Charities and Treasury in the new Australian Labor Party Government led by Prime Minister Anthony Albanese.⁵³ Leigh will be a key decision-maker in terms of the response of the Federal Government to the right to repair recommendations made by the Productivity Commission.

In the Productivity Commission inquiry, there was much discussion about the right to repair and motor vehicles.⁵⁴ As this Article will discuss, the Productivity Commission made some further recommendations regarding the right to repair and motor vehicles.⁵⁵ Professor MC Forelle of Cornell University made a submission that highlighted some of the intellectual property dimensions of the topic of automobiles, and the right to repair as well.⁵⁶

49. TREASURY, MANDATORY SCHEME FOR THE SHARING OF MOTOR VEHICLE SERVICE AND REPAIR INFORMATION, (2019), <https://treasury.gov.au/consultation/c2019-t358022>; MATTHEW RIMMER, THE RIGHT TO REPAIR: MANDATORY SCHEME FOR THE SHARING OF MOTOR VEHICLE SERVICE AND REPAIR INFORMATION, (2019), <https://eprints.qut.edu.au/127446/>; Leanne Wiseman, Kanchana Kariyawasasm & Lucas Davey, *The Mandatory Repair Scheme for Motor Vehicles 2019: Australia's First Response to the International Right to Repair Movement?*, 48 AUSTL. BUS. L. REV. 218, 218–33 (2020).

50. Hon. Shorten & Hon. Leigh, *supra* note 45.

51. *Id.*

52. *Id.*

53. The Hon. Dr. Andrew Leigh was sworn in as Assistant Minister for Competition, Charities and Treasury on June 1, 2022. *The Hon Dr Andrew Leigh*, TREASURY, <https://ministers.treasury.gov.au/ministers/andrew-leigh-2022> (last visited March 22 2023).

54. PRODUCTIVITY COMM'N, Inquiry Report, *supra* note 4, at 139–140.

55. *Id.* at 139–40.

56. MC FORELLE, SUBMISSION TO THE AUSTRALIAN PRODUCTIVITY COMMISSION, SUBMISSION NO. 177, PRODUCTIVITY COMMISSION (2021); MC Forelle, *Copyright and the Modern Car: Colliding Visions of the Public Good in DMCA Section 1201 Anti-Circumvention Proceedings*, NEW MEDIA & SOC'Y 1–18 (2021) [hereinafter Forelle, *Copyright*].

A number of the members of the Australian Labor Party have taken a strong interest in the more general debate about the right to repair and the Productivity Commission inquiry. The Hon. Julie Owens observed that community organizations, such as the Bower Repair and Reuse Centre, in her constituency had been lobbying for a right to repair: “A right to repair would also encourage manufacturers to make high-quality, long-lasting goods in the first place, rather than products that conveniently die as soon as the warranty expires.”⁵⁷ Owens noted that the community center promoted a circular economy: “If you are in the community of Parramatta, or anywhere in Western Sydney, and you want to be better at repairing stuff, they run fantastic workshops as well.”⁵⁸ She concluded that the Bower Repair and Recuse Center is “a really interesting organization, and they are doing what they need to do to make this world a better place.”⁵⁹ Although Owens retired in 2022, her sentiments remain pertinent—many Australian Labor Party members would be supportive of such community-based repair organizations.

Likewise, the Hon. Josh Wilson—as the Australian Labor Party’s Shadow Assistant Minister for the Environment—discussed the broader issue of the right to repair in Australia.⁶⁰ He reflected: “We can’t just have a linear economy of using raw materials to make products that are thrown into landfill, are burnt or end up in the ocean.”⁶¹ Wilson also noted: “We can’t have that in terms of the environmental impact, but, in fact, we can’t have it from the point of view of resource sustainability.”⁶² He stressed: “We need to use the materials that are here, at a time when the population is very large and is continuing to grow and at a time when resource consumption per capita is continuing to grow.”⁶³ Wilson called for the development of a circular economy:

You design goods so that you don't throw them away if you don't have to. You use them for as long as possible by repairing them as much as possible and by making sure that they're designed to be repaired. You ensure that manufacturers are obliged to consider that

57. Commonwealth, *Parliamentary Debates*, House of Representatives, 22 Oct. 2020, 7952, (Hon. Julie Owens, ALP MP for Parramatta), <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansardr%2Ff1f6ceec-f76e-46be-b279-e3d2a88da6c2%2F0026%22>.

58. *Id.*

59. *Id.*

60. Commonwealth, *Parliamentary Debates*, House of Representatives, 13 May 2021, 4144, (Hon. Josh Wilson, ALP MP for Fremantle), <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansardr%2F9174ef36-5bd6-4333-8000-d719ad0b062d%2F0191%22>.

61. *Id.*

62. *Id.*

63. *Id.*

in their design process and that they make sure there are parts available.⁶⁴

Wilson further called for a stronger regime of product stewardship “so that, at the end of all of that, we are only left with the barest minimum of residual waste.”⁶⁵ Wilson represents a left-wing, progressive seat of Fremantle. His views about the environmental importance of the right to repair will be important—especially given that there is a point of convergence there with the opinions of the Australian Greens on the subject.

As Australian Labor Party has formed the new Australian Government in 2022, the views of the politicians within this party will be important in the implementation of the Productivity Commission’s recommendations on the right to repair.

C. THE NATIONAL PARTY OF AUSTRALIA

The National Party of Australia is a conservative party that is focused on regional and rural areas in Australia. Traditionally, the National Party of Australia has formed coalition governments with the (also conservative) Liberal Party of Australia at a Federal level and a state level.

At a state conference in 2018, the Nationals WA (a Western Australian political party affiliated with the National Party of Australia) called for the recognition of the right to repair for farmers, after supporting a motion put forward by the Esperance Branch of the party.⁶⁶ The spokesperson for agriculture, the Hon. Colin de Grussa, discussed the platform.⁶⁷ He commented: “Right to repair legislation would give independent repair shops, such as IT companies and mechanics, the same access to genuine parts, tools and information to aid them in the repair process for consumer electronics.”⁶⁸ De Grussa observed that “it is also vitally important for farmers and workers in the agricultural system.”⁶⁹ He was concerned about the need for specialist repairs in respect of farming equipment and agricultural machinery: “As farming equipment has become more hi-tech, the ability to fix software issues in agricultural machinery has become more complex.”⁷⁰

64. *Id.*

65. *Id.*

66. Bremmer, *supra* note 20.

67. *Nationals Call for Consumers to Have Right to Repair*, NATIONALS FOR REGIONAL WA (Oct. 16, 2018), <https://www.nationalswa.com/nationals-call-for-consumers-to-have-right-to-repair/>. Note that the Western Australian branch of the National Party of Australia is distinct from the Federal branch.

68. *Id.*

69. *Id.*

70. *Id.*

He was also concerned about the repair restrictions imposed by technology developers: “Major machinery manufacturers such as John Deere now require customers to sign a license agreement which prevents them, or unauthorized third-parties, from performing software repairs.”⁷¹ De Grussa observed that, in rural and remote Australia, there were great difficulties in getting timely, affordable, and local access to authorized repair mechanics. This was a particular concern in Western Australia, where agricultural communities can be far-flung and remote from regional centers. He stressed that there were significant costs associated with such barriers to the right to repair in Australian farming communities: “The costs to farmers and the loss in productivity for the agriculture sector are significant and consumers are denied the right to utilize local mechanics or technicians.”⁷²

In 2019, the Hon. Colin de Grussa discussed the scheme for the sharing of motor vehicle service and repair information.⁷³ He urged the Government to consider extending the scope of the Code, or implementing a separate Code, that would address farm vehicles, construction vehicles, and heavy vehicles. Furthermore, de Grussa encouraged “the Government to also consider ‘right to repair’ legislation that will allow more localised access to smart device repairers.”⁷⁴

The Hon. Ken O’Dowd—a Federal member of the Liberal National Party of Queensland—brought a petition to the Australian Government, which requested “a right to repair legalization to ensure access to repair information, spare parts for electronics for consumers and independent repair technicians for all products.”⁷⁵ The petition “asked the House to introduce legalization for Right to Repair for all products including a mandatory data sharing scheme similar to the one for motor car industry.”⁷⁶ The petition also called on the Australian Parliament to “ensure access to spare parts and repair information to the general public and not just to authorized repairers.”⁷⁷ The Assistant

71. *Id.*

72. *Id.*

73. HON. COLIN DE GRUSSA MLC, MANDATORY SCHEME FOR THE SHARING OF MOTOR VEHICLE SERVICE AND REPAIR INFORMATION (2019), <https://treasury.gov.au/sites/default/files/2019-11/c2019-t358022v2-The-Nationals-WA.pdf>.

74. *Id.*

75. Petition, Consumer Rights: Right to Repair, House of Representatives, 13 May 2020, 3260, <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansard%2F809dc477-581d-4161-a8ca-c741a051ff95%2F0111%22>.

76. *Id.*

77. *Id.*

Treasurer the Hon. Michael Sukkar responded to the petition, explaining that the government was investigating the right to repair.⁷⁸

The Australian Competition and Consumer Commission (ACCC) conducted an investigation of repair restrictions on competition in agriculture and concluded that there needed to be better access to servicing and repairs in agricultural markets.⁷⁹ The Farmers' Federation of Australia reinforced such points in their submission and appearance before the Productivity Commission inquiry in respect of the right to repair.⁸⁰ The Productivity Commission certainly focused heavily upon such concerns in their hearings and the final report.⁸¹ There are parallels to the controversy in the United States over repair restrictions in respect of agricultural machinery.⁸²

D. THE LIBERAL PARTY OF AUSTRALIA

The Liberal Party of Australia held Federal government for a few terms—led by Tony Abbott (2013–2015), Malcolm Turnbull (2015–2018), and Scott Morrison (2018–2022)—before being deposed by Anthony Albanese and the Australian Labor Party in 2022.

In response to concerns raised by independent repairers, Australia's Treasury has been focused on the question of sharing repair information in respect of motor vehicles. In 2021, the Federal Government introduced and passed the *Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Act 2021* (Cth). Assistant Treasurer and Minister

78. Hon. Michael Sukkar, *Productivity Commission Inquiry into Right to Repair*, TREASURY (Oct. 29, 2020), <https://ministers.treasury.gov.au/ministers/michael-sukkar-2019/media-releases/productivity-commission-inquiry-right-repair>.

79. *Better access to servicing and repairs needed in agricultural machinery markets*, ACCC (May 4, 2021), <https://www.accc.gov.au/media-release/better-access-to-servicing-and-repairs-needed-in-agricultural-machinery-markets#:~:text=The%20ACCC%20has%20recommended%20that,repair%20scheme%20introduced%20in%20Australia>.

80. NAT'L FARMERS FED'N, RE: SUBMISSION TO THE PRODUCTIVITY COMMISSION "RIGHT TO REPAIR" INQUIRY, (2021), https://www.pc.gov.au/__data/assets/pdf_file/0004/272335/sub055-repair.pdf.

81. PRODUCTIVITY COMM'N, *Inquiry Report*, *supra* note 4, at 21.

82. *See* *Forest River Farms v. Deere & Co.*, No. 1:22-CV-00188 (N.D. Ill. Jan. 12, 2022); Matthew Gault & Jason Koebler, *John Deere Hit With Class Action Lawsuit for Alleged Tractor Repair Monopoly*, VICE (Jan. 13, 2022, 10:01 AM), <https://www.vice.com/en/article/xgdazj/john-deere-hit-with-class-action-lawsuit-for-alleged-tractor-repair-monopoly>; *see also* *Agricultural Right to Repair Act*, S. 3549, 117th Cong. (2022); *Right to Repair' Farm Equipment and Empowering Family Farmers is Aim of Tester's New, Groundbreaking Legislation*, JON TESTER (Feb. 1, 2022), https://www.testersenate.gov/?p=press_release&id=8866#:~:text=%E2%80%9CThe%20Agricultural%20Right%20to%20Repair,at%20the%20Open%20Market%20Institute.

Michael Sukkar discussed the significance of the legislation in his second reading speech.⁸³ He maintained that the government has engaged in extensive consultation to “ensure that [the scheme] is effective, fair[,] and safe.”⁸⁴ Sukkar commented: “This bill includes significant reforms to the service and repair industry that have been made possible only through a strong partnership with industry.”⁸⁵ This regime was passed in 2021.

In 2020, Federal Treasurer Josh Frydenberg requested that the Productivity Commission undertake an inquiry into the right to repair in Australia.⁸⁶ He recommended: “The Productivity Commission should examine the potential benefits and costs associated with ‘right to repair’ in the Australian context, including current and potential legislative, regulatory and non-regulatory frameworks and their impact on consumers’ ability to repair products that develop faults or require maintenance.”⁸⁷ In the terms of reference, Frydenberg noted: “In examining the Australian context, the Productivity Commission should identify evidence of the impact of relevant international approaches.”⁸⁸

In particular, Frydenberg asked the Productivity Commission to focus on five main issues. First, Frydenberg wanted the law reform body to consider “the legislative arrangements that govern repairs of goods and services, and whether regulatory barriers exist that prevent consumers from sourcing competitive repairs.”⁸⁹ Second, he asked the Productivity Commission to focus upon “the barriers and enablers to competition in repair markets, including analyzing any manufacturer-imposed barriers, and the costs and benefits associated with broader application of regulated approaches to right of repair and facilitating legal access to embedded software in consumer and other goods.”⁹⁰ Third, he asked the Productivity Commission to consider “the impact of digital rights management on third-party repairers and consumers, and how intellectual

83. Commonwealth, *Parliamentary Debates*, House of Representatives, 24 Mar. 2021, 7 (Hon. Michael Sukkar MP, Assistant Treasurer) , <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansardr%2Fd64bba7e-9b55-427c-ae1f-2c98b347651d%2F0014%22>.

84. *Id.*

85. *Id.*

86. Hon. Josh Frydenberg MP, *Terms of Reference for Productivity Commission Inquiry into the Right to Repair*, PRODUCTIVITY COMM’N (Oct. 29, 2020), <https://www.pc.gov.au/inquiries/completed/repair/terms-of-reference>. The Treasurer exercises his powers to call an inquiry under Parts 2 and 3 of the Productivity Commission Act. *Productivity Commission Act 1998* (Cth) pts 2, 3

87. *Id.*

88. *Id.*

89. *Id.*

90. *Id.*

property rights or commercially-sensitive knowledge would interact with a right to repair.”⁹¹ Fourth, he wanted the advisory body to explore “the effectiveness of current arrangements for preventing premature or planned product obsolescence and the proliferation of e-waste, and further means of reducing e-waste through improved access to repairs and increased competition in repair markets.”⁹² Fifth, he asked the law reform body to investigate “the impact on market offerings, should firms have their control over repair removed.”⁹³ These terms of reference established the scope and the breadth of the inquiry by the Productivity Commission in relation to the right to repair.

In terms of process, Frydenberg advised that “the Commission should consult broadly, including with state and territory consumer affairs regulators.”⁹⁴ Moreover, “the Commission should undertake an appropriate public consultation process including by holding public hearings, inviting public submissions[,] and releasing a draft report to the public.”⁹⁵

The Coalition Government received the final report of the Productivity Commission in 2022—but lost power in the Federal election, before they had an opportunity to respond to the recommendations of the Productivity Commission. Frydenberg lost his seat of Kooyong to the “Teal” community independent Dr. Monique Ryan.⁹⁶ It remains to be seen who will be in charge of the topic of the right to repair in the opposition Shadow Bench of the Liberal Party of Australia.

E. THE PRODUCTIVITY COMMISSION

The Productivity Commission has broad experience in carrying out law reform investigations in respect of intellectual property policy, law, and practice. Over many years, the Productivity Commission has considered the interaction between intellectual property and international trade agreements in Australia.⁹⁷ The advisory body has previously looked at the operation of the

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. Paul Sakkar, *How a Political Novice Took Down Australia's Treasurer*, THE AGE (May 28, 2022, 7:08 PM), <https://www.theage.com.au/politics/federal/how-a-political-novice-took-down-australia-s-treasurer-20220526-p5aoq7.html>.

97. PRODUCTIVITY COMM'N, *BILATERAL AND REGIONAL TRADE AGREEMENTS* (2010), <http://www.pc.gov.au/inquiries/completed/trade-agreements/report/trade-agreements-report.pdf>; PRODUCTIVITY COMM'N, *TRADE AND ASSISTANCE REVIEW 2014–2015* (2016), <http://www.pc.gov.au/research/ongoing/trade-assistance/2014-15/trade-assistance-review-2014-15.pdf>.

compulsory licensing and Crown use provisions of the patents and designs regime.⁹⁸ The Productivity Commission has conducted a holistic inquiry into Australia's intellectual property arrangements.⁹⁹ The law reform body was, therefore, well placed to consider the right to repair. (The Productivity Commission has subsequently received a reference to investigate Indigenous intellectual property.)¹⁰⁰

The inquiry into the right to repair was presided over by two commissioners from the Productivity Commission—Paul Lindwall, the presiding commissioner, and Julie Abramson. An economist by training, Lindwall is in his second term on the Productivity Commission and has worked on a dozen inquiries.¹⁰¹ He has previously been a senior official with the Australian Treasury, the Department of Finance, and the Productivity Commission, and a senior economic adviser to high-level Liberal Party politicians Peter Costello and Malcolm Turnbull. Lindwall also represented Australia at the OECD—and worked as a consultant for the OECD. A lawyer by training, Julie Abramson is in her second term with the Productivity Commission.¹⁰² She has particular expertise in respect of law and regulation. Abramson has undertaken half-a-dozen inquiries with the Productivity Commission—including one on consumer law enforcement and administration. It was widely acknowledged that the combination of Lindwall and Abramson performed the job of undertaking the inquiry into the right to repair in a systematic and thoughtful fashion and were able to engage with a wide range of stakeholders during the process.

The Productivity Commission has a well-organized system of undertaking inquiries. In relation to the right to repair, the Productivity Commission held some initial meetings with interested stakeholders. The law reform body sought feedback from interested parties. The law reform body received 146 initial submissions; and 97 post-draft submissions. The organization also received 196 pre-draft brief comments; and 47 post-draft brief comments. The law reform body held public hearings—many of which were online because of

98. PRODUCTIVITY COMM'N, COMPULSORY LICENSING OF PATENTS: INQUIRY REPORT NO. 61 (2013) <https://www.pc.gov.au/inquiries/completed/patents/report/patents.pdf>.

99. PRODUCTIVITY COMM'N, INTELLECTUAL PROPERTY ARRANGEMENTS: INQUIRY REPORT NO. 78 (2016) <https://www.pc.gov.au/inquiries/completed/intellectual-property/report/intellectual-property-overview.pdf>.

100. PRODUCTIVITY COMM'N, DRAFT REPORT ON ABORIGINAL AND TORRES STRAIT ISLANDER VISUAL ARTS AND CRAFTS (2022) <https://www.pc.gov.au/inquiries/current/indigenous-arts/draft/indigenous-arts-draft-overview.pdf>.

101. *Paul Lindwall*, PRODUCTIVITY COMM'N <https://www.pc.gov.au/about/people-structure/commissioners/paul-lindwall>.

102. *Julie Abramson*, PRODUCTIVITY COMM'N, <https://www.pc.gov.au/about/people-structure/commissioners/julie-abramson>.

the COVID-19 spatial and travel restrictions, which were in place at the time. There were hearings held in Sydney, New South Wales; Melbourne, Victoria; and Canberra in the Australian Capital Territory. There was a transcript of the proceedings.¹⁰³ The Productivity Commission released an issues paper,¹⁰⁴ a discussion paper,¹⁰⁵ and a final report.¹⁰⁶

It is worthwhile exploring the recommendations of the Productivity Commission on the right to repair in respect of intellectual property; consumer law and competition policy; and e-waste, product obsolescence, and sustainable development.

III. INTELLECTUAL PROPERTY

The right to repair raises public policy issues across a range of species of intellectual property. There have been conflicts over copyright law, technological protection measures, and the right to repair. Australia's design laws have recognized a right to repair—and there has been litigation over the nature and scope of this spare parts exception.¹⁰⁷ There have been similar questions elsewhere about the right to repair under designs law.¹⁰⁸ There has been a consideration of whether the larger interest in social welfare has been adequately addressed in designs law.¹⁰⁹ There has been debate over trademark law and the right to repair,¹¹⁰ most notably in the context of recent litigation by Apple against a repair store in Norway.¹¹¹ There has been discussion in a

103. PRODUCTIVITY COMM'N, RIGHT TO REPAIR—PUBLIC HEARINGS 381 (2021), <https://www.pc.gov.au/inquiries/completed/repair/public-hearings/transcripts/all-repair-transcript.pdf>.

104. PRODUCTIVITY COMM'N, RIGHT TO REPAIR: ISSUES PAPER (2020), <https://www.pc.gov.au/inquiries/completed/repair/issues/repair-issues.pdf>.

105. PRODUCTIVITY COMM'N, RIGHT TO REPAIR: DRAFT REPORT (2021), <https://www.pc.gov.au/inquiries/completed/repair/draft/repair-draft.pdf>.

106. PRODUCTIVITY COMM'N, Inquiry Report, *supra* note 4.

107. Section 72 of the *Designs Act* 2003 (Cth); *GM Glob Tech Operations LLC v S.S.S Auto Parts Pty Ltd* [2019] FCA 97.

108. David Llewelyn & Veronica Barresi, *Right Holders' Control over Repair and Reconditioning*, in SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS 3–20 (Christopher Heath & Anselm Kamperman Sanders eds., 2009).

109. Alison Firth, *Repairs, Interconnections, and Consumer Welfare in the Field of Design*, in SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS 147–80 (Christopher Heath & Anselm Kamperman Sanders eds., 2009).

110. Michael Pendleton, *Trademarks and Reconditioned Goods in Greater China and at Common Law*, in SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS 127–46 (Christopher Heath & Anselm Kamperman Sanders eds., 2009).

111. *Huseby v. Apple Inc.*, HR-2020-1142-A, Nor. Sup. Ct., <https://assets.documentcloud.org/documents/6936580/Norway.pdf>. For commentary, see Karl Bode, *Norway Supreme Court Signs Off On Apple's Harassment Of An Independent Repair Shop*,

range of jurisdictions about how the patent system deals with patent infringement and the right to repair. There has increasingly been conflict over trade secrets and data protection related to repair.¹¹² Accordingly, there is a need to consider the right to repair across a range of intellectual property regimes—and not merely in isolated systems, such as just designs law or only copyright law.

There is a strong body of evidence that intellectual property restrictions do impact the right to repair in Australia. The evidence is more than merely anecdotal or patchy (as suggested initially by the Productivity Commission in its Draft Finding 5.1).¹¹³ There is a history of conflict over copyright law, technological protection measures, and the right to repair.¹¹⁴ There have been threats of litigation in respect of copyright relating to repair manuals in Australia.¹¹⁵ The High Court of Australia and the Australian Parliament have expressed concerns about the breadth of technological protection measures.¹¹⁶ There has been major litigation over the spare parts exception under designs law.¹¹⁷ There was a landmark dispute in the High Court of Australia over patent law and the distinction between repair and refurbishment.¹¹⁸ There has been a policy discussion about repair information and trade secrets—resulting in action by both the Treasury and the Australian Parliament.¹¹⁹

In light of intellectual property restrictions on the right to repair in Australia, it is essential to craft some significant and lasting public policy solutions in this area. It is worthwhile considering the recommendations of the Productivity Commission in its final report to address intellectual property-related restrictions and limitations on repair. The Productivity Commission did

TECHDIRT (June 5, 2020), <https://www.techdirt.com/articles/20200604/11170944646/norway-supreme-court-signs-off-apples-harassment-independent-repair-shop.shtml>.

112. TREASURY, *Mandatory Scheme for the Sharing*, *supra* note 49.

113. See PRODUCTIVITY COMM'N, DRAFT REPORT, *supra* note 105, at Draft Finding 5.1.

114. Andy Sun, *Blocking Repair or Fair Use of Software? The U.S. Perspectives on Anticircumvention*, in SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS 105–24 (Christopher Heath & Anselm Kamperman Sanders eds., 2009); Matthew Gault, *Nintendo Threatens Repair Shop for Advertising Switch Mod Chip Installs*, VICE (June 18, 2020, 6:15 AM), https://vice.com/en_us/article/7kpxbb/nintendo-threatens-repair-shop-for-advertising-switch-mod-chip-installs.

115. Kyle Wiens, *The Shady World of Repair Manuals: Copyrighting for Planned Obsolescence*, WIRED (Nov. 12, 2012, 6:00 PM), <https://www.wired.com/2012/11/cease-and-desist-manuals-planned-obsolence/>; Tim Hicks, *Toshiba Laptop Service Manuals and the Sorry State of Copyright Law*, FUTURE PROOF (2012), <http://www.tim.id.au/blog/2012/11/10/toshiba-laptop-service-manuals-and-the-sorry-state-of-copyright-law/>.

116. *Stevens v Kabushiki Kaisha Sony Comput. Ent.* [2005] HCA 58.

117. *GM Glob Tech Operations LLC v S.S.S. Auto Parts Pty Ltd.* [2019] FCA 97.

118. *Calidad v Seiko Epson Corp.* [2020] HCA 41.

119. Treasury, *Mandatory Scheme for the Sharing*, *supra* note 49.

make some substantive recommendations for law reform in respect of copyright law, technological protection measures, and contracting out of copyright exceptions. However, the Productivity Commission declined to make recommendations for other forms of industrial property. The regulator did provide a footnote:

While it could not be established that other forms of IP, including patents, designs and trademarks, are materially impacting product repairs to warrant reform at this time, this is not to say that issues in these areas do not exist, nor that they may not become a material issue requiring government intervention in the future.¹²⁰

This hedged statement opens the possibility that there may need to be law reform in other fields of intellectual property—if there is evidence of material issues in that field.

Arguably, it is important that the Productivity Commission crafts a solution for the right to repair, which spans the various fields of intellectual property. It would be insufficient to merely make recommendations for law reform in respect of copyright law, technological protection measures, and contracting out. Given the importance of industrial forms of property, it is imperative to also consider law reform in the fields of designs law, trademark law, patent law, confidential information and trade secrets, and data protection. By necessity, this is a broad, overview discussion of each of these fields of intellectual property—rather than an in-depth investigation of particular areas. No doubt each topic could deserve a paper-long discussion in its own right.

A. COPYRIGHT LAW

As Professor Pamela Samuelson has presciently pointed out, there have long been conflicts over copyright law, the right to repair, and the freedom to tinker.¹²¹ There is a growing literature on the relationship between copyright law and the right to repair.¹²² There have been proposals for copyright law reform to address the right to repair in many other jurisdictions—such as the United States and Canada.

120. PRODUCTIVITY COMM'N, Inquiry Report, *supra* note 4, at 180.

121. Pamela Samuelson, *Freedom to Tinker*, 17 THEORETICAL INQUIRIES L. 563, 563–600 (2016).

122. Sun, *supra* note 114, at 105–24; Wiens, *supra* note 115; Cory Doctorow, *The Copyright Office's DMCA-defanging is Nice, but Man, There Are: So. Many Hoops to Jump Through*, BOING BOING (Oct. 26, 2018, 10:17 AM), <https://boingboing.net/2018/10/26/your-stuff-your-rules.html>; Bryan Bello & Patricia Aufderheide, *The DMCA, Database Protection, and Right to Repair: The Long Tail of Public Interest Activism in the First Digital Copyright Decade*, 56 INFO. & CULTURE 1 (2021); Forelle, *Copyright*, *supra* note 56.

1. *Copyright Exceptions*

The Productivity Commission recognized that copyright laws prevented third-party repairers from accessing repair information (such as repair manuals and diagnostic data), and that was one of the more significant intellectual property-related barriers to repair.

In Finding 5.1, the Productivity Commission recognized that “copyright laws are an impediment to accessing repair information.”¹²³ The Productivity Commission found that “Copyright laws that prevent third-party repairers from accessing repair information (such as repair manuals and diagnostic data) are the most significant unnecessary intellectual property-related barrier to repair in Australia.”¹²⁴

Recommendation 5.2 of the Productivity Commission calls for the introduction of a new use exception in the *Copyright Act* 1968 (Cth). The Productivity Commission recommends: “The Australian Government should amend the *Copyright Act* to include an exception that allows for the reproduction and sharing of repair information.”¹²⁵ The Productivity Commission provides: “In the immediate term, this exception should be included through the existing fair dealing framework in the *Copyright Act*.”¹²⁶ It is worth noting, though, that the courts have read the defense of fair dealing quite narrowly in recent litigation.¹²⁷ So it would be important to ensure that any new defense of fair dealing for the purposes of repair was broadly constructed.

The Productivity Commission comments: “In the medium to long term, the Australian Government should pursue a more flexible copyright exception regime, including a principles-based ‘fair use’ exception.”¹²⁸ The Productivity Commission echoes its previous support for a defense of fair use from its inquiry in respect of Australia’s intellectual property arrangements.¹²⁹ Other law reform bodies, such as the Australian Law Reform Commission, have also

123. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 34.

124. *Id.*

125. *Id.* at 35.

126. *Id.*

127. See Matthew Rimmer, *An Elegy for Greg Ham: Copyright Law, the Kookaburra Case, and Remix Culture*, 17 DEAKIN L. REV. 385, 385–423 (2012); *TCN Channel Nine Pty Ltd v Network Ten Pty Ltd* [2001] FCA 108, 108 FCR 235; *TCN Channel Nine Pty Ltd v Network Ten Pty Ltd* [2002] FCAFC 146, 118 FCR 417; *AGL Energy Ltd v Greenpeace Australia Pac Ltd* [2021] FCA 625; *Universal Music Publ’g Pty Ltd v Palmer* [No. 2] (2021) FCA 434 .

128. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 35.

129. PRODUCTIVITY COMM’N, IP ARRANGEMENTS, *supra* note 99.

advocated the adoption of a broad-based defense of fair use.¹³⁰ As Professor Pamela Samuelson has observed, the defense of fair use is flexible and adaptable, and can deal with new technologies.¹³¹ Moreover, she observed that the defense of fair use is underpinned by important values such as the progress of authorship, access to information, freedom of speech, competition, technological innovation, and the privacy and autonomy interests of users. Australia would also no doubt benefit from stronger copyright user groups, which would engage in advocacy in respect of copyright exceptions and provide advice on copyright exceptions.¹³²

It should be noted that copyright owner organizations voiced disapproval at the proposals to create further exceptions in respect of Australian copyright law. The copyright collecting society—Copyright Agency—emphasized that “We strongly oppose the introduction of a US-style fair use exception into Australia’s copyright legislation [because] it would necessarily have unintended consequences, particularly given that the issue before the Commission is so specific.”¹³³ Moreover, the Copyright Agency argued: “Any exception introduced into the *Copyright Act* to address this issue, such as a new fair dealing exception, needs to be carefully drafted so that it does not have any wider application or unintended consequences.”¹³⁴ The Australian Copyright Council—an industry advocacy body that represents copyright owners—opposed reforms to copyright exceptions, technological protection measures, and contracting out: “It is the Australian Copyright Council’s position that amending the existing Australian copyright law framework is not appropriate for matters which are best dealt with by changes to consumer and competition law, as the issues raised by the Commission are matters of trade and not of copyright policy.”¹³⁵ Screenrights—a collecting society for broadcast content—opposed the introduction of a defense of fair use, or a defense of

130. AUSTRALIAN L. REFORM COMM’N, COPYRIGHT AND THE DIGITAL ECONOMY: FINAL REPORT, ALRC REPORT 122 (2013), <https://www.alrc.gov.au/publication/copyright-and-the-digital-economy-alrc-report-122/>.

131. Pamela Samuelson, *Unbundling Fair Uses*, 77 FORDHAM L. REV. 2537, 2537–2621 (2009).

132. Matthew Rimmer, *A Fair Use Project for Australia: Copyright Law and Creative Freedom*, 28 COPYRIGHT REP. 165–212 (2010).

133. COPYRIGHT AGENCY, RESPONSE TO PRODUCTIVITY COMMISSION DRAFT REPORT ON RIGHT TO REPAIR, (2021), https://www.pc.gov.au/__data/assets/pdf_file/0005/279212/subdr182-repair.pdf.

134. *Id.*

135. AUSTRALIAN COPYRIGHT COUNCIL, RESPONSE TO THE PRODUCTIVITY COMMISSION DRAFT REPORT: RIGHT TO REPAIR, (2021), https://www.pc.gov.au/__data/assets/pdf_file/0008/279332/subdr189-repair.pdf.

fair dealing for repair.¹³⁶ Australian film and television bodies objected to the introduction of new copyright exceptions and steadfastly defended the system for technological protection measures.¹³⁷

Nonetheless, the Productivity Commission was not daunted by the critical responses of copyright owner groups (particularly after their previous disagreements during the inquiry into Australia's intellectual property arrangements).

2. *Technological Protection Measures*

In Australia, there has been disquiet amongst the judiciary over the expansive approach taken to technological protection measures—known colloquially in Australia as “digital locks.” The High Court of Australia expressed concerns about the overbroad protection of technological protection measures in the case of *Stevens v. Sony*.¹³⁸

The Australian Parliament, though, has further enlarged the scope of technological protection measures, particularly in response to trade agreements such as the *Australia-United States Free Trade Agreement* 2004¹³⁹ and the *Trans-Pacific Partnership* 2015.¹⁴⁰ However, there has been disquiet about the impact of technological protection measures upon consumer rights and competition policy. The IT Pricing inquiry, in particular, expressed deep concerns that Australian consumers were being disadvantaged compared to their U.S. counterparts.¹⁴¹

136. SCREENRIGHTS, DRAFT REPORT: RIGHT TO REPAIR, (2021), https://www.pc.gov.au/__data/assets/pdf_file/0011/279182/subdr174-repair.pdf.

137. AUSTL. FILM & TV BODIES, RESPONSE TO THE PRODUCTIVITY COMMISSION DRAFT REPORT DATED JUNE 2021: RIGHT TO REPAIR, (2021), https://www.pc.gov.au/__data/assets/pdf_file/0010/279181/subdr173-repair.pdf.

138. *Stevens v Kabushiki Kaisha Sony Comp Ent* [2005] HCA 58. For commentary, see MATTHEW RIMMER, DIGITAL COPYRIGHT AND THE CONSUMER REVOLUTION: HANDS OFF MY IPOD (2007).

139. Matthew Rimmer, *Robbery Under Arms: Copyright Law and the Australia-United States Free Trade Agreement*, FIRST MONDAY (Mar. 6, 2006), <https://firstmonday.org/ojs/index.php/fm/article/view/1316/1236>.

140. MATTHEW RIMMER, THE TRANS-PACIFIC PARTNERSHIP: INTELLECTUAL PROPERTY AND TRADE IN THE PACIFIC RIM (2020).

141. H. REP. STANDING COMM. ON INFRASTRUCTURE & COMM'NS, AT WHAT COST? IT PRICING AND THE AUSTRALIA TAX (2013), https://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=ic/itpricing/report.htm; Matthew Rimmer, *Clash of the Titans: Apple, Adobe, and Microsoft Under Fire at the IT Pricing Inquiry*, CONVERSATION (Mar. 22, 2013, 12:39 AM), <https://theconversation.edu.au/clash-of-the-titans-apple-adobe-and-microsoft-under-fire-at-it-pricing-inquiry-12878>; MATTHEW RIMMER, IT PRICING: COPYRIGHT LAW, CONSUMER RIGHTS, AND COMPETITION POLICY (2012), http://works.bepress.com/matthew_rimmer/121/.

In the right to repair inquiry, the Law Council of Australia has expressed concern that repairers could be subject to civil remedies and criminal offenses under the technological protection measures scheme.¹⁴² The Law Council of Australia commented:

Technological protection measures (TPMs) may pose a barrier to repair in some cases. The *Copyright Act 1968* (Cth) creates both civil and criminal liability for anyone who circumvents a TPM (sections 116AN, 132APC), manufactures a circumvention device for a TPM (sections 116AO, 132APD) or provides a circumvention service for a TPM (sections 116AP, 132APE). Maximum penalties for these offences reach 550 penalty units (currently \$122,100) and/or five years imprisonment.¹⁴³

The Australian Digital Alliance has also called for exceptions for repair under technological protection measures in a range of inquiries.¹⁴⁴ The Pirate Party of Australia expressed concern about the impact of technological protection measures upon the exercise of free use exceptions and exemptions.¹⁴⁵

In Recommendation 5.1, the Productivity Commission called for amendments to the technological protection measures regime: “The Australian Government should amend the technological protection measures (TPMs) regime in the *Copyright Act 1968* and *Copyright Regulations 2017* to better facilitate repairers’ access to embedded information protected by TPMs necessary for issue diagnosis and repair.”¹⁴⁶ The Productivity Commission observed that the Federal Government should “amend the existing TPM circumvention exception for repair in regulation 40(2)(d) of the *Copyright Regulations 2017*, to clarify its scope and application to permit circumvention in order to access information necessary to perform repairs to the product in which the TPM is installed.”¹⁴⁷ The Productivity Commission also recommended that the

142. L. COUNCIL AUSTR., PRODUCTIVITY COMMISSION—RIGHT TO REPAIR ISSUES PAPER (2021), https://www.pc.gov.au/__data/assets/pdf_file/0007/272896/sub114-repair.pdf.

143. *Id.* at 13.

144. *Submission in response to the ACCC Agricultural machinery: After-sales markets Inquiry*, AUSTR. DIGIT. ALL. (May 31, 2020), <https://digital.org.au/resources/accc-agricultural-machinery-after-sales-markets-inquiry-submission/>; Appearance of Ben Rice, for the Australian Digital Alliance, before the Productivity Commission 292–99 (July 21, 2021), <https://www.pc.gov.au/inquiries/completed/repair/public-hearings/transcripts/all-repair-transcript.pdf>.

145. PIRATE PARTY AUSTR., SUBMISSION TO THE AUSTRALIAN PRODUCTIVITY COMMISSION ON THE RIGHT TO REPAIR (2021), https://www.pc.gov.au/__data/assets/pdf_file/0010/272458/sub074-repair.pdf.

146. PRODUCTIVITY COMM’N, *Inquiry Report*, *supra* note 4, at 35.

147. *Id.*

Australian Government should “amend section 116AO of the *Copyright Act* 1968, to permit the distribution of TPM circumvention devices for the purpose of facilitating a permitted act of circumvention (such as circumvention for the purpose of repairing a product in regulation 40(2)(d) of the *Copyright Regulations* 2017).”¹⁴⁸ Australia has obligations in respect of the standards for protection for technological protection measures under international trade agreements, such as the *Australia-United States Free Trade Agreement* 2004,¹⁴⁹ the *Trans-Pacific Partnership* 2015, and the *Comprehensive and Progressive Trans-Pacific Partnership* 2018.¹⁵⁰

In the inquiry, Anthony Rosborough discussed the push for law reform in Canada on copyright, the right to repair, and technological protection measures, which has received broad support from several of the main parties in the Parliament of Canada.¹⁵¹ The Australian proposals for exceptions for technological protection measures echo recent developments in Canada.¹⁵²

3. Contracting Out

In Recommendation 5.3, the Productivity Commission called for a prohibition on the contracting out of copyright exceptions: “To give full effect to copyright exceptions, including those relating to repair, the Australian Government should amend the *Copyright Act* 1968 to make unenforceable any part of an agreement restricting or preventing a use of copyright material permitted by copyright exceptions.”¹⁵³ It should be noted that this problem of contracting-out of repair is also apparent in other fields of intellectual property—such as designs law, trademark law, patent law, and trade secrets law. It would be useful to prohibit the use of contract terms that restrict repair-related activities otherwise permitted under intellectual property law.

148. *Id.*

149. *Australia-United States Free Trade Agreement (AUSFTA)*, 2004 ATS 1; Rimmer, *Robbery Under Arms*, *supra* note 139.

150. *Trans-Pacific Partnership* 2015; *Comprehensive and Progressive Agreement for Trans-Pacific Partnership* 2018 ATS 23. For commentary, see RIMMER, *The Trans-Pacific Partnership*, *supra* note 140.

151. Rosborough, *supra* note 16, at 26, 48.

152. *C-272, An Act to Amend the Copyright Act (diagnosis, maintenance or repair)* (Canada); The Hon. Bryan May, *Copyright Act*, PRIVATE MEMBERS BUS. (Apr. 15, 2021), <https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239176>; Rosborough, *If a Machine Could Talk*, *supra* note 13, at 141–71; Rosborough, *Canada Needs Right-to-Repair Legislation*, *supra* note 13; Meera Nair, *Canadians Should Have a Right to Repair Their Own Devices*, EDMONTON J. (May 4, 2022), <https://edmontonjournal.com/opinion/columnists/opinion-canadians-should-have-a-right-to-repair-their-own-devices>.

153. PRODUCTIVITY COMM’N, *Inquiry Report*, *supra* note 4, at 34.

It should also be noted that the Free Software Foundation, the open-source movement, the Creative Commons community, and open-source hardware advocates have sought to use open licensing terms to promote the right to repair.¹⁵⁴ Free Software Melbourne discussed the need for open access to repair information in its submission.¹⁵⁵ The submission contends: “We need legislation that would mandate the Fair and Open Access to information required to perform repairs on modern devices.”¹⁵⁶ Moreover, the organization contends: “Open Access to this kind of data also enhances the security of our devices by enabling another level of independent auditing, analysis, and research.”¹⁵⁷

B. DESIGNS LAW

There have been longstanding tensions between the protection of industrial designs, and the scope for the use of spare parts for repair in Australia and elsewhere.¹⁵⁸

Unlike some of the other Australian intellectual property regimes, Australian designs law has a defense in respect of spare parts.¹⁵⁹ The scope of this defense has been recently considered in the 2019 case of *GM Global Technology Operations LLC v S.S.S. Auto Parts Pty Ltd*.¹⁶⁰ Even though such a defense was effective in this particular case, the existing provisions in relation to spare parts are complicated and convoluted.

Noting the Federal Court of Australia precedent, the Law Council of Australia has identified the current strange construction of the spare parts exception in its submission:

That decision illustrated the difficulty faced by registered design owners against whom the defence is raised, in light of the fact that the Act places the onus on the design holder to establish that the use was not for repair purposes. In that case, the design owner failed to

154. Matthew Rimmer, *Lady Ada: Limor Fried, Adafruit Industries, Intellectual Property and Open Source Hardware*, 16 J. INTELL. PROP. L. & PRAC. 1047, 1047–61 (2021).

155. FREE SOFTWARE MELBOURNE, SUBMISSION TO THE PRODUCTIVITY COMMISSION ON THE RIGHT TO REPAIR (2021), https://www.pc.gov.au/__data/assets/pdf_file/0005/272318/sub043-repair.pdf.

156. *Id.*

157. *Id.*

158. Llewelyn & Barresi, *supra* note 108, at 3–20; Firth, *supra* note 109, at 147–80.

159. *Designs Act 2003* (Cth) s 72.

160. *GM Glob Tech Operations LLC v S.S.S. Auto Parts Pty Ltd* [2019] FCA 97. For commentary, see Tyrone Berger, *A First Look at the Designs Repair Defence in Australia*, 14 J. INTELL. PROP. L. & PRAC. 358 (2019); Leanne Wiseman & Kanchana Kariyawasam, *Revisiting the Repair Defence in the Designs Act (2003) in Light of the Right to Repair Movement and the Circular Economy*, 31 AUSTL. INTELL. PROP. J. 133 (2020).

do so except in relation to a small number of transactions, with the result that the “repair” defence was largely made out.¹⁶¹

There was an opportunity for the Productivity Commission to recraft the spare parts exception under designs law to ensure that there is a broad fair use defense for repair under designs law.

However, in its final report, the Productivity Commission merely noted that there had been debate over the reform of the spare parts defense:

Some stakeholders have called for reform of the defence, with one arguing that the current defence is “awkward and cumbersome” and may not fully account for the development of new technologies. However, the defence appears to provide sufficient protection in the few cases that have been brought under it, and with further cases, the courts will be able to fully explore the scope and reach of the defence.¹⁶²

The Productivity Commission also commented that “new technologies such as 3D printing may also increase the accessibility of spare parts, by enabling repairers to fabricate their own replacement parts and be less dependent on conventional manufacturers.”¹⁶³ The regulator was of the view that there was a low likelihood of 3D printed works infringing upon designs.

Arguably, the Productivity Commission should have availed itself of the opportunity to design a broad defense for the right to repair under designs law. Scholars have wondered whether Australia’s designs regime is well-adapted to new technologies, such as 3D printing.¹⁶⁴ There has been a longstanding discussion about the need to modernize Australia’s design laws more broadly. In 2015, the Advisory Council on Intellectual Property provided a review of the designs regime.¹⁶⁵ There has been a more recent investigation into design

161. LAW COUNCIL AUSTRALIA, Law Council of Australia, *supra* note 142, at 10.

162. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 167.

163. *Id.*

164. Mitchell Adams, *The “Third Industrial Revolution” 3D Printing Technology and Australian Designs Law*, 24 J.L., INFO., & SCI. 56, 56–84 (2015); Tyrone Berger, “Substantial Similarity” under Australian Design Law: Application to 3D Printing, in 3D PRINTING AND BEYOND: INTELLECTUAL PROPERTY AND REGULATION 294–307 (Dinusha Mendis, Mark Lemley & Matthew Rimmer eds., 2019); Thomas Margoni, *Design Rights and 3D Printing in the UK: Balancing Innovation and Creativity in a (Dis)harmonised and Fragmented Legal Framework*, in 3D PRINTING AND BEYOND: INTELLECTUAL PROPERTY AND REGULATION 77–98 (Dinusha Mendis, Mark Lemley & Matthew Rimmer eds., 2019); Elizabeth Ferrill, Robert MacKichan, Christopher McKinley & Kelly Horn, *Integrating a Classic Tool for a Modern Challenge: US Designs Patents Implications for 3D Printing*, in 3D PRINTING AND BEYOND: INTELLECTUAL PROPERTY AND REGULATION 185–202 (Dinusha Mendis, Mark Lemley & Matthew Rimmer eds., 2019).

165. ADVISORY COUNCIL ON INTELL. PROP., *Review of the Designs System* (2015), https://www.ipaustralia.gov.au/sites/default/files/acip_designs_final_report.pdf.

law reform by IP Australia.¹⁶⁶ There have been some procedural reforms made in 2021 to the system, with the introduction of a grace period and some further clarification and simplification.¹⁶⁷ The next Australian Parliament should take the opportunity to refashion Australia's design laws, with a broad defense for the right to repair.

There are similar challenges in respect of law reform of design patents in the United States.¹⁶⁸

C. TRADEMARK LAW

There is a growing literature on the impact of trademark law on the right to repair.¹⁶⁹ There has also been some high-profile litigation. In Norway, Apple brought trademark infringement against an independent repairer, Huseby.¹⁷⁰ In the United States, there has been a discussion of the use of the trademark

166. IP AUSTRALIA, *DEFINING DESIGN: DESIGN'S ROLE IN THE AUSTRALIAN ECONOMY* (2020), https://www.ipaustralia.gov.au/sites/default/files/defining_design_ip_australia_report.pdf; IP AUSTRALIA, *TALKING DESIGN: VIEWS FROM AUSTRALIA'S VISUAL DESIGN ECOSYSTEM* (2020), https://www.ipaustralia.gov.au/sites/default/files/talking_design_ip_australia_report.pdf; IP AUSTRALIA, *VALUING DESIGNS: ECONOMIC IMPACT OF DESIGN RIGHTS IN AUSTRALIA* (2020), https://www.ipaustralia.gov.au/sites/default/files/valuing_design_ip_australia_report.pdf; IP AUSTRALIA, *PROTECTING DESIGNS: DESIGN INNOVATION, COPYING AND ENFORCEMENT IN AUSTRALIA* (2020), https://www.ipaustralia.gov.au/sites/default/files/protecting_design_ip_australia_report.pdf; IP AUSTRALIA, *DESIGN REFORM PROJECT—OUTCOMES OF THE REVIEW* (2021), https://www.ipaustralia.gov.au/sites/default/files/design_reform_project_-_outcomes_of_the_review.pdf; IP AUSTRALIA, *DESIGN INITIATIVES*, <https://www.ipaustralia.gov.au/designs/design-initiatives>.

167. *Designs Amendment (Advisory Council on Intellectual Property Response) Act 2021* (Cth).

168. See generally *Design Patents Symposium*, 36 BERKELEY TECH. L.J. 1 (2022); see also JOSHUA SARNOFF, WHITE PAPER ON PROTECTING THE CONSUMER PATENT LAW RIGHT OF REPAIR AND THE AFTERMARKET FOR EXTERIOR MOTOR VEHICLE REPAIR PARTS: THE PARTS ACT, S. 812; H.R. 1879, 115TH CONGRESS (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3082289.

169. Pendleton, *supra* note 110, at 127–46; Jay Sanderson & Teddy Henriksen, *Certified Repairable: Using Trade Marks to Distinguish, Signal and Encourage Repair*, 31 AUSTRALIAN INTELLECTUAL PROPERTY J. 161, 161–72 (2020); Ole-Andreas Rognstad, *Revisiting the Concept of Trade Mark Piracy in light of Sustainable Development Goals: a Discussion of the Norwegian Apple Case*, in INTELLECTUAL PROPERTY AND SUSTAINABLE MARKETS 101–14 (Ole-Andreas Rognstad & Inger B. Ørstavik eds., 2021).

170. *Huseby v. Apple Inc.*, HR-2020-1142-A, (sak nr. 19-141420SIV-HRET) <https://s3.documentcloud.org/documents/6936580/Norway.pdf> (Nor.). For commentary, see Rognstad, *supra* note 169, at 101–14.

“Lexus” by a third-party broker.¹⁷¹ In South Africa, there has been a trademark dispute in relation to replacement parts for BMW.¹⁷²

In the final report, the Productivity Commission expressed its doubts as to whether trademark owners would be able to bring action for trademark infringement against repairers.¹⁷³ The law reform body noted:

It is unclear whether manufacturers could use trademark law protections to prevent the importation of spare parts into Australia, as has occurred in other countries. In particular, the use of microscopic marks on non-visible product components may not satisfy legislative criteria set out in the *Trade Marks Act 1995* (Cth) as to the “use” of a mark that gives rise to exclusive trademark rights, as the consumer is unable to use the sign to distinguish the goods.¹⁷⁴

Arguably, though, it would be helpful to clarify this position under Australian trademark law by providing for an express defense, exception, or limitation in respect of repair.

In light of the Norwegian trademark dispute between Huseby and Apple, as well as South African trademark litigation over replacement parts and U.S. disputes over Lexus advertising cars, there is a need to ensure that trademark law respects the right to repair. The Australian Parliament should consider law reform to ensure that trademark owners cannot bring trademark infringement actions in respect of cases of repair. As Professor Aaron Perzanowski comments, “Trademark law is meant to prevent unfair competition, but too often manufacturers use it to undermine any competition in the marketplace.”¹⁷⁵

D. PATENT LAW

There is vast jurisprudence dealing with patent law and the right to repair across various jurisdictions.¹⁷⁶ There is also extensive scholarly work on patent

171. *Toyota Motor Sales, U.S.A., Inc. v. Tabari*, 610 F.3d 1171 (9th Cir. 2010).

172. *Bayerische Motoren Werke Aktiengesellschaft v. Grandmark International* 2013 (722/12) SA 114 (S. Afr.).

173. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 167.

174. *Id.*

175. PERZANOWSKI, *supra* note 12, at 175.

176. *See, e.g., Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476 (1964); *Jazz Photo Corp. v. United States*, 439 F.3d 1344 (Fed. Cir. 2006); *Schütz (U.K.) Ltd. v. Werit (U.K.) Ltd.* [2013] UKSC 16 (U.K.).

law and the right to repair (although most of that literature focuses on the United States,¹⁷⁷ the United Kingdom,¹⁷⁸ and the European Union).¹⁷⁹

In the inquiry, the Productivity Commission did engage with questions about the application of patent law to repairs. However, in the end, the Productivity Commission did not make substantive recommendations for patent law reform in respect of the right to repair.¹⁸⁰

In the 2020 case of *Calidad v. Seiko Epson Corporation*, the High Court of Australia handed down an important precedent on patent exhaustion in a dispute over printer cartridges.¹⁸¹ The Productivity Commission provided this gloss on the complex ruling:

The High Court (in a 4-3 majority) found that once the modifications had been carried out, what remained were the original cartridges with some alterations that had enabled their reuse, and there was no replication of parts and features of the invention as claimed in the patents. Ultimately, the modifications were consistent with “the exercise of the rights of an owner to alter an article to improve its usefulness and enable its re use” (*Calidad*, at [70]).¹⁸²

The Productivity Commission recognized that “there are still uncertainties as to the exact scope and limitations of the recently adopted patent law exhaustion doctrine, including whether the doctrine applies on an international basis to allow for parallel importing of patented articles, or only on a national basis.”¹⁸³ The Productivity Commission noted: “This uncertainty may act to limit the effectiveness of such a doctrine generally, and in particular with respect to product repairs as many repairers choose to source repair inputs

177. Julia Powles, *Replacement of Part and Patent Infringement*, 72 CAMBRIDGE L.J. 518, 518–21 (2013); Tesh Dagne & Gosia Piasecka, *The Right to Repair Doctrine and the Use of 3D Printing Technology in Canadian Patent Law*, 14 CAN. J.L. & TECH. 263, 263–87 (2016); Contreras, *supra* note 10, at 1–7.

178. Mineko Mohri, *Repair and Recycle as Direct Patent Infringement?*, in SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS 59–84 (Christopher Heath & Anselm Kamperman Sanders eds., 2009); Christopher Heath, *Repair and Refill as Indirect Patent Infringement*, in SPARES, REPAIRS AND INTELLECTUAL PROPERTY RIGHTS 85–102 (Christopher Heath & Anselm Kamperman Sanders eds., 2009).

179. Rosa Ballardini & Taina Pihlajarinne, *Incentivizing Circular and Sustainable Innovations Through Patent Law*, in BIOREFINERIES AND CIRCULAR ECONOMY BASED ON WASTE TO ENERGY-FOOD-FEED-CHEMICAL-MATERIAL (Eduardo Jacob-Lopes ed., 2022).

180. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4.

181. *Calidad Pty Ltd. v Seiko Epson Corp.* [2020] HCA 41. For a commentary on this case, see Matthew Rimmer, *The Right to Repair: Patent Law and 3D Printing in Australia*, 20 (1) SCRIPTED: J.L., TECH., & SOC’Y 130-202 (2023).

182. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 179.

183. *Id.* at 186.

online from overseas.”¹⁸⁴ The Productivity Commission also discussed the possibility that the precedent on patent exhaustion could be applied to other legal regimes—such as copyright law.¹⁸⁵ There is of course a larger international literature on exhaustion of intellectual property rights.¹⁸⁶

It is disappointing that the Productivity Commission did not go further, and make recommendations, which would strengthen the right to repair under patent law. While the High Court of Australia has recently ruled on patent exhaustion, it would be helpful to clarify that the provision of repairs does not amount to patent infringement. Australian patent law recognizes a defense of experimental use. However, it is not clear that the defense extends to all forms of repairs. A specific patent defense for repairs would provide reassurance about the legitimacy of conducting repairs. The compulsory licensing regime remains unwieldy at the moment—but in exceptional circumstances could be used to provide access to inventions for the purposes of repair on competition grounds.¹⁸⁷ The Crown use/government use provisions of the patent regime could also be deployed by the government to deal with repair restrictions, which adversely impacted Australian consumers.¹⁸⁸

It is notable that in other jurisdictions, there has been a push for patent law reform to achieve better competition outcomes. Minnesota Senator and one-time Presidential candidate Amy Klobuchar has argued: “While patent protection is critical to our economy, the U.S. patent system can also be used by patent holders to block new market entrants from competing effectively.”¹⁸⁹

E. TRADE SECRETS LAW

Increasingly, trade secrets impinge upon the right to repair. In their study of intellectual property law and the right to repair, Professor Leah Grinvald

184. *Id.*

185. *Id.* at 184–85.

186. SHUBHA GHOSH & IRENE CALBOLI, EXHAUSTING INTELLECTUAL PROPERTY RIGHTS: A COMPARATIVE LAW AND POLICY ANALYSIS (2018).

187. The compulsory licensing provisions enable compulsory access to patented inventions in return for compensation. Chapter 12 of the *Patents Act* 1990 (Cth) deal with compulsory licensing. S 133 provides for the general regime for compulsory licensing. S136D-S136H deals with compulsory licensing for the manufacture and export of pharmaceutical drugs to eligible importing countries.

188. The Crown use provisions enable government use of patented inventions in return for compensation. Chapter 17 of the *Patents Act* 1990 (Cth) concern the Crown. S 163 of the *Patents Act* 1990 (Cth) deals with crown exploitation of inventions. S 163A deals with crown exploitation of inventions during emergencies. S 164 concerns information to be given by the relevant authority. S 165A deals with court orders to cease crown exploitation of inventions.

189. AMY KLOBUCHAR, ANTITRUST: TAKING ON MONOPOLY POWER FROM THE GILDED AGE TO THE DIGITAL AGE 335 (2021).

and Dr. Ofer Tur-Sinai have noted the intersection of trade secrets and the right to repair.¹⁹⁰

In their inquiry, the Productivity Commission only touched on the question of trade secrets and the right to repair.¹⁹¹ The advisory body observed that manufacturers sometimes include clauses about confidential information in contract law: “Manufacturers may also have contractual or licensing arrangements with other businesses (such as authorized repairers) that may include provisions such as non-disclosure of confidential repair information to third parties.”¹⁹² The Productivity Commission provided an example of Toshiba relying upon a combination of copyright law, contract law, and confidential information to restrict access to repair information, including repair manuals.¹⁹³ The law reform organization expressed concerns about the contracting out of repair obligations—including through confidentiality agreements. The Productivity Commission noted that trade secrets were excluded from the data-sharing scheme for motor vehicles.¹⁹⁴ Such an exclusion raises questions about whether the data-sharing scheme will be viable—if such important confidential information and know-how is not included. Ultimately, the Productivity Commission did not make recommendations in respect of the reform of confidential information and trade secrets law.

Australia provides for civil remedies in respect of trade secrets, as well as criminal offences in respect of violation of trade secrets by foreign principals. Australia was required to strengthen its regime for trade secrets protection as part of the *Trans-Pacific Partnership* 2015.¹⁹⁵ However, the nature and scope of defenses for trade secrets remains unclear in Australia. There has been debate as to whether there is a general interest defense (as espoused by Justice Kirby)¹⁹⁶ or a narrow defense related to exposing wrongdoing and iniquity (as recommended by Justice Gummow).¹⁹⁷ There has also been discussion about

190. Leah Chan Grinvald & Ofer Tur-Sinai, *Intellectual Property Law and the Right to Repair*, 88 *FORDHAM L. REV.* 63, 63–128 (2019).

191. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4.

192. *Id.* at 163.

193. *Id.* at 167.

194. *Id.* at 292.

195. *Trans-Pacific Partnership* 2015; *Comprehensive and Progressive Agreement for Trans-Pacific Partnership* 2018 ATS 23. For commentary, see RIMMER, *The Trans-Pacific Partnership*, *supra* note 140, at 380–411.

196. Kirby J in *Att’y-Gen (U.K.) v Heinemann Publishers Australia Pty Ltd* [1987] 10 NSWLR 86.

197. Gummow J in *Corrs Pavey v Collector of Customs* [1987] 74 ALR 238.

the need for codification of defenses to trade secrets infringement in other jurisdictions—like the United States.¹⁹⁸

In this context, there is currently a lack of clarity as to whether using trade secrets for the purposes of repair would be allowable. The Australian Parliament and the new Albanese Government should consider making recommendations regarding defenses in respect of trade secrets relating to repair. There should also be a more general overhaul of trade secrets law and policy as a discipline in intellectual property.¹⁹⁹ In his book on *The Right to Repair*, Professor Aaron Perzanowski highlights parallel issues in respect of trade secrets in the US and the EU: “The final weapon in the manufacturer’s IP arsenal is trade secrecy.”²⁰⁰

The open-access community has maintained that repair manuals and other repair data and information should be shared openly—rather than restricted under confidential information and trade secrets.

F. DATA-SHARING

After consultations and legislative reform, Australia’s Treasury has established a motor vehicle service and repair information sharing scheme.²⁰¹ However, it is problematic that this information sharing scheme has been industry-specific—rather than universal. There was also a failure to consider how that scheme would interact with other disciplines of law—like intellectual property. The exclusion of trade secrets from the regime means that there will be significant forms of data, which will not be open for sharing. There is a need for a more general system regarding the sharing of repair information for all technologies and industries—not just the special case of automobiles. It would be desirable to go beyond the model of self-regulatory codes of conduct and establish binding standards in respect of sharing repair information.

In Recommendation 8.1, the Productivity Commission called for an evaluation of the motor vehicle information scheme: “The Australian Government should establish an independent evaluation of the Motor Vehicle Service and Repair Information Sharing Scheme, once it has been in operation

198. Peter Menell, *Tailoring a Public Policy Exception to Trade Secret Protection*, 105 CALIF. L. REV. 1, 1–63 (2017).

199. SHARON SANDEEN & ELIZABETH ROWE, TRADE SECRETS AND UNDISCLOSED INFORMATION (2014); ELIZABETH ROWE & SHARON SANDEEN, TRADE SECRECY AND INTERNATIONAL TRANSACTIONS: LAW AND PRACTICE (2015).

200. PERZANOWSKI, *supra* note 12, at 159–64.

201. *Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Act 2021* (Cth). For commentary, see RIMMER, MANDATORY SCHEME FOR THE SHARING, *supra* note 49.

for three years.”²⁰² The Productivity Commission recommended: “The evaluation should assess whether the scheme is effectively meeting its objectives to improve competition and choice, whether the benefits outweigh the costs, and whether any changes are required.”²⁰³

There is a need for a harmonized approach to the right to repair in Australia, which cuts across technology fields and covers all the various forms of intellectual property.

IV. CONSUMER LAW AND COMPETITION POLICY

Australia has updated its consumer law and competition policy in recent times. The *Trade Practices Act* 1974 (Cth) was replaced with the *Competition and Consumer Act* 2010 (Cth). The Harper Review in 2015 has made further recommendations for law reform in respect of competition policy.²⁰⁴ The Australian Competition and Consumer Commission (“ACCC”) has been an active regulator.²⁰⁵ Nonetheless, there has remained concern as to whether Australia’s consumer laws and competition policy have been adequate to deal with some of the challenges of concentrated markets.

The Productivity Commission were much concerned by questions of consumer law and competition policy in respect of their investigation into the right to repair.

As part of the investigation, the Productivity Commission engaged in empirical research into repair markets. Finding 2.1 observed: “A consumer’s decision to repair or replace a broken product is primarily driven by price.”²⁰⁶ The law reform body also reflected: “The inconvenience of repair and consumer preferences for up-to-date products are also likely to make repair less appealing.”²⁰⁷ The Productivity Commission estimated: “The repair sector accounts for about one per cent of all business revenue in Australia and has grown modestly over the past decade.”²⁰⁸ The advisory body commented: “Most repair activity (revenue, number of businesses and workers) comes from industries with more expensive products, such as motor vehicles and machinery, that require regular maintenance and where repair is often more

202. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 20.

203. *Id.* at 20.

204. IAN HARPER, PETER ANDERSON & SU MCCLUSKEY, COMPETITION POLICY REVIEW—FINAL REPORT (2015), <https://treasury.gov.au/publication/p2015-cpr-final-report>.

205. Christine Parker & Vibeke Lehmann Nielsen, *The Fels Effect: Responsive Regulation and the Impact of Business Opinions of the ACCC*, 20 GRIFFITH L. REV. 91, 91–126 (2011).

206. *Id.* at 29.

207. *Id.*

208. *Id.*

cost-effective than replacement.”²⁰⁹ The Productivity Commission noted: “There was less activity in repair industries for relatively less expensive products, such as electronics and appliances, where replacement tends to be more attractive.”²¹⁰ The advisory body opined: “This is likely due to the relatively low and falling prices of these products over time, rapid technological development, and consumer preferences for new and up-to-date products.”²¹¹

These factual findings provide the foundation for the recommendations of the Productivity Commission in respect of consumer law reform and competition policy updates in the report.

A. CONSUMER LAW

Australian consumer law provides some protection in respect of repairs.²¹² The ACCC has brought a number of consumer actions in respect of repairs. In 2017, the ACCC lost a case against LG Electronics Australia Pty Ltd. (“LG”) over customer repairs in the Federal Court of Australia. In 2018, the ACCC partially won an appeal against an earlier judgment dismissing the ACCC’s case against LG.²¹³ The Full Court found that LG made two representations to consumers that were false but dismissed the ACCC’s appeal in respect of other LG statements made to consumers.²¹⁴ ACCC Commissioner Sarah Court commented: “When consumers buy products, they come with a consumer guarantee under the Australian Consumer Law that they will be of acceptable quality.”²¹⁵ She observed: “Manufacturer’s warranties exist in addition to the consumer guarantee rights.”²¹⁶ Court stressed: “Consumers will often still be entitled under the consumer guarantee to a repair, refund or replacement when the manufacturer’s warranty does not apply or has come to an end.”²¹⁷

209. *Id.*

210. *Id.*

211. *Id.*

212. ACCC, *Repairs and Spare Parts*, AUSTL. COMPETITION & CONSUMER COMM’N, <https://www.accc.gov.au/consumers/consumer-rights-guarantees/repair-replace-refund> (Last visited March 22 2023).

213. *ACCC v LG Electronics Australia Pty Ltd* [2018] FCAFC 96.

214. *Id.*; see also *ACCC v LG Electronics Australia Pty Ltd [No 2]* (2018) FCAFC 128.

215. *Full Court finds LG made misleading representations*, ACCC (June 27, 2018), <https://www.accc.gov.au/media-release/full-court-finds-lg-made-misleading-representations>.

216. *Id.*

217. *Id.*

In 2018, the ACCC took action against Apple Inc. over repairs.²¹⁸ The Federal Court ordered Apple Inc to pay \$9 million in penalties for making false or misleading representations to customers with faulty iPhones and iPads about their rights under the Australian Consumer Law (ACL). Apple admitted it had represented to at least 275 Australian customers affected by error 53 that they were no longer eligible for a remedy if their device had been repaired by a third party.²¹⁹ ACCC Commissioner Sarah Court commented: “If a product is faulty, customers are legally entitled to a repair or a replacement under the Australian Consumer Law, and sometimes even a refund.”²²⁰ Court commented: “Global companies must ensure their returns policies are compliant with the Australian Consumer Law, or they will face ACCC action.”²²¹ She observed: “If people buy an iPhone or iPad from Apple and it suffers a major failure, they are entitled to a refund.”²²² Court concluded: “If customers would prefer a replacement, they are entitled to a new device as opposed to refurbished, if one is available.”²²³

CHOICE Australia has made a detailed submission to the Productivity Commission on the right to repair and consumer law.²²⁴ In her evidence to the Productivity Commission, Erin Turner said: “We’re seeing that warranties generally can discourage large groups of consumers from getting a remedy under the consumer law.”²²⁵ She noted that the consumer organization had surveyed 6,571 of its members and supporters in April and May in 2021 about getting remedies on TVs, washing machines, microwaves and lawn mowers.²²⁶ Turner commented that only 24% of people with washing machine issues tried to get a remedy, 15% for TVs, 19% for microwaves and 18% for lawnmowers. She commented: “Often these products could be just outside the warranty period, a few weeks, months, or years.”²²⁷ Turner observed: “So what worried

218. *iPhone and iPad Misrepresentations Cost Apple Inc \$9 Million in Penalties*, ACCC (June 19, 2018), <https://www.accc.gov.au/media-release/iphone-and-ipad-misrepresentations-cost-apple-inc-9-million-in-penalties>.

219. *Id.* These facts are recounted in the press release from the ACCC.

220. *Id.*

221. *Id.*

222. *Id.*

223. *Id.*

224. CHOICE AUSTRALIA, SUBMISSION TO THE PRODUCTIVITY COMMISSION ISSUES PAPER ON THE RIGHT TO REPAIR, (2021), https://www.pc.gov.au/__data/assets/pdf_file/0013/273010/sub126-repair.pdf.

225. Josh Taylor, *Australian Warranties To “Discourage” Repairs or Replacements Under Consumer Law*, GUARDIAN (July 20, 2021, 7:21 PM), <https://www.theguardian.com/law/2021/jul/20/australian-warranties-acting-to-discourage-repairs-or-replacements-under-consumer-law>.

226. CHOICE AUSTRALIA, *supra* note 224.

227. Taylor, *supra* note 225.

me is that this research is telling us is that warranty periods could have a dampening effect on consumers seeking remedy.”²²⁸

The Consumer Action Law Centre (CALC) has argued that “the Productivity Commission should recommend improvements to people’s access to dispute resolution services, including when a person’s right relates to a choice between a repair, refund or replacement.”²²⁹ The Centre maintains: “The responsibility for repair and ethical disposal can be shifted to the supplier or manufacturer of a faulty product, once a person receives the remedy to which they are entitled.”²³⁰ The CALC elaborated: “In short, in relation to faulty products, the burden of a right to repair should not fall on the shoulders of consumers, who have already outlaid the cost for the good.”²³¹ The CALC contends that “it is imperative that any recommendations from the Productivity Commission into a right to repair improve access to justice for people who purchase faulty products, including lemons, which are largely immune to repair, rather than decreasing access to justice through additional barriers.”²³²

In Finding 3.1, the Productivity Commission commented that “consumers sometimes lack the ability to exercise existing rights.”²³³ The Productivity Commission recognized: “The Australian Consumer Law provides consumers with rights to obtain a remedy (repair, replacement or refund) for defective products through consumer guarantees.”²³⁴ The Productivity Commission acknowledged that “these guarantees are reasonably comprehensive.”²³⁵ The Productivity Commission recommended that the consumers’ ability to access their rights could be clarified by a range of reforms—including “clarifying existing rights by explicitly requiring manufacturers to provide software updates for a reasonable period”; “enabling a super complaints process”; “enhancing relevant State and Territory regulators’ alternative dispute resolution options for individual cases”; and “empowering the ACCC to seek pecuniary penalties on suppliers and manufacturers that fail to provide a

228. *Id.*

229. CONSUMER ACTION LAW CENTRE., RIGHT TO REPAIR INQUIRY (2021), <https://consumeraction.org.au/wp-content/uploads/2021/02/210215-CALC-sub-Right-to-repair-FINAL.pdf>.

230. *Id.*

231. *Id.*

232. *Id.*

233. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 29.

234. *Id.*

235. *Id.*

remedy.”²³⁶ Such wide-ranging reforms were further elaborated upon in the recommendations.

In Recommendation 3.1, the Productivity Commission called for software updates for a reasonable period: “The Australian Government should amend the Australian Consumer Law to include a new consumer guarantee for manufacturers to provide reasonable software updates for a reasonable time period after the product has been purchased, with no option to limit or exclude that guarantee.”²³⁷

In Recommendation 3.2, the Productivity Commission called for the creation of a super complaints process.²³⁸ The law reform body suggested: “The Australian Government should enable designated consumer groups to lodge ‘super complaints’ on systemic issues associated with access to consumer guarantees, with the complaints to be fast tracked and responded to by the [ACCC].”²³⁹ The Productivity Commission envisaged that this could be a process of co-design of a super-complaints system “in consultation with the ACCC, relevant State and Territory regulators, and consumer and industry groups.”²⁴⁰ The Productivity Commission commented: “The system should be underpinned by operational principles—including criteria for the assignment (or removal) of designated consumer bodies, evidentiary requirements to support a complaint, and the process and time period by which the ACCC should respond.”²⁴¹

The new Assistant Minister for Competition, Charities, and Treasury, Andrew Leigh MP, has been a supporter of the establishment of a super-complaints process.²⁴² He has stressed that a “super complaint” function within the ACCC will allow trusted consumer groups, such as CHOICE Australia, and business sector advocates to provide feedback on serious complaints of corporate misbehavior.

Academics have called for the use of alternative dispute resolution in consumer law for some time.²⁴³ In Recommendation 3.3, the Productivity

236. *Id.*

237. *Id.* at 30.

238. *Id.*

239. *Id.*

240. *Id.*

241. *Id.*

242. Sarah Martin, *Labor Vows to Shake Up ‘Cost Monopolists’ with Fines of up to \$40m for Anti-Competitive Behaviour*, GUARDIAN (July 9, 2022, 10:00 PM), <https://www.theguardian.com/australia-news/2022/jul/09/labor-vows-to-shake-up-cosy-monopolists-with-fines-of-up-to-50m-for-anti-competitive-behaviour>.

243. See Luke Nottage, *The New Australian Consumer Law: What About Consumer ADR?*, 9 QUT L. & JUST. J. 176, 176–97 (2010).

Commission called for State and Territory Governments to develop enhanced alternative dispute resolution powers to “better resolve complaints about the consumer guarantees.”²⁴⁴ The law reform body commented that governments should consider: the need for a “national consumer framework”; “funding options to adequately resource enhanced alternative dispute resolutions”; “the net benefit of options that enable regulators to make enforceable decisions or facilitate enforceable outcomes”; and “as an alternative, the net benefit of certain product markets (such as motor vehicles) having an ombudsman to make enforceable decisions or facilitate enforceable outcomes.”²⁴⁵

In Recommendation 3.4, the Productivity Commission demanded enhanced regulator powers to enforce guarantees, recommending amending “the Australian Consumer Law to make it a contravention for suppliers and manufacturers to fail to provide a remedy to consumers when legally obliged to do so under the consumer guarantees.”²⁴⁶ The law reform body also urged the ACCC to seek pecuniary penalties as well. The use of pecuniary penalties has been extensively used in Australian competition policy as well.²⁴⁷

B. COMPETITION POLICY

In its investigation of the right to repair, the Productivity Commission has also considered the role of competition law and policy in repair markets. In particular, it focused on agricultural machinery; mobile phones and tablets; motor vehicles; and other product markets.²⁴⁸ The Productivity Commission considered the operation of competition rules on anti-competitive agreements, misuse of market power, and exclusive dealing.²⁴⁹ The Productivity Commission reflected upon the philosophy and approach of the ACCC to enforcement of competition law and policy.²⁵⁰ The advisory body also highlighted the complexities of pursuing legal action for breaches of the competition regime. The Productivity Commission also stressed the importance of comparative approaches to competition law and policy in the field of the right to repair.²⁵¹

244. PRODUCTIVITY COMM’N, Inquiry Report, *supra* note 4, at 30.

245. *Id.*

246. *Id.* at 31.

247. OECD, PECUNIARY PENALTIES FOR COMPETITION LAW INFRINGEMENTS IN AUSTRALIA (2018) <https://www.oecd.org/competition/pecuniary-penalties-competition-law-infringements-australia-2018.htm>.

248. PRODUCTIVITY COMM’N, DRAFT REPORT, *supra* note 105, at 129.

249. *Id.* at 138.

250. *Id.* at 142–45.

251. *Id.* at 156.

In evidence to the hearings held by the Productivity Commission, there was concern expressed about a lack of competition in key markets. The IT service provider Interactive expressed concern that enterprises are being forced to enter into direct maintenance services contracts with technology manufacturers to be able to access firmware updates.²⁵² iFixit was alarmed by the market domination by technology developers, such as Apple, Samsung, and Microsoft.²⁵³ There has been worry about the position of independent repairers in the motor vehicle industry.²⁵⁴ The Watch and Clockmakers of Australia Inc. was worried that independent repairers were being squeezed out of the marketplace by various monopolies.²⁵⁵ The National Farmers Federation was worried about the domination of farming markets by technology developers and big agriculture companies.²⁵⁶

Rod Sims, when he was the head of the ACCC, expressed his concerns about tackling market power.²⁵⁷ He was worried “whether our market economy is too much favoring the producers at the expense of consumers.”²⁵⁸ Sims maintained that “we must do all we can to align the interests of business and society through sound laws.”²⁵⁹ Sims contended that there was a need to address the gaps in Australia’s competition and consumer laws—particularly for small business. He hoped to “[m]ake unfair contract terms illegal, introduce an Unfairness Provision, regulate the prices and services of monopoly infrastructure and introduce well-targeted regulation to deal with the more damaging market power issues.”²⁶⁰ Sims observed: “Our need for a strong post-COVID recovery invites this [law reform], particularly given the concern that significant disruption often allows the strong to get stronger, to the detriment of our economy and society.”²⁶¹ Rod Sims was particularly concerned about the market dominance of digital platforms, noting: “The

252. Aimee Chanthadavong, *IT Service Provider Interactive hits out at Tech Companies for Monopolistic Firmware Tactics*, ZDNET (July 20, 2021), <https://zd.net/2TpuRM9>.

253. Aimee Chanthadavong, *iFixit CEO Names and Shames Tech Giants for Right to Repair Obstruction*, ZDNET (July 18, 2021), <https://zd.net/3kyA3Z9>.

254. Peter McCutcheon, *Mechanics Say They’ll Go Bust If Car Makers Don’t Share Computer Codes*, ABC (Nov. 21, 2018, 8:55 PM), <https://www.abc.net.au/news/2018-11-21/mechanics-want-car-makers-to-share-computer-codes/10506186>.

255. WATCHMAKERS & CLOCKMAKERS AUSTL. INC., RIGHT TO REPAIR: PRODUCTIVITY COMMISSION, SUBMISSION 83 TO THE ISSUES PAPER (2021), https://www.pc.gov.au/__data/assets/pdf_file/0006/272562/sub083-repair.pdf.

256. Nat’l Farmers Fed’n, *supra* note 80.

257. Rod Sims, *Tackling Market Power in the COVID-19 Era*, ACCC (Oct. 21, 2020), <https://www.accc.gov.au/speech/tackling-market-power-in-the-covid-19-era>.

258. *Id.*

259. *Id.*

260. *Id.*

261. *Id.*

main digital platforms have accumulated huge wealth from innovation, and later steps to cement their market power.”²⁶²

In respect of Finding 4.2, the Productivity Commission expressed concerns that some limits on access to repair supplies lacked sound justification.²⁶³ The advisory body doubted that repair problems were a universal problem: “There is no evidence of a systemic competition problem across all repair markets.”²⁶⁴ Nonetheless, the Productivity Commission recognized that there were significant repair limitations in “third party access to repair supplies (such as information, tools and parts).”²⁶⁵ The law reform body was skeptical of some of the justifications for repair limitations provided for by technology developers because “[w]hile manufacturers often justify these limits as a way to safeguard against risks from poor quality repair (particularly for safety and security), these risks can be overstated for many products and types of repair.”²⁶⁶ The Productivity Commission called for greater transparency regarding repair restrictions and limitations, requiring manufacturers to “show clear and verifiable evidence of the associated risks.”²⁶⁷ This Finding 4.2 is frustrating in some ways it suggests that repair restrictions are a problem in only some exceptional markets. However, there was evidence during the inquiry that there were widespread problems in respect of repair restrictions.

There were powerful submissions by organizations representing farmers to the Productivity Commission calling for a right to repair in the field of agriculture.²⁶⁸ Such submissions were opposed by agricultural technology developers, such as John Deere.²⁶⁹ In Finding 4.3, the Productivity Commission highlighted that the field of agriculture was problematic, and that limits on repair supplies for agricultural machinery were harmful. The advisory body stressed that there was a serious problem in this particular market: “Manufacturer and dealer restrictions on repair supplies for agricultural machinery (including repair manuals, diagnostic software tools and spare parts)

262. *Id.*

263. PRODUCTIVITY COMM’N, INQUIRY REPORT, *supra* note 4, at 31.

264. *Id.*

265. *Id.*

266. *Id.*

267. *Id.*

268. Nat’l Farmers Fed’n, *supra* note 80.

269. JOHN DEERE, RE: PRODUCTIVITY COMMISSION RIGHT TO REPAIR ISSUE PAPER, SUBMISSION NO. 84, PRODUCTIVITY COMMISSION (2021), https://www.pc.gov.au/__data/assets/pdf_file/0008/272564/sub084-repair.pdf; JOHN DEERE, A SUBMISSION TO THE PRODUCTIVITY COMMISSION ON THE DRAFT REPORT ON THE RIGHT TO REPAIR, SUBMISSION NO. 176, PRODUCTIVITY COMMISSION (2021), https://www.pc.gov.au/__data/assets/pdf_file/0006/279186/subdr176-repair.pdf.

are causing material harm to farmers and other machinery owners through higher repair prices, reduced access and choice, and greater financial risks from repair delays.”²⁷⁰ The Productivity Commission recommended that there was a need for government intervention to provide for “additional measures” to address harmful repair restrictions and limitations in the area of agriculture.²⁷¹

In Recommendation 8.2, the Productivity Commission recommended the introduction of a repair supplies obligation on agricultural machinery.²⁷² The advisory body observed: “The Australian Government should introduce a repair supplies obligation on agricultural machinery that requires manufacturers to provide access to repair information and diagnostic software tools to machinery owners and independent repairers on fair and reasonable commercial terms.”²⁷³ The law reform body stressed that this was an immediate priority, as soon as the end of 2022.²⁷⁴ The Productivity Commission emphasized that the Australian Government should take into account “developments in the Motor Vehicle Service and Repair Information Sharing Scheme, as well as voluntary information sharing within the agricultural machinery industry.”²⁷⁵ The law reform body recommended that such a scheme for agricultural repair should be evaluated after it had been in operation for three years.²⁷⁶

In Finding 4.4, the Productivity Commission maintained that the extent of harm in mobile phone and tablet repair markets was uncertain: “Manufacturer restrictions on repair supplies for mobile phones and tablets are likely to be resulting in some consumer harm (through higher repair prices and reduced choice of repairer), which could be material in aggregate, given the ubiquitous nature of such goods and the concentrated market for new devices.”²⁷⁷ The law reform body noted that “data limitations and some countervailing market characteristics (such as high product turnover) mean that the evidence base is insufficient to justify specific policy interventions at this time.”²⁷⁸ In Recommendation 4.1, the Productivity Commission called for the ACCC to “undertake a market study of the mobile phone and tablet market.”²⁷⁹ In my view, the focus on the right to repair should not be confined to particular

270. PRODUCTIVITY COMM’N, INQUIRY REPORT, *supra* note 4, at 31.

271. *Id.*

272. *Id.* at 38.

273. *Id.* at 39.

274. *Id.*

275. *Id.*

276. *Id.*

277. *Id.* at 31.

278. *Id.*

279. *Id.* at 32.

sectors or industries. Arguably, though, the better approach would be to ensure that there was a universal right to repair in Australia.

The draft report by the Productivity Commission briefly discussed in passing some of the impacts of the coronavirus pandemic upon the topic of the right to repair. As part of the inquiry, the author (Rimmer) and his collaborator Dr. Muhammad Zaheer Abbas made submissions to the Productivity Commission, arguing that there needed to be greater coverage of the right to repair in the field of medicine, especially in light of the COVID-19 crisis.²⁸⁰ The U.S. Wyden and Clarke Bill on the right to repair for medical equipment was a useful precedent in this regard.²⁸¹ There were countervailing submissions from the medical device industry that the right to repair should not apply to the field of medicine.²⁸² The Federal Department of Health also made submissions on the regulatory framework for medical devices.²⁸³

In the end, though, the Productivity Commission seemed reluctant to tackle the topic of right to repair in the context of medicine and healthcare. In Recommendation 4.2, the advisory body observed: “The Australian Government should conduct an independent public review of existing medical device regulations to assess whether they strike a balance between repair access and device safety that maximizes community wellbeing.”²⁸⁴ The Productivity

280. MATTHEW RIMMER, A SUBMISSION TO THE PRODUCTIVITY COMMISSION INQUIRY ON THE RIGHT TO REPAIR, SUBMISSION NO. 168, PRODUCTIVITY COMMISSION (2021), <https://eprints.qut.edu.au/212034/>; MUHAMMAD ZAHEER ABBAS, A SUBMISSION ON THE ISSUES PAPER OF THE PRODUCTIVITY COMMISSION ON THE RIGHT TO REPAIR, SUBMISSION NO. 34, PRODUCTIVITY COMMISSION (2021), https://www.pc.gov.au/__data/assets/pdf_file/0006/272292/sub034-repair.pdf.

281. *Wyden and Clarke Introduce Bill to Eliminate Barriers to Fixing Critical Medical Equipment During the Pandemic*, RON WYDEN (Aug. 6, 2020), <https://www.wyden.senate.gov/news/press-releases/wyden-and-clarke-introduce-bill-to-eliminate-barriers-to-fixing-critical-medical-equipment-during-the-pandemic->; Mark Morgenstein & Nathan Proctor, *43,000 Call on Ventilator Manufacturers to Release Repair Information*, MOPIRG (Apr. 3, 2020), <https://mopirg.org/news/usp/43000-call-ventilator-manufacturers-release-repair-information>; Contreras, *supra* note 10.

282. *See* Med. Imaging & Tech. Alliance v. Libr. of Cong. No. 1:22-cv-499 (D.D.C. 2022) (demonstrating activity by medical device trade groups against the right to repair in the United States); Isaiah Poritz, *Medical Device Trade Group Wants Federal Repair Rule Blocked*, BLOOMBERG L. (Mar. 30, 2022, 2:11 PM), <https://news.bloomberglaw.com/ip-law/medical-device-trade-group-wants-federal-repair-rule-blocked>; Mike Masnick, *Medical Device Makers Sue Library of Congress for allowing people to fix their own Medical Devices*, TECHDIRT (May 5, 2022, 9:33 AM), <https://www.techdirt.com/2022/05/05/medical-device-makers-sue-library-of-congress-for-allowing-people-to-fix-their-own-medical-devices/>.

283. DEP’T HEALTH, RESPONSE TO THE PRODUCTIVITY COMMISSION ISSUES PAPER: RIGHT TO REPAIR, SUBMISSION NO. 121 (2021), https://www.pc.gov.au/__data/assets/pdf_file/0011/272909/sub121-repair.pdf.

284. PRODUCTIVITY COMM’N, INQUIRY REPORT, *supra* note 4, at 32.

Commission commented: “The review should consider whether current regulations create incentives for manufacturers to restrict repair, and examine potential ways to improve repair access for low-risk medical devices or for highly qualified independent repair technicians.”²⁸⁵ It remains to be seen whether there will be a reference from the new Albanese government to undertake a further inquiry in this field.

During the right to repair hearing, there were a flurry of submissions about market concentration in the field of watch repairs. In Finding 4.6, the Productivity Commission observed: “The high degree of market concentration and consumer lock-in in the prestige watch market in Australia suggests manufacturer restrictions on the supply of watch repair equipment and components to small independent repairers are resulting in consumer harm.”²⁸⁶ The advisory body noted that “this harm is likely to be limited due to the small size of the prestige watch repair market in Australia.”²⁸⁷ The law reform body commented that “there are credible arguments that these restrictions may constitute a misuse of market power under Australian competition law (s. 46 of the *Competition and Consumer Act* 2010) that substantially lessens competition in the watch repair market by affecting the viability of local watch repairers.”²⁸⁸ The advisory body suggested that such matters may need to be adjudicated and resolved in court.

More broadly, the Productivity Commission considered the role of the ACCC in addressing concerns about enforcement under Australian competition law. The law reform body acknowledged: “There are considerable costs and a high evidentiary threshold for bringing cases under the existing competition provisions in Part IV of the *Competition and Consumer Act* 2010—such as the misuse of market power, exclusive dealing and anti-competitive agreement provisions.”²⁸⁹ The Productivity Commission recognized that this access to justice problem would be “likely to discourage third-party repairers (particularly smaller businesses, such as watch repairers) from taking action against manufacturers and authorized dealers.”²⁹⁰ The Productivity Commission stressed that “the [ACCC] already has powers to investigate credible cases of anti-competitive conduct in repair markets and, if warranted, institute court proceedings.”²⁹¹ The Productivity Commission commented: “New cases could test the impact of recent legislative changes and other global

285. *Id.*

286. *Id.*

287. *Id.*

288. *Id.*

289. *Id.* at 33.

290. *Id.*

291. *Id.*

repair market developments, as well as provide an educative or deterrent effect for broader repair market conduct.”²⁹²

In Recommendation 4.3, the Productivity Commission pointedly remarks that the regulator should investigate the issue of “whether manufacturer conduct in repair markets is contravening the restrictive trade practices provisions of the *Competition and Consumer Act* 2010, with a view to commencing proceedings.”²⁹³ The Productivity Commission even makes a recommendation about the issue that the regulator should focus upon: “The ACCC’s investigation should initially focus on whether the alleged conduct of watch manufacturers is breaching the misuse of market power (s. 46) provisions.”²⁹⁴

A positive obligation to provide access to repair supplies could be a useful means of mandating access to repair supplies—including repair information, spare parts, and diagnostic tools. Professor Aaron Perzanowski has called for competition regulators to engage in active intervention against repair restrictions: “Under appropriate leadership, we could see meaningful efforts by antitrust enforcers to protect competition, resist market concentration, and break up dominant firms when necessary.”²⁹⁵

In the United States, anti-monopoly advocate Lina Khan has been appointed to the Federal Trade Commission by the Biden Administration.²⁹⁶ As iFixit noted, “With [Lina Khan’s] appointment, Right to Repair gains perhaps its highest-profile advocate, and people get a committed advocate to their right to fix the things they own, regardless of what the biggest companies would prefer.”²⁹⁷ In July 2021, Lina Khan and the Federal Trade Commission

292. *Id.*

293. *Id.*

294. *Id.*

295. PERZANOWSKI, *supra* note 12, at 194.

296. See, e.g., Zephyr Teachout & Lina Khan, *Market Structure and Political Law: A Taxonomy of Power*, 9 DUKE J. CONST. L. & PUB. POL’Y 37, 37–74 (2014) (providing an example of Lina Khan’s classic work); Lina Khan, *Amazon’s Antitrust Paradox*, 126 YALE L.J. 710, 710–805 (2017); Lina Khan & Sandeep Vaheesan, *Market Power and Inequality: The Antitrust Counter-revolution and its Discontents*, 11 HARV. L. & POL’Y REV. 235, 235–94 (2017); Lina Khan, *The New Brandeis Movement: America’s Antimonopoly Debate*, 9 J. EUR. COMPETITION L. & PRAC. 131, 131–32 (2018); Lina Khan, *Sources of Tech Platform Power*, 2 GEO. L. & TECH. REV. 325, 325–31 (2018); Lina Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973, 973–1098 (2019); Lina Khan & David Pozen, *A Skeptical View of Information Fiduciaries*, 133 HARV. L. REV. 497, 497–541 (2019).

297. Kerry Sheehan, *Lina Khan is the New FTC Chair, and That’s Great for Repair*, IFIXIT (June 15, 2021), <https://www.ifixit.com/News/50783/lina-khan-is-the-new-ftc-chair-and-thats-great-for-repair>?utm_content=buffer0abf&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

have prioritized taking enforcement action in respect of repair restrictions.²⁹⁸ In 2022, Lina Khan and the Federal Trade Commission have issued warnings over repair restrictions to three major companies—motorcycle company Harley-Davidson,²⁹⁹ outdoor generator maker Westinghouse,³⁰⁰ and grill company Weber.³⁰¹ Khan issued a statement, joined by Commissioner Slaughter, noting that such actions “mark an important step forward, demonstrating our commitment to vigorously protecting Americans’ right to repair.”³⁰² Khan and Slaughter commented about the policy problems generated by repair restrictions: “Illegal repair restrictions can significantly raise costs for consumers, stifle innovation, close off business opportunity for independent repair shops, create unnecessary electronic waste, delay timely

298. *FTC to Ramp Up Law Enforcement Against Illegal Repair Restrictions*, FED. TRADE COMM’N (July 21, 2021), <https://www.ftc.gov/news-events/press-releases/2021/07/ftc-ramp-law-enforcement-against-illegal-repair-restrictions>; *Policy Statement of the Federal Trade Commission on Repair Restrictions Imposed by Manufacturers and Sellers*, FED. TRADE COMM’N (July 21, 2021), https://www.ftc.gov/system/files/documents/public_statements/1592330/p194400repairrestrictionspolicystatement.pdf; Lina Khan, *Remarks of Chair Lina M. Khan Regarding the Proposed Policy Statement on Right to Repair*, FED. TRADE COMM’N (July 21, 2021), <https://www.ftc.gov/public-statements/2021/07/remarks-chair-lina-m-khan-regarding-proposed-policy-statement-right-repair>.

299. Press Release, Fed. Trade Comm’n, *FTC Takes Action Against Harley-Davidson and Westinghouse for Illegally Restricting Customers’ Right to Repair: Agency Orders Require Companies to Fix Warranties, Come Clean with Customers, and Compete Fairly with Independent Repairers*, (June 23, 2022), <https://www.ftc.gov/news-events/news/press-releases/2022/06/ftc-takes-action-against-harley-davidson-westinghouse-illegally-restricting-customers-right-repair-0>; Adi Robertson, *FTC Orders Harley-Davidson to Follow Right-To-Repair Rules*, VERGE (June 23, 2022, 8:55 AM), <https://www.theverge.com/2022/6/23/23180054/ftc-harley-davidson-westinghouse-right-to-repair-warranty-violations-consent-order>; Don Williams, *FTC Asserts Harley-Davidson Owners’ Right To Repair, Access Aftermarket*, ULTIMATE MOTORCYCLE (June 24, 2022), <https://ultimatemotorcycling.com/2022/06/24/ftc-asserts-harley-davidson-owners-right-to-repair-access-aftermarket/>.

300. Press Release, Fed. Trade Comm’n, *FTC Takes Action Against Harley-Davidson and Westinghouse*, *supra* note 299.

301. Press Release, Fed. Trade Comm’n, *FTC Takes Action Against Weber for Illegally Restricting Customers’ Right to Repair Agency Order Requires Grill Maker to Fix Warranty and Come Clean with Customers*, (July 7, 2022), <https://www.ftc.gov/news-events/news/press-releases/2022/07/ftc-takes-action-against-weber-illegally-restricting-customers-right-repair>; Sean Hollister, *Weber grills will soon come with the Explicit Right to Repair Them: What Weber was doing has been Illegal Since 1975*, VERGE (July 8, 2022, 1:24 PM), <https://www.theverge.com/2022/7/8/23200649/right-to-repair-ftc-weber-third-party-parts-warranty-act>; Jason Koebler, *FTC Orders Weber to Honor the Sacred Right to Repair Your Own Grill*, VICE (July 7, 2022, 9:42 AM), <https://www.vice.com/en/article/7k8vb4/ftc-orders-weber-to-honor-the-sacred-right-to-repair-your-own-grill>.

302. Lina Khan & Rebecca Kelly Slaughter, *Statement of Chair Lina M. Khan Joined by Commissioner Rebecca Kelly Slaughter In the Matter of Harley-Davidson Motor Company Group and MWE Investments Inc.*, FED. TRADE COMM’N (June 22, 2022), https://www.ftc.gov/system/files/ftc_gov/pdf/2223012_2123140HarleyMWEChairStatement.pdf.

repairs, and undermine resiliency—harms that can have an outsized impact on low income communities in particular.”³⁰³ Khan and Slaughter vowed to take further policy action to uphold the right to repair: “It is critical that unlawful repair restrictions continue to be a key area of focus for the Commission and that we continue to use all of our tools and authorities to root out these illegal practices.”³⁰⁴

Arguably, the ACCC should show a similar enthusiasm for enforcement action in respect of repair restrictions, as has been shown by Lina Khan and the Federal Trade Commission, with encouragement from President Joe Biden.³⁰⁵ The new Australian assistant minister for competition, Andrew Leigh MP, has expressed a desire for the Australian government to emulate the policy activity and enforcement intervention of the US Federal Trade Commission.³⁰⁶ Leigh maintained: “Both competition and productivity are kind of seen as soporific words, but they’re at the heart of Australia getting to enjoy the sort of prosperity which lets us live longer lives, healthier lives, to be more generous to disadvantaged Australians and to the region.”³⁰⁷ He contended: “So much of Australia’s prosperity has been driven by productivity and so much of the productivity growth has been driven by making sure that markets are competitive.”³⁰⁸

C. WARRANTIES

The Productivity Commission observed that there have been misleading terms in warranties for mobile phones, gaming consoles, washing machines, and high-end watches regarding independent repairs.³⁰⁹

Finding 4.1 of the Productivity Commission expressed concern that “some manufacturer warranties include terms that automatically void the warranty if repairs are undertaken by a non-authorized repairer or use non authorized parts.”³¹⁰ The law reform body also noted that “[o]ther warranties often contain dense and difficult to understand language, which can lead consumers to mistakenly believe that such terms exist.”³¹¹ The advisory body commented: “These voiding clauses can deter consumers from using third party repairs

303. *Id.*

304. *Id.*

305. *Policy Statement of the Federal Trade Commission on Repair Restrictions Imposed by Manufacturers and Sellers*, FED. TRADE COMM’N (July 21, 2021), https://www.ftc.gov/system/files/documents/public_statements/1592330/p194400repairrestrictionspolicystatement.pdf.

306. Martin, *supra* note 242.

307. *Id.*

308. *Id.*

309. PRODUCTIVITY COMM’N, INQUIRY REPORT, *supra* note 4, at 153–59.

310. *Id.* at 33.

311. *Id.*

during the warranty period, limiting their choice of repairer and reducing competition in repair markets.”³¹² The Productivity Commission also observed: “Many consumers are also not aware that consumer guarantees under the Australian Consumer Law cannot be displaced by terms in warranties, and the guarantees are not extinguished if consumers have previously used non-authorized repair services or spare parts (as long as those services have not caused any damage to the product).”³¹³

In Recommendation 4.4, the Productivity Commission proposed the addition of new mandatory warranty text. The Productivity Commission commented:

The Australian Government should amend r. 90 of the *Competition and Consumer Regulations* 2010, to require manufacturer warranties (‘warranties against defect’) on goods to include text (located in a prominent position in the warranty) stating that entitlements to a remedy under the consumer guarantees do not require consumers to have previously used authorised repair services or spare parts.³¹⁴

The Productivity Commission recommended that there should be broad-based consultation with industry and consumer groups in the development of the final wording of this text.³¹⁵

The Productivity Commission also reached Finding 4.8 that a prohibition on warranty voiding clauses was not justified at this time.³¹⁶ The law reform body maintained that “Improvements to awareness of the consumer guarantees (through mandatory warranty text— recommendation 4.4) and the enforcement of those guarantees (through the introduction of pecuniary penalties—recommendation 3.4) will go some way towards reducing the deterrent effect of manufacturer warranty terms that void the warranty if any non-authorized repairs occur.”³¹⁷ The advisory body argued that such a prohibition “may also increase costs for manufacturers and consumers, so is not justified at this time.”³¹⁸

This explanation, though, is unconvincing. Arguably, the Australian Parliament should adopt provisions similar to those of the Magnuson-Moss Warranty Act in the United States, which prohibit manufacturer warranties

312. *Id.*

313. *Id.*

314. *Id.* at 34.

315. *Id.*

316. *Id.*

317. *Id.*

318. *Id.*

from containing terms that require consumers to use authorized repair services or parts to keep their warranty coverage.

V. SUSTAINABLE DEVELOPMENT

In a speech to the Australian Repair Summit, Presiding Commissioner Paul Lindwall discussed some of the environmental issues in respect of the right to repair.³¹⁹ He posed the question, “Why do some products last many years, while others break quickly?”³²⁰ Lindwall noted that, in Cuba, repair is a necessity (given the trade restrictions to that jurisdictions). He then considered the position of repair in Australia:

We replace products for a whole range of reasons. It could be the product is broken and it's more expensive to repair than replace. It could be that a new product offers features that we desire, or the new product is more efficient and less environmentally harmful. It could be that we like a change for the sake of fashion. The design of many products today has incorporated solid state technology, including the internet of things, allowing our products to be connected and controlled remotely. This has been an important factor leading to the rapid change over of certain products.³²¹

Lindwall reflected: “Overall we didn't find clear evidence that manufacturers deliberately design products to fail early.”³²² Nonetheless, he observed that there could be a case for a repairability index or labelling scheme, like France.³²³

Environmental advocates and sustainability groups, though, have argued that the Productivity Commission has not gone far enough its findings on the environmental dimensions of the right to repair. Such civil society groups have maintained that there is a need for a more substantive set of law reform recommendations dealing with e-waste, product design and obsolescence, repair labelling, as well as the circular economy, sustainable development, and

319. Paul Lindwall, *Right to Repair Draft Report*, AUSTRALIAN REPAIR SUMMIT, CANBERRA (July 9, 2021), <https://www.pc.gov.au/news-media/speeches/repair>.

320. *Id.*

321. *Id.*

322. *Id.*

323. *Id.*

climate action. The parlous state of Australia's environment is a driving factor for wholesale reform.³²⁴

A. E-WASTE

Environmentalist George Monbiot has been concerned about the production of e-waste and the problem of planned obsolescence: "Our appliances are designed to break down, they are deliberately engineered not to be repaired."³²⁵ Monbiot contended that there is a need to shift to a model of sustainable production and consumption in a circular economy.

The Hon. Shane Rattenbury has been concerned about the cost of e-waste: "Rapid technological innovation, low-quality manufacturing methods, and globalized markets lowering the costs of consumer goods have supported faster rates of product obsolescence."³²⁶ He contends: "Stemming the creation of e-waste by extending product viability and life-span will more successfully address environmental and health detriments than measures such as recycling and up-cycling measures".³²⁷ Rattenbury was of the view that recycling did not go far enough to address the problem of e-waste.

John Gertsakis and Shaun Scallan of the e-Waste Watch Institute have argued to the Productivity Commission that there is a need for a stronger package of policy measures to support product stewardship, the reduction of e-waste, and the transition to a circular economy.³²⁸ Their submission contends: "The right to repair must facilitate and enable easy and if possible (and safe) DIY repair, this will lower the cost of repair dramatically."³²⁹ The authors call for stronger recognition of key principles of a circular economy—including "designing-out waste from the outset"; and "prolonging the life of products through repair, refurbishment, remanufacturing and reuse."³³⁰ The authors called for "waste avoidance and reduction by extending product life

324. Ian Creswell, Terri Janke & Emma Johnston, *Australia: State of the Environment 2021*, <https://soe.deceew.gov.au/>.

325. George Monbiot, *People Want a Greener, Happier World Now. But Our Politicians Have Other Ideas*, *GUARDIAN* (July 22, 2020, 11:55 AM), https://www.theguardian.com/commentisfree/2020/jul/21/greener-happier-world-politicians-boris-johnson-consumerism-planet?CMP=share_btn_tw.

326. Rattenbury, *supra* note 25.

327. *Id.*

328. SHAUN SCALLAN & JOHN GERTSAKIS, E-WASTE WATCH INSTITUTE, A SUBMISSION TO THE AUSTRALIAN GOVERNMENT PRODUCTIVITY COMMISSION ON RIGHT TO REPAIR, SUBMISSION 125 TO THE ISSUES PAPER, PRODUCTIVITY COMMISSION (2021), https://www.pc.gov.au/__data/assets/pdf_file/0020/273008/sub125-repair.pdf.

329. *Id.*

330. *Id.*

and prolonging the life of products, components and materials.”³³¹ The submission comments: “Design for durability, repair and reuse can be seen as the ‘first responders’ when considering solutions and preventative measures that can avoid and reduce waste.”³³²

In Finding 7.1, the Productivity Commission suggested that e-waste is a small but growing waste stream: “Annual e-waste generation is growing relatively quickly compared to other waste streams (more than doubling by weight between 2009–10 and 2018–19), but is a small share (less than one per cent by weight) of total waste generated in Australia.”³³³ The Productivity Commission commented that the available data suggested that “the main sources of e-waste (by weight) over the past decade were tools, washing machines, air conditioners, small domestic appliances (such as adapters, irons and clocks), cooking appliances (such as food processors and grills), and cathode ray tube televisions.”³³⁴ The Productivity Commission also predicted that “solar panels and lithium-ion batteries are expected to generate growing quantities of e-waste over the coming decade.”³³⁵

In Finding 7.2, the Productivity Commission maintained that the environmental and health risks from e-waste in landfill are relatively low because “Australia’s landfills are generally well-regulated and well-managed.”³³⁶ The Productivity Commission qualified that statement, noting that “landfill quality varies, particularly among smaller and older landfill sites in regional and remote areas, generating increased risks from e-waste in some sites.”³³⁷

In Recommendation 7.1, the Productivity Commission called for reuse to be included within the annual targets of the National Television and Computer Recycling Scheme.³³⁸ The advisory organization commented: “The Australian Government should amend the *Recycling and Waste Reduction (Product Stewardship — Televisions and Computers) Rules 2021* to count e-waste products that have been repaired and reused towards the annual targets of the National Television and Computer Recycling Scheme (NTCRS) co-regulatory bodies.”³³⁹ The law reform body wanted a consultative process for such a scheme: “The exact design features that need to be incorporated into the NTCRS to enable reuse options should be determined in consultation with the scheme’s liable parties

331. *Id.*

332. *Id.*

333. PRODUCTIVITY COMM’N, INQUIRY REPORT, *supra* note 4, at 37.

334. *Id.*

335. *Id.*

336. *Id.* at 38.

337. *Id.*

338. *Id.*

339. *Id.*

and co regulatory bodies.”³⁴⁰ The Productivity Commission observed that there was a need to guard against various risks—including “manipulating (or ‘gaming’ of) scheme targets, when the same products cycle through the scheme without legitimately being reused”; “unlawful exports for reuse that result in more products in the informal recycling sector, generating worse health and environmental outcomes” and “consumer concerns about data security for repaired and reused products.”³⁴¹ The law reform body suggested: “Any future product stewardship schemes should also include repair and reuse as options within their targets, where practical.”³⁴²

In Recommendation 7.2, the Productivity Commission called for the use of tracking devices to monitor e-waste exports.³⁴³ In its view, “[t]he Australian Government should make greater use of electronic tracking devices to determine the end-of-life outcomes of Australian e-waste collected for recycling.”³⁴⁴ The Productivity Commission stressed: “At a minimum, the Government should increase the National Television and Computer Recycling Scheme’s use of tracking devices, to better monitor co regulatory bodies and their downstream recyclers and logistic providers.”³⁴⁵ The law reform body suggested that the Department of Agriculture, Water and the Environment could also consider the use of “tracking devices in e-waste products outside the scope of product stewardship schemes.”³⁴⁶ The Productivity Commission envisaged that such “tracking should be conducted by independent third party auditors.”³⁴⁷

There were a number of environmental and sustainability groups who questioned the findings of the Productivity Commission, suggesting that they under-estimated the scale and intensity of the problem of e-waste. Such organizations maintained that there should be a stronger set of policy solutions to the problem of e-waste in Australia.

B. PRODUCT DESIGN AND OBSOLESCENCE

There was also much discussion in the right to repair inquiry about product design and planned obsolescence.

The ACT Attorney-General Shane Rattenbury calls for product stewardship laws to support the development of a circular economy: “A truly

340. *Id.*

341. *Id.*

342. *Id.*

343. *Id.*

344. *Id.*

345. *Id.*

346. *Id.*

347. *Id.*

circular economy will rely, in part, upon product design for next life and new life, through reparability, modularity and disassembly.”³⁴⁸

Australian Earth Laws Alliance (AELA) has been concerned about the problem of planned obsolescence—“an economic strategy to keep people buying the same product again, and again, in a saturated market.”³⁴⁹ AELA recommends:

Mandatory existing environmental design standards to be applied to all relevant products made, imported and sold in Australia. These standards would require Australian companies to manufacture, import or sell products that are designed to be durable and exist for their optimal lifetime, and that can easily be upgraded, repaired and recycled where technically possible.³⁵⁰

AELA recommends amending the objects of the *Product Stewardship Act 2011* (Cth) so that a core objective of the Act is to reduce energy and water use and reduce emissions. In its view, “The *Product Stewardship Act 2011* (Cth) should state that in considering the environmental impacts of products, decision makers will draw on contemporary scientific knowledge, and use an evidenced based approach.”³⁵¹ AELA argues: “Environmental impacts of products must include an assessment of the life cycle of the product, and its contribution to the cumulative impacts of pollution and resource use.”³⁵²

The World’s Biggest Garage Sale, based in Morningside, South Brisbane, submitted: “A ‘Right to Repair’ should not be considered in isolation, but rather in tandem with extended producer responsibility and novel materials.”³⁵³ The submission suggested:

Manufacturers or distributors should be encouraged to work with local organisations embedded in the community so that when an item no longer works or is not wanted, then it can be repaired and reused, repurposed or recycled locally, making it more accessible for consumers; however the manufacturer must pay for this service as part of their extended producer responsibility.³⁵⁴

348. Rattenbury, *supra* note 25.

349. *Challenging Consumption and Planned Obsolescence*, AELA, <https://www.earthlaws.org.au/our-programs/challenging-consumption/planned-ob/>.

350. *Id.*

351. *Id.*

352. *Id.*

353. WORLD’S BIGGEST GARAGE SALE, SUBMISSION FOR THE RIGHT TO REPAIR INQUIRY, (Jan. 30, 2021), https://pc.gov.au/__data/assets/pdf_file/0019/272323/sub045-repair.pdf.

354. *Id.*

The organization contends that “to truly move into a circular economy, we want to prevent future legacy waste..., so we need to explore circular chemistry, circular metallurgy and circular component disciplines.”³⁵⁵ The World’s Biggest Garage Sale argued: “As we move from a linear to a circular economy, repair must be considered integral in any policies and frameworks moving forward.”³⁵⁶ The submission maintained: “Environmental considerations can no longer be ignored at the very critical phase of designing products, where options for repair should be examined.”³⁵⁷

The Australian Academy of Technology and Engineering has called on governments to provide for “targeting manufacturing grant programs and tax incentives toward innovative design for waste avoidance or minimization, including reparability.”³⁵⁸

In Finding 6.1, the Productivity Commission recognized that there was community disquiet about the problem of obsolescence: “There is growing community concern in Australia and overseas that product lifespans are becoming unnecessarily short (‘premature obsolescence’), with detrimental impacts on consumers and the environment.”³⁵⁹ Nonetheless, the law reform body was of the view that “the evidence is mixed on whether premature obsolescence is a significant problem.”³⁶⁰ The advisory body was of the view that “such practices [of planned obsolescence] are unlikely to be widespread.”³⁶¹ The Productivity Commission observed: “The lifespans of some products are becoming shorter, but this is often driven by consumers choosing to replace their products with newer ones rather than the products breaking; indeed, some products are becoming more durable.”³⁶²

The Productivity Commission insisted: “For certain types of products (such as white goods and consumer electronics), some consumers find it difficult to access relevant information about product reparability and durability when making purchasing decisions.”³⁶³ The Productivity Commission observed: “Such information gaps could contribute to premature obsolescence by preventing consumers from selecting more repairable and

355. *Id.*

356. *Id.*

357. *Id.*

358. AUSTRALIAN ACADEMY OF TECHNOLOGY & ENGINEERING, SUBMISSION TO THE PRODUCTIVITY COMMISSION INQUIRY INTO A RIGHT TO REPAIR (2021), <https://www.atse.org.au/wp-content/uploads/2021/01/SUB-2021-02-01-Inquiry-into-the-Right-to-Repair-within-Australia-FINAL.pdf>.

359. PRODUCTIVITY COMMISSION, INQUIRY REPORT, *supra* note 4, at 36.

360. *Id.*

361. *Id.*

362. *Id.*

363. *Id.*

durable products based on their preferences, and reducing manufacturers' incentives to develop these products."³⁶⁴

In Finding 6.2, the Productivity Commission maintained that "interventionist responses" to premature obsolescence were unnecessary and not needed.³⁶⁵ The law reform body maintained that it did not support "additional policies to prevent premature product obsolescence—in the form of mandatory product design standards, tax incentives and subsidies, or expanded consumer protection laws—are unlikely to have net benefits for the community."³⁶⁶ The Productivity Commission argued that "[m]andatory product design standards, as well as tax incentives and subsidies for repair, are costly."³⁶⁷ In its view, "Existing consumer protection laws, combined with this inquiry's recommendations ... are likely to address some of the behaviors associated with premature obsolescence."³⁶⁸

It is disappointing that the Productivity Commission shied away from a stronger response to the problem of premature and planned obsolescence (which was identified as a serious and persistent problem by many stakeholders).

C. REPAIR LABELLING

There was significant debate in the Productivity Commission inquiry as to whether labelling and certification schemes would be helpful in dealing with repairs.

Professor Jay Sanderson and Teddy Henriksen have contended that trademarks and labelling schemes could play a useful role in terms of certifying the quality of repairs.³⁶⁹ Sanderson and Henriksen commented: "While a repairable mark and license is not the panacea of repairability, it can help distinguish repairable goods and signal to consumers, manufacturers and governments the efforts implemented to ensure goods are as repairable as they can be."³⁷⁰ Sanderson and Henriksen argued that "once a repairable trade mark and associated standards are established the real work begins; building trust in the mark, and its standards and processes."³⁷¹

364. *Id.*

365. *Id.*

366. *Id.*

367. *Id.*

368. *Id.*

369. Sanderson & Henriksen, *supra* note 169, at 161–72.

370. *Id.* at 171–72.

371. *Id.* at 172.

In its submission to the Productivity Commission, Clare Hobby and Andreas Nobell considered the right to repair and sustainability certification.³⁷² Hobby and Nobell contended that “the right to repair is fundamental to longer product use, which in turn supports the shift to a regenerative, circular economy and the prevention of e-waste.”³⁷³ Hobby and Nobell commented that there was a lack of consideration of the need for a circular economy by many technology developers and users.³⁷⁴ The submission also noted the problem of false product claims: “There is a continuing problem of untrue claims that certain products are unsafe to open up and repair.”³⁷⁵ Hobby and Nobell suggested that there was a need for the regulator to take further action in respect of greenwashing.

The Australian Academy of Technology and Engineering has provided support for the recognition of the right to repair.³⁷⁶ The Academy “recommended a legislated consumer right to repair products in Australia, starting with electronics.”³⁷⁷ The Academy discussed the need for standard-setting and labelling systems in respect of repair: “Creating standards and certification systems for reused, repaired and remanufactured goods to build consumer confidence and promote sustainable design.”³⁷⁸

As of January 2021, France is the first country in the European Union to have implemented a repairability index on 5 categories of electronic devices. The architect of the scheme Jean-Paul Ventere has discussed the right to repair mandates in France.³⁷⁹ There has been much public policy interest in France’s new ‘repairability index’.³⁸⁰ Maddie Stone commented upon the development: “The repairability index represents part of France’s effort to combat planned obsolescence, the intentional creation of products with a finite lifespan that need to be replaced frequently, and transition to a more circular economy

372. CLARE HOBBY & ANDREAS HOBELL, SUBMISSION TO INQUIRY—RIGHT TO REPAIR IN AUSTRALIA (2021), https://www.pc.gov.au/__data/assets/pdf_file/0007/273895/sub137-repair.pdf.

373. *Id.*

374. *Id.*

375. *Id.*

376. AUSTL. ACAD. TECH. & ENG’G, *supra* note 358.

377. *Id.*

378. *Id.*

379. Jean-Paul Ventere, *Climate Crisis. Right to Repair Mandates In France*, YOUR POSITIVE IMPACT (Apr. 25, 2022), <https://yourpositiveimprint.com/episodes/climate-crisis-right-to-repair-mandates-in-france-jean-paul-ventere/>.

380. *The French Repair Index: Challenges and Opportunities*, RIGHT TO REPAIR (Feb. 3, 2021), <https://repair.eu/news/the-french-repair-index-challenges-and-opportunities/>.

where waste is minimized.”³⁸¹ Stone observes that the policy initiative has global implications: “Repair advocates say that the index will serve as a litmus test for other nations weighing similar regulations, help consumers make better choices, and hopefully incentivize companies to manufacture more repairable devices.”³⁸² Professor Aaron Perzanowski comments that “France’s stance against planned obsolescence is an important step forward” because it “recognizes the unavoidable convergence of consumer protection and environmental regulation.”³⁸³

In the European Union, there has been an interest in the adoption of further repair labelling schemes. The Greens/EFA in the European Parliament have been campaigning for the adoption of a repair score as part of a sustainability labelling scheme.³⁸⁴ The Greens/EFA have the policy ambition “to reduce e-waste and enable consumers to make informed choices about whether or not their electronics can be repaired.”³⁸⁵ Supporting a sustainability labelling scheme, the Greens/EFA commented: “The repair score will tell consumers how easy a product is to repair before they make the choice to buy it.”³⁸⁶ They observed: “The repair score would grade products based on: accessible product design; the tools needed to perform the repair; the availability of spare parts; and the prices of spare parts.”³⁸⁷ The Greens/EFA noted: “This repair score should also take into account the environmental footprint and how circular a product is (whether it will last, and whether it can be repaired, reused or recycled).”³⁸⁸

There has also been much interest in Switzerland about the adoption of a “repairability index.”³⁸⁹ There has been interesting empirical research on the role of independent repairers working in the field of mobile phones in Switzerland.³⁹⁰

The Productivity Commission showed enthusiasm during the inquiry for the new French scheme for repair product labelling. In Finding 6.3, the Productivity Commission ruled that “better consumer information could lead

381. Maddie Stone, *Why France’s New ‘Repairability Index’ is a Big Deal*, GRIST (Feb. 8, 2021), <https://grist.org/climate/why-frances-new-repairability-index-is-a-big-deal/>.

382. *Id.*

383. PERZANOWSKI, *supra* note 12, at 222.

384. *Support a Repair Score in Europe*, GREENS/EFA, https://act.greens-efa.eu/repairscore?source=gg_twitter_20210719.

385. *Id.*

386. *Id.*

387. *Id.*

388. *Id.*

389. *Swiss Consumers*, *supra* note 15.

390. NICOLAS NOVA & ANAIS BLOCH, DR. SMART-PHONE: AN ETHNOGRAPHY OF MOBILE PHONE REPAIR SHOPS (2020), <https://hal.archives-ouvertes.fr/hal-03106034>.

to longer-lived products.”³⁹¹ The Productivity Commission maintained: “Product labelling is likely to help address information gaps in product repairability and durability for certain products, such as white goods and consumer electronics (finding 6.1).”³⁹² The Productivity Commission insisted that labelling “can assist consumers to purchase more repairable and durable products that align with their preferences and encourage manufacturers to develop these types of products.”³⁹³

In Recommendation 6.1, the Productivity Commission called for the development and introduction of a product labelling scheme.³⁹⁴ The law reform body observed that “the Australian Government should develop a product labelling scheme that provides consumer information about product repairability and/or durability.”³⁹⁵ The law reform body anticipated that there would be three stages. First, the Australian Government would establish a working group to introducing a product labelling scheme within five years.³⁹⁶ Second, the Australian Government needed to “design and implement a pilot scheme for products where it is likely to have the most benefits (such as white goods and consumer electronics).”³⁹⁷ Third, the Australian Government would review the pilot scheme within two years of commencement to assess its effectiveness.³⁹⁸

D. THE CIRCULAR ECONOMY, SUSTAINABLE DEVELOPMENT AND CLIMATE ACTION

Discussing the Productivity Commission report, Jeff Sparrow commented that the topic of the right to repair raised larger issues in respect of sustainable development and climate action.³⁹⁹ He commented: “If we want to reverse the ecological catastrophe engulfing our planet, we must refocus attention on what is produced and how.”⁴⁰⁰ Sparrow reflected upon the public policy significance of the right to repair: “In an increasingly fragile world, we need more—much more—control over production.”⁴⁰¹ Sparrow suggested that the right to repair

391. PRODUCTIVITY COMM’N, INQUIRY REPORT, *supra* note 4, at 37.

392. *Id.*

393. *Id.*

394. *Id.*

395. *Id.*

396. *Id.*

397. *Id.*

398. *Id.*

399. Jeff Sparrow, *Ending over Mending: Planned Obsolescence is Killing the Planet*, GUARDIAN (Mar. 16, 2021, 12:30 PM), https://theguardian.com/commentisfree/2021/mar/17/ending-over-mending-planned-obsolence-is-killing-the-planet?CMP=share_btn_tw.

400. *Id.*

401. *Id.*

should also lead us to consider the various pressing needs to repair the planet: “In the era of catastrophic climate change, it’s very clear where ending over mending leads.”⁴⁰²

It is notable that there has been an array of innovation strategies in respect of clean, sustainable technologies to encourage responsible consumption and production. In Australia, there has been the establishment of a growing networks of repair cafes (like the Bower Reuse and Repair Centres) and social enterprises (such as Logan’s Substation 33). It is notable that a number of these organizations made submissions to the Productivity Commission. The Bower Reuse and Repair Centres called on the Treasurer Josh Frydenberg to “[i]ntroduce mandatory schemes for manufacturers of new products to provide spare parts and repair manuals for a mandated period of time.”⁴⁰³ The submission also recommended “[t]ax breaks for repairs of personal and household items.”⁴⁰⁴ The submission also called for the adoption of “[o]ther best practice measures to boost the circular economy, lengthen product life, reduce landfill and protect the environment.”⁴⁰⁵ The community group called for reusability and reparability standards in the *Product Stewardship Act* as well as a broad right to repair. There has even been the establishment of circular economy precincts, like those set up by the World’s Biggest Garage Sale.⁴⁰⁶ Makerspaces, fab labs, and hackerspaces in Australia and overseas have also been focused upon repair, recycling, and upcycling. There have been an array of small businesses and independent repairers who have been engaged in repair.

Australian governments have increasingly focused on the establishment of research institutions and networks to support a circular economy. UNSW’s Professor Veena Sahajwalla is the founding Director of the Centre for Sustainable Materials Research & Technology at UNSW.⁴⁰⁷ She has been focused on producing a new generation of green materials, products and resources derived from waste. Professor Sahajwalla has also been a leader of the ARC Industrial Transformation Hub for “green manufacturing,” which concluded its work in 2020.⁴⁰⁸ The hub undertook research into the high

402. *Id.*

403. *Right to Repair Petition*, BOWER REUSE & REPAIR CTRS., <https://bower.org.au/1122-2/>.

404. *Id.*

405. *Id.*

406. WORLD’S BIGGEST GARAGE SALE, *supra* note 353.

407. *Scientia Professor Veena Sahajwalla*, UNSW, <https://research.unsw.edu.au/people/scientia-professor-veena-sahajwalla> (last visited March 22 2023).

408. *ARC Green Manufacturing Research Hub*, UNSW, <https://www.smart.unsw.edu.au/research-programs/arc-green-manufacturing-research-hub> (last visited March 22 2023).

temperature transformation of waste rich in plastic and metals, such as from used cars and electronic waste, as well as textiles. The New South Wales Government and UNSW established the NSW Circular Economy Innovation Network.⁴⁰⁹ This organization was known as NSW Circular.⁴¹⁰ NSW Circular's mission was to deliver a zero-carbon circular economy.⁴¹¹ There has been efforts in 2022 to transform this New South Wales network into an Australian-wide network—with Circular Australia.⁴¹² The Federal Government could consider establishing research frameworks to encourage sustainable innovation—such as through a Centre of Excellence or a new Co-operative Research Centre.

David R. Boyd—the U.N. Special Rapporteur on Human Rights and the Environment—has discussed the importance of law reform to promote a circular economy.⁴¹³ He suggests:

Consumers need to think in new ways about the things they need and be open to leasing or renting instead of owning, enabling manufacturers to build new business models and be responsible for the durability, reuse, and recycling of their products. Governments need to enact stronger laws governing the disposal of waste, the manufacturing of disposable products, and the elimination of toxic substances. Businesses need to rethink their current approach and embrace the opportunities offered by the circular economy, cradle-to-cradle design, and biomimicry.⁴¹⁴

Boyd maintains that the “adoption of the circular economy could yield trillions of dollars in resource savings annually, along with enormous benefits for human and ecosystem health.”⁴¹⁵

Sustainable Development Goal No. 12 is focused on responsible production and consumption.⁴¹⁶ The U.N. Development Programme (UNDP)

409. *NSW Circular Economy Innovation Network*, UNSW, <https://newsroom.unsw.edu.au/keywords/nsw-circular-economy-innovation-network> (last visited March 22 2023).

410. *Circular Economy Policy*, NSW EPA, <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/response-to-china-national-sword/circular-economy-policy>; *NSW Government Commits to a Circular Economy*, LIBERAL PARTY AUSTR., (Mar. 21, 2022), <https://nswliberal.org.au/Shared-Content/News/2022/NSW-government-commits-to-a-circular-economy>.

411. *Id.*

412. CIRCULAR AUSTRALIA, <https://circularaustralia.com.au/> (last visited March 22 2023).

413. DAVID R. BOYD, *THE OPTIMISTIC ENVIRONMENTALIST: PROGRESSING TOWARDS A GREENER FUTURE* 51–67 (2015).

414. *Id.* at 66.

415. *Id.* at 67.

416. SDGs 2015, *supra* note 33; SDG Goal 12, *supra* note 33; UN General Assembly, *supra* note 33.

has sought to help realize the Sustainable Development Goals with the establishment of a network of Accelerator Labs.⁴¹⁷ At an international level, the UNDP administrator Achim Steiner has established a network of UNDP Accelerator Labs to help realize the U.N. Sustainable Development Goals.⁴¹⁸ Steiner has explained the impetus for the initiative: “These Labs, will enhance our capacity to provide more agile and solutions-focused support to countries as they build on local expertise and global best practices.”⁴¹⁹ The initiative was supported by the Federal Republic of Germany and the State of Qatar. As of July 2021, the UNDP Network of Accelerator Labs consists of 91 locations, supporting 115 countries.⁴²⁰ There are Accelerator Labs located in several regions, including Central America, the Caribbean, South America, Africa, the Middle East, Eastern Europe, Asia, and the Pacific. Thus far, the Australian Government has not made much progress in translating the Sustainable Development Goals into new laws, regulations, policies, and practices.⁴²¹ As yet, Australia is not a funder, participant, or a host in the UNDP Accelerator Labs. But conceivably, Australia could play a significant and instrumental role as a funder, host, and a participant in the UNDP Accelerator Labs system.

There has also been a growing focus on the reform of intellectual property law, policy, and practice to promote Sustainable Development Goals.⁴²² There

417. *Accelerator Labs*, UNDP, <https://acceleratorlabs.undp.org/content/acceleratorlabs/en/home.html>.

418. See Matthew Rimmer, *The UNDP Accelerator Lab Network: Intellectual Property, Innovation Policy, Sustainable Development, and the COVID-19 Recovery*, in RETHINKING THE ROLE OF INTELLECTUAL PROPERTY RIGHTS IN THE POST PANDEMIC WORLD (2023), (Taina Pihlajarinne, Jukka Mahonen, and Pratyush Upreti eds., 2023) (discussing this initiative broadly).

419. *German Ministry for Economic Cooperation and Development supports bold new pathway to development through 60 UNDP Accelerator Labs*, UNDP (June 27, 2019), <https://www.undp.org/content/undp/en/home/news-centre/news/2019/undp-accelerator-labs.html>.

420. *Accelerator Labs*, *supra* note 417.

421. MATTHEW RIMMER, A SUBMISSION ON INTELLECTUAL PROPERTY AND THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (2018), <https://eprints.qut.edu.au/121459/>; SENATE STANDING COMMITTEE ON FOREIGN AFFAIRS, DEFENCE, AND TRADE, UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (2019), https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Foreign_Affairs_Defence_and_Trade/SDGs/Report.

422. CHRISTOPHER MAY, THE WORLD INTELLECTUAL PROPERTY ORGANIZATION: RESURGENCE AND THE DEVELOPMENT AGENDA (2007); JEREMY DE BEER, IMPLEMENTING THE WORLD INTELLECTUAL PROPERTY ORGANIZATION'S DEVELOPMENT AGENDA (2009); DEAN BAKER, ARJUN JAYADEV & JOSEPH STIGLITZ, INNOVATION, INTELLECTUAL PROPERTY, AND DEVELOPMENT: A BETTER SET OF APPROACHES FOR THE 21ST CENTURY (2017); MARGARET CHON, PEDRO ROFFE & AHMED ABDEL-LATIF, THE CAMBRIDGE HANDBOOK OF PUBLIC-PRIVATE PARTNERSHIPS, INTELLECTUAL PROPERTY GOVERNANCE, AND SUSTAINABLE DEVELOPMENT (2018); Sara Bannerman, *The World Intellectual Property*

has been a WIPO Development Agenda—although that initiative has been quite technocratic in its operation.⁴²³ Kyle Wiens of iFixit has been concerned that intellectual property is putting circular economy in jeopardy.⁴²⁴ Nobel Laureate Joseph Stiglitz and his collaborators have emphasized that current intellectual property institutions and treaties are not well aligned with the sustainable development goals.⁴²⁵ Professor Margaret Chon and her collaborators have promoted the use of intellectual property partnerships to help realize the Sustainable Development Goals.⁴²⁶ Professor Sara Bannerman has called for a substantive reform agenda, which considers the full panoply of sustainable development goals.⁴²⁷ The author of this submission has argued that regional trade agreements need to be better informed by the sustainable development goals.⁴²⁸ There has also been an increasing interest in the role played by intellectual property in fostering clean innovation, green businesses, and sustainable markets.⁴²⁹ There is a growing scholarship in respect of intellectual property, clean technologies, and climate change.⁴³⁰

VI. CONCLUSION

In its conclusion to the inquiry, Australia's Productivity Commission posed the question: "Are broader right to repair laws needed?"⁴³¹ The law reform body noted that "many participants to this inquiry supported the

Organization and the Sustainable Development, 122 FUTURES 102586 (2020); Rogstad & Ørstavik, *supra* note 169.

423. Development Agenda for WIPO, WORLD INTEL. PROP. ORG., <https://www.wipo.int/ip-development/en/agenda/>; CHRISTOPHER MAY, THE WORLD INTELLECTUAL PROPERTY ORGANIZATION: RESURGENCE AND THE DEVELOPMENT AGENDA (2007); JEREMY DE BEER, IMPLEMENTING THE WORLD INTELLECTUAL PROPERTY ORGANIZATION'S DEVELOPMENT AGENDA (2009).

424. Kyle Wiens, *Intellectual property is putting circular economy in jeopardy*, GUARDIAN (June 4, 2014, 2:00 PM), <https://www.theguardian.com/sustainable-business/intellectual-property-circular-economy-bmw-apple>.

425. BAKER, JAYADEV & STIGLITZ, *supra* note 422.

426. CHON, ROFFE & ABDEL-LATIF, *supra* note 422.

427. Bannerman, *supra* note 422.

428. See Matthew Rimmer, *The Trans-Pacific Partnership and Sustainable Development: Access to Genetic Resources, Informed Consent, and Benefit-Sharing*, in BIODIVERSITY, GENETIC RESOURCES AND INTELLECTUAL PROPERTY: DEVELOPMENTS IN ACCESS AND BENEFIT SHARING 151–84 (Charles Lawson & Kamalesh Adhikari eds., 2018); RIMMER, *supra* note 140, at 525–50.

429. OLE-ANDREAS ROGNSTAD & INGER B. ØRSTAVIK, *Intellectual Property and Sustainable Markets* (2021).

430. MATTHEW RIMMER, INTELLECTUAL PROPERTY AND CLIMATE CHANGE: INVENTING CLEAN TECHNOLOGIES (2011); MATTHEW RIMMER (ED.), INTELLECTUAL PROPERTY AND CLEAN ENERGY: THE PARIS AGREEMENT AND CLIMATE JUSTICE (2018).

431. PRODUCTIVITY COMM'N, INQUIRY REPORT, *supra* note 4, at 20.

further adoption of repair supply obligations in Australia.”⁴³² The Productivity Commission observed that some participants “proposed extending obligations to many other products and types of repairs supplies.”⁴³³ However, the advisory body did not necessarily support such a broad approach: “While the Commission sees a role for repair supplies obligations, their adoption should be targeted to areas where there is evidence that they are needed.”⁴³⁴ The law reform body, in particular, focused on the motor vehicle information scheme, and agricultural machinery. This paper argues that there is a strong case for a broader approach to Australia’s right to repair laws. It maintains that the new Australian Government led by Anthony Albanese should adopt a comprehensive approach to the right to repair—not one that is industry-specific, or particular to certain technologies.

The Productivity Commission is commended for running such an inclusive and rigorous process in its inquiry in relation to the right to repair. In spite of all the disruptions caused by the COVID-19 crisis in Australia, the Productivity Commission nonetheless did a commendable job at canvassing all the various stakeholders. The law reform body is certainly to be congratulated for producing a comprehensive discussion paper on the complex and tangled topic of the right to repair. Taking an interdisciplinary, holistic approach to the issue, the Productivity Commission shows a strong understanding that the topic of the right to repair is a multifaceted policy issue. Its final report covers the fields of intellectual property, consumer law, competition policy, product stewardship, and environmental law. The law reform body displays a great comparative awareness of developments in other jurisdictions in respect of the right to repair. The policy body is also sensitive to the international dimensions of the right to repair—particularly in light of the U.N. Sustainable Development Goals. The Productivity Commission puts forward a compelling package of recommendations, which will be useful in achieving law reform in respect of the right to repair in Australia.

Nonetheless, this Article argues that there is a need to go further than the final recommendations of the Productivity Commission. While a number of the recommendations are a useful starting point for law reform, there is an urgent need to build upon those recommendations and develop a more substantive framework for the right to repair. The new Albanese Government should build a comprehensive package of reforms to achieve a right to repair in Australia. In the field of intellectual property law and policy, it is insufficient to merely make reforms on the right to repair to copyright law, technological

432. *Id.*

433. *Id.*

434. *Id.*

protection measures, and contracting law. There is also a need for the modernization of designs law. Australia's trademark law should be updated to ensure that trademark infringements cannot be launched against independent repairers. Likewise, Australia's new precedent on patent exhaustion may not be adequate to protect repairers. A proper defense on the right to repair may be necessary. Moreover, Australia's burgeoning laws in respect of confidential information and trade secrets should have proper exceptions and defenses—including in relation to the right to repair. Data sharing laws and regulations should cover all fields and industries—not just the special case of motor vehicles. Intellectual property law, policy, practice requires refashioning to better accommodate the needs and the demands of the U.N. Sustainable Development Goals.

No doubt guided by its expert commissioner Abramson, the Productivity Commission made a set of useful and helpful recommendations to improve the operation of consumer law and competition policy in the field of the right to repair. Much will depend upon the behavior of the regulator, the Australian Competition and Consumer Commission. Gina Cass-Gottlieb has been appointed as the new chair of the ACCC.⁴³⁵ She has stressed: “The ACCC is a world-leading regulator with a high performing, capable and diverse team that is committed to the safety, interests and welfare of consumers and the maintenance of effective competition across the Australian economy.”⁴³⁶ Cass Gottlieb has emphasized that she will focus on the regulation of the digital economy.⁴³⁷ She has also promised to tackle the problem of price gouging (which may well have some connections to the topic of the right to repair).⁴³⁸ It remains to be seen how she will respond to the recommendations of the Productivity Commission on the right to repair in respect of the application and enforcement of consumer law and competition policy in Australia. Arguably, Australia needs to have an energetic and vigorous regulator on the right to repair—like the United States has with the leadership of Lina Khan at

435. *New Chair Gina Cass Gottlieb Starts at ACCC*, ACCC (Mar. 21, 2022), <https://www.accc.gov.au/media-release/new-chair-gina-cass-gottlieb-starts-at-accc#:~:text=Highly%20respected%20competition%20lawyer%20Gina,experience%20across%20complex%20competition%20matters>.

436. *Id.*

437. Ben Butler, *The Power of One: Gina Cass-Gottlieb on Becoming the First Woman to lead the ACCC*, GUARDIAN (Mar. 25, 2022, 3:00 PM), <https://www.theguardian.com/australia-news/2022/mar/26/the-power-of-one-gina-cass-gottlieb-on-becoming-the-first-woman-to-lead-the-accc>.

438. Peter Ryan, *New ACCC chair Gina Cass-Gottlieb vows to target price gougers, plays down Murdoch family links*, ABC NEWS (Mar. 27, 2022, 5:16 PM), <https://www.abc.net.au/news/2022-03-28/accc-chair-gina-cass-gottlieb/100943878>.

the Federal Trade Commission. The new assistant minister Andrew Leigh MP is keen for Australia to take decisive action in respect of competition policy.⁴³⁹

The Productivity Commission also made some cautious recommendations in respect of e-waste, product stewardship, and repairability labelling and indexing. Arguably, there is a need for a stronger set of policy prescriptions to fully realize the environmental benefits of a right to repair. There are many aspects of Australian society in 2022 that remain resolutely unsustainable. There will need to be a larger undertaking to transform Australia's culture to one that embraces the U.N. Sustainable Development Goals. It will require a revolution to change Australia's economy to a fully circular economy. As Professor Aaron Perzanowski has remarked, "[l]egislation and regulation are part of the solution, but fixing our culture of repair will demand lasting changes to our behavior as consumers and citizens."⁴⁴⁰

439. Martin, *supra* note 242.

440. PERZANOWSKI, *supra* note 12, at 268.

PER SE ILLEGALITY OF EXCLUSIVE DEALS AND TYINGS AS FAIR COMPETITION

Daniel A. Hanley[†]

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I. INTRODUCTION

Exclusive deals and tyings are deeply intertwined restrictive and unfair business practices. Dominant corporations routinely use exclusive deals and tyings to forcefully deprive customers, distributors, and suppliers of their freedom to conduct business with whom they like and purchase the products and services they want.

Exclusive deals require a firm to entirely limit or restrict their purchases or use of a service with rivals. Exclusive deals can occur explicitly through contract or through a myriad of implicit practices (known as “de facto exclusive dealing”); the latter includes direct coercion, as well as significant financial inducement or penalty.¹ Tyings operate similarly. In a tying arrangement, a firm requires the purchase or use of a product or service in conjunction with the purchase or use of another product or service. Like exclusive deals, tyings can operate explicitly by contract or implicitly in practice. Since a tying can also require the exclusive use of a service or product, in some cases, there is hardly a distinction between what is a tying and an exclusive deal.²

Exclusive deals and tyings create a range of public harms, including: (1) unfairly inhibiting and degrading the freedom of businesses to engage in competition; (2) suppressing the entry and success of new and small firms; (3) degrading firm rivalry; (4) unfairly entrenching and extending a firm’s dominance; (5) narrowing the channels of firm growth and destroy competition; (6) reducing consumers’ and firms’ choices to engage in business with whom they would like; (7) enhancing the adverse effects of other unfair, predatory, and exclusionary conduct; and (8) causing consumers or other dependent firms to incur higher costs, lower quality products or services, and worse terms. This Article will explain how exclusive deals and tyings are potent

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† Senior Legal Analyst, Open Markets Institute; J.D., 2019, University of Connecticut School of Law. The author would like to thank Sandeep Vaheesan, Brian Callaci, Nathan Proctor, Gay Gordon-Byrne, Kyle Wiens, and the editors of the Berkeley Technology Law Journal for their exceptionally thoughtful edits, commentary, and feedback. All errors are my own.

1. *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 289 n.20 (3d Cir. 2012), *cert. denied*, 133 S. Ct. 2025 (2013) (defendant’s agreements “as a whole functioned as exclusive dealing agreements that adversely affected competition”).

2. *See generally* *Jefferson Par. Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984), *abrogated on other grounds* by *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 31 (2006); *see also* *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1178 (“Section 1 [of the Sherman Act] also forbids ‘negative’ ties—arrangements conditioning the sale of one product on an agreement not to purchase a second product from competing suppliers.”).

weapons of subjugation that dominant corporations routinely and almost effortlessly use to exert power over, maintain control of, and punish dependent firms.

Exclusive deals and tyings can also have other ancillary adverse and unintended effects, such as creating fragile supply chains and restricting the ability of consumers to repair their products. Often exclusive deals and tyings are not negotiated, but simply demanded. Dominant corporations present them in an all-or-nothing manner to smaller dependent firms, limiting their freedom to choose which products or services they purchase or determine whom they do business with. Exclusive deals and tyings are also nearly costless methods of competition to employ—and thus can function as a form of “cheap exclusion” or “naked exclusion,” where significant harm is caused to afflicted firms or the public at only a negligible cost to the initiator.³ In combination with both practices being almost exclusively reviewed under the antitrust law’s exceptionally deferential rule of reason, both practices are routinely used by corporations.

Congress explicitly enacted the antitrust laws to promote fair competition between firms.⁴ Fair competition requires firms to engage in activities that “ensure[] the economic liberty and social welfare of workers, market participants, and consumers... [and] prevents firms from engaging in exclusionary, predatory, or otherwise unfair conduct that unduly harms these parties.”⁵ It creates an economy free from domination and coercion from concentrated corporate power, and establishes democratically enacted market rules where firms succeed only through socially beneficial conduct rather than engaging in unfair practices. Fair competition ensures that firms with excessive market power have obtained that power fairly through internal expansion (such as investing in product development, productive capacity, increased pay to workers, offering superior terms to distributors or customers, or developing

3. Steven C. Salop, *Condition Pricing Practices and the Two Anticompetitive Exclusion Paradigms*, FED. TRADE COMM’N (June 23, 2014), https://www.ftc.gov/system/files/documents/public_events/302251/salop_0.pdf; Jonathan M. Jacobson, *Exclusive Dealing, “Foreclosure,” and Consumer Harm*, 70 ANTITRUST L.J. 311, 360–61 (2002); Ilya R. Segal & Michael D. Whinston, *Naked Exclusion: Comment*, 90 AM. ECON. REV. 296, 296 (2000); Susan A. Creighton, D. Bruce Hoffman, Thomas G. Krattenmaker & Ernest A. Nagata, *Cheap Exclusion*, 72 ANTITRUST L.J. 975, 977, 989–90 (2005).

4. Daniel A. Hanley, *How Self-Preferencing Can Violate Section 2 of the Sherman Act*, COMPETITION POL’Y INT’L, June 15, 2021, at 3–4, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3868896; 50 CONG. REC. 12,146 (1914) (statement of Senator Hollis).

5. DANIEL A. HANLEY, EYES EVERYWHERE: AMAZON’S SURVEILLANCE INFRASTRUCTURE AND REVITALIZING A FAIR MARKETPLACE, OPEN MARKETS INST., (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4089858.

“superior product[s]”⁶) or through the exclusive usage of fair business practices such as aggressive pricing (so long as it remains above cost), offering significant (but fair and equitable) volume discounts on their products, investing in research and development, providing better terms to suppliers and customers, increased pay and benefits to workers, or increasing the quality or quantity of products and services. Fair competition also prevents firms from unfairly exploiting their power to expand, entrench, or perpetuate their dominant market position.⁷ A market governed by fair competition makes certain that the public derives the greatest amount of benefit from vigorous firm rivalry, and ensures the primacy of democratic institutions rather than having markets controlled by private ordering; this in turn prevents the erosion of our political system and ensures widespread, equitable, and fair economic prosperity.⁸ Indeed, the antitrust laws prohibit a range of conduct and work in conjunction with other laws to ensure firms are competing fairly and in socially beneficial ways.⁹ Given the stated harms of exclusive deals and tyings, both practices violate notions of fair competition and thus the spirit and Congress’s intent with the antitrust laws—and thus should be substantially restricted and, in some cases, prohibited outright.¹⁰

6. *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966); *see also* *United States v. Paramount Pictures*, 334 U.S. 131, 174 (1948) (methods of competition violate the antitrust laws if they “restrain or suppress competition.” Firms should engage in “[internal] expansion to meet legitimate business needs.”).

7. James May, *Antitrust in the Formative Era: Political and Economic Theory in Constitutional and Antitrust Analysis, 1880–1918*, 50 OHIO ST. L.J. 257, 296 (1989); *id.* at 295 (“For most of the nineteenth century, however, small proprietors were considered to be the vibrant heart of economic life, indeed, archetypical examples of the ‘free laborers’ who were thought to be central to the natural economic order of classical economic theory.”); *see also* Sanjukta Paul, *Recovering the Moral Economy Foundations of the Sherman Act*, 131 YALE L.J. 175 (2022).

8. Warren J. Samuels, *The Economy as a System of Power and its Legal Bases: The Legal Economics of Robert Lee Hale* in *ESSAYS IN THE HISTORY OF HETERODOX POLITICAL ECONOMY* 184 (1992) (citing Robert Hale’s papers and quoting Hale as stating, “There is government whenever one person or group can tell others what they must do and when those others have to obey or suffer a penalty.”); *see generally* Lina Khan & Sandeep Vaheesan, *Market Power and Inequality: The Antitrust Counterrevolution and Its Discontents*, 11 HARV. L. & POL’Y REV. 235, 238 (2017) (describing the public harms associated when markets are concentrated and firms acquire significant market power).

9. *See, e.g.*, *Verizon Commc’ns Inc. v. Law Off.’s of Curtis V. Trinko, L.L.P.*, 540 U.S. 398, 408 (2004) (Stating when refusals to deal can violate § 2 of the Sherman Act); *Robinson-Patman Act of 1936*, Pub. L. No. 74-692, 49 Stat. 1526 (1936) (codified at 15 U.S.C. §§ 13, 21a) (prohibiting extraction of preferential terms from powerful buyers and price discrimination); *Lanham Act*, Pub. L. No. 79-489, 60 Stat. 427 (1946), codified at 15 U.S.C. § 1051 et seq. (protecting trademarks and prohibiting deceptive marketing).

10. 21 CONG. REC. 3152 (1890) (statement of Senator Hoar) (“[Monopoly is more than just commercial success] it involve[s] something like the use of means which made it impossible for other person to engage in fair competition.”); 21 CONG. REC. 2457 (1890)

Despite exclusive deals and tyings being repeatedly litigated and analyzed for more than a century,¹¹ both practices have caused reviewing courts significant trouble with developing a consistent legal analysis to determine precisely when they violate the antitrust laws. Moreover, the confusing and unpredictable litigation concerning these practices only further incentivizes their use and has resulted in exclusive deals and tyings becoming pervasive throughout the economy.

Prior to the landmark antitrust case that the DOJ initiated against Google in 2020, the DOJ has not initiated another antitrust case alleging tying since 1996.¹² Over the same time period, the Federal Trade Commission (FTC) has only initiated one lawsuit alleging illegal tying.¹³ Concerning exclusive deals, the Federal Trade Commission has initiated, litigated, or settled at least fourteen suits since 1998 and the Department of Justice has only initiated three lawsuits since 1999.¹⁴

(statement of Sen. Sherman) (His namesake act was meant to secure “free and fair competition”); 21 CONG. REC. 2570 (1890) (statement of Sen. Sherman); David Millon, *The Sherman Act and the Balance of Power*, 61 S. CALIF. L. REV. 1219, 1275–88 (1988); 21 CONG. REC. 2570 (1890) (statement of Sen. Sherman).

11. Daniel A. Hanley, *American History Provides a Valuable Lesson on How Monopolists Use Exclusive Deals to Fortify Their Market Power*, PROMARKET (July 4, 2021), <https://promarket.org/2021/07/04/history-exclusive-deals-monopolists-market-power/>; Motion Picture Co. v. Universal Film Co., 243 U.S. 502 (1917).

12. The complaint was filed in 1996. *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001).

13. *In re Intel Corp.*, FTC Docket No. 9341, 2010 WL 4542454 (Nov. 2, 2010).

14. The Federal Trade Commission has initiated, litigated, or settled the following cases:

- Complaint, *Broadcom Inc.*, FTC Docket No. C-4750 (June 30, 2021), <https://www.ftc.gov/system/files/documents/cases/1810205c4750broadcomcomplaint.pdf>.
- Complaint, *Vitrex plc*, FTC Docket No. C-4586 (July 14, 2016), www.ftc.gov/system/files/documents/cases/160714vitrexcmt.pdf.
- Complaint for Injunctive and Other Equitable Relief, *FTC v. Cardinal Health, Inc.* (S.D.N.Y. 2015) (15-CV-3031), <https://www.ftc.gov/system/files/documents/cases/150420cardinalcmt.pdf>.
- Complaint, *IDEXX Laboratories, Inc.*, FTC Docket No. C-4383 (Dec. 21, 2012), <https://www.ftc.gov/sites/default/files/documents/cases/2012/12/121221idexxcmt.pdf>.
- Complaint, *Sigma Corp.*, FTC Docket No. C-4347 (Jan. 10, 2012), <https://www.ftc.gov/legal-library/browse/cases-proceedings/101-0080-sigma-corporation-matter>.
- Complaint, *McWane, Inc.*, FTC Docket No. 9351 (Jan. 4, 2021) (the case went to trial), <https://www.ftc.gov/sites/default/files/documents/cases/2012/01/120104ccwanestaramincompt.pdf>.

Given the vast jurisprudence, repeated instances of litigation, difficulty of succeeding in litigation under the current analysis employed by courts, and the clear public harms associated with these practices, this Article suggests that all explicit and implicit exclusive deals and tyings should be subject to a bright line rule that clearly defines when they are illegal.

The specific rule this Article proposes is that all exclusive deals that foreclose a substantial share of the relevant market should be per se illegal. Concerning tyings, if they foreclose a substantial share of the relevant market

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- Complaint, Transitions Optical, Inc., FTC Docket No. 4289 (Mar. 3, 2010), <https://www.ftc.gov/sites/default/files/documents/cases/2010/04/100427transopticalempt.pdf>.
 - Redacted Amended Complaint for Injunctive and Other Equitable Relief, FTC v. Vyera Pharmaceuticals, LLC (S.D.N.Y. 2020) (No. 20-CV-00706), https://www.ftc.gov/system/files/documents/cases/161_001_vyera_pharm_-_amended_complaint_-_redacted.pdf.
 - Complaint for Equitable Relief, FTC v. Qualcomm Inc. (N.D. Cal 2017) (17-CV-00220), https://www.ftc.gov/system/files/documents/cases/170117qualcomm_redacted_complaint.pdf.
 - Complaint for Injunctive and Other Equitable Relief, FTC v. Surescripts, LLC (D.D.C. 2019) (19-CV-01080), https://www.ftc.gov/system/files/documents/cases/surescripts_redacted_complaint_4-24-19.pdf.
 - Complaint, Pool Corp. FTC Docket No. 4345 (Jan. 13. 2012), <https://www.ftc.gov/legal-library/browse/cases-proceedings/1010115-pool-corporation>.
 - Complaint for Injunctive and Other Equitable Relief, FTC v. Mylan Labs., Inc. (D.D.C. 1998) (98-CV-03114), <https://www.ftc.gov/sites/default/files/documents/cases/1998/12/mylancmp.htm>.
 - Complaint, FTC v. Syngenta Crop Protection Ag. (M.D.N.C. 2022) (No. 22-CV-00828), https://www.ftc.gov/system/files/ftc_gov/pdf/SyngentaComplaint.pdf.
 - Complaint, Intel Corp. FTC Docket No. 9341 (Dec. 16, 2009), <https://www.ftc.gov/sites/default/files/documents/cases/091216intelcmpt.pdf>.

The Department of Justice has initiated and litigated the following cases:

- United States v. United Regional Health Care Sys., (N.D. Tex. Sept. 29, 2011) (No 11-CV-00030-0) (consent decree).
- United States v. Dentsply Int'l, Inc., 399 F.3d 181 (3d Cir. 2005) (complaint filed in 1999).
- Amended Complaint, United States v. Google, (D.D.C. 2021) (20-CV-03010), <https://www.justice.gov/atr/case-document/file/1428271/download>.

and if there are two separate products or services, where the sale of one of the products or services is conditioned on the purchase or use of another, then they should be per se illegal. A substantial share of the relevant market would be defined as: (1) a firm with a market share of 30% or more in a relevant market uses exclusive arrangements or tyings with all its customers, suppliers, or distributors; (2) a firm that uses exclusive arrangements or tyings with customers, suppliers, or distributors that collectively possess a market share of 30% or more in their relevant market; (3) a firm in a concentrated relevant market that engages in exclusive arrangements or tyings with the top three or more customers, suppliers, or distributors; (4) the leading three firms have a combined market share of 50% or more in a relevant market and use exclusive arrangements or tyings with their customers, suppliers, or distributors; (5) the leading three firms in a relevant market use exclusive arrangements or tyings with customers, suppliers, or distributors that collectively possess a share of 50% or more of their relevant market; or (6) the leading three firms in a concentrated relevant market engage in exclusive arrangements or tyings with the top five or more customers, suppliers, or distributors.

Additionally, this Article proposes a financial metric bright line rule such that all exclusive deals and tyings involving two or more separate products or services, where the sale of one of the products or services is conditioned on the purchase or use of another, are per se illegal when used by firms with over \$1 billion in revenue. This financial threshold would allow firms significant flexibility to use exclusive deals and tyings, and prohibit exclusive deals and tyings when a firm becomes too dominant and the practices would create significant and clear public harms. This rule could be enacted by an act of Congress amending the antitrust laws or through the FTC using its unfair methods of competition rulemaking power.

To justify these proposals, this Article examines the jurisprudence of the Supreme Court, which once enacted strict restrictions on exclusive deals and tyings, and details public harms caused by both practices as they relate to the right of consumers or other businesses to repair their products and their usage by technology firms. Moreover, this Article analyzes some of the justifications for exclusive deals and tyings and concludes that they are unpersuasive and many of the asserted benefits can be obtained by firms using more socially beneficial conduct.

II. THE LAW GOVERNING EXCLUSIVE DEALS

Exclusive deals (also called “exclusive agreements”) prohibit firms from purchasing or using rivals’ products and services. Due to their ability to expand and fortify a firm’s market power, exclusive deals are broadly prohibited by the

antitrust laws. Congress has provided several causes of action to potential litigants. The use of exclusive deals can violate §§ 1 and 2 of the Sherman Act, § 3 of the Clayton Act, and § 5 of the Federal Trade Commission (FTC) Act.¹⁵ Despite the wide range of causes of action available to litigants with different standards of illegality to challenge exclusive deals under the antitrust laws, many courts currently review exclusive deals under a similar analysis.¹⁶

Exclusive agreements can occur overtly through contract or through implicit actions that include significant financial inducement, coercion, or severe penalty.¹⁷ For example, in *Lorain Journal Co. v. United States*, the defendant threatened to remove all advertising from its dominant newspaper if advertisers in the area did not exclusively advertise with it.¹⁸

Originally, exclusive agreements were determined to be illegal if they solely “foreclosed [competition] in a substantial share of the line of commerce affected.”¹⁹ The Supreme Court, in a landmark decision known as *Standard Stations*, held that exclusive agreements violated § 3 of the Clayton Act since the defendant had a market share of 23%, the agreements foreclosed almost 7% of the market, and where the industry was already facing 67% foreclosure due to exclusive deals.²⁰ The Supreme Court’s analysis became known as the quantitative substantiality test.²¹ The quantitative substantiality test operated as a near-bright line rule that demarcated when an exclusive arrangement would be illegal based on a simple variable without the need to engage in a morass of economic analysis and justification.²² Foreclosure is typically measured in the proportionate volume of commerce affected or outlets closed off and is the

15. *Standard Oil Co. v. United States (Standard Stations)*, 337 U.S. 293 (1949) (§ 3 of the Clayton Act); *FTC v. Brown Shoe Co.*, 384 U.S. 316 (1966) (§ 5 of the Federal Trade Commission Act); *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) (§ 2 of the Sherman Act); *Omega Env’t, Inc. v. Gilbarco, Inc.*, 127 F.3d 1157, 1166–67 (9th Cir. 1997), *cert. denied*, 525 U.S. 812 (1998) (§ 1 of the Sherman Act).

16. *See, e.g., Roland Mach. Co. v. Dresser Indus.*, 749 F.2d 380, 393 (7th Cir. 1984); *Omega Env’t*, 127 F.3d at 1162; *LePage’s Inc. v. 3M*, 324 F.3d 141 (3d Cir. 2003); Jacobson, *supra* note 3, at 327.

17. *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254 (3d Cir. 2012) (de facto exclusive dealing); *McWane, Inc. v. FTC*, 783 F.3d 814, 820–21 (11th Cir. 2015) (coercion); *Dentsply*, 399 F.3d at 181 (de jure exclusive dealing agreements).

18. *Lorain Journal Co. v. United States*, 342 U.S. 143 (1951).

19. *Standard Stations*, 337 U.S. at 314.

20. *Id.* at 295–97, 309, 314.

21. Jacobson, *supra* note 3, at 320.

22. *See Standard Stations*, 337 U.S. at 309–13 (seeking to avoid “economic investigation . . . of the same broad scope as was adumbrated with reference to unreasonable restraints of trade in Chicago Board of Trade,” and acknowledging that Section 3 of the Clayton Act was meant to reach farther than the Sherman Act).

primary vice of exclusive deals due to its “tendency to restrain competition and to develop a monopoly.”²³

As a result of the economization of antitrust and the purposeful and precipitous decline in antitrust enforcement since the late 1970s,²⁴ exclusive agreements have—like many restraints including minimum and maximum resale price maintenance²⁵ and vertical territorial restraints²⁶—transitioned to being analyzed under the rule of reason. In 1961, the Supreme Court in *Tampa Electric* modified its holding in *Standard Stations* and changed how exclusive deals are to be analyzed by establishing a three-part test.²⁷ The first two parts of the *Tampa Electric* test require plaintiffs to define the relevant product market and geographic market.²⁸ The third part of the test requires plaintiffs to show that “the competition foreclosed” by the exclusive arrangement constitutes “a substantial share of the relevant market.”²⁹ But the Supreme Court in *Tampa Electric* amended its *Standard Stations* holding by listing other relevant factors that affect and determine when foreclosure is substantial.³⁰ Thus, while foreclosure still remains the primary variable to determine whether an exclusive arrangement is illegal,³¹ it is not the sole variable.

Typically, a market share and foreclosure of 30% or more is required to find that an exclusive agreement violates the antitrust laws.³² But, due to the broad market considerations allowed by the rule of reason and what the Court stated in *Tampa Electric*, courts consider other factors such as high barriers to

23. See *Tampa Elec. Co. v. Nashville Coal Co.* (*Tampa Elec.*), 365 U.S. 320 (1961); *United States v. Richfield Oil Corp.*, 99 F. Supp. 280 (S.D. Cal. 1951), *aff'd*, 343 U.S. 922 (1952); *FTC v. Motion Picture Advert. Serv. Co.*, 344 U.S. 392, 397 (1953).

24. See generally MARC ALLEN EISNER, *ANTITRUST AND THE TRIUMPH OF ECONOMICS INSTITUTIONS, EXPERTISE, AND POLICY CHANGE* (1991).

25. *Dr. Miles Med. Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911), *overruled by* *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007), *Albrecht v. Herald Co.*, 390 U.S. 145 (1968), and *State Oil Co. v. Khan*, 522 U.S. 3 (1997).

26. *United States v. Arnold, Schwinn & Co.*, 388 U.S. 365 (1967), *overruled by* *Continental T.V. Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977); see also Brian Callaci & Sandeep Vaheesan, *Antitrust Remedies for Fissured Work*, CORNELL L. REV. ONLINE (forthcoming), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4076274.

27. *Tampa Elec.*, 365 U.S. at 325–30.

28. *Id.*

29. *Id.*

30. *Id.* at 329.

31. See *Jefferson Par. Hosp. Dist. No. 2 v. Hyde* (*Jefferson Par.*), 466 U.S. at 45 (1984) (O’Connor, J., concurring) (“In determining whether an exclusive dealing contract is unreasonable, the proper focus is on the structure of the market for the products or services in question . . . Exclusive dealing is an unreasonable restraint on trade only when a significant fraction of buyers or sellers are frozen out of a market by the exclusive deal . . .”).

32. *Jefferson Par.*, 466 U.S. at 26–29; *Tampa Elec.*, 365 U.S. at 329.

entry,³³ the prevalence of the practice in the industry,³⁴ the essential nature of the product or service at issue,³⁵ the necessity of the agreement,³⁶ entry or exit of firms in the industry,³⁷ and other “particularized considerations of the parties’ operations”³⁸ to determine if foreclosure is “substantial.”³⁹ Courts have determined that each of the factors can lower or raise the threshold for illegality.⁴⁰

Concerning the foreclosure analysis, under *Tampa Electric*, litigants must also show:

[T]he probable effect of the [exclusive arrangement] on the relevant area of effective competition, taking into account the relative strength of the parties, the proportionate volume of commerce involved in relation to the total volume of commerce in the relevant market area, and the probable immediate and future effects which pre-emption of that share of the market might have on effective competition therein.⁴¹

Some courts have also determined that the duration and terminability of an exclusive deal can decrease or increase the amount of foreclosure required for the conduct to violate the antitrust laws.⁴²

Other qualifiers are also relevant for courts to determine whether an exclusive deal is illegal. For example, monopolists (or firms with a “dominant position”) face increased scrutiny when exclusive deals are used because the

33. *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 309 (3d Cir. 2012); *McWane, Inc. v. FTC*, 783 F.3d 814, 838 (11th Cir. 2015).

34. *See Standard Stations*, 337 U.S. at 314; *Tampa Elec.*, 365 U.S. at 334 (“industry-wide practice”).

35. *See United States v. Dentsply Int’l, Inc.*, 399 F.3d 181, 195 (3d Cir. 2015).

36. *See Standard Stations*, 337 U.S. at 307–08; *United States v. Jerrold Elecs. Corp.*, 187 F. Supp. 545, 557 (E.D. Pa. 1960), *aff’d per curiam*, 365 U.S. 567 (1961); *Brown Shoe Co. v. United States*, 370 U.S. 294, 330–31, (1962) (an exclusive arrangement “may escape censure if only a small share of the market is involved, if the purpose of the agreement is to insure to the customer a sufficient supply of a commodity vital to the customer’s trade or to insure to the supplier a market for his output and if there is no trend toward concentration in the industry.”).

37. *McWane*, 783 F.3d at 838.

38. *Tampa Elec.*, 365 U.S. at 335.

39. *Id.* at 328 (“a substantial share of the relevant market”).

40. *Id.* at 334–35 (20-year term justified because “in the case of public utilities the assurance of a steady and ample supply of fuel is necessary in the public interest.”); *United States v. Microsoft Corp.*, 253 F.3d 34, 70 (D.C. Cir. 2001) (exclusive contracts may violate Section 2 “even though the contracts foreclose less than the roughly 40% or 50% share usually required”).

41. *Tampa Elec.*, 365 U.S. at 329 (emphasis added).

42. *See Microsoft*, 253 F.3d at 82.

action would be occurring where competition is already limited in the market.⁴³ Moreover, evidence such as internal documents (commonly known as “hot docs”) can override any (often pretextual) assertions that the agreement is pro-competitive or beneficial to consumers.⁴⁴ In all, due to the Supreme Court’s holding in *Tampa Electric*, the analysis for exclusive deals is now highly subjective. Indeed, the highly subjective nature of the *Tampa Electric* case and other future Supreme Court cases that weakened enforcement led to the landmark FTC *Beltone* decision in 1982.⁴⁵ The case is important because it is credited with being highly deferential and approving of efficiency justifications for the use of exclusive deals and “contributed to a trend towards upholding exclusive dealing arrangements even at increasingly higher levels of foreclosure.”⁴⁶

Judicial precedent also reveals two important points relating to the legality of exclusive deals. First, exclusive deals do not need to be expressed in clear and definite terms. Instead, the Supreme Court has stated that the “practical effect” and the “impact of the particular practice on competition, not the label” of an action that results in exclusivity is what matters to determine if the conduct violates the antitrust laws.⁴⁷ Second, complete foreclosure or monopoly power is not required for an exclusive arrangement to violate the antitrust laws.⁴⁸ Significant explicit or implicit foreclosure of 30% or more can deprive firms of critical and essential market channels or inputs that can inhibit

43. *United States v. Dentsply Int’l, Inc.*, 399 F.3d 181, 187 (3d Cir. 2015) (“Behavior that otherwise might comply with antitrust law may be impermissible exclusionary when practiced by a monopolist.”); *Tampa Elec.*, 365 U.S. at 334 (“dominant position”).

44. *McWane, Inc. v. FTC*, 783 F.3d 814, 821–22, 840–42 (11th Cir. 2015).

45. *Beltone Elecs. Corp.*, 100 F.T.C. 68 (1982).

46. *Jacobson*, *supra* note 3, at 324.

47. *See Tampa Elec.*, 365 U.S. at 326–27 (citing *United Shoe Mach. Corp. v. United States*, 258 U.S. 451, 457 (1922) and examining the “practical effect” of the challenged conduct); *United States v. United Shoe Mach. Corp.*, (*United Shoe III*), 110 F.Supp. 295, 324–25 (D. Mass. 1953), *aff’d per curiam*, 347 U.S. 521 (1954) (discussing a leasing system that is “buttressed by a study of features...which have a special deterrent effect and...[among other things, causes dependent firms to] be reluctant to experiment with a competitive machine to the extent he would wish.”); *FTC v. Motion Picture Advert. Serv. Co.*, 344 U.S. 392, 397 (1953); *LePage’s Inc. v. 3M*, 324 F.3d 141, 162 (3d Cir. 2003) (“the relevant inquiry is the anticompetitive effect of 3M’s exclusionary practices considered together ... courts must look to the monopolist’s conduct taken as a whole rather than considering each aspect in isolation.”). Indeed, looking at substance over form is a consistent theme in antitrust and prevents the broad prohibitions imposed by the antitrust laws from being circumvented. *See United States v. Yellow Cab Co.*, 332 U.S. 218, 227 (1947), *overruled by Copperweld Corp. v. Indep. Tube Corp.*, 467 U.S. 752 (1984); *Apple Inc. v. Pepper*, 139 S. Ct. 1514, 1523 (2019).

48. *See United States v. Microsoft Corp.*, 253 F.3d 34, 64 (D.C. Cir. 2001); *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 696, 270 (3d Cir. 2012) (“[T]he law is clear that an express exclusivity requirement is not necessary because de facto exclusive dealing may be unlawful.”).

their growth, development of economies of scale, and opportunities to succeed in the market.⁴⁹

III. THE LAW GOVERNING TYINGS

A tying is “an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that product from any other supplier.”⁵⁰ Like exclusive deals, tyings are broadly prohibited by the antitrust laws. Litigants can challenge tyings under §§ 1 and 2 of the Sherman Act, § 3 of the Clayton Act, and § 5 of the Federal Trade Commission Act.⁵¹ Tyings can occur explicitly through contract or through implicit actions such as coercion or financial inducement.⁵²

Tyings are an unfair business practice and were originally held to be per se illegal under the antitrust laws.⁵³ In 1949, the Supreme Court forcefully asserted that tyings serve “hardly any purpose beyond the suppression of competition.”⁵⁴ As such, the Supreme Court adopted a per se analysis to avoid “elaborate inquiry as to . . . the business excuse for their use.”⁵⁵ The Supreme Court also adopted a strict per se test to avoid “the necessity for an incredibly complicated and prolonged economic investigation into the entire history of

49. *Motion Picture Advert. Serv. Co.*, 344 U.S. at 392 (foreclosure of 40% of outlets using exclusive deals is unlawful under § 5 of FTC Act); *Standard Fashion Co. v. Magrane-Houston Co.*, 258 U.S. 346 (1922) (foreclosure of 40% is unlawful); *Mytinger & Casselberry, Inc. v. FTC*, 301 F.2d 534 (D.C. Cir. 1962) (foreclosure of 61.5% and 34.6% is unlawful); *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 184 (3d Cir. 2015) (Defendant had market share between 67–80% and agreements held illegal); *id.* at 194 (“dealers have a strong economic incentive to continue carrying Dentsply’s teeth.”); *id.* at 189 (direct sales [as an alternative channel] were not “a practical alternative for most [competing] manufacturers[.]”); *Microsoft*, 253 F.3d at 70 (noting “roughly 40% or 50%” market foreclosure can establish a violation of § 1 of the Sherman Act but less foreclosure can be required when exclusive arrangements are used by a monopolist); Andrew I. Gavil, *Exclusionary Distribution Strategies by Dominant Firms: Striking a Better Balance*, 72 ANTITRUST L.J. 3, 59–60 (2004); Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837, 839–40 (1990); Steven C. Salop, *The Raising Rivals’ Cost Foreclosure Paradigm, Conditional Pricing Practices, and the Flawed Incremental Price-Cost Test*, 81 ANTITRUST L.J. 371, 384, 386–87 (2017).

50. *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5–6 (1958).

51. *See generally id.*; 15 U.S.C. § 14.

52. *See, e.g., United Shoe III*, 110 F.Supp. at 340; *Amerinet, Inc. v. Xerox Corp.*, 972 F.2d 1483, 1500–01 (8th Cir. 1992), *cert. denied*, 506 U.S. 1080 (1993), *Stephen Jay Photography v. Qian Mills, Inc.*, 903 F.2d 988, 991 (4th Cir. 1990); *Datagate, Inc. v. Hewlett-Packard Co.*, 60 F.3d 1421, 1426 (9th Cir. 1995).

53. *Int’l Salt Co. v. United States*, 332 U.S. 392, 396 (1947), *abrogated by Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006).

54. *See Standard Stations*, 337 U.S. at 305.

55. *N. Pac. Ry. Co.*, 356 U.S. at 5.

the industry involved, as well as related industries, in an effort to determine at large whether a particular restraint has been unreasonable—an inquiry so often *wholly fruitless when undertaken*.⁵⁶

Despite the economization of antitrust law which has weakened significant parts of its legal potency,⁵⁷ today, tyings can still be classified as per se illegal—although the test has been modified from a traditional per se test that governs conduct such as horizontal market allocation or price-fixing.⁵⁸ Like exclusive deals, there is increased scrutiny when tyings are engaged in by a monopolist.⁵⁹

Under the current modified per se test, a tying violates the antitrust laws if:

- 1) Two separate products or services exist, where the sale of one of the products or services is conditioned on the purchase of the other.⁶⁰
- 2) The arrangement forecloses a substantial volume of commerce in the tied market.⁶¹

56. *Id.*

57. EISNER, *supra* note 24, at 2–5.

58. The test is often called a “quasi-per se rule,” *see* Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 400 (2009).

59. *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 488 (1992) (Scalia, J. dissenting) (“Where a defendant maintains substantial market power, his activities are examined through a special lens: Behavior that might otherwise not be of concern to the antitrust laws—or that might even be viewed as procompetitive—can take on exclusionary connotations when practiced by a monopolist.”).

60. *Jefferson Par.*, 466 U.S. 2 at 16 (“[W]hen a purchaser is forced to buy a product he would not have otherwise bought even from another seller in the tied-product market, there can be no adverse impact on competition because no portion of the market which would otherwise have been available to other sellers has been foreclosed.”); *id.* at 19 (“[T]he answer to the question whether one or two products are involved turns not on the functional relation between them, but rather on the character of the demand for the two items.”); *id.* at 19 n.30 (“We have often found arrangements involving functionally linked products at least one of which is useless without the other to be prohibited tying devices.”); *see also Fortner Enters., Inc. v. U. S. Steel Corp. (Fortner I)*, 394 U.S. 495, 504–07 (1969) (focusing on the functional relationship of products).

61. *Jefferson Par.*, 466 U.S. at 16, (“we have refused to condemn tying arrangements unless a substantial volume of commerce is foreclosed thereby”); *id.* at 28 (“[probably] foreclosed a choice [in the tied product market] that would have otherwise been made ‘on the merits.’”); *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 11 (1958); *Fortner I*, 394 U.S. at 501 (“[T]he controlling consideration is simply whether a total amount of business, substantial enough in terms of dollar-volume so as not to be merely de minimis, is foreclosed to competitors by the tie.”); *id.* at 502 (“For purposes of determining whether the amount of commerce foreclosed is too insubstantial to warrant prohibition of the practice, therefore, the relevant figure is the total volume of sales tied by the sales policy under challenge, not the portion of this total accounted for by the particular plaintiff who brings suit.”); *Int’l Salt Co. v. United States*, 332 U.S. 392, 396 (1947), *abrogated by Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006)

- 3) The seller has “appreciable economic power” in the tying product market.⁶²
- 4) There is some presence of “condition[ing]” or “forc[ing]” the purchaser to buy the tied product or to not purchase a competitor’s product.⁶³

The requirement for two separate products can be fulfilled by showing “the functional relation between them” and also the “character of the demand for the two items.”⁶⁴ Other factors that are considered by courts to determine if there are two separate products or services include historical practice and the utility of both products when combined or separated.⁶⁵ The conditioning of a product can be shown by depriving purchasers of other options and forcing them to make a purchase they did not want or “preferred to purchase elsewhere on different terms.”⁶⁶

Appreciable economic power does not require a showing of monopoly power or dominance.⁶⁷ What constitutes appreciable economic power is highly flexible. The Supreme Court has stated that “no magic inheres in numbers; the relative effect of percentage command of a market varies with the setting in which that factor is placed.”⁶⁸ Moreover, the Supreme Court has stated that

(the volume of commerce involved must be sufficient enough so that it “cannot be said to be insignificant or insubstantial[.]”).

62. *Eastman Kodak*, 504 U.S. at 462 (quoting *Fortner I*, 394 U.S. at 503); see also *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 42–43 (2006) (holding tying arrangements are *per se* illegal when a plaintiff presents “proof of power in the relevant market”).

63. *Eastman Kodak*, 504 U.S. at 461–62; *Jefferson Par.*, 466 U.S. at 12–18; *United States v. Loew’s Inc.*, 371 U.S. 38, 45 (1962), *abrogated by* *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006); see also *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1178 (1st Cir. 1994), *abrogated on other grounds by* *Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154 (2010) (“Section 1 also forbids ‘negative’ ties—arrangements conditioning the sale of one product on an agreement not to purchase a second product from competing suppliers.”).

64. *Jefferson Par.*, 466 U.S. at 19.

65. See *Eastman Kodak*, 504 U.S. at 462–63 (“We have often found arrangements involving functionally linked products at least one of which is useless without the other to be prohibited tying devices.”).

66. *Jefferson Par.*, 466 U.S. at 12; *Eastman Kodak*, 504 U.S. at 462.

67. *Eastman Kodak*, 504 U.S. at 462 (“Such an arrangement violates § 1 of the Sherman Act if the seller has “appreciable economic power” in the tying product market and if the arrangement affects a substantial volume of commerce in the tied market.) (quoting *Fortner I*, 394 U.S. at 503); see also *U.S. Steel Corp. v. Fortner Enterprises, Inc.* (*Fortner II*), 429 U.S. 610, 620 (1977); *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 11 (1958) (“the vice of tying arrangements lies in the use of economic power in one market to restrict competition on the merits in another, regardless of the source from which the power is derived and whether the power takes the form of a monopoly or not.”).

68. *Times-Picayune Publ’g Co. v. United States*, 345 U.S. 594, 612 (1953) (quoting *United States v. Columbia Steel Co.*, 334 U.S. 495, 528 (1948)).

other factors such as consumer lock-in, information deficiencies, high switching costs, high barriers to entry, uniqueness or desirability of the product, and other “market realities,” their “inherent nature,” or “effect” can lower the market power requirement.⁶⁹ For example, in *Eastman Kodak*, the Supreme Court rejected the claim that a supplier did not have market power in the original equipment market for its copies when it had less than 23% market share.⁷⁰ The Court accepted the lower threshold for illegality because of concerns related to information deficiencies, high switching costs, and product lock-in.⁷¹

The requirement for a tie foreclosing a substantial volume of commerce is also quite low. In *International Salt*, the Supreme Court found that \$500,000 in sales of a tied product was sufficient.⁷² In *United States v. Loews*, the Court found just over \$60,000 to be sufficient.⁷³ Additionally, the cost of the tied good is often irrelevant to determining illegality.⁷⁴ The Supreme Court justifies its position on the basis that (along with low prices) market foreclosure is “facially anticompetitive and exactly the harm that [the] antitrust laws aim to prevent.”⁷⁵

Lastly, the element of “condition[ing]” or “forc[ing]” is, at best, loosely defined and substantially linked to the level of market power of the corporation selling the products and the degree of freedom the purchaser has to not purchase the tied product.⁷⁶ Determining whether this element exists requires a somewhat simple, although highly factual, investigation as to whether a buyer “either did not want at all, or might have preferred to purchase [the tied product] elsewhere on different terms.”⁷⁷

69. *Eastman Kodak*, 504 U.S. at 466; *United States v. Loew’s Inc.*, 371 U.S. 38, 45 (1962), *abrogated by* *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28 (2006) (“uniqueness in its attributes”); *id.* at 49 (“It is therefore clear that the tying arrangements here both by their “inherent nature” and by their “effect” injuriously restrained trade.) (quoting *United States v. Am. Tobacco Co.*, 221 U.S. 106, 179 (1911)); *Fortner I*, 394 U.S. at 500; *Fortner II*, 429 U.S. at 617–22.

70. *Eastman Kodak*, 504 U.S. at 466–71; *Image Technical Servs., Inc. v. Eastman Kodak Co.*, 903 F.2d 612, 618 (9th Cir. 1990).

71. *Eastman Kodak*, 504 U.S. at 474–77.

72. *Int’l Salt Co. v. United States*, 332 U.S. 392, 395 (1947).

73. *Loew’s*, 371 U.S. at 49.

74. *See, e.g.*, *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30, 50 (D.D.C. 2000), *aff’d in part, rev’d in part, remanded in part*, 253 F.3d 34 (D.C. Cir. 2001), *cert. denied*, 534 U.S. 952 (2001) (cost of Internet Explorer was free); *Multistate Legal Stud., Inc. v. Harcourt Brace Jovanovich Legal and Prof’l Publ’ns, Inc.*, 63 F.3d 1540, 1548 (10th Cir. 1995) (An illegal tie can be found if the cost of the tied product is reflected in the price of tying product).

75. *Eastman Kodak*, 504 U.S. at 478.

76. *Jefferson Par.*, 466 U.S. at 12–18

77. *Id.* at 12.

Even when tying conduct is not held per se illegal, tyings can also be reviewed under the rule of reason.⁷⁸ The rule of reason test is substantially similar to the modified per se test. The rule of reason test includes all of the factors for the per se test with the addition that courts will balance asserted pro-competitive effects of the tie against its anticompetitive effects to ultimately determine if the tying is unreasonable.⁷⁹

IV. THE PUBLIC HARMS OF EXCLUSIVE DEALS AND TYINGS

Exclusive deals and tyings impose a range of harms on society and constitute unfair methods of competition. This Section will detail how exclusive deals and tyings unfairly entrench and extend firm dominance, narrow the channels of firm growth and destroy competition, deter potential competition, coerce consumers and firms and reduce their choice to engage in business with whom they would like, create fragile supply chains, and enhance the adverse effects of other unfair, predatory, and exclusionary conduct.

First, tyings and exclusive deals can entrench and extend a firm's dominant position and control over a market. Both tactics accomplish this by shutting out the opportunity for rival firms to compete for the business of the dependent firm and potentially depriving the dependent firm of necessary inputs—particularly when the market is concentrated and there are few, if any, alternative providers.⁸⁰ In the case of exclusive deals, a rival firm can explicitly (via contract) or implicitly (through direct payment or coercion, such as threatening to withdraw business or issue financial penalties) impose an exclusive relationship that prevents firms from conducting business with their rivals. Tyings are not much different. By requiring the purchase of one product or service with another, the effect is the same.⁸¹ While tying is in some cases not as overt as an exclusive deal, if a firm is already required to purchase or use a substitutable or bundled product or service, engaging in business with another firm providing a substantially similar one is redundant. Thus, with a tying or exclusive deal, a firm can secure and extend its business relations while

78. *Id.* at 35 (O'Connor, J. concurring).

79. *Fortner I*, 394 U.S. at 500; *Jefferson Par.*, 466 U.S. at 29 (“In order to prevail in the absence of per se liability, respondent has the burden of proving that the [allegedly unlawful tying arrangement] violated the Sherman Act because it unreasonably restrained competition.”).

80. *McWane, Inc. v. FTC*, 783 F.3d 814, 820–21, 840–42 (11th Cir. 2015).

81. *United States v. Loew's Inc.*, 371 U.S. 38, 44–45 (1962) (“[Tying arrangements] . . . may force buyers into giving up the purchase of substitutes for the tied product . . . and they may destroy the free access of competing suppliers of the tied product to the consuming market.”).

shutting out current and even potential rivals. Insulation from competition also has the added adverse effect of suppressing a firm's incentive to make necessary investments to improve their products and services and promote internal growth.⁸²

The shutting out of firms to competition has the immediate effect of blocking and slowing a rival firm's expansion and (in the case of future entrants as well) relegating a firm's growth to less efficient or more costly and obscure commercial channels.⁸³ Such a circumstance inhibits the growth of rivals by impeding their ability to reach a minimum efficient scale for profitability, often causing them to exit the market entirely.⁸⁴ Tying, by forcing or conditioning the use or purchase of a product or service on the use or purchase of another, has the added effect of potentially converting a firm's dominance in one market into dominance in a new market.⁸⁵

82. See, e.g., Martin Gaynor & Robert Town, *The Impact of Hospital Consolidation—Update* 3, SYNTHESIS PROJECT (2012), https://www.researchgate.net/profile/Martin_Gaynor/publication/283910115_The_Impact_of_Hospital_Consolidation_-_Update/links/564a017508ac44e7a28d805e.pdf.

83. *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 189 (3d Cir. 2015) (“A set of strategically planned exclusive dealing contracts may slow the rival’s expansion by requiring it to develop alternative outlets for its products or rely at least temporarily on inferior or more expensive outlets. Consumer injury results from the delay that the dominant firm imposes on the smaller rival’s growth.”); *McWane*, 783 F.3d at 833–34, 839–41; see also *United States v. Griffith*, 334 U.S. 100, 108 (1948) (detailing how monopoly power, particularly in the context of the granting of exclusive privileges, in this case concerning first or second-run movies, “may [not] be used to stifle competition by denying competitors less favorably situated access to the market.”) (citing *United States v. Paramount Pictures*, 334 U.S. 131 (1948)).

84. *McWane*, 783 F.3d at 833–34, 839–41; *Lorain Journal Co. v. United States*, 342 U.S. 143, 150, 153 (1951); Andrew I. Gavil, *Exclusionary Distribution Strategies by Dominant Firms: Striking a Better Balance*, 72 ANTITRUST L.J. 3, 59–60 (2004); Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837, 839–40 (1990); Steven C. Salop, *The Raising Rivals’ Cost Foreclosure Paradigm, Conditional Pricing Practices, and the Flawed Incremental Price-Cost Test*, 81 ANTITRUST L.J. 371, 384, 386–87 (2017); Jacobson, *supra* note 3, at 353–55 (“Exclusive distribution provides incentives to the distributor to maximize sales of the supplier’s brand.”).

85. *Times-Picayune Publ’g Co. v. United States*, 345 U.S. 594, 611 (1953) (“[T]he essence of illegality in tying arrangements is the wielding of monopolistic leverage; a seller exploits his dominant position in one market to expand his empire into the next.”); *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436, 459 (1940); *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 6 (1958) (The Supreme Court recognized tyings “den[ie]d competitors free access to the market for the tied product, not because the party imposing the tying requirements has a better product or a lower price but because of his power or leverage in another market.”); *Sheridan v. Marathon Petrol. Co.*, 530 F.3d 590, 592 (7th Cir. 2008) (Posner, J.) (“The traditional antitrust concern with such an agreement is that if the seller of the tying product is a monopolist, the tie-in will force anyone who wants the monopolized product to buy the tied product from him as well, and the result will be a second monopoly.”); *Jefferson Par.*, 466 U.S. at 14.

Both tyings and exclusive deals are effectively weapons of subjugation that allow dominant corporations to exert their power to maintain their control and punish dependent firms. In *Shell Oil Co. v. FTC*, the Seventh Circuit Court of Appeals captured this idea by stating:

A man operating a gas station is bound to be overawed by the great corporation that is his supplier, his banker, and his landlord. When he hears that Shell will benefit from his patronage of sponsored TBA outlets, the velvet glove of request has within it *the mailed fist of command*.⁸⁶

Second, by virtue of closing off avenues for competition and entrenching and extending a firm's dominant position, tyings can unfairly destroy current competition, deter potential competition, and raise barriers to entry.⁸⁷ Justice White, in his dissent in *Fortner I*, aptly encapsulated this point. His comment in full states:

The tying seller may be working toward a monopoly position in the tied product and, even if he is not, the practice of tying forecloses other sellers of the tied product and makes it more difficult for new firms to enter that market. They must be prepared not only to match existing sellers of the tied product in price and quality, but to offset the attraction of the tying product itself. Even if this is possible through simultaneous entry into production of the tying product, entry into both markets is significantly more expensive than simple entry into the tied market, and shifting buying habits in the tied product is considerably more cumbersome and less responsive to variations in competitive offers.⁸⁸

Exclusive deals can have a similar effect.⁸⁹ In *LePage's Inc. v. 3M*, 3M, in combination with substantial all-or-nothing rebates, implemented exclusive agreements with LePage's customers that forced them to exclusively purchase

86. *Shell Oil Co. v. FTC*, 360 F.2d 470, 487 (5th Cir. 1966), *cert. denied*, 385 U.S. 1002 (1967).

87. *See Times-Picayune*, 345 U.S. at 605 (“[I]n the extent the enforcer of the tying arrangement enjoys market control, other existing or potential sellers are foreclosed from offering up their goods to a free competitive judgment; they are effectively excluded from the marketplace.”); *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 485 (1992) (citing *Jefferson Par.*, 466 U.S. at 14) (stating “one of the evils proscribed by the antitrust laws is the creation of entry barriers to potential competitors by requiring them to enter two markets simultaneously.”); *Fortner Enters., Inc. v. U. S. Steel Corp. (Fortner I)*, 394 U.S. 495, 509 (1969).

88. *Fortner I*, 394 U.S. at 513 (White, J., dissenting).

89. *Jefferson Par.*, 466 U.S. at 45, (O'Connor, J., concurring) (“Exclusive dealing can have adverse economic consequences by allowing one supplier of goods or services unreasonably to deprive other suppliers of a market for their goods”); *McWane*, 783 F.3d at 822–24, 831.

transparent tape from them.⁹⁰ These agreements enhanced 3M's market power—where it already controlled 90% of the market—and inhibited the growth and entry of its rivals.⁹¹

Firms using tyings can entrench and expand their own dominance and unfairly exclude current and potential competitors by foreclosing channels of competition. Such practices can also increase barriers to entry. Specifically, tyings can be used to require firms to compete in two product or service markets simultaneously (commonly known as “two-step” or “two-stage” entry).⁹² Tying also places consumers in an unfair situation because they are restricted from making (or significantly incentivized to avoid) alternative purchases. Tyings can also mask the actual cost of the tied product or service.⁹³ Exclusive deals can have a similar effect.⁹⁴

Third, tyings and exclusive deals lessen competition by reducing the freedom of consumers and businesses to engage in business with whom they like—depriving them of their “independent judgment” and thus causing them to incur higher costs, lower quality products or services, and worse terms.⁹⁵

90. *LePage's Inc. v. 3M*, 324 F.3d 141, 154–59 (3d Cir. 2003).

91. *Id.* at 144, 159, 162–63.

92. *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 6 (1958) (“[Tying agreements] deny competitors free access to the market for the tied product, not because the party imposing the tying requirements has a better product or a lower price but because of his power or leverage in another market.”); *Times-Picayune*, 345 U.S. at 605 (“[T]o the extent the enforcer of the tying arrangement enjoys market control, other existing or potential sellers are foreclosed from offering up their goods to a free competitive judgment; they are effectively excluded from the marketplace.”); *id.* (“By conditioning his sale of one commodity on the purchase of another, a seller coerces the abdication of buyers’ independent judgment as to the ‘tied’ product’s merits and insulates it from the competitive stresses of the open market.”) (emphasis added); *Fortner I*, 394 U.S. at 513–14 (White, J., dissenting) (“The tying seller may be working toward a monopoly position in the tied product and, even if he is not, the practice of tying forecloses other sellers of the tied product and makes it more difficult for new firms to enter that market. They must be prepared not only to match existing sellers of the tied product in price and quality, but to offset the attraction of the tying product itself. Even if this is possible through simultaneous entry into production of the tying product, entry into both markets is significantly more expensive than simple entry into the tied market, and shifting buying habits in the tied product is considerably more cumbersome and less responsive to variations in competitive offers.”); Daniel A. Hanley, *A Topology of Multisided Digital Platforms*, 19 CONN. PUB. INT. L.J. 271, 320 (2020).

93. *Jefferson Par.*, 466 U.S. at 15 (“the freedom to select the best bargain in the second market is impaired by [the consumer’s] need to purchase the tying product, and perhaps by an inability to evaluate the true cost of either product when they are available only as a package.”).

94. See generally *Standard Stations*, 337 U.S. at 320–21 (Douglas, J. dissenting); see also *McWane, Inc. v. F.T.C.*, 783 F.3d 814, 838 (11th Cir. 2015).

95. See *Times-Picayune*, 345 U.S. at 605 (“By conditioning his sale of one commodity on the purchase of another, a seller coerces the abdication of buyers’ independent judgment as to the ‘tied’ product’s merits and insulates it from the competitive stresses of the open market.”)

The Supreme Court has repeatedly supported this point. In *FTC v. Brown Shoe*, the Supreme Court stated that exclusive dealing arrangements violate the Sherman Act and the Clayton Act because they “take away freedom of purchasers to buy in an open market.”⁹⁶ In *Jefferson Parish*, the Supreme Court explained that “the freedom to select the best bargain in the second market is impaired by his need to purchase the tying product, and perhaps by an inability to evaluate the true cost of either product when they are available only as a package.”⁹⁷ It further stated:

[T]he essential characteristic of an invalid tying arrangement lies in the seller’s exploitation of its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms.⁹⁸

In other words, the Supreme Court clearly views exclusive deals and tyings as unfair business practices that reduce the freedom of consumers and businesses by forcing them to act a specific way and function as tools of control to limit choice.

Tyings and exclusive deals, like increases in concentration from mergers, can also create supply chains that are less resilient—particularly to black swan and other economy wide events like a financial crisis or natural disaster that shock an entire system.⁹⁹ Through private ordering of the economy, exclusive deals and tyings practices restrict who can sell or buy a product or service, artificially limit the number of alternative outlets and potential entrants to supply that product. By artificially concentrating supply chains, tyings and exclusive deals make them less resilient and therefore exacerbate the adverse effects of supply and demand shocks when they occur.¹⁰⁰

(emphasis added); *United States v. Paramount Pictures*, 334 U.S. 131, 156–57 (1948) (“Block-booking prevents competitors from bidding for single [movies] *on their individual merits.*”) (emphasis added). Block-booking is similar to tying such that it is the practice of licensing, or offering for license, one movie or set of movies on condition that the theater exhibitor will also license another movie or set of movies.

96. *FTC v. Brown Shoe Co.*, 384 U.S. 316, 321 (1966).

97. *Jefferson Par.*, 466 U.S. at 15.

98. *Id.* at 12.

99. Norman W. Hawker & Thomas N. Edmond, *Avoiding the Efficiency Trap: Resilience, Sustainability, and Antitrust*, 60 ANTITRUST BULL. 208, 215 (2015).

100. See, e.g., Julio Ortiz, *Spread Too Thin: The Impact of Lean Inventories*, VOX EU (Dec. 17, 2021), <https://voxeu.org/article/impact-lean-inventories>; *How to Fix Supply Chains? Break the Chain.*, OPEN MARKETS INST. (Feb. 25, 2021), <https://www.openmarketsinstitute.org/publications/how-to-fix-supply-chains-break-the-chain>; Hawker & Edmond, *supra* note 99, at 216–18; Peter C. Carstensen & Robert H. Lande, *The Merger Incipency Doctrine and the Importance of “Redundant” Competitors*, 2018 WIS. L. REV. 781, 828–31 (2018).

Lastly, exclusive deals and tyings have been repeatedly used by dominant firms to achieve unfair, exclusionary, and predatory ends. Their prevalence as additional and ancillary means to extend and entrench power is a significant indicator of their effectiveness and exemplifies their designation as a near-costless form of “cheap exclusion.”¹⁰¹ Tyings and exclusive deals have been used in combination with other unlawful acts including deception,¹⁰² refusals to deal,¹⁰³ overt collusion or conscious parallelism,¹⁰⁴ restrictive price maintenance practices,¹⁰⁵ and used as a tool to facilitate price discrimination.¹⁰⁶ Additionally, all of these harms are exacerbated and amplified when used by many firms at once.¹⁰⁷

It is clear that when used by dominant corporations both exclusive deals and tyings often arise not from superior investments, internal growth, or happenstance.¹⁰⁸ Rather they are often unfair business practices that are purposefully implemented to forcefully control dependent firms, shut out competitors, and entrench and extend a firm’s market power.¹⁰⁹

101. Creighton, et al., *supra* note 3, at 977, 989–90.

102. Conwood Co., L.P. v. U.S. Tobacco Co., 290 F.3d 768 (6th Cir. 2002); United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).

103. Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 458 (1992); United States v. Aluminum Co. of Am. (*Alcoa*), 148 F.2d 416, 422 (2d Cir. 1945) (describing an enforcement action by the government in 1912).

104. United States v. Visa U.S.A., Inc., 344 F.3d 229 (2d Cir. 2003).

105. See *Ethyl Gasoline v. United States*, 309 U.S. 436, 458 (1940).

106. Fortner Enters., Inc. v. U.S. Steel Corp. (*Fortner I*), 394 U.S. 495, 513–14 (1969) (White, J. dissenting); see also United States v. United Shoe Mach. Corp., (*United Shoe III*), 110 F.Supp. 295, 336, 340, 349 (D. Mass. 1953).

107. See *FTC v. Motion Picture Advert. Serv. Co.*, 344 U.S. 392, 395 (1953).

108. See, e.g., United States v. Aluminum Co. of Am., 148 F.2d 416, 429–30 (2d Cir. 1945) (“A single producer may be the survivor out of a group of active competitors, merely by virtue of his superior skill, foresight and industry. In such cases a strong argument can be made that, although, the result may expose the public to the evils of monopoly, the Act does not mean to condemn the resultant of those very forces which it is its prime object to foster[.]”).

109. N. Pac. Ry. Co. v. United States, 356 U.S. 1, 6 (1958) (“[Tying agreements] deny competitors free access to the market for the tied product, not because the party imposing the tying requirements has a better product or a lower price but because of his power or leverage in another market.”); *id.* (“buyers are forced to forego their free choice between competing products.”); United States v. Loew’s Inc., 371 U.S. 38, 45 (1962), *abrogated by* Ill. Tool Works, Inc. v. Indep. Ink, Inc., 547 U.S. 28 (2006) (“[Tying arrangements]...may force buyers into giving up the purchase of substitutes for the tied product . . . and they may destroy the free access of competing suppliers of the tied product to the consuming market.”).

V. MANY OF THE JUSTIFICATIONS FOR EXCLUSIVE DEALS AND TYINGS FOR CORPORATIONS WITH MARKET POWER ARE UNPERSUASIVE

Tying and exclusive deals have been repeatedly analyzed by courts to determine if they violate the antitrust laws. Economists, academics, and other scholars have heavily contributed to the intellectual firepower of dominant firms by supplying them with nearly endless reasons to justify their exclusionary conduct.

Listing and responding to each of the justifications for exclusive deals and tyings individually is beyond the scope of this Article. However, this Article will address three primary justifications that have been repeatedly asserted by litigants, scholars, and other academic proponents. In short, the justifications for exclusive deals and tyings are unpersuasive and, at the very least, are not outweighed by less restrictive, more socially beneficial, practices a firm can use to accomplish similar goals.

First, proponents assert that tyings and exclusive deals enhance a firm's operations by providing necessary economies of scale which can vicariously secure firm loyalty, be used to expand operations or break into a new market, or ensure a minimum level of purchases for the firm (or adequate supply for the distributor).¹¹⁰ This argument is faulty on the grounds that tyings and exclusive deals are not the only methods for firms to expand their operations. Indeed, tyings and exclusive deals are merely a limited set of business practices among a plethora of other available and more socially beneficial practices that firms can use to achieve these goals.¹¹¹ For example, firms can engage in aggressive (above-cost) pricing,¹¹² offer significant (but fair and equitable) volume discounts on their products,¹¹³ provide enhanced financial incentives and better terms to firms to persuade them to make a purchase, or invest in innovation to make their products more attractive to potential and existing

110. A. Douglas Melamed, *Exclusive Dealing Agreements and Other Exclusionary Conduct—Are There Unifying Principles*, 73 ANTITRUST L.J. 375, 377, 408 (2006); J. Gregory Sidak, *Do Free Mobile Apps Harm Consumers?*, 52 SAN DIEGO L. REV. 619, 627 (2015); *FTC v. Brown Shoe Co.*, 384 U.S. 316, 330–31 (1966); Charles J. Smaistrle, *An Analysis of Tying Arrangements: Invalidating the Leveraging Hypothesis*, 61 TEX. L. REV. 893, 911 (1983) (stating “A firm may tie together products used in a fixed proportion because, for one reason or another, it cannot recover a profit in the sale of the tying good.”); Jacobson, *supra* note 3, at 357–58 (discussing loyalty).

111. Tim Wu, *Taking Innovation Seriously: Antitrust Enforcement If Innovation Mattered Most*, 78 ANTITRUST L.J. 313, 319 (2012).

112. *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222 (1993).

113. *Falls City Indus., Inc. v. Vanco Beverage, Inc.*, 460 U.S. 428, 435 (1983); *FTC v. Morton Salt Co.*, 334 US 37, 50–51 (1948).

buyers.¹¹⁴ Moreover, while the use of exclusive deals and tyings may provide some increases in economies of scale for the firm using them, they often do so (particularly for firms with significant market power) at the cost of impeding or completely preventing economies of scale for other firms. They also mitigate the effects of the excluded firms from using the other less restrictive tactics to obtain scale.

The use of exclusive deals and tyings to obtain economies of scale is further mitigated when used by firms that are already established market participants and have preexisting operations. Unlike a new entrant, incumbent firms have established infrastructure and capital to obtain additional business.

Second, proponents also justify exclusive deals and tyings on the grounds that both practices provide firms robust protection of their brand—both in the eyes of consumers and to ensure the product is being used correctly by purchasers as an incident may harm the manufacturer's brand. In the case of exclusive deals, proponents assert that they protect the firm's goods from being "passed off," which takes place when a distributor switches a higher-margin but inferior product as a lower-margin, higher-quality brand.¹¹⁵ In the case of tyings, firms assert that tyings protect goodwill concerning their brand name or trademark, thus ensuring customers receive the quality of the product they expect.¹¹⁶

This argument is faulty for at least five reasons. First, neither tyings nor exclusive deals extinguish the threat of a distributor passing off or damaging the goodwill of a firm's product or brand. Stealth purchases or the use of non-compatible products can always occur. Second, under this circumstance, a firm using exclusive deals or tyings for this purpose will always still have to incur some monitoring costs to ensure the compliance it seeks.¹¹⁷ Third, a firm

114. Willard K. Tom, David A. Balto and Neil W. Averitt, *Anticompetitive Aspects of Market-Share Discounts and Other Incentives to Exclusive Dealing*, 67 ANTITRUST L.J. 615, 629 n.39 (2000).

115. *FTC v. Sinclair Refining Co.*, 261 U.S. 463, 475 (1923) ("[The stuff is highly inflammable and the method of handling it is important to the refiner. He is also vitally interested in putting his brand within easy reach of consumers with ample assurance of its genuineness.") (emphasis added); Benjamin Klein & Andres V. Lerner, *The Expanded Economics of Free-Riding: How Exclusive Dealing Prevents Free-Riding and Creates Undivided Loyalty*, 74 ANTITRUST L.J. 473, 480 (2007).

116. *See Ethyl Gasoline v. United States*, 309 U.S. 436, 459–60 (1940). Lawful intent does not override unlawful means. *See Int'l Salt Co. v. United States*, 332 U.S. 392, 400 (1947); *Int'l Bus. Machs. Corp. v. United States (IBM)*, 298 U.S. 131, 139–40 (1936); *Eastman Kodak*, 504 U.S. at 485.

117. Benjamin Klein, *Exclusive Dealing As Competition for Distribution "On the Merits"*, 12 GEO. MASON L. REV. 119, 153 (2003) ("[I]he manufacturer [even with vertical restraints in place] must monitor distributor efforts along noncontractible dimensions, as well as monitor the exclusive and other contracted elements of promotional performance."); *see, e.g.*, Brian

caught by consumers passing off inferior goods will likely face significant consumer backlash for being lied to and deceived by the firm. Fourth, firms are also governed by other laws, such as the Lanham Act and other state and federal consumer protection laws that punish passing off.¹¹⁸ Fifth, as it specifically concerns tying two products together, nothing prevents a firm from providing detailed instructions and (truthful) warnings to firms about compatibility or quality requirements that other firms should follow to ensure the product is being used in the manner in which it was intended and built for which can exculpate the firm from potential liability, protect their good will, and protect their reputation from being harmed.¹¹⁹ In summary, there are many less restrictive avenues firms can take to protect their brand or goodwill, rather than rely on exclusive deals and tyings.

Third, exclusive deals and tyings are justified on the grounds that they prevent firms from “free riding.”¹²⁰ Free riding is defined as “the externality that arises when investments by one firm increase demand or reduce costs for rivals, and the first firm is not compensated for providing this benefit.”¹²¹ For example, consider when a manufacturing firm provides training to a distributor on how to display the manufacturer’s products. The free riding supposedly

Callaci, *The Historical and Legal Creation of a Fissured Workplace: The Case of Franchising* 28 (Oct. 2019) (Ph.D. dissertation, University of Massachusetts Amherst), https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=2719&context=dissertations_2 (“Franchisors also invest in monitoring. They send ‘secret shoppers’ to franchised establishments, and monitor franchisee cash registers and operations through real time ‘point of sale’ systems.”).

118. *E.g.*, 18 U.S.C. § 2320(a) (criminalizing intentional use of, among other things, “counterfeit mark on or in connection with such goods or services”); *see also* *Lexmark Inter., Inc. v. Static Control Components, Inc.* 572 U.S. 118, 140 (2014) (“To invoke the Lanham Act’s cause of action for false advertising, a plaintiff must plead (and ultimately prove) an injury to a commercial interest in sales or business reputation proximately caused by the defendant’s misrepresentations.”); *POM Wonderful LLC v. Coca-Cola Co.*, 573 U.S. 102, 115 (2014) (“Competitors who manufacture or distribute products have detailed knowledge regarding how consumers rely upon certain sales and marketing strategies. Their awareness of unfair competition practices may be far more immediate and accurate than that of agency rulemakers and regulators. Lanham Act suits draw upon this market expertise by empowering private parties to sue competitors to protect their interests on a case-by-case basis.”); *see* Maurice E. Stucke, *How Do (and Should) Competition Authorities Treat a Dominant Firm’s Deception?*, 63 SMU L. REV. 1069, 1077–80 (2010); *see id.* at 1077 (“In the United States, for example, numerous federal laws (such as prohibitions on false statements; bank, mail, wire, and securities fraud) and state laws (such as forgery; fraudulent use of a credit or debit card; and deceptive business practice) criminalize deception.”).

119. *See, e.g., Int’l Salt*, 332 U.S. at 397–98.

120. Klein, *supra* note 115, at 480; Andy C. M. Chen & Keith N. Hylton, *Procompetitive Theories of Vertical Control*, 50 *Hastings L.J.* 573, 604–06 (1999).

121. Jonathan B. Baker, *Exclusion as A Core Competition Concern*, 78 *ANTITRUST L.J.* 527, 580 n.251 (2013).

occurs when the distributor then takes that knowledge and applies it to the manufacturing firm's competitor's products.¹²² The problem with this justification for exclusive deals and tyings is that it is based on highly disputable assumptions and ignores that less restrictive alternatives are available.

Free riding assumes that a firm that shares any knowledge or makes any investment in another firm should be entitled to extract all or almost all of the returns that investment provides. Such a situation allows firms to be allowed to impose economic "rents" on the firms they are engaging in business with and obtain above fair and adequate returns.¹²³ The existence of adequate returns on any training or other investments made indicates that exclusive deals and tyings are not needed at all and that they merely serve as a means to extract excessive gains greater than their initial investment. Moreover, higher than reasonable returns are not necessary to incentivize such investment making activities.

Free riding also assumes that firms make product-specific as opposed to brand-specific investments in dealers.¹²⁴ Whenever a firm invests time and money into another firm for using, selling, and promoting of product, often that training cannot be used for using, selling, and promoting a rival's product—in which case, concerns of free riding would not exist.¹²⁵ Additionally, brands that possess strong demand from purchasers—whether it be through their reputation for high quality, name or brand recognition, favorable price point for their products or services, established consumer preference, or some other factor—create a circumstance where distributors, even if they were to free ride off of training provided from a manufacturer, have limited capability to alter that demand. Such a situation also serves as ample incentive for a distributor to carry such products regardless of the margin obtained for selling that product or training received or not received.¹²⁶

Moreover, to the extent that free riding exists at all,¹²⁷ there are other less restrictive means to achieve the ends that exclusive dealing and tying is asserted

122. The training example is modified from Benjamin Klein, *Exclusive Dealing As Competition for Distribution "On the Merits"*, 12 GEO. MASON L. REV. 119, 137 (2003).

123. A. ALLAN SCHMID, CONFLICT AND COOPERATION INSTITUTIONAL AND BEHAVIORAL ECONOMICS 131 (2004) ("Economic Rent" is a return above opportunity cost due to natural limits to supply.").

124. See Klein, *supra* note 115, at 447, 477, 484, 512–13.

125. See Howard P. Marvel, *Exclusive Dealing*, 25 J.L. & ECON. 1, 8 (1982).

126. Warren S. Grimes, *The Future of Distribution Restraints Law: Will the New Learning Take Hold?*, 2006 UTAH L. REV. 885, 888 (2006).

127. See Marina Lao, *Free Riding: An Overstated, and Unconvincing, Explanation for Resale Price Maintenance: Where Chicago Has Overshot the Mark*, in HOW THE CHICAGO SCHOOL OVERSHOT THE MARK 196, 200–01 (Robert Pitofsky ed., 2008) ("[V]ery few products require dealer

to accomplish. For example, firms that provide specific training to their distributors for using, selling, or promotion of their products can charge, through establishing a contract with a distributor, for the training they are providing.¹²⁸ Charging for services in this manner would allow a firm to obtain the value of their investment, eliminate any free riding that potentially exists, and do so without relying on exclusive deals or tyings.

VI. EXAMPLES OF PUBLIC HARMS CAUSED BY THE USE OF EXCLUSIVE DEALS AND TYINGS

There is a surfeit of examples of dominant corporations using tyings and exclusive deals to unfairly injure competitors, downstream firms, and end-use consumers. Both tyings and exclusive deals are used repeatedly to entrench and extend their existing monopoly positions into new markets, cause dependents to incur unnecessary costs, and unfairly supplant competition. This section explores a set of factual allegations and news sources that detail some examples of how exclusive deals and tyings are used in unfair ways.

A. PRODUCT REPAIR

1. *McDonald's' Ice Cream Machines*

Evidence reveals that McDonald's' ice cream machines are perpetually broken, depriving consumers of the dessert and franchisees of the revenue derived from the sale of the product to customers. Some third-party data shows that at any given point, 11% of McDonald's ice cream machines are inoperable.¹²⁹ This situation is the result of the unfair use of exclusive deals and tyings.

McDonald's uses exclusive agreements to grant Taylor Company, a food equipment manufacturer, the right to supply ice cream machines to its franchisees.¹³⁰ As the manufacturer of the ice cream machines, Taylor makes deliberate choices about how its products will be designed. Taylor uses a variety of technical and contractual means to prevent franchisees from making

demonstrations, consumer education, operational expertise, special showrooms, and the like for effective marketing, and few dealers actually provide any such services.”).

128. Chen & Hylton, *supra* note 120, at 607; Robert L. Steiner, *The Nature of Vertical Restraints*, 30 ANTITRUST BULL. 143, 162–63 (1985).

129. Lauren Barry, *An Estimated 11% of McDonald's Ice Cream Machines Broken in the US*, AUDACY (Mar. 5, 2022), <https://www.audacy.com/kcbsradio/news/national/why-are-around-11-of-mcdonalds-ice-cream-machines-broken>.

130. Complaint at 2, *Kytch v. McDonald's*, (D. Del.) (No. 22-cv-00279) [hereinafter *Kytch McDonalds Complaint*]; Complaint for Damages, Injunctive Relief and Demand for Jury Trial at 2, *Kytch v. Gamble*, (Cal. Super. Ct., Alameda Cnty.) (RG21099155) [hereinafter *Kytch California Complaint*]

the repairs themselves and making repairs overly complicated.¹³¹ In particular, Taylor ties the supply of its ice cream machines with its repair services so that if a number of issues occur (as detailed in the operations manual for the machine), a franchisee must call Taylor and is forced to use their (and only their) repair technicians.¹³² Franchisees already have very thin margins and thus hiring an authorized service technician to repair the machine further eats into their already limited profits.¹³³ In some cases, the cost for a repair technician can be several hundred dollars for merely an hour of work.¹³⁴ And, since franchisees are required to exclusively use Taylor's machines, there is no alternative action they can make—either the costly repair is made by Taylor, or the machine is not repaired at all.

Like other companies,¹³⁵ Taylor is heavily dependent on making these repairs for their revenue. The company disclosed in corporate documents that up to 25% of their revenue comes from repairs.¹³⁶ Thus, in this case, McDonald's' exclusive agreements provide Taylor a distribution channel shielded from competition and provides the company with a highly lucrative recurring revenue source by tying its products to its repair services.

2. *Tractors, Combines, and Other Farming Equipment*

John Deere is the largest provider of agricultural equipment with a U.S. market share for tractors and combines that exceeds 50%.¹³⁷ Tractors and combines are essential for farmers to harvest their crops to obtain the yield they need to have a viable business and in a timely manner to optimize their overall yield and quality.¹³⁸ Over the years, Deere has purposefully implemented a series of restrictions on their products that inhibit or entirely block farmers from being able to repair their equipment.¹³⁹

131. Kytch California Complaint, *supra* note 130, at 15.

132. Kytch McDonalds Complaint, *supra* note 130, at 16.

133. Brian Callaci, *What Do Franchisees Do? Vertical Restraints as Workplace Fissuring and Labor Discipline Devices*, 1 J.L. & POL. ECON. 397, 407 (2021) (on average 43 percent of supplies in my sample of franchise contracts are from sources of supply restricted by the franchisor).

134. Johnny Harris, *The REAL Reason McDonalds Ice Cream Machines Are Always Broken*, YOUTUBE (Apr. 23, 2021), <https://youtu.be/SrDEtSlqJC4> (starting at 14:28).

135. DANIEL A. HANLEY, CLAIRE KELLOWAY AND SANDEEP VAHEESAN, *FIXING AMERICA: BREAKING MANUFACTURERS' AFTERMARKET MONOPOLY AND RESTORING CONSUMERS' RIGHT TO REPAIR, OPEN MKTS. INST.* (Apr. 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4089852.

136. Harris, *supra* note 134, at 15:53 (25% of revenue comes from repair and parts service).

137. Nat'l Farmers Union, *Complaint for Action to Stop Unfair Methods of Competition and Unfair and Deceptive Trade Practices* 8 (2022), <https://farmaction.us/wp-content/uploads/2022/03/Deere-Right-To-Repair-FTC-Complaint.pdf>.

138. *Id.* at 14.

139. *Id.* at 2.

Deere requires the use of proprietary software and the exclusive use of its repair technicians to make the repairs farmers need for their machines. The repairs are costly for farmers in multiple ways. First, the farmers have to wait significantly long periods to actually get the repairs completed. The time spent waiting can irreparably disrupt farmers' already tight window to optimally harvest their crops.¹⁴⁰ Second, these repairs are expensive. In fact, Deere makes three to six times more profits on repairs than actual equipment sales—so the incentives are aligned for Deere to restrict repair whenever they can.¹⁴¹ Third, farmers cannot use an alternative repair service provider. Farmers must use Deere's technicians and software to make their tractors operable and to have them repaired.¹⁴² Enhancing Deere's power over farmers is that these machines are so costly to replace.¹⁴³ In fact, according to Deere's terms of service, farmers must use Deere's authorized repair services and, in some cases, if unauthorized attempts at repair are made, the farming equipment, in many cases costing several hundred thousand dollars, can be rendered inoperable because Deere designs their products such that all replaced parts have to be accepted by their proprietary repair software.¹⁴⁴ In other words, farmers are forced to comply with Deere's restrictive demands.

3. *Hospital Ventilators*

Restrictions on repair can have significant unintended consequences. Ventilators are a lifesaving piece of equipment that can assist a person's breathing and provide their body time to recover if they have a severe case of COVID-19. At the onset of the COVID-19 pandemic, journalists and advocates revealed that manufacturers imposed on hospitals and other medical outlets restrictive repair requirements on their ventilators. Manufacturers required that either proprietary software or authorized technicians were needed to make the repairs on ventilators.¹⁴⁵ Similar restrictions applied to other medical devices such as defibrillators, anesthesia machines, and imaging machines.¹⁴⁶

140. *Id.* at 14.

141. *Id.* at 16.

142. *Id.* at 11.

143. *Id.* at 23.

144. *Id.* at 19; Class Action Complaint Demand for Jury Trial at 11, *Underwood v. Deere*, (E.D. Tenn.) (No. 22-CV-00005).

145. Markian Hawryluk, *As Ventilators Become Crucial, Repair Roadblocks Remain*, FIERCE BIOTECH (Apr. 17, 2020), <https://www.fiercebiotech.com/medtech/as-ventilators-become-crucial-repair-roadblocks-remain>.

146. Kate Gibson, *Manufacturers Hinder Repairs of Crucial COVID Hospital Equipment, Critics Warn*, CBS NEWS (July 8, 2020), <https://www.cbsnews.com/news/medical-equipment-makers-hinder-repairs-of-ventilators-says-consumer-group/>.

With so many ventilators needed at once due to the extreme rise in COVID-19 cases in late 2020, shortages were practically inevitable, but unnecessary repair restrictions drastically exacerbated the situation.¹⁴⁷ Hospitals eventually had stockpiles of broken ventilators standing by waiting for authorized repair personnel or access to specialized parts.¹⁴⁸ While some manufacturers loosened restrictions, the use of tyings and exclusive deals were unnecessary and the justifications for those restrictions, such as ensuring adequate security, were pretextual.¹⁴⁹

B. TECHNOLOGY SECTOR

1. *Google*

Google has made repeated use of exclusive deals and tyings as they pertain to establishing the default placement of its search engine, Google Play Store (its smartphone application store), its smartphone application payment system, and its Chrome web browser. Concerning its search engine, between 2014 and 2019, Google entered an exclusive deal with Apple and paid Apple more than twenty-five billion to be the default search engine on its mobile smartphone operating system iOS.¹⁵⁰ Additional agreements ranged between eight to twelve billion in 2020, and estimates show that Google could have paid Apple fifteen billion in 2021.¹⁵¹ Google's payments to Apple are not just substantial in numerical terms, but in percentage terms as well. In total, Google's payments constituted 17% to 26% of Apple's total revenue for its services division in 2019.¹⁵² Collectively, iOS and Android control well over 90% of the

147. Kevin O'Reilly, *Hospital Technicians Renew Urgent Call for Right to Repair Medical Equipment*, U.S. PIRG (Feb. 10, 2021), <https://uspig.org/blogs/blog/usp/hospital-technicians-renew-urgent-call-right-repair-medical-equipment>.

148. *Id.*

149. FED. TRADE COMM'N, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS 29 (2021), https://www.ftc.gov/system/files/documents/reports/nixing-fix-ftc-report-congress-repair-restrictions/nixing_the_fix_report_final_5521_630pm-508_002.pdf.

150. Hanley, *supra* note 92, at 298–99, 317.

151. Tim Hardwick, *Google Basically Pays Apple to Stay Out of the Search Engine Business, Class Action Lawsuit Alleges*, MACRUMORS (Jan. 5, 2022), <https://www.macrumors.com/2022/01/05/google-pays-apple-stay-out-of-search/>; Chance Miller, *Analysts: Google to pay Apple \$15 billion to remain default Safari search engine in 2021*, 9TO5 MAC (Aug. 25, 2021), <https://9to5mac.com/2021/08/25/analysts-google-to-pay-apple-15-billion-to-remain-default-safari-search-engine-in-2021/>.

152. Kif Leswing, *Apple's Services Success Story Relies on Massive Payments From a Single Partner: Google*, CNBC (Oct. 21, 2020), <https://www.cnbc.com/2020/10/21/apple-services-success-story-bolstered-by-huge-google-payments.html>.

total smartphone operating system market.¹⁵³ With Google's agreements, rivals have almost no opportunity to access this essential growth channel.¹⁵⁴

Similarly, Google has entered into exclusive agreements and tying arrangements with phone manufacturers to ensure its search engine and application store remained the exclusive default application as well as tied its Application Store to its Android smartphone operating system.¹⁵⁵ Google has also tied its payment processing system to its Android operating system, inhibiting consumers from using alternative payment services, which are often significantly cheaper to use since they charge less to the user per transaction.¹⁵⁶ In 2022, Google decided to enact further restrictions to ensure all applications developers and customers are forced to use its payment system on Android.¹⁵⁷

In a lawsuit against Google in 2018, the European Commission determined that Google violated the European antitrust laws by establishing exclusive agreements with phone manufacturers to pre-install Google search and set it as the default search engine across all devices that used the Android operating system.¹⁵⁸ The European Commission eventually fined Google almost five billion euros for its actions.¹⁵⁹

Google has also used exclusivity agreements with website publishers that prohibited them from using alternative digital advertising services. Even though Google changed its exclusivity provisions to a "Premium Placement"

153. Hanley, *supra* note 92, at 346.

154. In some cases, users can switch the search engine they want to use as the default, but this is a significant barrier to entry. Indeed, being the default provider is practically the goal to succeed. *Id.* at 298–99, 317.

155. Over the years, Google has taken deliberate steps to close off Android despite continued marketing that it is an open platform. *See* First Amended Complaint for Injunctive Relief at 2, *Epic Games, Inc. v. Google LLC*, (N.D. Cal.) (No. 20-CV-05671).

156. *Id.* at 57–58.

157. Jay Peters, *Google Crackdown Means You Won't Be Able to Buy Barnes & Noble Ebooks on Android*, VERGE (Apr. 4, 2022), <https://www.theverge.com/2022/4/1/23006695/audible-barnes-noble-in-app-purchases-google-android>. However, apparently Google is letting a select few application developers use alternative payments systems, but this is in a pilot program. *See* Jay Peters, *Google Will Test Letting Android Developers Use Their Own Billing Systems, Starting with Spotify*, VERGE (Mar. 23, 2022), <https://www.theverge.com/2022/3/23/22993417/google-pilot-test-android-alternate-billing-systems-spotify>.

158. Antitrust Procedure Council Regulation Commission Decision on Google Android (EC) No. 1/2003 of 18 July 2018, art. 7, 2018 O.J. (C AT.40099) 2, 168, n.753

159. *Antitrust: Commission Fines Google €4.34 Billion for Illegal Practices Regarding Android Mobile Devices to Strengthen Dominance of Google's Search Engine*, EUROPEAN COMM'N (July 18, 2018), http://europa.eu/rapid/press-release_IP-18-4581_en.htm.

provision, the European Commission found that Google violated the European Union's antitrust laws in March 2019.¹⁶⁰

In each of these actions (and others¹⁶¹), Google has unfairly foreclosed competition and entrenched its market dominance in multiple essential markets and, in combination with other conduct,¹⁶² made it nearly impossible for rivals to overcome Google's monopoly control.

2. *Apple*

Like Google, Apple also ties its application payment system to its smartphone operating system (and thus vicariously to its iOS App Store), mandating that its service is the only acceptable one to accept user financial transactions or download applications.¹⁶³ Here again, the financial incentive for these tying arrangements is clear. For each transaction, Apple obtains 30% of the charged amount.¹⁶⁴ While Apple does not disclose how much the company makes from commission fees from its App Store, third-party calculations estimate the company makes well over twenty billion dollars.¹⁶⁵

3. *Microsoft*

Microsoft is no stranger to tying its products and services together and using exclusive deals. Indeed, significant aspects of the blockbuster antitrust lawsuit initiated against Microsoft in the 1990s were a tie between the Windows operating system and the Internet Explorer web browser and Microsoft's use of exclusive deals with the top internet access providers and other online service providers like AOL (prohibiting these providers from promoting or

160. *Antitrust: Commission Fines Google €1.49 billion for Abusive Practices in Online Advertising*, EUROPEAN COMM'N (Mar. 20, 2019), https://europa.eu/rapid/press-release_IP-19-1770_en.htm.

161. Amended Complaint, *United States v. Google*, (D.D.C. 2021) (20-CV-03010); Second Amended Complaint, *Texas v. Google*, (E.D. Tex. 2021) (20-CV-00957); First Amended Complaint, *Utah v. Google*, (N.D. Cal. 2021) (21-CV-05227).

162. MAJORITY STAFF OF HOUSE SUBCOMM. ON ANTITRUST, COMMERCIAL & ADMIN. LAW, 116TH CONG., INVESTIGATION OF COMPETITION IN DIGITAL MARKETS 174-247 (2020) [hereinafter HOUSE TECH REPORT].

163. *Epic Games, Inc. v. Apple Inc.*, No. 4:20-CV-05640-YGR, 2021 WL 4128925, at *18–29 (N.D. Cal. Sept. 10, 2021); HOUSE TECH REPORT, *supra* note 162, at 342.

164. HOUSE TECH REPORT, *supra* note 162, at 342.

165. Therese Poletti, *How Much Does Apple Make From the App Store? Even a Landmark Antitrust Trial Couldn't Reveal It*, MARKETWATCH (June 2, 2021), <https://www.marketwatch.com/story/how-profitable-is-apples-app-store-even-a-landmark-antitrust-trial-couldnt-tell-us-11622224506> (estimating 22 billion in profits for 2020); Kif Leswing, *Apple's App Store Had Gross Sales Around \$64 billion Last Year and It's Growing Strongly Again*, CNBC (Jan. 8, 2021), <https://www.cnbc.com/2021/01/08/apples-app-store-had-gross-sales-around-64-billion-in-2020.html> (estimating \$64 billion in revenue for 2020).

providing alternative internet browsers besides Internet Explorer).¹⁶⁶ Microsoft also used exclusive deals to force Apple and other software vendors to make Internet Explorer the default browser on their platforms.¹⁶⁷

Despite more than twenty years since its federal antitrust case, Microsoft has not changed its strategy much. The company engages in prolific tying of its services. Microsoft ties together its lines of productivity software in a massive bundle known as Microsoft 365.¹⁶⁸ Microsoft repeatedly finds rival products to imitate and then bundles its nominally new product with its Microsoft 365 service. This practice, while not completely foreclosing competition for alternative services, deeply disincentivizes consumers from using alternative services because they are already paying to use Microsoft's products and thus increases barriers to entry for rival products.

An example of the adverse effects of Microsoft's practices concerns its rivalry with Slack. Slack is a communications platform that helps teams connect through providing various chat functions. Microsoft, recognizing the value of Slack's business model, decided to significantly copy Slack's functionality into its own product.¹⁶⁹ Then Microsoft bundled its new product (known as Microsoft Teams) into its Microsoft 365 productivity suite. Microsoft effectively leverages and exploits its dominance in office productivity software into the business communications industry.

Microsoft Teams on its own would normally have to grow its user base from zero. Instead, through Microsoft's tying, Teams was immediately able to access over 200 million customers.¹⁷⁰ Microsoft's use of tying has been exceptionally effective. Microsoft Teams went from twenty million users in 2019 to over 270 million in January 2022.¹⁷¹ While the COVID-19 pandemic undoubtedly accelerated the consumer demand for video conferencing software, Teams would not have been able to automatically access Microsoft's

166. *United States v. Microsoft Corp.*, 253 F.3d 34, 67, 71–72 (D.C. Cir. 2001).

167. *Id.* at 73.

168. *Apps and Services*, MICROSOFT, <https://www.microsoft.com/en-us/microsoft-365/products-apps-services> (last visited Apr. 20, 2022).

169. Steve Lohr, *Slack Accuses Microsoft of Illegally Crushing Competition*, N.Y. TIMES (July 22, 2020), <https://www.nytimes.com/2020/07/22/technology/slack-microsoftantitrust.html>.

170. Tony Redmond, *Office 365 Hits 200 Million Monthly Active Users*, OFFICE365 IT PROS (Oct. 24, 2019), <https://office365itpros.com/2019/10/24/office-365-hits-200-million-monthly-active-users/>; Casey Newton, *How Microsoft Crushed Slack*, PLATFORMER (Dec. 2, 2020), <https://www.platformer.news/p/how-microsoft-crushed-slack?s=r>.

171. *Number of daily active users (DAU) of Microsoft Teams worldwide as of April 2021 (in millions)*, STATISTA (Jan. 2022), <https://www.statista.com/statistics/1033742/worldwide-microsoft-teams-daily-and-monthly-users/>; Mary Jo Foley, *Microsoft: Teams Now Has More Than 270 Million Monthly Active Users*, ZDNET (Jan. 25, 2022), <https://www.zdnet.com/article/microsoft-teams-now-has-more-than-270-million-monthly-active-users/>.

large customer base without the company's tying practices. At the same time, Microsoft's actions neutralize or at least significantly weaken a growing rival—not by producing a better product but by exploiting its dominant position.¹⁷²

4. *Amazon*

Amazon also makes routine use of tying. Amazon deeply integrates its services that results in the tying of its products and services.¹⁷³ For example, Amazon effectively forces sellers to adopt their “Fulfillment by Amazon” (FBA) product storage, packaging, delivery, and customer management service because Amazon penalizes third-party sellers that do not use its FBA service.¹⁷⁴ Amazon penalizes third-party sellers by potentially depressing their search ranking when users search for a product.¹⁷⁵ Alternatively, Amazon rewards third-party sellers that use their FBA service. For example, Amazon is significantly more likely to reward a third-party seller with a Buy Box (a digital button that simplifies the process a user endures to purchase a product) if the seller uses its FBA service.¹⁷⁶ Thus, Amazon appears to be leveraging its dominance in online ecommerce as a way to maintain and extend its dominance in logistic services. Other parties have alleged that Amazon ties its online bookstore for print-on-demand with its printing services.¹⁷⁷

VII. PROPOSED RULE TO PROHIBIT EXCLUSIVE DEALS AND TYINGS THAT FORECLOSE A SUBSTANTIAL SHARE OF THE RELEVANT MARKET

This Section outlines a proposed rule regarding how exclusive deals and tyings should be treated under the antitrust laws. The proposed rule could be enacted either through formal legislation from Congress amending the Clayton Act and Sherman Act or from state legislatures amending their respective antitrust laws. Alternatively, the FTC could enact the proposed rule using its

172. Lohr, *supra* note 169 (“Slack threatens Microsoft’s hold on business email, the cornerstone of Office, which means Slack threatens Microsoft’s lock on enterprise software,” Jonathan Prince, vice president of communications and policy at Slack, said in a statement.”).

173. HOUSE TECH REPORT, *supra* note 162, at 289; Hanley, *supra* note 4, at 6–7.

174. Hal Singer, *Top 10 Admissions from Tech CEOs Secured at the Antitrust Hearing*, PROMARKET (July 31, 2020), <https://www.promarket.org/2020/07/31/top-10-admissions-from-tech-ceos-secured-at-the-antitrust-hearing/>.

175. INTERNATIONAL BROTHERHOOD OF TEAMSTERS, PETITION FOR THE INVESTIGATION OF AMAZON.COM, INC. BEFORE THE FTC, 5–7 (Feb. 27, 2020).

176. Hanley, *supra* note 5, at 6.

177. *BookLocker.com, Inc. v. Amazon.com, Inc.*, 650 F. Supp. 2d 89, 95 (D. Me. 2009). A federal district court denied Amazon’s motion to dismiss the plaintiff’s tying claim. *Id.* at 105, 107.

unfair methods of competition rulemaking authority.¹⁷⁸ In the meantime, enforcers should continue to bring cases against dominant corporations using exclusive deals and tyings.¹⁷⁹

A. FORMAL WRITTEN RULE

Exclusive dealing contracts, exclusionary payments, exclusive arrangements and other related and analogous practices such as bundled discounts (collectively “exclusionary agreements”), either explicit through contract or implied (through coercion, financial inducement, or other behavior) are declared unlawful and unfair methods of competition if: (1) the arrangement causes substantial foreclosure of customers, distribution channels, or suppliers for rivals in the relevant market or (2) when used by any firm with over \$1 billion in revenue.

Tyings, either explicit through contract or implied (through coercion, bundling of products or services together, financial inducement or penalty, or other behavior), are hereby declared unlawful and unfair methods of competition if: two separate products or services exist, where the sale of one product or service is conditioned on the purchase of another product or service, and either (1) if the conduct causes substantial foreclosure of customers, distribution channels, or suppliers for rivals in the relevant market or (2) when used by any firm with over \$1 billion in revenue.

B. RULE DEFINITIONS AND DETAILS

1. *Exclusive Dealing Contracts, Exclusionary Payments, Exclusive Arrangements*

Under exclusive arrangements, firms require customers or distributors to purchase all or substantially all of a specified product or service from them or require suppliers to sell all, or substantially all, of a specified product to them. An exclusive agreement restricts rivals from accessing customers or distribution outlets or obtaining essential inputs from suppliers. Exclusionary arrangements can be implemented explicitly, such as through a contract.

178. Sandeep Vaheesan, *Resurrecting “A Comprehensive Charter of Economic Liberty”: The Latent Power of the Federal Trade Commission*, 19 U. PA. J. BUS. L. 645, 661–63, 656 (2017); *FTC v. Brown Shoe Co.*, 384 U.S. 316, 322 (1966) (“[T]he Commission has power under § 5 to arrest trade restraints in their incipiency, without proof that they amount to an outright violation of § 3 of the Clayton Act or other provisions of the antitrust laws.”); *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233, 244 (1972); Neil W. Averitt, *The Meaning of “Unfair Methods of Competition” in Section 5 of the Federal Trade Commission Act*, 21 B.C. L. REV. 227, 232–38 (1980); *see also* 15 U.S.C. §§ 46(g), 57a(a)(2) (authorizing the FTC “to make rules and regulations for the purpose of carrying out the provisions of this subchapter”).

179. Litigants can still make use of the modified per se test for tyings.

Exclusionary arrangements can also be instituted through threats that the firm will terminate its relationship with a customer or impose significantly less favorable business terms if the customer conducts business with the firm's competitors.

2. *Tying*

Tying arrangements (hereinafter "tyings") require customers, suppliers, or distributors to purchase or use an additional (often ancillary and unnecessary) product or service upon the purchase of some other product or service. Tyings restrict the freedom of customers from purchasing or using the products or services they want by being required or forced to purchase or use some other product or service. Tyings can be implemented explicitly, such as through a contract. Tyings can also be instituted implicitly such as through coercion or financial inducement.

3. *Substantial Foreclosure*

Substantial foreclosure of rivals from customers or distributors occurs when any one of the following six conditions is satisfied:

- 1) A firm with a market share of 30% or more in a relevant market uses exclusive arrangements or tyings with all its customers, suppliers, or distributors;
- 2) A firm that uses exclusive arrangements or tyings with customers, suppliers, or distributors that collectively possess a market share of 30% or more in their relevant market;
- 3) A firm in a concentrated relevant market that engages in exclusive arrangements or tyings with the top three or more customers, suppliers, or distributors;
- 4) The leading three firms have a combined market share of 50% or more in a relevant market and use exclusive arrangements or tyings with their customers, suppliers, or distributors;
- 5) The leading three firms in a relevant market use exclusive arrangements or tyings with customers, suppliers, or distributors that collectively possess a share of 50% or more of their relevant market;
or
- 6) The leading three firms in a concentrated relevant market engage in exclusive arrangements or tyings with the top five or more customers, suppliers, or distributors.

4. *Two Separate Products or Services*

For tyings, separate products should be determined by:

- 1) Their functional necessity, such that if product or service X is entirely operable, mostly operable, or can be reasonably designed to be operable without product or service Y or if either is operable with a readily available substitute, there are two products or services; or
- 2) There is clear evidence of separate consumer demand for both products and services. Clear evidence of separate consumer demand can be shown through qualitative evidence such as surveys, historical practice, or industry practice for each product or service.

5. *Examples of Two Separate Products or Services*

A product and service are always two separate items. For example, Company A requires the purchase of its repair services with its computers. Since the computer is a product and repair is a service, both are separable items for purposes of the stated tying test.

Company A bundles Software Program X with Software Programs Y and Z. Since Software Program X can be entirely operable, mostly operable, or can be reasonably designed to be operable without Software Programs Y and Z, Software Program X is a separate product.

Company A sells Hardware X with Default Program Y. Since Hardware X can be entirely operable, mostly operable, or can be reasonably designed to be operable without Default Program Y, both are separate products.

6. *Relevant Market*

For determining the relevant market, litigants should rely on the qualitative factors detailed by the Supreme Court in *Brown Shoe v. United States* and its progeny, and should not use quantitative methods such as the hypothetical monopolist test.¹⁸⁰

For determining whether a relevant market is concentrated, enforcers should adopt the definition that was used in the Department of Justice's 1968 Merger Guidelines.¹⁸¹ The 1968 Merger Guidelines state that a relevant market is concentrated when the four largest firms in the relevant market amount to 75% or more of the total market share.¹⁸²

VIII. JUSTIFICATIONS FOR THE PROPOSAL

The rule proposed, *supra*, is justified on several grounds. First, the requirement that a firm possesses 30% or more market share or where the

180. *Brown Shoe*, 370 U.S. at 325.

181. *See 1968 Merger Guidelines*, U.S. DEP'T JUST. (1968), <https://www.justice.gov/archives/atr/1968-merger-guidelines>.

182. *Id.*

agreement forecloses 30% or more of the market ensures that only the most competitively harmful exclusive agreements or tyings are prevented by the antitrust laws.¹⁸³ Tyings and exclusive deals can provide some benefits to firms, such as breaking into a new market, matching consumer tastes and preferences, and can be used for benign purposes (particularly in the short run and when not used by monopolists).

Such a high market share and foreclosure requirement, along with the \$1 billion revenue threshold provides ample room for firms (both large and small) in an industry to utilize exclusive deals or tyings in limited cases.¹⁸⁴

183. See Sandeep Vaheesan, *Reconsidering Brooke Group: Predatory Pricing in Light of the Empirical Learning*, 12 BERKELEY BUS. L.J. 81, 99 (2015) (detailing and providing justification for a market share threshold for predatory pricing). Indeed the 30% threshold is used in other areas of antitrust law such as horizontal mergers, see *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 364 (1963) (“Without attempting to specify the smallest market share which would still be considered to threaten undue concentration, we are clear that 30% presents that threat.”); *United States v. Visa U.S.A., Inc.*, 344 F.3d 229, 240 (2d Cir. 2003) (“[T]he court inferred market power from the defendants’ large shares of a highly concentrated market: In 1999, Visa U.S.A. members accounted for approximately 47% of the dollar volume of credit and charge card transactions, while MasterCard members accounted for approximately 26%.”).

184. *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 7 (1958) (“[I]f one of a dozen food stores in a community were to refuse to sell flour unless the buyer also took sugar it would hardly tend to restrain competition in sugar if its competitors were ready and able to sell flour by itself.”); *Standard Stations*, 337 U.S. at 306–07 (“In the case of the buyer, they may assure supply, afford protection against rises in price, [and] enable long-term planning on the basis of known costs From the seller’s point of view ... [they] may make possible the substantial reduction of selling expenses, give protection against price fluctuations, and ... offer the possibility of a predictable market.”); *FTC v. Sinclair Refining Co.*, 261 U.S. 463, 475 (1923) (concerning a misguided but sanctioned reason by the Supreme Court detailing that an exclusive arrangement did not violate the antitrust laws since in the specific case the material was highly dangerous, thus giving the defendant a “vital[] interest[]” in protecting their brand); see also *Data Gen. Corp. v. Digidyne Corp.*, 473 U.S. 908, 908 (1985) (White, J., dissenting) (“As we have consistently explained, a particular tying arrangement may have procompetitive justifications, and it is thus inappropriate to condemn such an arrangement without considerable market analysis.”).

Consider in *Pick Mfg. Co. v. Gen. Motors Corp.*, 299 U.S. 3 (1936) (per curiam), *aff’g* 80 F.2d 641 (7th Cir. 1935), the Supreme Court approved the use of a tie to ensure defective or otherwise inappropriate parts were not used in repairing General Motors’s cars. But also note that this justification is a narrow one. The Supreme Court detailed just how narrow this justification was in *Int’l Bus. Machs. Corp. v. United States (IBM)*, 298 U.S. 131, 139–40 (1936). In *IBM*, the Supreme Court rejected the use of a tie concerning the use of IBM specific tabulating cards with their machines. IBM asserted a similar argument made in *Pick Mfg.* based on assuring high product quality and proper functioning of the machines. *Id.* at 138–39. The Supreme Court rejected this argument on the grounds that other less restrictive business practices were available. *Id.* at 138–40.

Additionally, a firm without such a substantial share of the market or without foreclosing a significant share of the market or with less than \$1 billion in revenue is unlikely to harm dependent firms and consumers using tyings and exclusive arrangements.

The proposed rule would also prevent agencies and the courts from engaging in repeated and protracted litigation concerning tyings and exclusive deals. As explained, both practices have been subject to such circumstances—a bright line rule would prevent that.¹⁸⁵

Along the same lines, a bright line rule would also provide members of the public a clear sense of what the law is and how to comply with it.¹⁸⁶ Currently, the courts and enforcers offer no such guidance or clarity, and instead, the public must guess if their use of exclusive deals and tyings are legal.

Furthermore, under the current enforcement environment, both practices are also predominantly analyzed under the rule of reason. Effectively that means they are *per se* legal. In a comprehensive study of 897 rule of reason cases, scholars Michael Carrier and Christopher Sagers have found that courts determined that plaintiffs asserting antitrust claims failed to establish anticompetitive effects to overcome the first step of the rule of reason in nearly all cases and thus dismissed their lawsuits.¹⁸⁷

The evidence detailed above clearly shows that tyings and exclusive deals cause immense public harm. The proposed rule thus acknowledges the

Similarly, the one billion dollar and market share thresholds are also justified on the grounds that tying while useful and generally harmless for smaller firms becomes unnecessary given the availability of alternative, more socially beneficial business practices that are available and as a firm grows larger in size. Consider in *United States v. Jerrold Elecs. Corp.*, 187 F. Supp. 545, 557–58 (E.D. Pa. 1960), *aff'd*, 365 U.S. 567 (1961) (*per curiam*), a district court, in an opinion affirmed by the Supreme Court, found that the use of a tying arrangement was initially lawful because it helped with “launching of a new business with a highly uncertain future,” but the practice became unlawful as those concerns were no longer relevant or controlling.

185. OPEN MARKETS INSTITUTE ET AL., PETITION FOR RULEMAKING TO PROHIBIT EXCLUSIONARY CONTRACTS 83–86 (2020); Kevin Caves & Hal Singer, *When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer-Welfare Standard*, 26 GEO. MASON L. REV. 395, 419 (2018); Daniel A. Crane, *Optimizing Private Antitrust Enforcement*, 63 VAND. L. REV. 675, 691–94 (2010).

186. Indeed, significant events in antitrust jurisprudence have taken place precisely to make the “broad terms” of the antitrust laws more “workable.” See *United States v. E. I. du Pont de Nemours & Co. (Cellophane)*, 351 U.S. 377, 387–88 (1956) (incorrectly asserting that the rule of reason made the Sherman Act more workable. Also in the case, the Supreme Court expanded and refined the process to define the relevant product market, which was also meant to accomplish the same goal).

187. Michael A. Carrier & Christopher L. Sagers, *The Alston Case: Why the NCAA Did Not Deserve Antitrust Immunity and Did Not Succeed Under a Rule-of-Reason Analysis*, 28 GEO. MASON L. REV. 1461, 1476, 1476 n.114 (2021).

evidence that tyings and exclusive deals can cause harms, that they should not be allowed in nearly all circumstances, and that they should particularly be restricted when used by dominant firms.

The proposed rule would also limit the role and discretion of the judiciary. Currently, the rule of reason grants judges enormous discretion to determine how the economy is governed and forces the judiciary to “sail on a sea of doubt”¹⁸⁸ and “ramble through wilds of economic theory.”¹⁸⁹ As the Supreme Court in *Topco Associates* stated:

“[C]ourts are ill-equipped and ill-situated for such decisionmaking. To analyze, interpret, and evaluate the myriad of competing interests and the endless data that would surely be brought to bear on such decisions, and to make the delicate judgment on the relative values to society of competitive areas of the economy, the judgment of the elected representatives of the people is required.”¹⁹⁰

A bright line rule ensures that courts adequately adhere to Congress’s intent with the antitrust laws and ensures that Congress and the administrative agencies it has delegated its legislative authority to, rather than the courts or private enterprises, are ultimately the political bodies that establish and enforce the rules governing the economy.

Along similar lines of reducing the role and discretion of the judiciary, and specifically concerning the enactment of a financial metric-based test (which prohibits both tyings and exclusive deals for firms with over \$1 billion in revenue), the proposal would completely avoid the requirement of litigation to define the relevant market. As currently practiced by antitrust enforcers, the analysis for defining the relevant market involves an overly complex investigation—one that is currently heavily dependent on the use of expensive economists and econometric analysis.¹⁹¹ Even if litigants were to exclusively

188. *United States v. Addyston Pipe & Steel Co.*, 85 F. 271, 283–84 (6th Cir. 1898) (Taft, J.), *aff’d*, 175 U.S. 211 (1899).

189. *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 609 n.10 (1972); *see also Jefferson Par.*, 466 U.S., at 15 n.25 (“The rationale for per se rules in part is to avoid a burdensome inquiry into actual market conditions in situations where the likelihood of anticompetitive conduct is so great as to render unjustified the costs of determining whether the particular case at bar involves anticompetitive conduct.”).

190. *See, e.g., id.* at 611–12; *see also United States v. United Shoe Mach. Corp.*, (*United Shoe III*), 110 F.Supp. 295, 345 (D. Mass. 1953) (“It is for Congress, not for private interests, to determine whether a monopoly, not compelled by circumstances, is advantageous. And it is for Congress to decide on what conditions, and subject to what regulations, such a monopoly shall conduct its business.”).

191. Andrew P. Vassallo, *Can One (Ever) Accurately Define Markets?*, 13 J. COMPETITION L. & ECON. 261 (2017); *FTC v. Brown Shoe Co.*, 384 U.S. 316, 325, 343 n.69 (1966); *United States v. Cont’l Can Co.*, 378 U.S. 441, 449 (1964); *United States v. Phillipsburg Nat’l Bank &*

rely on the qualitative approach for defining the relevant market as the Supreme Court outlined in *Brown Shoe*,¹⁹² current antitrust jurisprudence places an undue amount of weight on litigants to define the relevant market.¹⁹³ Although the qualitative market definition process the Supreme Court detailed in *Brown Shoe* and its progeny is a highly workable process for enforcers and the courts to use, a financial metric-based test would be superior as it would prevent and relieve courts of the burden of engaging in this analysis and bring even more certainty to the public as to the legality of exclusive deals and tyings.

A bright line rule is also justified on the grounds that, as this Article has explained, many of the justifications for exclusive deals and tyings are unpersuasive.¹⁹⁴ Many of the purported reasons why exclusive deals and tyings are needed can also be achieved through less restrictive, more socially beneficial, means.

Lastly, such a rule would—in line with both the Federal Trade Commission Act and the Clayton Act—operate as a prophylactic measure to both deter, significantly curtail, and prohibit exclusive deals and tyings in their “incipiency” before the harms from the practices completely manifest themselves.¹⁹⁵

Tr. Co., 399 U.S. 350, 360 (1970); *Berlyn, Inc. v. Gazette Newspapers, Inc.*, 214 F. Supp. 2d 530, 537 (D. Md. 2002) (the court excluded testimony provided to define the relevant market because the witness lacked “specific education, training, or experience in economics or antitrust analysis”); *Va. Vermiculite Ltd. v. W.R. Grace & Co.-Connecticut*, 98 F. Supp. 2d 729, 733 (W.D. Va. 2000) (the court excluded to define the relevant market by a witness lacking the “skill and training of a professional economist necessary to define a relevant market for antitrust purposes”).

192. *Brown Shoe*, 370 U.S. at 325.

193. Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST L.J. 129 (2007) (“Throughout the history of U.S. antitrust litigation, the outcome of more cases has surely turned on market definition than on any other substantive issue.”); *United States v. Grinnell Corp.*, 384 U.S. 563, 572–73 (1966) (Applying same relevant market analysis under Section 7 of the Clayton Act and Section 2 of the Sherman Act).

194. *See infra* Part V.

195. *See* *FTC v. Motion Picture Advert. Serv. Co.*, 344 U.S. 392, 394–95 (1953) (“[T]he Federal Trade Commission Act was designed to supplement and bolster the Sherman Act and the Clayton Act—to stop in their incipiency acts and practices which, when full blown, would violate those Acts, as well as to condemn as ‘unfair method of competition’ existing violations of them.”) (internal citations omitted); *Standard Fashion Co. v. Magrane-Houston Co.*, 258 U.S. 356 (1922) (Principally in reference to § 3, “The Clayton Act sought to reach the agreements embraced within its sphere in their incipiency[.]”).

THE CONTINUING RIGHT TO REPAIR

Shubha Ghosh[†]

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I. INTRODUCTION

My thesis is quite simple: the right to repair is continuing, not emerging. This point respectfully questions the title of this Symposium on the Emerging Right to Repair. When this conference was initially launched in 2020, it was called “Right to Repair Under Siege.” The pandemic, which delayed the scheduling of the symposium, has perhaps saved the right to repair from whatever crisis it was facing. But the right to repair has always existed, and what we are seeing is not an emergence but a continued saliency of this right.¹

Although many states have passed legislation creating a state right to repair,² and there is a push for analogous federal legislation,³ the right to repair has roots in the exhaustion doctrine—a rule that exists at the intersection of

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[†] Crandall Melvin Professor of Law, Syracuse University College of Law

1. See generally Michael Williams & Vanessa Farago-Diener, *Rewriting Judicial History or Just Refilling Ink? Patents and the Right to Repair in Australia Post-Calidad: “Logic, Simplicity, and Coherence with Legal Principle” Prevail over “Rights Which They Have Held for More than a Century,”* 31 AUSTL. INTEL. PROP. J. 147 (2020) (discussing the long-standing roots of the right to repair).

2. See generally Leah Chan Grinvald & Ofer Tur-Sinai, *Intellectual Property Law and the Right to Repair*, 88 FORDHAM L. REV. 63 (2019); Leah Chan Grinvald & Ofer Tur-Sinai, *The Right to Repair: Perspectives from the United States*, 31 AUSTL. INTEL. PROP. J. 98 (2020).

3. See AARON PERZANOWSKI, *THE RIGHT TO REPAIR: RECLAIMING THE THINGS WE OWN* 228 (2022).

intellectual property and competition law, and which has an established pedigree.⁴ Modern statutes expand on the right to repair's roots in exhaustion. But these roots inform how we interpret these statutes and glean their policies. Exhaustion also grounds right to repair in antitrust law. This Article develops these points in two stages: First, it addresses the question of why recognizing the exhaustion doctrine is important for the emergent right to repair. Subsequently, this Article turns to the implications of exhaustion for implementing the right to repair. These implications stem from understanding the exhaustion doctrine as applying to reuses as well as resales, as reflecting the common law rules against restraint of trade, and as abrogating limits on right to repair through contract. After navigating through these three arguments, the Article ends with a challenge to the right to repair arising from technology protection measures (TPMs) that block repair. The right to repair's roots in the exhaustion doctrine can address the challenge of TPMs and continue the tradition of this critical right.

II. WHY DOES THE RIGHT TO REPAIR MATTER?

As right to repair statutes progress through the courts as a subject of litigation, judges will need to interpret the breadth of the statutory language and potential conflicts with other legislation. Although it is beyond the scope of this Article to assess all right to repair statutes, one predictable challenge to the implementation of these statutes may come from intellectual property laws—that is, perceived conflicts between an individual's right to repair a product and a patent or copyright owner's right to exclude. As issues of how state or federal right to repair statutes conflict with intellectual property laws, the roots of right to repair in the exhaustion doctrine serve to reconcile the two bodies of law. Federal and state statutes continue the right to repair. They do not create it. Instead, they embellish it.

For those reasons alone, the right to repair's roots in the exhaustion doctrine must be recognized. Exhaustion is a doctrine that limits or cuts off certain intellectual property rights upon some event.⁵ The classic example is the first sale doctrine, under patent, copyright, and trademark laws, which ends the distribution right associated with a particular copy of a work after it is first sold.⁶ Similarly the right to repair is a limitation on the exclusive right to use,

4. See SHUBHA GHOSH & IRENE CALBOLI, EXHAUSTING INTELLECTUAL PROPERTY RIGHT: A COMPARATIVE LAW AND POLICY ANALYSIS 11–12 (2018).

5. See *id.* at 6.

6. *Id.* at 12.

typically under patent law, after a particular copy of a patented invention is distributed to the public.⁷

Aside from the right to repair statutes, the exhaustion doctrine is relevant for assessing the competition laws, specifically the antitrust laws (the Sherman and Clayton Acts) and the Federal Trade Commission Act (FTCA). Intellectual property laws do not create an immunity from the competition laws, but intellectual property rights provide latitude for exclusionary practices that are anticompetitive. Despite the Supreme Court's ruling in *FTC v. Actavis*,⁸ the scope of the patent doctrine is vestigial, allowing patent owners to engage in conduct that is within their rights under patent law even if there are anticompetitive effects. Copyrights and trademarks also provide some limits on antitrust enforcement against intellectual property owners.⁹ But when repair is at issue, and an intellectual property owner engages in conduct that impinges on the repair right, the right to exclude is exhausted in the face of repair. Under the Intellectual Property Licensing Guidelines,¹⁰ licensing restrictions on repair are subject to the rule of reason, and the existence of intellectual property exhaustion would weigh the rule of reason against the intellectual property owner. In addition, recognizing the right to repair as a right, rooted in common law restrictions on restraint of trade (a point which I discuss in more detail, *infra* Part IV), weighs in favor of consumers and their surrogates within a competition analysis. In short, recognizing the right to repair in the exhaustion doctrine has implications for enforcement under competition laws.

The contours of competition laws are complex, but exhaustion plays a role in the analysis. Under the antitrust laws, restrictions on repairs need to be analyzed under established antitrust claims. Restricting repairs by requiring purchasers to hire repair service providers designated by the seller would

7. *Id.* at 86–87.

8. 570 U.S. 136, 141 (2013) (holding that agreements between pharma patent owner and generic drug manufacturer to delay generic entry would be subject to antitrust scrutiny under the rule of reason).

9. There is no scope of the copyright or scope of the trademark doctrine as analogue to the scope of the patent doctrine, but courts do find enforcement of a valid copyright or trademark as rights that do not violate antitrust laws. *See, e.g.,* Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147 (1st Cir. 1994) (copyright enforcement). *But see* United States v. Loew's, Inc., 371 U.S. 38 (1962) (antitrust enforcement against block booking practices based on copyright in motion pictures). As for trademarks, see *Clorox Co. v. Sterling Winthrop, Inc.*, 117 F.3d 50, 51 (2d Cir. 1997) (protection of trademarks as procompetitive justification to antitrust claims). *But see* *Timken Roller Bearing Co. v. United States*, 341 U.S. 593, 598 (1951) (“Nor can the restraints of trade be justified as reasonable steps taken to implement a valid trademark licensing system.”).

10. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY 16–19 (2017).

potentially fail as an illegal tying arrangement. Furthermore, a manufacturer or distributor cutting off independent repair technicians from parts or the ability to service products would be the basis for a claim of restraint of trade or monopolization. Other scholars in this Symposium discuss the potential problems with these claims, especially those arising from intellectual property laws. One approach is to develop the law of “unfair methods of competition” under § 5 of the FTCA.¹¹ Under this approach, acts limiting the right to repair would be addressed as an illegal business practice that deceives consumers as to the usability of the product or unfairly limits the consumer’s enjoyment of the product, by requiring repurchase or the purchase of expensive repair plans. Under all these legal strategies, the right to repair’s common law roots in exhaustion would weigh in favor of the plaintiff as it makes the case for exercising its long-recognized right.

Recognizing the right to repair as a type of exhaustion would also address the internal debate between competition law and consumer protection law. To summarize, the debate divides competition law’s role in preserving competitive processes from the role of consumer protection law in protecting consumers from deception. The terms of this debate can be explored in a companion piece on antitrust and false advertising. Within the universe of repair cases, the argument is made that consumers should look to consumer protection law, whether under state law or through federal provisions like the Magnusen—Moss Act¹² that provide warranty protections for consumer products, to address limitations on the repair right, whether through contractual provisions, restrictions on independent service providers, or denial of access to spare parts.

The right to repair’s roots in exhaustion can enhance the enforcement of these consumer protection laws, but the right can also support the claim that manufacturers and distributors might be overcharging for products and services by limiting the right to repair without reducing the price of the underlying product. Under this legal claim, consumers have long enjoyed the right to repair and buy products with the expectation that the product can be repaired either by the consumer or through the services of a knowledgeable technician. As products have been designed and sales contracts have been written to limit the right, the consumer has not been compensated for the

11. See FED. TRADE COMM’N, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS 11 (2021); Daniel A. Hanley, Claire Kelloway & Sandeep Vaheesan, *Fixing America: Breaking Manufacturers’ Aftermarket Monopoly and Restoring Consumers’ Right to Repair*, OPEN MKTS. INST. 18–23 (2020).

12. Magnusen-Moss Warranty Act, 15 U.S.C. § 2301 (1975); see PERZANOWSKI, *supra* note 3, at 218.

resulting limitations on the right to repair. As a practical matter, it may be difficult, if not impossible, to price out separately the right to repair from all the other attributes of a product. But the point of this argument is to counter the statement sometimes made that recognizing a right to repair will lead to increases in the price of consumer goods. That statement is questionable if the long standing right to repair has been taken away without corresponding compensation for diminished right. Recognizing the right to repair's long-standing roots in the exhaustion doctrine raises the question of why consumers should have to buy back the right from sellers who have been diminishing the right over time. This dynamic may explain why this Symposium was originally called "Right to Repair under Siege" and is now called "The Emergent Right to Repair." But what is emerging has deep legal roots and should not be accepted as an innovation when in truth it is a lost tradition.

Having made the case for why the exhaustion doctrine matters for the right to repair, I turn next to developing the connection between the right to repair and the exhaustion doctrine. I first show that the exhaustion doctrine extends beyond its narrow association with the first sale doctrine to include the right to use. Repair is one example of this protected class of use. As a protection of the right to resell and to reuse, the exhaustion doctrine has roots in the common law restriction on restraints on trade. The right to repair as a check on restraints on trade appears in the often-cited 1956 IBM Consent Decree¹³ and in antitrust cases involving independent repair service providers. The Article concludes with an analysis how the exhaustion doctrine limits the use of contract and technology protection measures to interfere with the right to repair.

III. EXHAUSTION APPLIES TO USE AS WELL AS RESALE.

Based on the publicity surrounding the Supreme Court's decisions in *Kirtsaeng*¹⁴ and *Lexmark*,¹⁵ readers may immediately associate the exhaustion doctrine with the more familiar term "first sale doctrine,"¹⁶ under which the purchaser of a product protected by intellectual property has the right to resell the product after the initial sale. But exhaustion is not limited to the

13. *United States v. IBM* [2018] Trade Cas. (CCH) ¶ 68,245, 1956 WL 113173 (S.D.N.Y. Jan. 25, 1956).

14. *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 545–47 (2013) (holding that sale of a copyrighted work anywhere in the world would exhaust the importation right in the United States).

15. *Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1536–37 (2017) (holding that the sale of a patented work anywhere in the world would exhaust the importation right in the United States).

16. See discussion of "first sale doctrine" in *Kirtsaeng*, *supra* note 14, at 525.

distribution right nor to an initial sale of a product. As discussed in separate scholarship,¹⁷ the exhaustion doctrine stands for a set of rules under which some of the intellectual property owners' rights are exhausted upon some triggering event. The familiar first sale doctrine cuts off the intellectual property owners' right to prevent distributions of a particular product after the first sale of that product, allowing the purchaser to resell, rent, gift, or otherwise transfer the product. But this example of exhaustion applies even if the intellectual property owner does not sell the product, but instead gives away or abandons it. The act that triggers the exhaustion doctrine need not be an initial sale. It can be some other transaction by the intellectual property owner.

Furthermore, the exhaustion doctrine is not limited to the distribution right of the intellectual property owner. The exhaustion doctrine can cut off the right of the intellectual property owner to prevent further use by the recipient of the protect product. This further use includes the right to repair. As an example of the broader principle of reuse under the exhaustion doctrine, consider the United States Supreme Court's decision in *Quanta Computer, Inc. v. LG Electronics, Inc.*,¹⁸ a critical exhaustion case that paved the way for the Court's noted decisions in *Kirstaeng* and *Lexmark*. At issue in *Quanta* was a post-sale use restriction that patent owner LG Electronics imposed on Intel who used the patented processes to install Intel's microprocessors and other components in electronic products. Quanta was an electronic product manufacturer that installed Intel's microprocessors that included LG's patents.¹⁹ Rejecting LG's claims of patent infringement against Quanta, the Supreme Court affirmed the application of the exhaustion to the use of a patent after sale:

The longstanding doctrine of patent exhaustion provides that the initial authorized sale of a patented item terminates all patent rights to that item. This Court first applied the doctrine in 19th-century cases addressing patent extensions on the Woodworth planing machine. Purchasers of licenses to sell and use the machine for the duration of the original patent term sought to continue using the licenses through the extended term. The Court held that the extension of the patent term did not affect the rights already secured by purchasers who bought the item for use "in the ordinary pursuits of life."²⁰

17. See GHOSH & CALBOLI, *supra* note 4.

18. 553 U.S. 617 (2008).

19. *Id.* at 623–24.

20. *Id.* at 625 (quoting *Bloomer v. McQuewan*, 55 (14 How.) U.S. 539, 549 (1853)).

The Court's reasoning rested on several patent exhaustion precedents as well as on antitrust precedents:

We agree with Quanta that *Univis* governs this case. As the Court there explained, exhaustion was triggered by the sale of the lens blanks because their only reasonable and intended use was to practice the patent and because they “embodie[d] essential features of [the] patented invention.” Each of those attributes is shared by the microprocessors and chipsets Intel sold to Quanta under the License Agreement. ... *Univis* held that “the authorized sale of an article which is capable of use only in practicing the patent is a relinquishment of the patent monopoly with respect to the article sold.”²¹

Intellectual property exhaustion embraces not only resales but also reuses, particularly of components in complex manufacturing processes. This principle is grounded both in intellectual property and antitrust.

The right of repair is an example of permitted reuse. At the outset, the right of repair is distinct from reconstructing a product from broken parts, which is an act of unpermitted making of a patented product, rather than permitted reuse. The Court emphasized that the exhaustion doctrine does not apply to the exclusive right to remake in *Bowman v. Monsanto Co.*²² But longstanding Supreme Court precedent recognizes the right to repair as a type of reuse that does not constitute a making of a patented product. In *Wilson v. Simpson*, the Court ruled:

[I]t does not follow, when one of the elements of the combination has become so much worn as to be inoperative, or has been broken, that the machine no longer exists, for restoration to its original use, by the owner who has bought its use. When the wearing or injury is partial, then repair is restoration, and not reconstruction.

Illustrations of this will occur to any one, from the frequent repairs of many machines for agricultural purposes. Also from the repair and replacement of broken or worn-out parts of larger and more complex combinations for manufactures.

In either case, repairing partial injuries, whether they occur from accident or from wear and tear, is only refitting a machine for use. And it is no more than that, thought it shall be a replacement of an essential part of a combination.²³

21. *Id.* at 631 (internal citations omitted).

22. 569 U.S. 278, 287 (2013).

23. 50 (9 How.) U.S. 109, 123 (1850).

These principles were reiterated in a pair of decisions from the Supreme Court on repair of convertible automobiles, the well-known *Aro* decisions:

No element, not itself separately patented, that constitutes one of the elements of a combination patent is entitled to patent monopoly, however essential it may be to the patented combination and no matter how costly or difficult replacement may be. While there is language in some lower court opinions indicating that “repair” or “reconstruction” depends on a number of factors, it is significant that each of the three cases of this Court, cited for that proposition, holds that a license to use a patented combination includes the right “to preserve its fitness for use so far as it may be affected by wear or breakage.”²⁴

In a follow-up decision, the Court limited the application of the right to repair to licensed distributions of the patented item:

[S]ince Ford infringed the patent by making and selling the top-structures without authority from the patentee, persons who purchased the automobiles from Ford likewise infringed by using and repairing the structures; and hence *Aro*, by supplying replacement fabrics specially designed to be utilized in such infringing repair, was guilty of contributory infringement.²⁵

The Federal Circuit subsequently followed these Supreme Court precedents in a case involving spent disposable cameras which were resold after having the film refilled:

It was elaborated by the Court in *Aro Manufacturing Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 81 S.Ct. 599, 5 L.Ed.2d 592 (1961), where the patented combination was a fabric convertible top and the associated metal support structure. The Court explained that replacement of the worn fabric top constituted permissible repair of the patented combination, and could not be controlled by the patentee. The Court restated the principles that govern the inquiry as applied to replacement of unpatented parts of a patented article.²⁶

This line of case law shows that in the context of products protected by patents (and perhaps other forms of intellectual property), the right to repair permits replacing the unpatented components of a patented product to permit reuse of the product.

But what is the place of the exhaustion doctrine when the relevant component is patented? Patent law does not, as it appears from the *Bowman*

24. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 345 (1961).

25. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 482 (1964).

26. *Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d 1094, 1103 (Fed. Cir. 2001).

decision, permit the user to make a replacement component to repair the damaged product. Patents on components can restrict the right to repair. Two possible lines of argument can limit this interference with the right to repair.

The first is the *Quanta* decision, which does allow the use of licensed patented products for their intended purpose. This ruling implies the need for a vibrant market for patented components, including a market for spare parts. Such a market can be supported by the proposed spare parts legislation, discussed briefly, *infra* Part IV, and advocated by several interest groups. It can also be supported by avoiding too broad a reading of patents on components, especially protections from design patents. In this regard, the Federal Circuit's decision in *Automotive Body Parts Association v. Ford Global Technologies, LLC* needs to be considered closely and reconsidered. In that case, the court ruled:

In our view, the breadth of the term “article of manufacture” simply means that Ford could properly have claimed its designs as applied to the entire F-150 or as applied to the hood and headlamp. To determine what repair rights apply, we look to what Ford actually claimed. As always, “the name of the game is the claim.” Ford chose to claim designs as applied to portions of particular components, and the law permits it to do so. That the auto-body components covered by Ford's patents may require replacement does not compel a special rule. Just as the patentee in *Aiken* could have only claimed the needles in conjunction with the knitting machine, Ford could have only claimed its design as applied to the whole truck. Unfortunately for ABPA, Ford did not do so; the designs for Ford's hood and headlamp are covered by distinct patents, and to make and use those designs without Ford's authorization is to infringe.

We thus reject ABPA's attempts to develop design patent-specific exhaustion and repair rules. Consequently, we affirm the district court's ruling that ABPA has not shown that Ford's designs for an F-150 hood and headlamp are exhausted when Ford sells an F-150 truck.²⁷

The Federal Circuit's reasoning on design, exhaustion, and repair is an obstacle to developing a robust right to repair. It is also inconsistent with the roots of the right to repair in the exhaustion doctrine. Future litigation and Supreme Court analysis will perhaps correct the error to bring the right to repair back on track.

Some antitrust precedents might support anticompetitive restrictions on the right to repair. In *Alcoa*, Judge Learned Hand ruled on an influential claim of monopolization, which rested in part on the defendant's limitations of the

27. *Auto. Body Parts Ass'n v. Ford Glob. Techs., LLC*, 930 F.3d 1314, 1324–25 (Fed. Cir. 2019).

right of repair.²⁸ As the court stated: “The [patent] monopolist cannot prevent those to whom he sells from ... reconditioning articles worn by use, unless they in fact make a new article.”²⁹ A little over a thirty years later, in its settlement for an antitrust suit based on monopolization, IBM entered into a consent decree with the Department of Justice, whose terms included the following provision on protecting the right to repair:

IBM is hereby ordered and directed:

(a) to offer to render, without separate charge, to purchasers from it of tabulating or electronic data processing machines the same type of services, other than maintenance and repair services, which it renders without separate charge to lessees of the same types of machines;

(b) to offer, commencing one year after the entry of this Final Judgment and so long thereafter as IBM shall continue to render

repair and maintenance service, to maintain and repair at reasonable and nondiscriminatory prices and terms IBM tabulating and electronic data processing machines for the owners of such machines; provided that, if any such machine shall be altered, or connected by mechanical or electrical means to another machine, in such a manner as to render its maintenance and repair impractical for IBM personnel having had the standard training and instruction provided by IBM to such maintenance and repair personnel, then IBM shall not be required by this Final Judgment to render maintenance and repair service for such IBM machine; and

(c) to offer to sell at reasonable and nondiscriminatory prices and terms, to owners of IBM tabulating or electronic data processing machines (whether or not the purchaser receives IBM repair and maintenance service) and to persons engaged in the business of maintaining and repairing such machines and during the period when IBM has such parts and subassemblies available for use in its leased machines, repair and replacement parts and subassemblies for any tabulating machines or electronic data processing machines manufactured by IBM.³⁰

In addition to these examples of how antitrust claims of monopolization, brought by the United States Government, protect the right of repair, independent service providers have brought monopolization claims when cut

28. United States v. Aluminum Co. of Am., 148 F.2d 416, 425 (2d Cir. 1945).

29. *Id.*

30. United States v. IBM [2018] Trade Cas. (CCH) ¶ 68,245, 1956 WL 113173 (S.D.N.Y. Jan. 25, 1956).

off from access to repair parts or service contracts.³¹ These claims rest on the theory that the intellectual property owner is attempting to monopolize the aftermarket for repair services of the patent or copyrighted product. Although not expressly based on the right to repair, the antitrust claims indirectly protect the right to repair by creating a robust service aftermarket.

Much of the discussion of exhaustion, reuse, and repair rests on patents. An open question is how the right to repair arises under Copyright law. Separate scholarship analyzes how copyright exhaustion rests on statute rather than on common law principles.³² Repair rights under the Copyright Act are limited to § 117(c), which allows purchasers of software to make back-up copies and repair technicians to upload copies of software for diagnostic purposes. As pointed out by the other comments in this Symposium because the right to repair evolves from its basis in exhaustion, its place in copyright law needs to be more closely delineated.

IV. EXHAUSTION'S COMMON LAW ROOTS

This Part demonstrates how the right to repair, with its roots in the exhaustion doctrine, prevents restraints of trade. The argument is based on an analysis of legislation, both enacted and proposed, regulating the market for automobile spare parts. Debates over automobile spare parts legislation focus our attention on how preventing the right to repair imposes an anticompetitive restraint on trade.

The case of consumer repair, especially the controversy over spare automobile parts, illustrates how exhaustion doctrine can be tailored in a way that seems to mimic competition law. At issue is the need for accessing spare parts in the aftermarket for automobile repair. One impediment in this market is the possibility of claims for infringement of protected design in these parts. The European Union resolved this issue decades ago through the imposition of legislative protection for spare part manufacturers.³³ As Professor Carvalho reports, “the laws of a number of WTO members take two different

31. See *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 459 (1992). For a discussion of this and subsequent cases, see Severn Borenstein, Jeffrey K. Mackie-Mason & Janet S. Netz, *Antitrust Policy in Aftermarkets*, 63 ANTITRUST L.J. 455, 458–59 (1995); Carl Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of Kodak*, 63 ANTITRUST L.J. 483, 483–85 (1995).

32. See GHOSH & CALBOLI, *supra* note 4, at 116 (discussing 17 U.S.C. § 117(c), which provides an exception from copyright protection of software for repair diagnosticians).

33. See Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs, 2002 O.J. (L 3) 1, <http://data.europa.eu/eli/reg/2002/6/oj>.

approaches to exclude *must fit* and *must match* components from protection”³⁴ of intellectual property laws. For *must fit* components, protection is denied “because their shape is essentially dictated by technical or functional considerations.”³⁵ Professor Carvalho points out that some WTO member states also exclude *must match* parts from protection since “once the body is designed, its parts must necessarily adjust to the whole design, which makes the design of those parts essentially functional.”³⁶

Such tailoring of intellectual property rights to consumer and company needs in the automobile industry reflects a question of the scope of intellectual property rights. Exhaustion arises in this debate because of the secondhand market for parts and because of the consumer’s alleged right to repair a purchased automobile. As the Supreme Court stated in its 1850 decision in *Wilson v. Simpson*: “[I]t is a hardship for the man who invested his capital in the purchase of an entire machine, that he should be deprived of the use of it because one part only has worn out.”³⁷ Purchasers have a right to repair worn parts in a patented machine: “[An assignee] having a right . . . to continue the use of the patented machine, has a right to replace new cutters or knives for those which are work out.”³⁸

An exemption from intellectual property protection creates a utilitarian-based rule that balances interest in the market for automobile spare parts. For example, legislation enacted in France in 2021 makes a distinction between protection for automobile parts in the foremarket and protection in the aftermarket.³⁹ This legislation recognizes intellectual property protection for *must match* parts in the original equipment parts when the parts are first incorporated into the new finished product but deny protection for resales of these parts in the aftermarket, whether as separate components or as part of the automobile.⁴⁰ Such countries are applying the exhaustion doctrine to spare parts to promote a ready consumer-oriented used market.

34. NUNO PIRES DE CARVALHO, THE TRIPS REGIME OF TRADEMARKS AND DESIGNS 437 (2014) (*italics in original*).

35. *Id.*

36. *Id.*

37. 50 U.S. 109, 116 (1850).

38. *Id.* at 120.

39. Loi 2021-1104 du 22 août 2021 portant lutte contre le dérèglement climatique et renforcement de la résilience face à ses effets (1) [Law 2021-1104 of August 22, 2021 on the fight against climate change and strengthening resilience to its effects (1)], Journal Officiel de la République Française [J.O.] [Official Gazette of France], Aug. 24, 2021.

40. *Car Spare Parts: The Repair Clause is Finally Adopted*, BEAU DE LOMÉNIE (Oct. 29, 2021), <https://www.bdl-ip.com/en/2021-10-car-spare-parts-the-repair-clause-is-finally-adopted/>.

Professor Carvalho criticizes these various approaches on the grounds that they do not reflect intellectual property policies, but instead introduce extraneous considerations of competition and consumer protection.⁴¹ He concludes that such exemptions are violations of obligations to protect design under Article 5 *quinquies* of the Paris Convention and Article 25.1 of the TRIPS Agreement.⁴² Furthermore, competition law might not be the most appropriate instrument to shape the markets for automobile parts since the competitive harms are minimal. Quoting Professor Herbert Hovenkamp, Professor Carvalho concludes that any ability to raise prices in the market for auto parts does not reflect abusive market behavior, but rather the ability to raise prices in markets for differentiated products.⁴³ They reflect what economic theory would call rents that arise from having a unique product. But if others are free to differentiate and create their own type of unique product, there is no anticompetitive effect in the marketplace. Therefore, he recommends that specific consumer protection laws address any concerns with the market for automobile parts. Consumers should be educated about the costs of spare parts, and the providers of the parts, presumably the intellectual property owners, should be prepared to meet the market demand for these parts to avoid artificial shortages.⁴⁴

Professor Carvalho's criticisms arguably ignore how the exhaustion doctrine serves to define the scope of intellectual property rights to accommodate interests related to intellectual property, such as those of consumers.⁴⁵ To repeat the point set forth at the outset of this article, exhaustion reflects a utilitarian calculus that intellectual property rights should be cut off to accommodate rights attendant to the innovation goals of intellectual property. These goals include the creation of markets that complement that for the new product.

To illustrate this last set of points and the broader debates over exhaustion, consider the “Promoting Automotive Repair, Trade, and Sales Act” (“PARTS Act”)—legislation the United States Congress considered at the time of writing. If enacted, this legislation would exclude consumer repair of automobiles from design patent infringement, effectively exhausting the patent owner's right to make in the context of repairing automobile parts. This proposed legislation is an example of the industry-tailored application of exhaustion to accommodate goals attendant to that of intellectual property.

41. CARVALHO, *supra* note 34, at 438.

42. *Id.*, at 437.

43. *Id.*, at 440.

44. *Id.*

45. *Id.*

Relevant provisions would allow consumers to restore the appearance of a motor vehicle or repair it without being potentially liable for design patent infringement:

It shall not be an act of infringement of the design patent [claiming a component part of an automobile exterior as originally manufactured] to make or offer to sell within the United States, or import into the United States, any article of manufacture that is similar or the same in appearance to the component part that is claimed in the design patent if the purpose of the article of manufacture is for the repair of a motor vehicle so as to restore the motor vehicle to the appearance of the motor vehicle as originally manufactured.⁴⁶

After the expiration of a period of 30 months beginning on the first day on which any such component part is first offered to the public for sale as part of a motor vehicle in any country, it shall not be an act of infringement of the design patent to use or sell within the United States any article of manufacture that is similar or the same in appearance to the component part that is claimed in the design patent if the purpose of the article of manufacture is for the repair of a motor vehicle so as to restore the motor vehicle to the appearance of the motor vehicle as originally manufactured.⁴⁷

Together, these two provisions would exempt any article of manufacture like a protected design in the context of repair of an automobile from design patent infringement acts of selling, making, using, and importing. Although the provisions do not use the language of *must fit* and *must match*, the proposed statute would include these types of parts under the exemption for repair and restoring appearance. But, unlike the European counterparts, the legislation would not exempt such designs from registration, only from enforcement in specific contexts. A predicted consequence of the United States legislation would be a market for automobile spare parts, including parallel imports, and a service market for repair and restoration.

The case of auto parts shows the subtle ways in which the exhaustion doctrine enters the debate over market promotion and consumer protection. It also demonstrates how exhaustion as a limitation on intellectual property rights interacts with competition law. The PARTS Act creates exemptions from a narrow set of intellectual property rights, namely certain rights of the design patent owner in the automotive industry. Although these exemptions are not couched in terms of exhaustion, at heart the limitations are based on

46. The PARTS Act, S. 812, H.R. 1879, 115th Cong. (2017) § 2 (proposed § 271(j)(1)(A) of the Patent Act).

47. *Id.* (proposed § 271(j)(1)(B) of the Patent Act).

protecting uses of a protected commodity after a transfer. Arguably, the exemptions go beyond traditional exhaustion, protecting not only purchasers, but insurance companies, rental car agencies, and lessees. Furthermore, the rights exhausted go beyond the right to distribute and include the rights to make and use. If enacted, the legislation recognizes the role of intellectual property law as a policy to promote markets. This policy goal overlaps with the goals of competition law, but without the open-ended balancing of the rule of reason. Exhaustion is a *per se* rule, sometimes a rule with many qualifications, that promotes markets through placing limitations on intellectual property rights before they are granted. Competition law, by contrast, limits the exercise of intellectual property rights after they have been defined. Exhaustion limits the scope of intellectual property rights; competition law limits how intellectual property owners control their right to exclude.

V. NO ELIMINATION BY CONTRACT

This Part addresses the question of how the right to repair can be eliminated through contract. One way contract can eliminate the right to repair is through rental rather than sale of the product. Under the exhaustion doctrine, especially in recent US Supreme Court decisions such as *Kirstaeng*, *Lexmark*, and *Quanta*, the power of contract to restrict or eliminate the exhaustion doctrine is limited. The rationale of these decisions would also apply to the right to repair.

An intellectual property rights holder has to the right to keep others from distributing a work containing the intellectual property, whether trademark, copyright, or patent. Distribution includes sale, rental, licensing, assignment, or any other transaction that involves the transfer of a product for any purpose. However, many jurisdictions separate within copyright law the rental right from the distribution right.

For example, in the United States, the copyright owners of software or recordings retain a rental right distinct from the broader distribution right. It is worth considering the language of the statute:

Notwithstanding the provisions of subsection (a), unless authorized by the owners of copyright in the sound recording or the owner of copyright in a computer program (including any tape, disk, or other medium embodying such program), and in the case of a sound recording in the musical works embodied therein, neither the owner of a particular phonorecord nor any person in possession of a particular copy of a computer program (including any tape, disk, or other medium embodying such program), may, for the purposes of direct or indirect commercial advantage, dispose of, or authorize the

disposal of, the possession of that phonorecord or computer program (including any tape, disk, or other medium embodying such program) by rental, lease, or lending, or by any other act or practice in the nature of rental, lease, or lending. Nothing in the preceding sentence shall apply to the rental, lease, or lending of a phonorecord for nonprofit purposes by a nonprofit library or nonprofit educational institution. The transfer of possession of a lawfully made copy of a computer program by a nonprofit educational institution to another nonprofit educational institution or to faculty, staff, and students does not constitute rental, lease, or lending for direct or indirect commercial purposes under this subsection.⁴⁸

It is worth noting that the statute excludes software that is embedded in a machine or product and cannot be copied or software in a limited-purpose device for playing videogames. The statute also expressly states that the provisions do not disrupt the application of antitrust laws.⁴⁹ Note that the rental right provision is notwithstanding the provision in § 109(a), which sets forth the first sale doctrine. The rental right must be negotiated separately from the right to distribute. If the rental right is not transferred, whether through license or assignment, the copyright owner retains this right. This implies that exhaustion of the distribution right does not mean that the rental right has been exhausted as well.

Unlike copyright, patent and trademark law typically do not separate out the rental right from the exclusive right to sell or distribute the product. This exclusion most likely reflects the business reality that patented or trademarked products are for the most part sold rather than licensed. However, the question remains about the treatment of rentals of patented or trademarked goods under the exhaustion doctrine. A rental would include a restriction, either implicit or explicit on resale since the transfer is for a limited period. With respect to patent, under *Lexmark*, presumably a sale with a condition prohibiting resale would be in tension with the exhaustion doctrine. While such a condition would not be illegal, breach of the condition would not be a basis for patent infringement. Instead, the patent owner would have a claim for contract damages. Although the U.S. Supreme Court has not addressed trademark exhaustion, a reasonable inference from the *Kirstaeng* and *Lexmark* decisions is that this same analysis would apply to the sale of trademarked goods conditioned with restrictions on resale.

48. 17 U.S.C. § 109(b)(1)(A).

49. 17 U.S.C. § 109(b)(3).

The European Union has adopted provisions like § 109(b) of the Copyright Act in the 1992 Council Directive⁵⁰ on rental right and lending right in the field of copyright. Once again rental rights in patents and trademarks are not addressed in the European Union directive, except for matters of competition law that this Article discussed. The Directive applies to: (1) authors with respect to the original and copies of their work, except for architectural works and applied art; (2) performers with respect to fixation of their performance; (3) phonogram producers; and (4) producers to first fixation of a film work. The goal of the directive is to provide harmonization with respect to rental rights and other neighboring rights of copyright in order “to prevent piracy, but also to secure an adequate income for those involved in creative and artistic work, in order to foster the Community’s economic and cultural development.”⁵¹ Like § 109(b) of the Copyright Act, the rental right directive recognizes the business practices of rental markets for certain types of works and the economic need for allowing rentals to create income streams for certain copyright owners.

The rental right is a carve-out from the general distribution right. There are two business implications from this carve-out. First, in cases where the rental right is recognized, a distribution of a work does not entail a transfer of the right to rent, and the copyright owner retains that right unless expressly granted. What this means is that a purchaser of a copyright work takes subject to the copyright owner’s rental right and must negotiate that right separately if the purchaser wants to start a rental business. A vivid example of this limitation is from the *Santosh* decision of the Delhi High Court.⁵² Santosh sought to create an online video rental service. However, the copyright owners retained the rental right under Indian copyright law. Therefore, Santosh’s lawful purchase of the videos precluded him from renting them. A second implication is about the resale of rented works. Since the rental of a copyrighted work includes a reversion of the work to the copyright owner or authorized lessor, the lessee cannot sell the rented work. This restriction might extend to further rentals or other distribution depending on the terms of the rental agreement. For rentals, the limited transfer of the rights and contract restrictions impose restrictions on resale.

For these two reasons, the rental right is an example of a restraint on alienation. However, as the discussion of the law demonstrates, the restraint is

50. The original version of Directive 92/100 has been replaced with a new version, Directive 2006/115. See CATHERINE SEVILLE, EU INTELLECTUAL PROPERTY LAW AND POLICY 33 (2016).

51. *Id.* at 30.

52. Warner Bros. Ent. v. Santosh, (2009) INDLHC 1365, ¶ 24 (India).

tolerated and even encouraged. What is the policy rationale for this restraint and what implications arise for the exhaustion doctrine more broadly?

In ruling on a challenge to the Directive, the European Court of Justice set forth a revealing analysis of the rental right and its relationship to exhaustion.⁵³ The challenge was brought by a retailer who claimed that the Directive, by recognizing and establishing the rental right, interfered with “the fundamental rights of undertakings operating rental businesses . . . including the right freely to pursue a trade.”⁵⁴ The German court reviewing the petition expressed the concern that the rental right interfered with the principle of exhaustion of rights.⁵⁵ The European Court of Justice upheld the rental right directive, largely on economic grounds. Revenues from sales were not sufficient to compensate copyright owners in film and phonograms since a sale did not adequately gauge the number of times the work was viewed or hired out.⁵⁶ “Rental rights,” as Professor Seville summarizes, “were therefore clearly justified on grounds of the protection of industrial and commercial property.”⁵⁷ The Court concluded that any restriction on the trade of the complaining businessperson was proportionate to the goals of the general interest.

How the European Court of Justice describes these goals is important for understanding the policies underlying the rental right and the corresponding abrogation of exhaustion. Specifically, the Court concluded that the Rental Directive “did pursue objectives of general interest, including the economic and cultural development of the Community, and the need to guarantee that authors and performers could ‘receive appropriate income and mortise the especially high and risky investments required particularly for the production of phonograms and films.’”⁵⁸ The Court concluded that traditional rental businesses could continue but only upon negotiating the requisite license from the copyright owners.⁵⁹

What the European Court of Justice teaches is a utilitarian justification for restraining alienation through the recognition of the rental right. While the costs of the rental right include restrictions on distribution of the rented work on businesses and personal users, the benefits are the realization of a new income stream for copyright owners that reflects the uses of the work and

53. Case C-200/96, *Metronome Musik GmbH v. Music Point Hokamp GmbH*, ECLI:EU:C:1998:172 (Apr. 28, 1998).

54. SEVILLE, *supra* note 50, at 30.

55. *Id.*

56. *See* Case C-180/05, *Comm’n of the Eur. Cmty. v. Grand Duchy of Lux.*, 2006 E.C.R. I-00054, 20.

57. SEVILLE, *supra* note 50, at 30.

58. *Id.*

59. *Id.*

realities of distribution for certain types of works. As a restraint on alienation, rental rights serve to promote new markets for works that benefit the copyright owner and thereby the process of creating and disseminating new works. The Court's logic reflects the logic of intellectual property, not surprisingly. The exclusive rights of intellectual property restrict certain uses, such as distribution, to promote invention and innovation. Limitations on alienation reward the intellectual property owner and benefit markets in the long run.

As a rationale for restraining alienation, the Court's analysis perhaps proves too much. Recognizing the rental right may create a new revenue stream for copyright owners, but so would recognizing any additional right to exclude. Applying the Court's rationale, any new intellectual property right would justify the costs of the right to business entities, users, and creators. Thus, the Court's analysis is unsatisfying when too grossly generalized. A more cogent and satisfying analysis would focus on the specifics of markets and industries. The Rental Directive applies to a limited class of works; it does not apply to software or to works of fine art, for example. Just as the rationale for restraints on alienation may differ among real property, personal property, and intellectual property, the rationale may be more finely assessed for different types of works embodying intellectual property. The risk is that such finely grained qualifications will make legal analysis clumsy, overly complex, and unpredictable. But that may be the unfortunate consequence of a utilitarian justification for law.

This discussion of the Rental Directive highlights the detailed policy analysis that informs an assessment of restraints on alienation and the scope of the exhaustion doctrine. Two other details from the Rental Directive further illustrate this point. First is the requirement of equitable remuneration of copyright owners from the rental of copyrighted works recognized under the Directive.⁶⁰ This requirement is imposed to limit unjust enrichment of the rental right licensee in distributing the licensed work.

The second detail worth noting in the Rental Directive is the recognition of public lending rights to protect lending of works by public libraries.⁶¹ While the specific scope of this right is still under discussion,⁶² its existence points to the need for allowing distribution mechanisms that benefit the public to

60. Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property (codified version), art. 5 2006 O.J. (L 376).

61. Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property (codified version), art. 6 2006 O.J. (L 376).

62. SEVILLE, *supra* note 50, at 37.

flourish. It is difficult to question the social benefit of public libraries. The hard policy question is how to limit the rental right to permit public library lending without undermining rental markets. For national governments, designing the public lending right is a delicate balance of protecting identified revenue streams for copyright owners and protecting intermediary businesses that rent out copyrighted works while promoting public institutions like libraries. From a legal perspective, the balance is an intricate one. The rental right is a carve-out from the distribution right that creates an exception to the exhaustion principle and the public lending right is a carve-out from the rental right that restores exhaustion for public libraries. Policymakers must confront an exception to an exception to a limitation on copyright. We are dealing not so much with the “metaphysics of the law”⁶³ as with doctrinal gymnastics.

Looking beyond the Directive’s domain of copyright, the intricacies of the rental right illustrate why some courts, like the United States Supreme Court, may prefer the broad rule of exhaustion with at best narrow statutory exceptions (found under § 109(b) in the United States).⁶⁴ While there are certain desirable features to a clear rule of exhaustion, allowing rental benefits consumers and the market economy, for reasons set forth throughout this article. One approach is to allow an exception to exhaustion for rentals. Such an exception would allow intellectual property owners to contract out uses of a protected work for a time limited period. The problem is how to contain such an exception. Arguably, parties might contract out intellectual property rights subject to negotiated conditions that would go beyond the rental situation. This possibility is the conditional sale doctrine recognized by the Federal Circuit but abrogated in the *Lexmark* decision. Courts will need some guidelines to determine when contractual limitations on exhaustion are permitted and when they are not. Without such guidelines, the broad rule in favor of exhaustion is an illusion.

The Supreme Court recognized this dilemma when the *Lexmark* majority wrote:

A patentee can impose restrictions on licensees because a license does not implicate the same concerns about restraints on alienation as a sale. Patent exhaustion reflects the principle that, when an item passes into commerce, it should not be shaded by a legal cloud on title as it moves through the marketplace. But a license is not about passing title to a product, it is about changing the contours of the patentee’s monopoly: The patentee agrees not to exclude a licensee

63. See *Folsom v. Marsh*, 9 F. Cas. 342 (C.C.D. Mass. 1841) (Justice Story describing both copyright and patent law as metaphysical).

64. 17 U.S.C. § 109(b).

from making or selling the patented invention, expanding the club of authorized producers and sellers. Because the patentee is exchanging rights, not goods, it is free to relinquish only a portion of its bundle of patent protections.

A patentee's authority to limit licensees does not, as the Federal Circuit thought, mean that patentees can use licenses to impose post-sale restrictions on purchasers that are enforceable through the patent laws. So long as a licensee complies with the license when selling an item, the patentee has, in effect, authorized the sale. That licensee's sale is treated, for purposes of patent exhaustion, as if the patentee made the sale itself. The result: The sale exhausts the patentee's rights in that item. A license may require the licensee to impose a restriction on purchasers, like the license limiting the computer manufacturer to selling for non-commercial use by individuals. But if the licensee does so—by, perhaps, having each customer sign a contract promising not to use the computers in business—the sale nonetheless exhausts all patent rights in the item sold.⁶⁵

To summarize, the patent owner can place limitations in licenses but not in sales. Yet, how can one distinguish between a license and a sale? The Supreme Court offers no guidance and lower courts have struggled to come up with an approach to identifying when a transaction is sale-like.⁶⁶ The Rental Directive example shows that the distinction between a license and a sale is a policy distinction that rests upon the justifications supporting the exhaustion doctrine. The European Court of Justice's broad language does not provide a meaningful standard. The Court states a rental right is needed to benefit the copyright holder. But such language is circular and proves too much.

Instead, the analysis is helpful in identifying business practices and expectations that support the need for rental, rather than sales, as the more desired form of distribution. This analysis mandates a fact-intensive inquiry, like what one might find in an antitrust or competition law review of a business practice. Furthermore, the sale/license distinction, which is equivalent to an exhaustion/no exhaustion distinction, will depend upon the type of work in question. From such factual inquiry, precise rules may emerge, but the law may not be there yet. Instead, we are confronted with generalities about contractual freedom, rewards to the intellectual property owner, and market alienability. As I argue there, intellectual property and antitrust law intersect in addressing when exhaustion applies and when it can be circumvented through contract.

65. *Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1534–35 (2017) (internal citations omitted).

66. GHOSH & CALBOLI, *supra* note 17, at 86.

But before considering antitrust, it is instructive to consider technology protection measures limiting exhaustion.

VI. THE CHALLENGE OF TECHNOLOGY PROTECTION MEASURES

This Part addresses the question of how technology protection measures, which block the ability to access code or parts that need to be repaired, can limit the right to repair. Technology protection measures often require users to copy or transform the protected work and infringe the rights of the intellectual property owner.⁶⁷ Exercising the right to repair would require exhaustion of the reproduction, adaptation, or making rights in addition to the right to resell. This Part presents arguments for expanding the exhaustion doctrine beyond the right to resell to facilitate the right to repair. In support of these arguments, this Part also presents case law correcting anticompetitive enforcement of technology protection measures.

Some scholars,⁶⁸ however, have cited the U.S. case *Kipling v. G.P. Putnam's Sons*⁶⁹ as supporting a broader application of exhaustion beyond distribution. The decision has relevance for technology protection measures and is worthy of discussion. A distributor bought unbound copies of Kipling's books from the publisher and then rebound separate volumes into one. Kipling, the copyright owner, claimed copyright infringement, but the court found for the distributor. Nothing in the Copyright Act prohibited the purchaser from binding the copyrighted sheets, according to the court. Kipling relied upon a supposed agreement with the publisher not to sell the unbound sheets. But the court concluded:

There is nothing in the law ... which prohibits the owner of a copyright from selling unbound books, if he desires to do so, and what he may do, his agent or licensee may do also. ... [I]f such as provision [prohibiting the sale of unbound sheets] were present the plaintiff's remedy would be an action against the publishers for breach of contract.⁷⁰

Two points are relevant from this pre-digital case for digital exhaustion. The first is the Second Circuit's construction of the purchaser's right to make a

67. For background discussion on technology protection measures, see generally GHOSH & CALBOLI, *supra* note 4, at 91; JESSICA LITMAN, DIGITAL COPYRIGHT (2017); David Nimmer, *A Riff on Fair Use in the Digital Millennium Copyright Act*, 148 U. PA. L. REV. 673, 681–84 (2000).

68. See Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. REV. 889, 916 (2011).

69. 120 F. 631 (2d Cir. 1903).

70. *Id.* at 634.

different version of the copyrighted work after the sale. The recognition of such a right shows that exhaustion may go beyond the narrow right to redistribute. Second, any restrictions on the distribution are a matter of contract, rather than copyright, a result consistent with application of exhaustion. The court's ruling does not resolve the digital exhaustion issue. An important fact is that the purchaser did not copy the expression, but rather took the unbound sheets containing copies of the expression and bound them in a new form. Such acts may implicate the copyright owner's adaptation right, and the court's ruling has little application to copying post-sale, which very likely would be prohibited under U.S. law.

Though this case is pre-digital, it sets forth possible parameters for the evolving debate on digital exhaustion. As geoblocking and other technology protection measures develop, legal regimes will move towards preventing circumvention of these measures, as Professor Trimble predicts, and towards limitations on anti-circumvention, as this article suggests.⁷¹ Digital exhaustion will be one such limitation, as the European experience shows. Another limitation may arise from identified abuse of digital rights by intellectual property owners. Court interpretations in the United States of the Digital Millennium Copyright Act (DMCA) provide an important example of this second type of limitation, one that overlaps with competition law and policy.

The DMCA prohibits anti-circumvention measures of technology protections that are designed to prevent copying of copyright-protected works. Although limited to the domain of copyright, the emergence of 3D printing has highlighted the need for digital patent protection as inventive works can be as readily digitized as copyrighted expressions. How far can anticircumvention measures go to prevent digital copying? The Act does address limitations for fair use, research, and other practices. But exhaustion is not mentioned in the statute. Nonetheless courts have creatively resolved the issue of anticircumvention measures and uses by purchasers of products containing digital protections.

Lexmark marketed printers that included a technology protection measure that prevented the use of noncompatible printer cartridges. The cartridge contained a chip that only was unlocked with a companion chip in the printer. Static Controls found a way to circumvent the chip and marketed its own cartridges that could be used with Lexmark printers. A lawsuit ensued and Lexmark lost on its digital copyright claims against Static Controls. The Sixth

71. Marketa Trimble, *Copyright and Geoblocking: The Consequences of Eliminating Geoblocking*, 25 B.U.J. SCI. & TECH. L. 476, 477 (2019).

Circuit's opinion is a complex one and its many details are beyond the scope of this article. But it summarized the central rationale elegantly:

A poem in the abstract could be copyrightable. But that does not mean that the poem receives copyright protection when it is used in the context of a lock-out code. Similarly, a computer program may be protectable in the abstract but not generally entitled to protection when used necessarily as a lock-out device.⁷²

In other words, the purpose of the DMCA was to allow technology measures to protect copyright, not to protected uncopyrighted consumer products like a printer. Lexmark was claiming a right that went beyond what the DMCA provided to copyright owners. Its claims constituted a form of misuse, expanding the Act beyond its purpose and scope. Lexmark's loss in asserting its technological protection measures led to its use of contractual controls over reuse of printers, a practice that United States Supreme Court put to rest in the company's dispute with Impression Products. The connections between technology and contract could not be more transparent.

As Lexmark sought protection of the technological system for its printers and cartridges, Chamberlain brought an analogous DMCA claim against a company circumventing its software code for garage door openers. The Federal Circuit ruled against Chamberlain. Its reasoning rested on a distinction between property and liability. According to the Federal Circuit, the anticircumvention provisions did not create a new property right, but rather a rule of liability to the copyright owner for circumventing:

The distinction between property and liability also addresses an important policy issue that Chamberlain puts into stark focus. According to Chamberlain, the 1998 enactment of the DMCA "renders the pre-DMCA history in the GDO industry irrelevant. By prohibiting the trafficking and use of circumvention technology, the DMCA fundamentally altered the legal landscape.... Any analysis of practices within the GDO industry must now be undertaken in light of the DMCA." Chamberlain reiterated and strengthened this assertion at oral argument, claiming that the DMCA overrode all pre-existing consumer expectations about the legitimate uses of products containing copyrighted embedded software. Chamberlain contends that Congress empowered manufacturers to prohibit consumers from using embedded software products in conjunction with competing products when it passed § 1201(a)(1). According to Chamberlain, all such uses of products containing copyrighted software to which a technological measure controlled access are now

72. *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 544 (6th Cir. 2004).

per se illegal under the DMCA unless the manufacturer provided consumers with explicit authorization. Chamberlain's interpretation of the DMCA would therefore grant manufacturers broad exemptions from both the antitrust laws and the doctrine of copyright misuse.⁷³

Such an exemption, however, is only plausible if the anticircumvention provisions establish a new property right capable of conflicting with the copyright owner's other legal responsibilities—which as explained *supra*, they do not. The anticircumvention provisions convey no additional property rights in and of themselves. They simply provide property owners with new ways to secure their property.

The Federal Circuit, like its sister circuit in the *Lexmark v. Static Controls* case, found against the copyright owner. The court reasoned that Chamberlain had given implicit authorization for consumers to obtain substitute garage door openers from a competing company because there were no contractual restrictions on what technology had to be used with the garage doors. An implication is that express contractual restrictions might have allowed Chamberlain to block Static Controls. The Supreme Court's ruling against Lexmark casts some doubt on this strategy, however. Furthermore, the Federal Circuit dismissed the DMCA claim on grounds very similar to that of the Sixth Circuit. Chamberlain was not using the technology measures to protect a copyrighted work, such as an encrypted movie on a DVD. Instead, Chamberlain was using the technology measure to protect a consumer product—a functional work—that was not copyrightable. That claim went beyond the reach of the DMCA.

What the experiences with printer cartridges and garage door openers teach is that the protection of the right to repair against TPMs requires a more complicated response than a legal prohibition against anticircumvention. Courts have responded to attempts to expand TPMs beyond the domain of intellectual property rights—that is, to include products purchased by consumers with certain expectations about uses and sales. This experience suggests some hope for a digital exhaustion doctrine that might limit practices like geoblocking that restrain alienability and use through technology. Policies of competition and restrictions on the creation of competing products that can benefit consumers and potentially expand markets are implicit in the *Static Controls* and *Chamberlain* cases. Although neither court expressly frames the issues in terms of competition, a more rigorous analysis of exhaustion's place

73. Chamberlain Grp., Inc. v. Skylink Techs., Inc., 381 F.3d 1178, 1193 (Fed. Cir. 2004).

in competition policy may set the course for a more vibrant future for the exhaustion doctrine.

MANDATING REPAIR SCORES

Aaron Perzanowski[†]

ABSTRACT

Restrictions on the repair of consumer goods have generated no shortage of policy proposals. This Article considers the empirical and legal case for one particular intervention—requiring firms to calculate and disclose their products’ scores on a uniform reparability index. These repair scores would provide consumers with salient information at or before the point of sale, enabling them to compare products on the basis of the ease and cost of repair. There is considerable empirical research, including assessments of France’s implementation of a similar requirement in recent years, suggesting that repair scores would both inform and empower consumers. Despite likely First Amendment challenges in the United States, such a regime is likely to survive constitutional scrutiny.

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† Thomas W. Lacchia Professor of Law, University of Michigan Law School. My deepest thanks to Pam Samuelson for co-organizing this symposium with me, and to Craig Nard, Director of Case Western Reserve University’s Spangenberg Center for Law, Technology and the Arts, for co-sponsoring it. I’m also grateful to Dara Ferguson and Maggie LaPoint for their outstanding research on the intersection of repair disclosures and the First Amendment.

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I. INTRODUCTION

When it comes to addressing the problems of repair markets, there are four primary justifications for legal intervention—respecting end-user autonomy, encouraging competition, reducing environmental harm, and facilitating consumer choice. I have written at length about each of these cases for legislative and regulatory fixes to the contemporary state of repair.¹ Although these rationales are undoubtedly intertwined, here, I want to focus primarily on the last rationale. How can the law make it easier for consumers to act on their preferences for durable, repairable devices?

Some may object that consumer behavior—as shown in the form of the nearly 1.5 billion smartphones² or the hundred million or so Apple AirPods sold each year³—reveals precisely how little we care about reparability. But that response is too quick to absolve device makers of their responsibility for shaping and manipulating consumer behavior. And, it is too dismissive of the mounting evidence that consumers respond predictably and favorably to clear, accurate information about the ease of repairing a device. Consumers prefer reparability. Too often, however, firms withhold or obscure the information necessary to assess the products they sell.

This Article outlines the evidence that consumers value repair, are often caught unaware of repair restrictions, and would make different purchasing choices if information about reparability were more readily available. These conclusions are borne out not only by experimental and survey data described in Part II, but the on-the-ground results of the first mandatory reparability

1. See generally AARON PERZANOWSKI, *THE RIGHT TO REPAIR: RECLAIMING THE THINGS WE OWN* (2022).

2. Manasi Sakpal, *Gartner Says Global Smartphone Sales Grew 6% in 2021*, GARTNER (Mar. 2, 2022), <https://www.gartner.com/en/newsroom/press-releases/2022-03-01-4q21-smartphone-market-share>.

3. Samantha Murphy Kelly, *How AirPods became Apple's hottest product*, CNN BUS. (Oct. 19, 2021, 4:08 PM), <https://www.cnn.com/2021/10/19/tech/airpods-3/index.html>. AirPods are notoriously difficult to repair. See *AirPods Teardown*, iFIXIT (Dec. 20, 2016), <https://www.ifixit.com/Teardown/AirPods+Teardown/75578>.

index for consumer goods, implemented in 2021 in France and detailed in Part III. The French approach, while far from perfect, suggests that requiring firms to measure and prominently disclose product reparability can shift consumer behavior and incentivize the design of more repairable products. Part IV argues that as legislators and regulators in the United States consider the most effective tools to address the rampant repair restrictions device makers impose, they should not overlook the potential power of mandated disclosures to internalize costs and recalibrate consumer behavior. Justified as a corrective to unfair or deceptive practices, a rule demanding device makers inform consumers of how easy—or difficult—their products are to fix is well within the power of either Congress or the Federal Trade Commission. Moreover, as Part V argues, such a rule is highly likely to withstand the First Amendment challenges device makers would almost certainly raise.

II. REPAIR AND CONSUMER PREFERENCES

A number of empirical studies have explored consumers' relationship to repair. They confirm that consumers expect to be able to repair the products they buy, are often unaware of repair restrictions, and would make different purchasing decisions on the basis of more complete information about reparability.

My 2021 study of U.S. consumers revealed that they expect to be able to repair smartphones, tablets, smart speakers, digital cameras, and smart refrigerators.⁴ Across device categories, 83% of consumers agreed with the proposition that they have the right to repair devices they purchase themselves or to take them to the repair shop of their choice.⁵ 59% reported that they would be very or somewhat surprised to learn that a manufacturer limited their ability to repair a device they purchased.⁶ When asked to describe in their own words how they would feel if they learned of repair restrictions, consumers offered anger, disappointment, frustration and annoyance most often.⁷ Others said they would feel cheated, conned, deceived, scammed, or swindled.⁸

Not only do consumers expect reparability—this expectation is material to their purchase decisions. When asked if their choices would be influenced by a manufacturer's decision to limit the reparability of a device, more than 70%

4. See generally Aaron Perzanowski, *Consumer Perceptions of the Right to Repair*, 96 IND. L.J. 361 (2021). The sample was representative of the U.S. population with respect to sex, age, and income according to census data. *Id.* at 380.

5. *Id.* at 382.

6. *Id.* at 383.

7. *Id.*

8. *Id.*

of consumers said they were less likely to purchase such a device.⁹ Nearly as many reported they would pay somewhat or much less for a device with repair restrictions.¹⁰ A recent Consumer Reports survey of more than 2000 U.S. residents reinforces this conclusion. When asked how important reparability is when making a new purchase, 96% reported it was very important or somewhat important for vehicles; 91% for large appliances, and 77% for smartphones and tablets.¹¹

A European Commission study reached similar results. European consumers were asked if they would prefer to receive better information about how long products last and their ease of repair. Not surprisingly, an overwhelming majority said yes.¹² Specifically, consumers believed that information would be most useful at the point of purchase or while comparing potential purchases.¹³ That study also incorporated an experiment that measured the degree to which repair information influences purchase decisions. Consumers were told they needed to purchase products—vacuum cleaners, dishwashers, televisions, smartphones, and coats—on an online shopping site. They were shown the name, picture, and price for six different models within each product category. In addition, a test group of consumers was shown information about the reparability of each model, scored on the standard A-G scale familiar from EU energy labels, accompanied by a wrench and screwdriver icon. Consumers who saw these scores were twice as likely to choose the most repairable option, compared to those who did not.¹⁴ Moreover, consumers were willing to spend more on repairable products. That price premium ranged from 29 to €54 for vacuum cleaners to €77 to €171 for televisions.¹⁵

Although surveys and experiments can be imperfect predictors of real-world behavior, these studies bolster the intuitions that consumers value reparability and that better access to information will shape their behavior. As Part III details, evidence from France over the past year further reinforces these conclusions.

9. *Id.* at 384.

10. *Id.* at 385.

11. CR SURV. RSCH. DEP'T, RIGHT TO REPAIR 2021: NATIONALLY REPRESENTATIVE MULTI-MODE SURVEY (2022), https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Right_to_Repair_Survey_2021.

12. EUR. COMM'N, BEHAVIOURAL STUDY ON CONSUMERS' ENGAGEMENT IN THE CIRCULAR ECONOMY (2018), https://ec.europa.eu/info/sites/default/files/ec_circular_economy_final_report_0.pdf.

13. *Id.* at 152–55.

14. *Id.* at 159–61.

15. *Id.* at 165–69.

III. THE FRENCH REPARABILITY INDEX

The idea of rating devices on the basis of reparability isn't entirely new. Researchers have developed a number of rubrics for measuring reparability.¹⁶ For well over a decade, iFixit has scored laptops, smartphones, game consoles, and other consumer goods on a 1–10 scale, based on their ease of repair.¹⁷ As helpful as those scores can be, most consumers do not know to consult them before they buy a device. Indeed, reparability often is not a top-of-mind consideration at the time of purchase. Consumers are focused on price, new features, and aesthetics when they buy new devices. Too often, their attention turns to repair only months or years down the line, when the device malfunctions. If consumers knew at the point of purchase, for example, whether replacement parts would be available at a reasonable price or whether a device was user-reparable, they would be better positioned to make fully informed choices.

To address the market's failure to reliably provide this information, France introduced a mandatory reparability labeling system for specified categories of consumer goods in 2021.¹⁸ Advertisements and product packaging for laptops, lawn mowers, smartphones, televisions, and washing machines must bear a graphic like the one below.¹⁹ Those labels prominently display a reparability score on a 1–10 scale and a color-coded graphic—red for low scores, green for high, and yellow for middling ones. Scores are based on five equally weighted criteria: documentation, like manuals and repair instructions; the disassembly process, including the number of steps, tools required, and types of fasteners used; access to spare parts, delivery times, and availability to

16. See, e.g., MAURO CORDELLA, FELICE ALFIERI & JAVIER SANFELIX, EUR. COMM'N, ANALYSIS AND DEVELOPMENT OF A SCORING SYSTEM FOR REPAIR AND UPGRADE OF PRODUCTS (2019).

17. See *iPhone First Generation Teardown*, IFIXIT (June 29, 2007), <https://www.ifixit.com/Teardown/iPhone+1st+Generation+Teardown/599>.

18. Loi 2020-105 du 10 février 2020 relative à la lutte contre le gaspillage et à l'économie circulaire [Law 2020-105 of 10 February 2020 Regarding a Circular Economy and the Fight Against Waste].

19. Specifically, the law requires that “sellers of electrical and electronic equipment as well as those using a website, a platform or any other online distribution channel in the context of their commercial activity in France shall inform the consumer free of charge, at the time of the act of purchase, by way of marking, labeling, display or any other appropriate process, of the reparability index of this equipment. The manufacturer or importer is responsible for making this information available to the public electronically, in an easily reusable format that can be used by an automated processing system in an aggregated form.” *Id.*

independent providers; the price of spare parts; and various considerations specific to the product type.²⁰

Figure 1: Caption



Although the French index has been in effect for little more than a year, the preliminary evidence lends strong support to the underlying theory that repair scores are an effective information-forcing mechanism that empowers consumers and increases the salience of reparability. Awareness of the repair index is high among French consumers. One study, conducted by Halte à L'Obsolescence Programmée (HOP), found that 55% of the French public was aware of the index.²¹ Another study, sponsored by Samsung, concluded that 76% of the French population knew about it.²² Beyond mere recognition, 66% of respondents said they fully or somewhat understand how the repair score is calculated.²³ While there is room for improvement when it comes to

20. MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE, INSTRUCTIONS MANUAL FOR THE CALCULATION OF THE REPAIRABILITY INDEX OF ELECTRICAL AND ELECTRONIC EQUIPMENTS (2021).

21. HALTE À L'OBSOLESCENCE PROGRAMMÉE, THE FRENCH REPAIRABILITY INDEX: A FIRST ASSESSMENT ONE YEAR AFTER ITS IMPLEMENTATION (2022), <https://www.halteobsolescence.org/wp-content/uploads/2022/02/Rapport-indice-de-reparabilite.pdf> [hereinafter HOP STUDY].

22. *Indice de réparabilité: le second baromètre Samsung/Ademe confirme l'intérêt des Français*, NEOMAG (Sept. 2, 2021), <https://www.neomag.fr/article/9600/indice-de-reparabilite-le-second-baromere-samsung-ademe-confirme-linteret-des-francais>.

23. HOP STUDY, *supra* note 21.

consumers' understanding of specific elements of the repair index, one goal of reporting an overall score on a ten-point scale is to simplify complex information and reduce the knowledge and research necessary for informed decision making.

More worryingly, only 28% of those who purchased relevant devices in 2021 reported encountering the repair index. Compliance with the labeling requirement appears to be high when it comes to smartphones, but other product categories, like laptops, are lagging behind, suggesting a need for more robust enforcement against some device makers.²⁴ That said, among those consumers who did encounter repair scores, 76% reported that the index was helpful in making their final purchase decision, and 91% indicated they would recommend a friend rely on the index when purchasing a new smartphone.²⁵ Although no comprehensive study of sales data has revealed the market impact of repair scores, an experiment using the French index, consistent with prior research, demonstrates that consumers are significantly more likely to purchase smartphones with higher repair scores.²⁶

But the French approach is hardly perfect. There are two central criticisms. First, scores are calculated by device makers.²⁷ Given their interest in higher marks, we might be reasonably suspicious of self-reported scores. Independent evaluation of products can also yield lower overall scores. When HOP undertook its own scoring of a variety of products, its results were as much as 1.5 points lower on the index's ten-point scale than those calculated by the manufacturer.²⁸ Of course, an independent evaluation of every consumer device, either by a government agency or a third-party organization, would impose significant costs. Anticipating these concerns, the French index requires manufacturers to publish a scoring protocol for each product so that consumers, competitors, and others can scrutinize their claims. Unfortunately, those disclosures are not always readily available and omit the sort of granular disclosures experts would need to fully assess scores.²⁹ To address these problems, heightened disclosure requirements, more consistent enforcement, and a public database of all scoring protocols would all be helpful tweaks, as would randomized auditing of self-reported scores and meaningful penalties when companies pad their grades.

24. HOP STUDY, *supra* note 21.

25. HOP STUDY, *supra* note 21.

26. HOP STUDY, *supra* note 21.

27. *See* MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE, *supra* note 20.

28. *See* HOP STUDY, *supra* note 21 (scoring a Philips television at 5.5, despite an official score of 7).

29. HOP STUDY, *supra* note 21

Second, regardless of who does the scoring, there is reason to suspect the index is too forgiving. Some points are just too easy to earn. For smartphones and laptops, simply providing information about software updates—identifying them as bug fixes, security patches, or upgrades—earns a product a full point on the overall score.³⁰ The ability to reset the device’s operating system and firmware ups the score by another half point.³¹ Because the five primary criteria are equally weighted, it is relatively easy for a device to earn seemingly high marks even when spare parts can’t be obtained or disassembly is prohibitively difficult. A product that scores a distressingly low 7 out of 20 on the disassembly metric, can still earn an overall score of 8 out of 10.³² Given the ambiguity of certain criteria, firms can play fast and loose with their scores in ways that give consumers false impressions about reparability.³³

Inflated scores threaten to undermine the central goals of the index. Since few products have low scores, they tend to cluster together, making it harder for consumers to comparison shop on the basis of reparability. Score differences that look trivial might in fact represent significant differences between products. Generous scores could also lead consumers to overestimate the reparability of specific devices. They might, for example, see a 6.1 score for a washing machine and assume that means it’s more repairable than average, despite the fact that it is among the lowest scores in the product category. The index’s color-coding system reinforces this worry. Scores of 8–10 earn a vibrant green logo; 6–7.9 are light green; 4–5.9 are yellow; 2–3.9 are orange, and 0–1.9 are red. Few products bear orange or red symbols. The iPhone 11 scores an abysmal 4.6, earning it a rather ambiguous yellow label.³⁴ If one of the goals of the index is to spur competition on the basis of reparability, clearer signals are needed. Otherwise, manufacturers will lack the incentives to prioritize repairable design.

These faults, while significant, are far from insurmountable. As the index evolves, its scoring system should account for these early lessons. Criteria might be added, removed, or given different relative weights. HOP has suggested minimum thresholds as another promising reform. If a device scores too low on key criteria like part availability or disassembly, its overall score would be capped regardless of how well it performs on other metrics like

30. MINISTERE DE LA TRANSITION ECOLOGIQUE, *supra* note 20.

31. MINISTERE DE LA TRANSITION ECOLOGIQUE, *supra* note 20.

32. HOP STUDY, *supra* note 21.

33. HOP STUDY, *supra* note 21.

34. Sophie Charara, *The most (and least) repairable Apple products, ranked*, WIRED (Apr. 17, 2021, 6:00 AM), <https://www.wired.co.uk/article/most-repairable-apple-products>; see *Indice de réparabilité*, Ministère de la transition écologique et de la Cohésion des territoires, (Aug. 30, 2022), <https://www.ecologie.gouv.fr/indice-reparabilite>.

documentation.³⁵ France may well decide to update its existing rules, and as other jurisdictions consider repair indices of their own, opportunities to improve on France's experience will emerge. Spain has announced plans for its own reparability index.³⁶ Even more promisingly, the European Parliament has embraced an aggressive repair agenda that includes harmonized, mandatory, EU-wide repair scores among other disclosures to consumers.³⁷ The next Part will consider how such an approach could be implemented under U.S. law.

IV. REPAIR SCORES IN THE U.S. LEGAL FRAMEWORK

Mandatory disclosure regimes are hardly unfamiliar in the United States. Loan providers must meaningfully disclose credit terms to consumers.³⁸ Car manufacturers are required to report accurate labeling of vehicle fuel economy. Makers of foodstuffs have to disclose artificial colors and flavors.³⁹ Tobacco companies must acknowledge the health risks of cigarettes.⁴⁰ Apparel makers must disclose the use of fur in their garments.⁴¹ Manufacturers of home insulation are obligated to share its r-value,⁴² and amplifier makers must inform consumers about the power output of home entertainment devices.⁴³ Throughout the U.S. economy, thousands of mandatory labeling laws help consumers gather accurate information about products and services.⁴⁴

When product characteristics are important to consumers but hard for them to evaluate independently, disclosure is especially important. Often, market forces will generate sufficient incentives for disclosure, rendering regulation less necessary. If a new car gets better gas mileage than the

35. HOP STUDY, *supra* note 21.

36. *Consumo etiquetará los productos eléctricos y electrónicos en función de su reparabilidad*, LA MONCLOA (Mar. 15, 2021), https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/consumo/Paginas/2021/150321-etiqueta_reparabilidad.aspx.

37. *Right to repair: MEPs want more durable and more easily repairable products*, EUR. PARLIAMENT (Apr. 7, 2022, 12:46 PM), <https://www.europarl.europa.eu/news/en/press-room/20220401IPR26537/right-to-repair-meps-want-more-durable-and-more-easily-repairable-products>.

38. 15 U.S.C. § 1601.

39. *See* 40 C.F.R. pts. 86 and 600; 71 Fed. Reg. 77,872 (Dec. 27, 2006).

40. 21 C.F.R. pt. 1141; 61 Fed. Reg. 44,615–44,618 (Aug. 28, 1996).

41. 15 U.S.C. § 69(b).

42. 16 C.F.R. pt. 460.

43. 16 C.F.R. pt. 432.

44. *See* Pharm. Care Mgmt. Ass'n v. Rowe, 429 F.3d 294, 316 (1st Cir. 2005) (noting the “literally thousands of similar regulations on the books—such as product labeling laws, environmental spill reporting, accident reports by common carriers, SEC reporting as to corporate losses and (most obviously) the requirement to file tax returns to government units”).

competition, we can bet the marketing department will make sure consumers know it. But we cannot always rely on the market to provide complete or accurate information. Firms have incentives to hide or minimize harmful ingredients or effects, as the tobacco industry did for decades.⁴⁵ Those incentives are particularly troublesome for industry-wide behavior. There is also the problem of inconsistent or ambiguous disclosures. Imagine a world in which each car maker came up with its own standards and tests for fuel efficiency. How would consumers compare Honda's claimed forty mile-per-gallon rating for a sedan to Toyota's supposed forty-two mile-per-gallon vehicle without a careful study of their methodologies? Mandatory disclosure regimes can bring greater uniformity that facilitates meaningful comparisons between products.

Not only can compelled disclosures increase the flow of material information to consumers, they can also correct deceptive or misleading perceptions created by marketing and other practices of producers. Again, tobacco companies are instructive. For years, their ads featured physicians touting the supposed benefits of one brand over another, giving the false impression that cigarettes were good for you.⁴⁶ The case for mandated disclosure, as a matter of both policy and law, is strongest when manufacturers explicitly or implicitly mislead consumers about the nature of their own products or those of competitors.

Although device makers typically avoid making false claims about repair—preferring instead to keep consumers focused on vague notions of newness and innovation—examples of prominent firms offering false or misleading statements are not terribly difficult to come by. John Deere has consistently misrepresented its position on repair for years. Despite aggressively anti-repair design choices and policies, Deere's marketing materials maintain that “repairability is designed into every tractor we build.”⁴⁷ And one of Deere's trade associations announced an elaborate “signing ceremony” for a memorandum of understanding with the California Farm Bureau that promised to make software tools necessary for diagnosis and repair available

45. *See* United States v. Philip Morris USA, Inc., 449 F. Supp. 2d 1, 852 (D.D.C. 2006) (noting that “over the course of more than 50 years, Defendants lied, misrepresented, and deceived the American public, including smokers and the young people they avidly sought as “replacement smokers,” about the devastating health effects of smoking and environmental tobacco smoke...”).

46. *See, e.g.,* *Outrageous vintage cigarette ads*, CBS NEWS (July 27, 2014, 7:35 AM), <https://www.cbsnews.com/pictures/outrageous-vintage-cigarette-ads>.

47. *Self-Repair Made Easy*, JOHN DEERE, perma.cc/Z4GF-ZD4K (last visited Feb. 23, 2022).

to farmers.⁴⁸ But years later, Deere and its dealers continued to drag their feet when it came time to make good on that promise.⁴⁹ Eventually, after public shaming and press attention, Deere made the software available, but only at an exorbitant subscription rate.⁵⁰

Perhaps less overtly, Apple advertises prices for “service” for iPads, AirPods, and other devices.⁵¹ What the company fails to make clear, however, is that “service” does not mean a consumer’s device will be repaired. Instead, it will be replaced with a new or refurbished one. For many products, Apple simply does not offer repair. For those who value reparability, this is a potentially material omission. Apple also trains its employees to withhold crucial repair information from consumers, warning them that third-party parts and repairs will not work as well or may result in missing features.⁵² But they fail to disclose that Apple’s own software restrictions are often the cause of performance issues and warning messages after third-party repairs.⁵³

Even without an explicit misrepresentation, these sorts of omission of material information in a commercial context are regarded as deceptive.⁵⁴ If consumers come away with a false understanding because of a firm’s failure to disclose information, they have been misled. That is true even when the misunderstanding is a byproduct of consumer expectations rather than affirmative representations made by the seller.

48. Jason Koebler & Matthew Gault, *John Deere Promised Farmers It Would Make Tractors Easy to Repair. It Lied*, VICE (Feb. 18, 2021), <https://www.vice.com/en/article/v7m8mx/john-deere-promised-farmers-it-would-make-tractors-easy-to-repair-it-lied>.

49. *Id.*

50. *See* Complaint for Action to Stop Unfair Methods of Competition and Unfair and Deceptive Trade Pract., by Deere & Co. (Mar. 3, 2022), https://drive.google.com/file/d/1h6HVLfQ491dyAhcdYM-w5v_FpVKmtOB3/view.

51. *See, e.g., Apple Watch Service and Repair*, APPLE, <https://support.apple.com/watch/repair/service/pricing> (last visited Sept. 12, 2022); *iPad Repair & Service*, APPLE, <https://support.apple.com/ipad/repair/service> (last visited Sept. 12, 2022); *AirPods Replacement, Repair, & Service*, APPLE, <https://support.apple.com/airpods/repair/service> (last visited Sept. 12, 2022).

52. Matthew Gault, *Leaked Apple Training Videos Show How It Undermines Third-Party Repair*, VICE (Sept. 21, 2021, 6:00 AM), <https://www.vice.com/en/article/5dbv83/leaked-apple-training-videos-show-how-it-undermines-third-party-repair>.

53. Chris Welch, *Apple’s iPhone 11 and 11 Pro will show a warning on your lock screen if they can’t verify a replaced screen*, VERGE (Sept. 25, 2019, 3:23 PM), <https://www.theverge.com/2019/9/25/20884287/apple-iphone-11-pro-max-display-screen-replacement-verification-warning>; Kevin Purdy, *The New “Important” iPhone Camera Message Is Another Bad Omen*, iFIXIT (Jan. 27, 2021), <https://www.ifixit.com/News/48768/the-new-important-iphone-camera-message-is-another-bad-omen>.

54. *See, e.g.,* Mkt. Dev. Corp., 95 F.T.C. 100, 212 (1980) (failing to disclose extra charges or conditions imposed on use of vacation certificates); Peacock Buick, Inc., 86 F.T.C. 1532, 1557–58 (1975) (failing to disclose handling and service fees), *aff’d*, 553 F.2d 97 (4th Cir. 1977).

Congress could require repair scores on consumer goods, whether to correct deceptive representations and omissions, or more generally to improve the quality and quantity of information available to consumers. There have been some promising signs that Congress is taking repair seriously.⁵⁵ The repair agenda has significant bipartisan support among voters.⁵⁶ But given the legislative inertia even broadly popular policies face, the FTC offers a more promising avenue for implementing a repair index.

The Commission has already been active in this space, issuing its Nixing the Fix in 2021 and a policy statement on repair a year later, prompted in part by the Executive Order on Competition from the Biden White House.⁵⁷ While the FTC could make significant progress by more aggressively enforcing existing law, repair is a policy question ripe for rulemaking. Those rules could be justified under at least three theories. First, they could, consistent with the Nixing the Fix report, focus on potential antitrust violations and broader concerns about unfair methods of competition in the markets for repair parts and service.⁵⁸ Second, they could develop and enforce repair-specific rules to reinforce the Magnuson-Moss Warranty Act.⁵⁹ Or third, they could target unfair and deceptive practices related to repair. Although all three approaches have merit, I will focus on the third approach.

In addition to the tactics outlined above, device makers rely on a range of repair restrictions—from software and hardware design to pricing strategies and tightly controlled authorized repair networks—to limit consumers’ access to repair services. I’ve argued elsewhere that these practices satisfy the FTC’s standards for deceptive and unfair practices. A deception claim requires proof of: (1) “a representation, omission, or practice that is likely to mislead the consumer” (2) as evaluated from the perspective of a reasonable consumer, and (3) and “the representation, omission, or practice must be material.” These

55. See Freedom to Repair Act, H.R. 6566, 117th Cong. (2022); REPAIR Act, H.R. 6570, 117th Cong. (2022); Fair Repair Act, H.R. 4006, 117th Cong. (2022); SMART Act, H.R. 3664, 117th Cong. (2022); Agricultural Right to Repair Act, S. 3549, 117th Cong. (2022).

56. *Nearly 7 in 10 Voters Back Proposed Law That Would Protect the ‘Right to Repair’*, MORNING CONSULT (Mar. 23, 2022, 6:00 AM), <https://morningconsult.com/2022/03/23/right-to-repair-electronic-devices-survey>; David Dayen, *The Day One Agenda Polls Pretty Well*, AM. PROSPECT (Feb. 11, 2020), <https://prospect.org/day-one-agenda/executive-authority-polls-pretty-well>; *Americans’ Views on Right to Repair*, WAVEFORM, <https://www.waveform.com/pages/right-to-repair-april-2020-report> (last visited Sept. 12, 2022).

57. *Executive Order on Promoting Competition in the American Economy*, WHITE HOUSE (July 09, 2021), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/>.

58. See generally Michael A. Carrier, *How the Federal Trade Commission Can Use Section 5 to Strengthen the Right to Repair*, 37 BERKELEY TECH. L.J. 1145 (forthcoming 2023).

59. See generally, 15 U.S.C. §§ 2301, 2301-2312.

practices, and the failure to disclose them, mislead consumers. They believe that they have the right to repair their devices as they see fit, when in reality, they do not. And that belief, as the empirical evidence demonstrates, is material to consumer purchase decisions.⁶⁰ Unless device makers are willing to argue and able to prove that the vast majority of their customers are unreasonable, repair restrictions like those prevalent today implicate the FTC's deception authority.

Even if these practices are not deemed deceptive, they are likely unfair. For a practice to be unfair, the FTC must show: (1) a substantial injury to consumers; (2) that is not outweighed by countervailing benefits; and (3) that is not reasonably avoidable.⁶¹ When firms force consumers to pay inflated prices for authorized repairs, consumers suffer. Likewise, when consumers buy products burdened by unknown repair restrictions, they are injured. We know that easily repairable products are worth more than restricted ones. So consumers are paying an unfair price premium when they unknowingly buy those products.

Device makers argue that their design choices and repair-restrictive policies provide a host of supposed benefits—greater reliability, safety, and security among them. Those benefits are specious, at best. The FTC considered and rejected them in its 2021 report.⁶² But even if there is some as-yet-uncovered upside to repair restrictions, the practice of failing to make consumers aware of them at or before the point of purchase offers no plausible countervailing benefit.

Nor are these harms reasonably avoidable. Once a device is purchased, consumers are forced to live with the consequences of repair restrictions. Even before a purchase is made, consumers often enjoy limited choice because of market concentration and the considerable lock-in effects that characterize consumer electronics markets. Perhaps most importantly, consumers cannot be expected to independently research, evaluate, and compare the reparability of each product they consider buying. In much the same way we do not expect every homeowner to test the r-value of competing insulation brands or every shopper to test the snacks at the grocery store for artificial flavors, we should

60. Even putting that evidence aside, courts presume materiality for claims or omissions that relate to the cost and performance of a product. *See* Fed. Trade Comm'n, FTC Policy Statement on Deception, Opinion Letter (Oct. 14, 1983).

61. *See* Fed. Trade Comm'n, FTC Policy Statement on Unfairness, Opinion Letter (1980).

62. FED. TRADE COMM'N, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS (2021), https://www.ftc.gov/system/files/documents/reports/nixing-fix-ftc-report-congress-repair-restrictions/nixing_the_fix_report_final_5521_630pm-508_002.pdf.

not expect consumers to figure out, on their own, how hard it will be to fix their new smartphone. Repair restrictions of various sorts are likely unfair, and even if they are not, the failure to disclose them is.

A rule requiring manufacturers to provide information about the reparability of their products could take at least two basic forms. First, it might identify a handful of discrete product characteristics or firm policies restricting repair that must be disclosed to consumers. For example, a product with a glued-in battery might trigger a disclosure obligation, as might a product for which key replacement parts aren't made available directly to consumers. Much like artificial colors and flavors in foods, products that include these troubling features would need to prominently disclose them. If a product avoids these pitfalls, manufacturers would be free to stay silent, but could also voluntarily tout their absence. For products that run afoul of multiple reparability standards, we might imagine a matrix of disclosures, noting the variety of ways in which a product is hostile to repair.

Although this approach would be an improvement over the current state of affairs, it runs into some of the problems that can hamper the effectiveness of disclosure regimes. Generally speaking, the longer and more complicated disclosures are, the less impact they have on consumer behavior.⁶³ We have all encountered voluminous license terms, privacy policies, and terms of service that bury important information in a wall of text. Most of us react the same way. Our eyes glaze over, and we click "Accept." Device makers might respond to an obligation to disclose discrete facts about reparability in a similar way, by designing technically compliant notices that minimize their impact. Beyond that concern, reparability criteria are not typically binary. For any particular product, the ease of disassembly, the availability of parts, and the provision of documentation all fall along a spectrum. That range of conditions does not lend itself to a straightforward yes-or-no determination in the way that the presence of artificial flavors or fur do. Finally, a system that results in an inconsistent assortment of disclosures across products—a few with none, some with one, and most with several—could frustrate comparison shopping,

63. Mandated disclosure is seen in some corners as a failed approach. *See generally* Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Discourse*, 159 U. PA. L. REV. 647, (2011). The number, length, and complexity of some disclosures—terms of service, privacy policies, and credit disclosures among them—undermine the central goal of disclosure regimes. *Id.* But when disclosures are simple, easy to understand, and well-timed, they can have a significant impact on consumer understanding and behavior. *See* Aaron Perzanowski & Chris J. Hoofnagle, *What We Buy When We Buy Now*, 165 U. PA. L. REV. 315, 359 (2017); *see also* Omri Ben-Shahar & Adam S. Chilton, *Simplification of Privacy Disclosures: An Experimental Test* 25 (Univ. Chi. Coase-Sandor Inst. Law & Econ., Research Paper No. 737, 2016), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2711474.

leaving consumers to puzzle over the ultimate question of reparability and undermining the incentives for bringing more repairable products to market.

A repair score along the lines of the French index would avoid these difficulties. It would present consumers with a simple, easy to understand metric. A color-coded score on a 1–10 scale immediately conveys information in an easily digestible and memorable way. The challenging work of evaluating and weighing various product characteristics is done at the front end by the designers of the scoring metric rather than foisting that obligation consumers. For those who want to dig deeper into the constituent components of a product's score, they certainly can. But the rule would not require it. Although it simplifies the process from the consumer perspective, a score allows for more nuance below its surface. Rather than stark binary choices between compliance and non-compliance, a scoring system can recognize finer gradations across a range of product attributes. By offering simple, understandable metrics that are more sensitive to the full spectrum of repair restrictions, repair scores are ultimately more likely to help consumers meaningfully compare products on the basis of reparability.

V. MANDATED REPAIR SCORES & THE FIRST AMENDMENT

Device makers would likely object that mandatory repair disclosures violate their First Amendment rights to describe and market their products as they see fit. Recent years have seen a number of challenges—occasionally successful—to regulations that compel commercial speech. Disclosure rules around country-of-origin labeling,⁶⁴ cigarette warnings,⁶⁵ cellular phone radiation,⁶⁶ abortion and crisis pregnancy services,⁶⁷ and conflict minerals⁶⁸ have all come under fire as potential violations of the First Amendment. But for the reasons outlined below, a repair score mandate is very likely to survive such a challenge.⁶⁹

64. *Am. Meat Inst. v. U.S. Dep't of Agric.*, 760 F.3d 18 (D.C. Cir. 2014).

65. *R.J. Reynolds Tobacco Co. v. FDA*, 696 F.3d 1205 (D.C. Cir. 2012).

66. *CTIA - The Wireless Ass'n v. City of Berkeley*, 928 F.3d 832 (9th Cir. 2019).

67. *Nat'l Inst. of Fam. & Life Advocs. v. Becerra*, 138 S. Ct. 2361, 2366 (2018).

68. *Nat'l Ass'n of Mfrs. v. SEC*, 800 F.3d 518 (D.C. Cir. 2015).

69. This conclusion assumes the Court continues to adhere to precedent in this space. Given its tendency set aside settled law when it suits the Justice's ideological aims and policy preferences, that is far from a guarantee. *See, e.g.*, *Janus v. Am. Fed'n of State, Cnty., & Municipal Emps., Council 31*, 138 S. Ct. 2448 (2018).

Compelled speech is constitutionally suspect.⁷⁰ Courts, however, have typically adopted a more forgiving approach to compelled commercial speech, such as product labeling requirements. The rule that emerged has its origins in *Zauderer*, a case that considered allegedly deceptive newspapers advertisements placed by an Ohio attorney.⁷¹ In particular, the state Disciplinary Counsel contended the ads were misleading because they promoted a contingency fee arrangement without disclosing that the client may still be liable for costs, even if they owed no fees.⁷² The Court reasoned that the primary value of commercial speech, and by extension, the rationale for its constitutional protection is its informational value to consumers.⁷³ As a result, an advertiser's interest in withholding factually accurate information is minimal.⁷⁴ Under *Zauderer*, compelled commercial speech is permitted if it is: (1) purely factual, (2) uncontroversial, (3) related to a substantial government interest, and (4) not unreasonably burdensome. Applying those elements, repair scores and related disclosures would appear to stand on solid constitutional footing.

The information provided to consumers is purely factual, derived directly from the attributes of the product or the manufacturer's practices. Mandatory disclosure regimes face difficulty on the "purely factual" prong of the *Zauderer* test when the court believes—correctly or not—that the required disclosure is itself inaccurate or misleading.⁷⁵ Some regulations have also met with resistance when the disclosures are understood to make emotional rather than factual appeals to consumers, as was the case with graphic imagery used to warn smokers of the dangers of cigarettes.⁷⁶

Similarly, in 2012 the SEC adopted a rule requiring companies to issue reports identifying products that were not "conflict free"—that is, products that contain metals like tantalum, tin, tungsten, and gold originating in the Democratic Republic of the Congo and neighboring countries, where their sale is used to fund armed conflict.⁷⁷ The National Association of Manufacturers sued.⁷⁸ The D.C. Circuit held that the required disclosure was not purely factual because the "not conflict free" designation was "a metaphor that conveys

70. *See, e.g.*, *West Virginia State Bd. of Educ. v. Barnette*, 319 U.S. 624 (1943); *Wooley v. Maynard*, 430 U.S. 705 (1977).

71. *Zauderer v. Off. of Disciplinary Couns.*, 471 U.S. 626, 650 (1985).

72. *Id.* at 634–35.

73. *Id.* at 651.

74. *Id.*

75. *See, e.g.*, *Am. Beverage Ass'n v. City & Cnty. of S.F.*, 916 F.3d 749, 766 (9th Cir. 2019).

76. *R.J. Reynolds Tobacco Co. v. Food & Drug Admin.*, 696 F.3d 1205, 1216 (D.C. Cir. 2012).

77. *Conflict Minerals*, 77 Fed. Reg. 56, 274, 56,277–56,278 (Sept. 12, 2012).

78. *See Nat'l Ass'n of Mfrs. v. Sec. & Exch. Comm'n*, 800 F.3d 518 (D.C. Cir. 2015).

moral responsibility.”⁷⁹ As the court understood it, the regulation “requires an issuer to tell consumers that its products are ethically tainted [and] compel[s] an issuer to confess blood on its hands.”⁸⁰

In contrast, repair disclosures make no explicit moral judgments. They report—either through factual statements about product design and company policy, or through a transparent scoring rubric—how easily a device can be repaired. While some consumers might draw conclusions about the environmental impact of products on the basis of this information, nothing about the disclosure itself or its presentation casts blame at the feet of device makers.

Even though they are an encapsulation of a variety of distinct product characteristics, repair scores are purely factual. In much the same way that fuel economy ratings are designed to give drivers an estimate of real-world efficiency and a basis for comparisons between models, repair scores offer consumers a single metric by which they can compare devices and predict the difficulty of repairing the range of issues they might face.⁸¹ In that sense, a repair score is no less factual than the EPA miles-per-gallon disclosure.

For some courts, the requirement that the information disclosed be uncontroversial is a natural extension of its factual nature. When a wireless industry trade group sued the City of Berkeley over its mandatory disclosures of radio-frequency radiation from cell phones, for example, the Ninth Circuit rejected the argument that the information was controversial because, according to the court, the disclosure was “factual and not misleading.”⁸² But courts have been far from consistent in their treatment of the controversiality element. Some have determined that *Zauderer’s* reference to “purely factual and uncontroversial” disclosures was simply a description of the information at issue in that case rather than a generalizable legal standard.⁸³ Others have expressed frustration with the uncertainty surrounding the definition of “uncontroversial.”⁸⁴

79. *Id.* at 530 (quoting Nat’l Ass’n of Mfrs. v. Sec. & Exch. Comm’n, 748 F.3d 359, 371 (D.C. Cir. 2014)).

80. *Id.*

81. *See* 71 Fed. Reg. 77,872, 77,881–88 (Dec. 27, 2006).

82. *CTIA - The Wireless Ass’n v. City of Berkeley, California*, 928 F.3d 832, 848 (9th Cir. 2019).

83. *See Disc. Tobacco City & Lottery, Inc. v. United States*, 674 F.3d 509, 559 n.8 (6th Cir. 2012) (noting “that language instead merely describes the disclosure the Court faced in that specific instance”).

84. *See Am. Meat Inst. v. U.S. Dep’t of Agric.*, 760 F.3d 18, 34 (D.C. Cir. 2014) (Kavanaugh, J., concurring) (noting that “it is unclear how we should assess and what we should examine to determine whether a mandatory disclosure is controversial”); *Kimberly-*

The D.C. Circuit treats the factual and uncontroversial elements as distinct inquiries.⁸⁵ Controversiality, as that court understands it, requires something beyond a disagreement about the factual accuracy of the disclosure.⁸⁶ It has also made clear that a manufacturer's reluctance to disclose information is not enough to create a controversy.⁸⁷ But the cases suggest some circumstances under which an otherwise factual disclosure may be controversial. If it is inflammatory or designed to provoke emotional response, it may be controversial.⁸⁸ Likewise, disclosures that suggest a product or producer is ethically tainted may create controversy.⁸⁹ More generally, disclosures that express matters of opinion could be deemed controversial.⁹⁰

Unfortunately, the Supreme Court's most recent application of the "noncontroversial" criterion sheds little light on the question.⁹¹ In *National Institute of Family and Life Advocates v. Becerra*, the Court held that *Zauderer* was inapplicable to a California law requiring crisis pregnancy centers to inform patrons of state-sponsored services, including abortions.⁹² With barely a hint of analysis, the Court decided the disclosures were "anything but" uncontroversial.⁹³ The legal and moral status of abortion may well be topics of heated debate, but the question under *Zauderer* ought to focus on whether the factual content of the disclosure, not the services the disclosure references, is controversial.⁹⁴ Outside of the abortion context, which occupies a unique place in the current Court's worldview, its cursory classification of California's factual disclosures tells us little about how to evaluate future regulations.

Paralleling the discussion of the factual nature of repair disclosures above, there is little reason to believe discrete factual disclosures or repair scores are controversial. They are not inflammatory or emotionally provocative,⁹⁵ nor do

Clark Corp. v. District of Columbia, 286 F.Supp. 3d 128, 140 (D.D.C. 2017) ("So what does it mean for a disclosure to be 'purely factual and uncontroversial'? Nobody knows exactly.").

85. *Nat'l Ass'n of Mfrs.*, 800 F.3d at 528.

86. *Id.* (quoting *Am. Meat Inst.*, 760 F.3d at 27).

87. *Am. Meat Inst.*, 760 F.3d at 27.

88. *R.J. Reynolds Tobacco, Co. v. Food & Drug Admin.*, 696 F.3d 1205, 1216–17 (D.C. Cir. 2012).

89. *Nat'l Ass'n of Mfrs.*, 800 F.3d at 530.

90. *Kimberly-Clark Corp. v. District of Columbia*, 286 F.Supp. 3d 128, 141 (D.D.C. 2017) (quoting *Zauderer v. Off. of Disciplinary Couns.*, 471 U.S. 626, 651 (1985)).

91. For a thorough effort to make sense of the Court's treatment of controversy, see Seana Valentine Shiffrin, *Compelled Speech and the Irrelevance of Controversy*, 47 PEPP. L. REV. 731 (2020).

92. *Nat'l Inst. of Fam. & Life Advocs. v. Becerra*, 138 S. Ct. 2361, 2366 (2018).

93. *Id.*

94. *Id.* at 2388 (Breyer, J., dissenting).

95. There is good reason to be skeptical of treating disclosures with emotional resonance or appeal as outside the scope of *Zauderer*. As Rebecca Tushnet has argued, when we convey

they assign moral culpability. And they do not, it goes without saying, address abortion. Manufacturers might plausibly argue that repair scores are a matter of opinion. But again, much like EPA fuel-efficiency ratings or r-values for home insulation, repair scores reflect a calculation of factual product attributes using a publicly available set of standards and metrics. They are not subjective expressions of taste or preference.

Even if disclosures are factual and noncontroversial, the government has to articulate a substantial interest to justify compelled commercial speech.⁹⁶ Courts have long recognized preventing consumer confusion and deception as substantial interests sufficient to support mandatory disclosures.⁹⁷ As detailed above, there is good evidence that manufacturers have engaged in misleading statements and omissions when it comes to reparability. Even short of deception, improving the amount and quality of material information in the marketplace, protecting consumers from unexpected costs, and reducing environmental harm are all significant interests that could be furthered by reparability disclosures.

Finally, *Zauderer* requires the government to show that its required disclosures are not unduly burdensome.⁹⁸ So long as the regulation is reasonably related to the state's interest in preventing deception or promoting more informed decision-making, clearing this hurdle is straightforward.⁹⁹ In some cases, courts have found burdens unreasonable when they interfere with commercial actors' own speech or otherwise overwhelm product packaging and advertising.¹⁰⁰ A repair score that dominated packaging or advertising

information, we commonly provoke emotional reactions. *See* Rebecca Tushnet, *More than a Feeling: Emotion and the First Amendment*, 127 HARV. L. REV. 2392, 2422-23 (2014).

96. *Zauderer v. Off. of Disciplinary Couns.*, 471 U.S. 626 (1985).

97. *Id.*; *Milavetz, Gallop & Milavetz, P.A. v. United States*, 559 U.S. 229, 229 (2010).

98. *Zauderer*, 471 U.S. at 651.

99. *See* *Grocery Mfrs. Ass'n v. Sorrell*, 102 F. Supp. 3d 583, 626 (D. Vt. 2015) (citing *Zauderer*, 471 U.S. at 651, 105 S.Ct. 2265; *N.Y. State Rest. Ass'n v. N.Y.C. Bd. of Health*, 556 F.3d 114, 134 (2d Cir. 2009)).

100. *See, e.g., Ibanez v. Fla. Dep't of Bus. & Prof'l Regul.*, 512 U.S. 136, 146-47 (1994) (finding an undue burden where a disclaimer requirement was so lengthy that it "effectively rule[d] out" the ability to use a "specialist" designation on business cards and letterhead); *see also Int'l Dairy Foods Ass'n v. Boggs*, 622 F.3d 628, 649 (6th Cir. 2010) (suggesting that a contiguity requirement for a disclaimer related to the use of artificial hormones on dairy products created an undue burden by limiting producers' ability to convey their own message); *Dwyer v. Cappell*, 762 F.3d 275, 284 (3d Cir. 2014) (finding a regulation that "effectively rules out" the ability to advertise using an accurately quoted judicial statement was an undue burden); *Pub. Citizen, Inc. v. La. Att'y Disciplinary Bd.*, 632 F.3d 212, 229 (5th Cir. 2011) (holding that the combination of "font size, speed of speech, and spoken/written requirements" effectively ruled out certain forms of television, radio, and print advertisements); *Ent. Software Ass'n v. Blagojevich*, 469 F.3d 641, 653 (7th Cir. 2006) (finding

could present an undue burden. But assuming a reasonable implementation in line with the French approach, there's little likelihood of a court deeming the burden on manufacturers too heavy. Device makers may argue that the calculation of the score itself is an undue burden but given their ready access to the information at issue and the relatively straightforward calculations a repair score entails, courts are unlikely to be sympathetic to this claim.

Some courts and commentators have characterized *Zauderer* as merely a particular articulation of the intermediate scrutiny test for commercial speech outlined in *Central Hudson*,¹⁰¹ rather than a distinct and more forgiving standard uniquely applicable to compelled commercial speech.¹⁰² Even assuming intermediate scrutiny applies, repair scores and related disclosures are still likely in the clear.

The *Central Hudson* test considers whether: (1) the speech concerns lawful activity and is not misleading; (2) the asserted government interest is substantial; 3) the regulation directly advances that interest; and (4) the regulation is no more extensive than necessary.¹⁰³ Assuming the speech in question is neither false nor misleading, the Court would then consider government interest at stake in the regulation. As described above, the interest in correcting deceptive or misleading statements and omissions regarding repair is a substantial interest, as is ensuring consumers have access to material information that can help them avoid unforeseen financial costs.¹⁰⁴ *Central Hudson* itself found energy conservation a substantial interest, which suggests reparability disclosures could be justified on environmental grounds as well.¹⁰⁵ With respect to reparability disclosures, there is considerable evidence that consumers incorrectly believe their devices can be repaired as they see fit, that those misconceptions affect their purchasing choices, and that the lack of

an undue burden where retailers were required to install three large signs in small retail locations).

101. *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of N.Y.*, 447 U.S. 557 (1980).

102. *Disc. Tobacco City & Lottery, Inc. v. United States*, 674 F.3d 509, 555 (6th Cir. 2012) (“The precise language *Zauderer* used in setting forth the *Central Hudson* test is slightly different than the language in *Central Hudson*, but the import is the same.”). *Am. Meat Inst. v. U.S. Dep’t of Agric.*, 760 F.3d 18, 27–28 (D.C. Cir. 2014) (Kavanaugh, J., concurring) (arguing that “*Zauderer* is best read simply as an application of *Central Hudson*, not a different test altogether”); see also Jonathan H. Adler, *Compelled Commercial Speech and the Consumer “Right to Know”*, 58 ARIZ. L. REV. 421, 436 (2016).

103. *Cent. Hudson Gas & Elec. Corp.*, 447 U.S. at 566.

104. See *supra* text accompanying note 95; see also *BellSouth Telecomms., Inc. v. Farris*, 542 F.3d 499, 507 (6th Cir. 2008); *United States v. Wenger*, 427 F.3d 840, 850 (10th Cir. 2005); Adler, *supra* note 102, at 440 (arguing that informing consumers about the costs of owning and operating products constitutes a substantial government interest).

105. *Cent. Hudson Gas & Elec. Corp.*, 447 U.S. at 568.

reparability harms their economic interests. Evidence of environmental harm flowing from repair restrictions is readily available.¹⁰⁶ In addition, the government must show that the regulation will materially alleviate the identified harms.¹⁰⁷ Again, the evidence outlined above strongly suggests that clear disclosures can help address each of these problems.

Finally, under *Central Hudson* the regulation must be no more extensive than is necessary. While this is a somewhat more stringent standard than *Zauderer*'s "unduly burdensome" standard, it does not demand that the government adopt the least restrictive means.¹⁰⁸ Instead, *Central Hudson* "requires a reasonable fit between the legislature's ends and the means chosen to accomplish those ends, . . . a means narrowly tailored to achieve the desired objective."¹⁰⁹ Unlike a prohibition on advertising tobacco products within 1000 feet of a school or playground, a regulation requiring disclosure of reparability information would be narrowly tailored.¹¹⁰ It would present information to consumers in the market for particular products at the time and place those facts are most relevant—at the point of purchase, on the company's website, or in its advertisements. A repair index would not prevent Apple or John Deere from marketing their products. It would not force them to foot the bill for a public education campaign about the importance of repair. And it would not force them to redesign their products or change their restrictive policies. It would simply help their customers better understand the terms of the deals they offer. Mandatory disclosures in this context are among the lightest regulatory touches we can expect to have a meaningful impact and hardly the sort of excessive intervention that runs afoul of *Central Hudson*'s fourth prong.¹¹¹

In the end, whether analyzed as compelled commercial speech under *Zauderer* or under the more rigorous *Central Hudson* approach, mandated disclosure of reparability information is fully consistent with the First Amendment.

Greater transparency about reparability is essential if we expect markets for consumer goods from cars to smartphones to function efficiently. Consumers want to know more about the difficulty of repairing products and

106. See PERZANOWSKI, *supra* note 1.

107. *Edenfield v. Fane*, 507 U.S. 761, 771 (1993).

108. See, e.g., *Bd. of Trustees of State Univ. of N.Y. v. Fox*, 492 U.S. 469, 480 (1989).

109. *Lorillard Tobacco Co. v. Reilly*, 533 U.S. 525, 555 (quotations omitted).

110. *Id.*

111. *Bd. of Trustees of State Univ. of New York v. Fox*, 492 U.S. 469, 479 (1989) (noting "almost all of the restrictions disallowed under *Central Hudson*'s fourth prong have been substantially excessive, disregarding 'far less restrictive and more precise means'" (quoting *Shapero v. Ky. Bar Ass'n*, 486 U.S. 466, 476 (1988))).

are prepared to send strong market signals through shifts in their behavior. Regulation can empower them to take greater control of their relationships with device repair. But as necessary and valuable as repair scores are, disclosures alone cannot solve all of the challenges created by device makers' restrictions on repair. There is a range of promising interventions beyond disclosure: more aggressive interpretation and enforcement of antitrust law and competition policy,¹¹² limiting the subject matter and scope of intellectual property rights,¹¹³ and enacting targeted state and federal legislation.¹¹⁴ But some practices may require more direct intervention to eliminate inherently unfair practices. Because of market concentration and high degrees of consumer lock-in, a heavier regulatory hand might be necessary to prohibit some of the more egregious repair restrictions. Part pairing and serialization—the technique of tying individual parts to devices so that equivalent replacements produced by the original manufacturer will not function—is one. Manufacturing devices without replaceable batteries is another. And device makers' refusal to sell design patented and other repair parts is yet a third.¹¹⁵ While these calls for more aggressive regulation of repair restrictions are unlikely to be embraced anytime soon, mandatory repair scoring would be an important first step towards restoring consumer control over the things they own.

112. See Carrier, *supra* note 58; PERZANOWSKI, *supra* note 1.

113. PERZANOWSKI, *supra* note 1.

114. See H.R. 3664, 117th Cong. (2022); S. 3549, 117th Cong. (2022); H.R. 4006, 117th Cong. (2022); H.R. 6566, 117th Cong. (2022); H.R. 6570, 117th Cong. (2022); Nathan Proctor, *Half of U.S. states looking to give Americans the Right to Repair*, PIRG (Mar. 10, 2021), <https://uspirg.org/blogs/blog/usp/half-us-states-looking-give-americans-right-repair>.

115. See Joshua D. Sarnoff, *How the FTC Could, but Won't, Use Its Rulemaking Authority to Allow Aftermarket Parts*, TRUTH ON MKT. (May 10, 2022), <https://truthonthemarket.com/2022/05/10/how-the-ftc-could-but-wont-use-its-rulemaking-authority-to-allow-aftermarket-parts>.

HOW THE FEDERAL TRADE COMMISSION CAN USE SECTION 5 TO STRENGTHEN THE RIGHT TO REPAIR

Michael A. Carrier[†]

ABSTRACT

Consumers' right to repair their products is under attack. Manufacturers have decimated this long-held right by making parts unavailable, preventing products from working, and imposing software restrictions. Farmers can no longer repair tractors, medical professionals can't fix ventilators, and military officers are stuck with broken equipment. Although competition law would seem to be a natural fit to address this conduct, antitrust law has erected very high hurdles, especially on "*Kodak*" claims involving "aftermarket" service and parts.

This article offers a framework for the Federal Trade Commission (FTC) to challenge this behavior as an "unfair method of competition" under Section 5 of the FTC Act. While such an approach could be applied without limits, I propose modestly extending *Kodak* in a predictable manner consistent with the decision's rationale.

In particular, my application builds on the "gap filler" rationale introduced by Susan Creighton and Thomas Krattenmaker that applies when an element of an antitrust claim is not satisfied. I argue that courts' unwillingness to find market power is addressed by practical indicators like multiple manufacturers' restrictive terms, users' lack of knowledge, and time-sensitive uses, each of which has dramatically increased in the 30 years since *Kodak*.

A competition cause of action is needed because the harms suffered are as severe as any that have appeared in antitrust cases: a loss of lives in hospitals and on battlefields, and a loss of livelihoods for farmers unable to harvest crops. Such a case is buttressed by a lack of procompetitive justifications. Comprehensive inquiries by the FTC and U.S. Food and Drug Administration (FDA) have cast doubt on manufacturers' safety-based rationale. And Section 5's consideration of policy shows how their other primary justification—IP—is not convincing. In particular, an analysis of design patents, trade secrets, trademarks, and copyrights (including the DMCA) reveals how the incentives/access tradeoff strongly supports the latter.

Finally, my framework promises to bridge the divide between "neo-Brandeisians" and other antitrust scholars, as consumer interests overlap with those of workers, user innovators, and independent repair shops. Given repair restrictions' questionable justifications and severe effects on lives and livelihoods, a competition-based tool promises real benefits.

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† Distinguished Professor, Rutgers Law School. I would like to thank Sarah Burstein, Steve Calkins, Stacey Dogan, Bert Foer, Laura Heymann, Leah Chan Grinvald, Herb Hovenkamp, Bob Lande, Mark Lemley, Mark McKenna, Doug Melamed, Aaron Perzanowski, Michael Risch, Pamela Samuelson, Sharon Sandeen, Josh Sarnoff, Ofer Tur-Sinai, and Rebecca Tushnet for helpful comments.

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I. INTRODUCTION

The right to repair products is critical in today’s society. Users need to fix tractors, ventilators, military equipment, and technological devices. With increasing frequency, however, they are not able to do so. Manufacturers have made it extremely difficult to repair products. They have made parts unavailable, prevented products from working, limited access to service

manuals, and relied on intellectual property (IP), software restrictions, and licenses.¹

There are many ways to address this problem. IP law allows defenses based on exhaustion, functionality, and reverse engineering. Anti-tying law prohibits manufacturers from conditioning warranties on using their services.² Competition law would seem to offer a natural antidote since repair restrictions limit a competitive marketplace. But it has not played the robust role that it could. The reason is that the primary instrument for effectuating competition—antitrust law—has erected very high hurdles in front of plaintiffs making right-to-repair claims. The “essential facility” doctrine is moribund in the courts, refusal-to-deal caselaw is not much better, and “tying” claims must satisfy several rigorous elements.

Even worse, the most relevant doctrine has been hamstrung. In *Eastman Kodak Company v. Image Technical Services*, the Supreme Court recognized that a manufacturer of equipment in a competitive “primary” market could have monopoly power in an “aftermarket” for service and parts.³ Why? Because customers might be “locked in” to the manufacturer’s product and therefore have high switching costs, weakening the significance of the primary market.⁴ This theory could be a natural fit for claims challenging a manufacturer’s repair restrictions. But in the years since *Kodak*, courts have significantly limited the ruling, often requiring a change in the service policy after purchase.

Even though courts have restricted antitrust law’s ability to address right-to-repair claims, there should be an available competition-based claim. Into this breach steps Section 5 of the Federal Trade Commission Act, which allows the Federal Trade Commission (FTC) to challenge “unfair methods of competition.”⁵ Section 5 can reach expansively to target conduct lying outside antitrust’s scope. Although such an approach could be applied in a way that has few limits, the framework I offer is designed to modestly expand *Kodak* in a predictable manner that is consistent with the decision’s rationale.

1. FTC, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS 17–18 (May 2021).

2. Magnuson-Moss Warranty Act § 102(c) (providing exception where service provided without charge or warrantor has received waiver from Federal Trade Commission). *See, e.g., FTC Takes Action Against Harley-Davidson and Westinghouse for Illegally Restricting Customers’ Right to Repair*, FED. TRADE COMM’N (June 23, 2022), <https://www.ftc.gov/news-events/news/press-releases/2022/06/ftc-takes-action-against-harley-davidson-westinghouse-illegally-restricting-customers-right-repair-0>.

3. 504 U.S. 451, 476–77 (1992).

4. *Id.* at 476.

5. 15 U.S.C. § 45(a)(1).

In particular, my application of Section 5 builds on the “gap-filler” rationale that Susan Creighton and Thomas Krattenmaker proposed for settings in which one of the elements of an antitrust claim is not satisfied.⁶ The element I target here is market power, as courts’ unwillingness to find this factor satisfied can be addressed by practical indicators of market power based on consumers’ lack of choice. I propose five settings in which this market-power gap can be filled: (1) multiple manufacturers’ restrictive terms; (2) control over a separate level of the distribution chain; (3) users’ lack of knowledge of restrictions; (4) revealed market power over time; and (5) time-sensitive uses.

My Section 5 framework offers several benefits. First, it extends the right to repair to settings in which there is a harm to competition that today’s antitrust courts frequently do not recognize. The harms suffered by users are as severe as any that have appeared in antitrust cases: a loss of lives in hospitals and on military battlefields, and a loss of livelihoods for farmers unable to harvest crops. Given the harms already suffered and users’ practical lack of choice when confronted with repair restrictions, Section 5’s expansion to embrace the functional presence of market power offers benefits.

Second, the framework allows the FTC to consider procompetitive justifications for the restriction. Sometimes there will be justifications based on safety or IP, and the agency needs to be able to consider them.⁷ Based on the evidence gathered through the FTC’s exhaustive analysis of the issue, many of these reasons typically will not be sufficient to justify the restrictions. But at least the agency can examine them.

Finally, the proposed use of Section 5 can serve as a bridge between the “neo-Brandeisians”⁸ and other antitrust scholars. Section 5 ranges beyond antitrust in a way that can help consumers, and the limited expansion I propose here takes into account the concerns with and potential overreach of the approach. In short, the framework promises to revive competition law in a way that would help users across the economy.

II. FOUR CASE STUDIES

In the past few years, the right to repair has exploded into public consciousness. The briefest overview of the past decade includes:

6. Susan A. Creighton & Thomas G. Krattenmaker, *Appropriate Role(s) for Section 5*, 8 ANTITRUST SOURCE 1 (2009).

7. For this reason, an approach based on automatic—or “per se”—illegality would not be appropriate.

8. *See generally infra* note 290 and accompanying text.

- Massachusetts voters in 2012 supporting a right to repair for automobiles,⁹ followed by manufacturers extending the provisions to the rest of the country.¹⁰
- The FTC’s 2019 workshop¹¹ and 2021 report detailing the types of repair restrictions, addressing explanations, and offering proposals to increase consumer choice.¹²
- President Biden’s 2021 executive order to promote competition¹³ that targeted “repair markets” and called for the FTC and Defense Department to act.¹⁴
- Colorado’s enactment of right-to-repair legislation for wheelchair users¹⁵ and the New York legislature’s passage of a bill providing repair rights for electronic devices, both in June 2022.¹⁶

Four case studies reveal the uniquely anticompetitive effects of and questionable justifications for restrictions on the right to repair.

9. H.B. 4362 § 2(c)(i), 187th Leg., 2012 Reg. Sess. (Mass. 2012) (requiring manufacturers to “make available . . . all diagnostic repair tools” that they “make[] available to [their] dealers”).

10. AAI, CARE, Alliance of Automobile Manufacturers & Association of Global Automakers, MEMORANDUM OF UNDERSTANDING, <https://wanada.org/wp-content/uploads/2021/01/R2R-MOU-and-Agreement-SIGNED.pdf> (last visited Apr. 25, 2022). Legislation has been introduced to ensure that “as cars become more technologically advanced,” independent repair shops continue to have access to “[a]ll tools and equipment, wireless transmission of repair and diagnostic data, and access to on-board diagnostic and telematic systems needed to repair a vehicle.” *U.S. Rep. Bobby Rush Introduces ‘Right to Equitable and Professional Auto Industry Repair’ Act*, MOTOR, Feb. 7, 2022, <https://www.motor.com/2022/02/u-s-rep-bobby-rush-introduces-right-to-equitable-and-professional-auto-industry-repair-act/>. See also Fair Repair Act, S. 3830, 117th Cong. § 3(a)(1) (2022), <https://www.congress.gov/bill/117th-congress/senate-bill/3830/text?r=1&s=1> (giving the FTC power to treat a manufacturer’s failure to make equipment available to independent repair providers as an “unfair or deceptive act or practice”).

11. *Nixing the Fix: A Workshop on Repair Restrictions*, FED. TRADE COMM’N (July 16, 2019), <https://www.ftc.gov/news-events/events/2019/07/nixing-fix-workshop-repair-restrictions>.

12. FTC, *supra* note 1. The FTC also issued a resolution allowing, for a 10-year period, the use of compulsory process for repair restrictions. *Resolution Directing Use of Compulsory Process Regarding Repair Restrictions*, FED. TRADE COMM’N (Sept. 2, 2021), <https://perma.cc/R5VE-EWJQ>.

13. Exec. Order No. 14,036, 86 Fed. Reg. 36987 (July 9, 2021).

14. *Id.* §§ 5(h), 5(s)(iii).

15. HB22-1031, 73rd Gen. Assemb., Reg. Sess. (Colo. 2022). See *infra* note 133 and accompanying text.

16. S4104A, Reg. Sess. (N.Y. 2021). See *infra* note 116 and accompanying text.

A. FARM EQUIPMENT

Farm equipment presents the first setting. The ubiquity of software has led to dramatic changes in the industry, which are exacerbated by timing issues, dealer consolidation, and the imposition of restrictions by multiple manufacturers. These developments have resulted in John Deere's effective market power being higher than courts are likely to recognize. And these competitive concerns are accompanied by questionable justifications based on safety and copyright law.

1. *Role of software*

The casual observer would be surprised by the role software plays in farm equipment. Today's John Deere tractors "cost as much as \$800,000" and "depend on multiple electronic control units (ECUs) to operate everything from the engine to the power seat."¹⁷ As a U.S. PIRG Education Fund report concluded: "The sensors and control systems that feed this software with data have been integrated into most of the functions of modern combine harvesters, tractors, and other farm equipment."¹⁸ The problem? When "a mechanical issue engages safety or emissions control systems, or some part of those systems fail, the immobilizer is activated," which "sends the machine into 'limp mode,' which disables most of the equipment's functionality" until "it is repaired and the error codes are cleared."¹⁹

This is no infrequent occurrence. There are "as many as 125 sensors in a single combine," with "[e]ach sensor . . . connected to a controller network."²⁰ A "problem with any one of those controller networks will require diagnostic tools not available to farmers," which forces them "to either haul their machine into the nearest dealership or wait for a field technician to arrive to complete the repair."²¹ These "sensors and their associated controller networks are now the highest point of failure on the product."²² Confirming this point, "[o]f the roughly 700 error codes" listed in the Diagnosis and Tests Service Manual for several Deere tractors, "89% state that the farmer should contact their John

17. AARON PERZANOWSKI, *THE RIGHT TO REPAIR: RECLAIMING THE THINGS WE OWN* 9 (2022).

18. KEVIN O'REILLY, U.S. PIRG EDUCATION FUND, *DEERE IN THE HEADLIGHTS* 5 (2021), https://uspirg.org/sites/pirg/files/reports/DeereInTheHeadlights/WEB_USP_Deere-in-the-Headlights_V3.pdf.

19. *Id.*

20. *Id.* at 6.

21. *Id.*

22. *Id.*

Deere Dealer with little to no other guidance on how the farmer can fix their equipment.”²³

The hurdles facing farmers are multi-layered. One is copyright law. In particular, the Digital Millennium Copyright Act (DMCA) punishes conduct that circumvents technological protection measures (TPMs) controlling access to copyrighted works, which include the software in tractors.²⁴ The DMCA created a “triennial exemption process” that allows the Librarian of Copyrights to grant exemptions every three years for certain classes of works.²⁵ Since 2015, there has been an exemption for motorized land vehicles, which includes tractors. In 2021, this exemption covered “[c]omputer programs that are contained in and control the functioning of a lawfully acquired motorized land vehicle . . . such as a . . . mechanized agricultural vehicle . . . when circumvention is a necessary step to allow the diagnosis, repair, or lawful modification of [a] vehicle function.”²⁶

Although this exemption is helpful for users able to circumvent the TPMs, it does not cover the trafficking of such tools, which prevents those not handy enough to fix the products themselves from benefiting from the exemption.²⁷ In addition, any solace provided by the exemption quickly dissipated. Just after it was first granted in 2015, Deere “started requiring farmers to sign licensing agreements.”²⁸ These licenses prohibit users from “exercis[ing] their repair rights or . . . even look[ing] at the software running the tractor.”²⁹ They cover “[s]oftware, data files, documentation, engine calibration tables, proprietary data messages, and controller area network . . . data messages that are in or communicated to or from any [licensed product]”³⁰ even though “[m]any of these items are numerical values that do not contain any copyrightable expression.”³¹ The licenses require users to agree that the licensed material is

23. KEVIN O'REILLY, U.S. PIRG EDUCATION FUND, *DEERE IN THE HEADLIGHTS II* 5 (2022), <https://uspirg.org/feature/usp/deere-headlights-ii>.

24. 17 U.S.C. § 1201(a). The DMCA also applies to the software in ventilators, military equipment, and technology discussed elsewhere in this Article.

25. 17 U.S.C. § 1201(a)(1)(B).

26. 37 C.F.R. § 201.40(b)(13) (2021).

27. 17 U.S.C. § 1201(a)(1)(B).

28. Jason Koebler, *Why American Farmers Are Hacking Their Tractor With Ukrainian Firmware*, VICE (Mar. 21, 2017, 1:17 PM), <https://www.vice.com/en/article/xykkkd/why-american-farmers-are-hacking-their-tractors-with-ukrainian-firmware>.

29. Kit Walsh, *John Deere Really Doesn't Want You to Own That Tractor*, EFF (Dec. 20, 2016), <https://www.eff.org/deeplinks/2016/12/john-deere-really-doesnt-want-you-own-tractor>.

30. License Agreement for John Deere Embedded Software ¶ 1, https://www.deere.com/assets/pdfs/common/privacy-and-data/docs/agreement_pdfs/english/2016-10-28-Embedded-Software-EULA.pdf [hereinafter License Agreement].

31. Walsh, *supra* note 29.

“protected under copyright law, trade secret law, and laws governing confidential information”³² and that they will not “‘modify,’ ‘reverse engineer,’ or ‘reproduce’ the covered information” even though these are “necessary steps to understanding, repairing, and improving [the] equipment.”³³

An additional hurdle comes from “[m]odifications and troubleshooting [that] requires diagnostic software that farmers can’t have,” with “[e]ven . . . farmer[s who] manage[] to get the right software . . . sometimes [needing] a factory password.”³⁴ Nor does Deere make it easy, as shown by the example of U.S. PIRG’s Kevin O’Reilly calling twelve Deere dealers, “asking to try to buy the software tools and diagnostics . . . need[ed] to fix [the] tractor,” being told by eleven of the twelve that he “couldn’t buy them” (sometimes hearing “they didn’t even exist”), and receiving from the twelfth “an email address to reach out to, which [he] never heard back from.”³⁵ Adding insult to injury, Deere withholds information about common failures and recalls from equipment owners.³⁶ In short, the widespread array of overlapping limitations ties the hands of farmers with broken equipment.

2. *Importance of timing*

These restrictions’ significant effects are exacerbated given the sensitivity of timing. The finite duration of harvesting seasons and idiosyncrasies of weather raise the stakes for *each day* farmers are not able to use their equipment. A few examples demonstrate this harm:

- A California farmer with a faulty tractor “ha[d] to take it to an authorized John Deere dealer—the closest one [wa]s about 40 miles away—or a John Deere rep ha[d] to come visit him,” which led to him “wait[ing] a day,” which presented a problem given that “in farming

32. License Agreement, *supra* note 30, ¶ 1.

33. Walsh, *supra* note 29. *See generally* Koebler, *supra* note 28 (explaining that “only John Deere dealerships and ‘authorized’ repair shops can work on newer tractors”).

34. Kyle Wiens, *New High-Tech Farm Equipment Is a Nightmare for Farmers*, WIRED (Feb. 5, 2015, 7:00 AM), <https://www.wired.com/2015/02/new-high-tech-farm-equipment-nightmare-farmers/>.

35. Uri Berliner, *Standoff Between Farmers And Tractor Makers Intensifies Over Repair Issues*, NPR (May 26, 2021, 7:19 AM), <https://www.npr.org/2021/05/26/1000400896/standoff-between-farmers-and-tractor-makers-intensifies-over-repair-issues>.

36. O’REILLY, *supra* note 23, at 13. For these reasons, farm-equipment dealers’ agreement with California farmers to provide “access to service manuals, product guides, on-board diagnostics, and other information that would help a farmer or rancher to identify or repair problems with the machinery” is not complete “without access to parts and diagnostic software.” Kyle Wiens & Elizabeth Chamberlain, *John Deere Just Swindled Farmers out of Their Right to Repair*, WIRED (Sept. 19, 2018, 1:12 PM), <https://perma.cc/K49D-P9BW>.

timing is everything”: “[w]hen the soil is soft enough to till you have to go[, and] when the crop is ripe you have to pick it.”³⁷

- The “unpredictable weather in southern Minnesota means that spring planting season is brief and often frantic, sometimes requiring 24-hour shifts if the weather requires it,” which means that “[f]armers who want to get their crops in the ground can’t afford to waste an hour.”³⁸
- A Kansas farmer with “a blown mechanical valve” that he “could have repaired himself” lost “\$30,000-\$60,000” after his tractor sat at the dealership, “full of fertilizer, for 32 days” despite his “call[ing] daily for progress updates and visit[ing] with the dealership manager in-person twice.”³⁹
- A Nebraska farmer “lost half a day of harvesting corn while waiting for mechanics to drive 65 miles to his farm to reset the software” on his combine, with the wait “contribut[ing] to a loss of at least 15% of the crop.”⁴⁰

37. Laura Sydell, *DIY Tractor Repair Runs Afoul of Copyright Law*, NPR (Aug. 17, 2015, 4:20 PM), <https://www.npr.org/sections/alltechconsidered/2015/08/17/432601480/diy-tractor-repair-runs-afoul-of-copyright-law>. See also O'REILLY, *supra* note 23, at 19 (a Minnesota farmer “who had to wait more than two weeks for a fix due to repair restrictions described the experience as being ‘stressful because cutting and baling small squares of hay is extremely weather dependent’”); Jason Koebler, *Tractor-Hacking Farmers Are Leading a Revolt Against Big Tech’s Repair Monopolies*, VICE (Feb. 14, 2018, 11:31 AM), <https://www.vice.com/en/article/kzp7ny/tractor-hacking-right-to-repair> (noting that even minor repairs will be costly, as hauling the equipment results in “\$2,000 [for] getting something minor fixed,” which presents a challenge since “[y]ou have a real small window to get [a harvest] done in the year”); Jesse Hirsch, *Broad agriculture coalition files federal complaint against John Deere, demanding the right to repair their own tractors*, COUNTER (Mar. 4, 2022, 4:28 PM), <https://thecounter.org/john-deere-tractors-federal-complaint-right-to-repair-ftc/> (a Missouri farmer explained that “[i]f a piece of my equipment breaks down during planting season, time is a luxury I don’t have,” with “[m]y only purpose in life . . . to get it working again as soon as I can”).

38. Adam Minter, *U.S. Farmers Are Being Bled by the Tractor Monopoly*, BLOOMBERG (Apr. 23, 2019, 5:00 AM), <https://www.bloomberg.com/opinion/articles/2019-04-23/u-s-farmers-need-a-better-way-to-fix-their-tractors>.

39. O'REILLY, *supra* note 18, at 8. See *id.* (explaining that “[t]he next closest dealership was an estimated 80 miles away,” which would require the farmer to “incur expensive hauling fees and . . . physically shovel out the fertilizer loaded in the machine to make sure it was light enough to load on the truck”).

40. Peter Waldman & Lydia Mulvany, *Farmers Fight John Deere Over Who Gets to Fix an \$800,000 Tractor*, BLOOMBERG BUSINESSWEEK (Mar. 5, 2020, 2:00 AM), <https://perma.cc/Z8JX-3DJJ>.

The inability to quickly repair equipment is frustrating for farmers, who “pride themselves” on “being able to come up with ingenious and creative solutions to the problems that come along with their profession.”⁴¹ And in fact, farmers are increasingly preferring older machines without software. A survey found that 77% “purchase older-model equipment to avoid the software in newer equipment that requires dealership fixes.”⁴² As a result, farmers are “paying unprecedented prices for older tractors . . . because they are actually fixable.”⁴³ In 1989, for example, the highest price for a thirty-year-old John Deere tractor was roughly \$7,000; by 2019, that figure had skyrocketed to \$71,000.⁴⁴

3. Deere market power

The role of software and importance of timing increase the leverage of manufacturers, in particular market leader John Deere. Deere’s market power varies among “specific product categories” as “[t]ractors, combines, and backhoes are not interchangeable products.”⁴⁵ But to pick one example, in the market for large farm tractors in 2018, John Deere had 53% market share, with most of the rest of the market taken by CNH Industrial (35%) and AGCO (7%).⁴⁶

The power that any single manufacturer has is buttressed by competitors employing similar restraints. An Illinois farmer explained that “it’s not just John Deere” but is “across the board,”⁴⁷ as “they all have the diagnostic systems you have to buy . . . or you have to pay their mechanics.”⁴⁸ And while Deere “is at the center of discussion . . . CNH Industrial and AgCo also engage in the same kind of restrictions.”⁴⁹

41. O’REILLY, *supra* note 18, at 9; *see also* Wiens, *supra* note 34 (“[I]t’s as old as dirt: farmers have been making, building, rebuilding, hacking, and tinkering with their equipment since chickens were feral.”).

42. O’REILLY, *supra* note 18, at 7.

43. *Id.* at 6–7.

44. *Id.* at 11 (figures in 2019 dollars).

45. PERZANOWSKI, *supra* note 17, at 181.

46. Jennifer Reibel, *Manufacturer Consolidation Reshaping the Farm Equipment Marketplace*, FARM EQUIPMENT (Aug. 29, 2018), <https://perma.cc/A65B-FN53>. In the market for combines (which combine several harvesting functions), Deere had 60%, followed by CNH with 30% and AGCO with 7%. *Id.*

47. Dave Byrnes, *John Deere accused of monopolizing tractor repair industry in antitrust suit*, COURTHOUSE NEWS SERV. (Jan. 12, 2022), <https://www.courthousenews.com/john-deere-accused-of-monopolizing-tractor-repair-industry-in-antitrust-suit/>.

48. *Id.*

49. Anne T. Regan, *A Closer Look at a Farmer’s Right to Repair*, HELLMUTH & JOHNSON (Aug. 5, 2021), <https://hljlawfirm.com/a-closer-look-at-a-farmers-right-to-repair/>.

This power is strengthened by dealer consolidation. 82% of John Deere’s dealerships “are a part of a large chain with seven or more locations.”⁵⁰ As a result, “some farmers only have one dealership choice near them,” which can “force them to travel long distances and cross state lines to get another quote from a dealer they might trust more.”⁵¹ For example, in Montana’s “58 million acres of farmland,” there are “only three large John Deere chains with a combined 19 locations serving Montana farms.”⁵² In addition to few choices, farmers also confront “customer service at chain dealerships [that] can be much worse than at local dealerships,” with family-owned dealerships replaced by corporate entities.⁵³

The combination of dealer consolidation and multiple manufacturers’ use of restrictions should lift John Deere’s market power above the threshold for liability.⁵⁴ As a practical matter, farmers confronting onerous restrictions imposed by Deere cannot turn elsewhere for alternatives.

4. *Unsupported excuses*

John Deere has offered safety and copyright justifications for its restrictions.⁵⁵ But these justifications are questionable.

a) Safety

First, Deere has claimed that “[s]oftware modifications increase the risk that equipment will not function as designed,” which would result in “unqualified individuals . . . hack[ing] or modify[ing] equipment software” that could “endanger Deere customers, dealers, and others” and “result in

50. O’REILLY, *supra* note 23, at 6.

51. *Id.*

52. *Id.*

53. *Id.*

54. Courts typically require at least a 70% market share for a finding of monopoly power. *E.g.*, HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE § 6.2a (6th ed. 2020).

55. The industry also raises environmental concerns, warning that “right to repair” legislation “could give third-party repair shops the ability to illegally bypass emissions standards set by the Federal Government.” *Manufacturers’ Support for Farmers’ Right to Repair*, ASSOC. EQUIP. MFRS. (June 15, 2020), <https://www.aem.org/news/report-highlights-equipment-manufacturers-support-for-farmers-right-to-repair>. But as U.S. PIRG has explained, “subverting environmental controls is illegal.” O’REILLY, *supra* note 18, at 14. In particular, no one can “remove or render inoperative any device or element of design installed on or in engines/equipment in compliance with the regulations prior to its sale and delivery to the ultimate purchaser.” 40 C.F.R. § 168.101(b)(1). *See also* Kevin O’Reilly & Nathan Proctor, *Deere shareholders: ‘It doesn’t add up’*, U.S. PIRG (Dec. 8, 2021), <https://uspig.org/blogs/blog/usp/deere-shareholders-it-doesn-t-add-up> (writing that farmers’ repair is not modification but rather “restor[es] equipment to original working order”).

equipment that no longer complies with industry and safety standards or environmental regulations.”⁵⁶ Similarly, in a comment to the Copyright Office, Deere stated that “TPMs protect access to copyrighted software code that ensures compliance with governmental rules and industry safety standards.”⁵⁷

More ominously, Deere’s chief technology officer highlighted “a 40,000-pound tractor going down the road at 20 miles an hour . . . with software on it that has been modified for steering or modified for braking” and asked: “Do you really want to expose untested, unplanned, unknown introductions of software into a product like that that’s out in the public landscape?”⁵⁸ Another senior Deere official warned that “[o]ne tweak could cascade throughout an entire software system and lead to unintended consequences.”⁵⁹ And an industry group worried that “right to repair . . . activists use hard-working farmers as pawns to advance their agenda and gain unfettered access to the embedded code in agricultur[al] equipment, which could be dangerous and harm both farmers and [the] general . . . public.”⁶⁰

These are foreboding claims. But as U.S. PIRG has explained, “[t]here is a clear difference between resetting an error code and ignoring or overriding safety codes.”⁶¹ In particular, “overriding emissions or safety controls requires modification tools, not . . . tools used for diagnosis and repair.”⁶² And “[t]o override these controls, a farmer would have to first erase the operating system present on the machine” and then “upload new, modified software that either does not have emissions and safety controls or allows a farmer to ignore them,” a path that “violates the tampering provisions” of the Code of Federal Regulations enforced by the Environmental Protection Agency (EPA).⁶³

Additional skepticism for the safety justification comes from Europe, where regulations require manufacturers to “provide ‘non-discriminatory’

56. Cory Doctorow, *John Deere: of course you ‘own’ your tractor, but only if you agree to let us rip you off*, BOINGBOING (May 13, 2015, 9:00 AM), <https://boingboing.net/2015/05/13/john-deere-of-course-you-ow.html>.

57. Darin Bartholomew, *Long Comment Regarding a Proposed Exemption Under 17 U.S.C. 1201*, 3, https://copyright.gov/1201/2015/comments-032715/class%2021/John_Deere_Class21_1201_2014.pdf; see also Dennis Slater, *Equipment manufacturers support farmers’ right to repair*, PENNLIVE (Mar. 1, 2020, 12:23 PM), <https://www.pennlive.com/opinion/2020/03/equipment-manufacturers-support-farmers-right-to-repair-pennlive-letters.html>.

58. Nilay Patel, *John Deere Turned Tractors into Computers—What’s Next?*, VERGE (June 15, 2021, 8:21 AM), <https://perma.cc/G3XJ-RLNU>.

59. Waldman & Mulvany, *supra* note 40.

60. *Manufacturers’ Support for Farmers’ Right to Repair*, *supra* note 55.

61. O’REILLY, *supra* note 18, at 17.

62. *Id.*

63. *Id.*

access to repair and maintenance information to ‘authorised dealers, repairers, and independent operators’ in a standardized format.”⁶⁴ As U.S. PIRG has observed, “[t]he fact that tractor manufacturers provide access to materials in Europe which they deny to farmers in the U.S. undermines their arguments that access to such information poses a safety or security risk.”⁶⁵

b) Copyright

As a second justification, John Deere and its representatives have argued that right-to-repair proponents are seeking “to get to the source code that operates modern tractors, forcing manufacturers to turn over their intellectual property.”⁶⁶ But as U.S. PIRG has explained, source code (the “instructions written by software engineers . . . that tell a machine what to do”) is “compiled and turned into embedded software,” an “important change” that “translates the human-legible coding language into computer-legible 1s and 0s.”⁶⁷ The weakness of Deere’s source-code justification is that “translating this information back into the source code originally written by the software engineers is essentially impossible,” which is “why Apple, HP, and others freely make embedded code available for their products in the form of firmware updates.”⁶⁸

More broadly, in a comment to the Copyright Office, Deere worried that circumventing TPMs would “make it possible for pirates, third-party software developers, and less innovative competitors to free-ride off the creativity, unique expression and ingenuity of vehicle software designed by leading vehicle manufacturers and their suppliers.”⁶⁹ Deere lamented that “in the absence of TPMs, third-party software developers could purchase vehicles to access instantly copyrighted, safe and regulatory-compliant software that is the result of years of extensive research and development by manufacturers and suppliers.”⁷⁰ The manufacturer also worried about the circumvention of TPMs “for vehicle software for entertainment systems,” as a driver “may listen to [infringing] sound recordings, while passengers may watch or view television

64. O’REILLY, *supra* note 23, at 10; *see also id.* (“Specifically, manufacturers must provide ‘technical manuals and technical service bulletins,’ ‘diagnostic trouble codes,’ ‘wiring diagrams,’ [and] ‘all information needed to install new or updated software on a new vehicle or vehicle type.’”).

65. *Id.*

66. Adam Belz, “Right-to-repair” fight extends from iPhones to tractors, STARTRIBUNE (Jan. 12, 2020, 1:00 PM), <https://www.startribune.com/right-to-repair-fight-extends-from-iphones-to-tractors/566910242/>.

67. O’REILLY, *supra* note 18, at 14.

68. *Id.*

69. Bartholomew, *supra* note 57, at 2.

70. *Id.*

and movie content.”⁷¹ It, however, is highly unlikely that farmers are using their equipment to “pirate[] . . . highly-expressive copyrighted works [such as] musical works, sound recordings, television content, and movies.”⁷² Or as Kyle Wiens colorfully asked: “Because copyright-marauding farmers are very busy and need to multitask by simultaneously copying Taylor Swift’s *1989* and harvesting corn?”⁷³

In short, John Deere and other manufacturers rely on the ubiquity of software to prevent farmers from repairing their equipment. Excuses based on safety and copyright are not persuasive. And the manufacturers are likely to possess market power based on time-sensitive uses, industry-wide restrictions, and dealer consolidation.

B. MEDICAL EQUIPMENT

The second example of restrictions on the right to repair is provided by ventilators and other medical equipment. As the Covid-19 pandemic showed, ventilators keep alive patients who are not able to breathe on their own. A lack of ventilators forces doctors into the impossible position of choosing which patients will live and which will die.

But ventilators and other medical equipment are subject to an array of restrictions making repair difficult. An empirical study of more than 200 biomedical professionals found that in a period of several months nearly half “had been denied access to ‘critical repair information, parts, or service keys.’”⁷⁴ The restrictions took many forms, including:

- “Requiring a password or service key to read diagnostic information”⁷⁵;
- “Refusing to provide access to service manuals,” with some manuals “also [being] password protected,” and others “requir[ing] an updated service contract to access”⁷⁶;

71. *Id.*

72. *Id.* at 8.

73. Kyle Wiens, *We Can’t Let John Deere Destroy the Very Idea of Ownership*, WIRED (Apr. 21, 2015, 9:00 AM), <https://www.wired.com/2015/04/dmca-ownership-john-deere/>. For a critique of copyright arguments similar to those advanced by Deere, see *infra* notes 244–286 and accompanying text.

74. U.S. PIRG EDUCATION FUND, HOSPITAL REPAIR RESTRICTIONS 2 (2020), https://uspig.org/sites/pirg/files/reports/Hospital_Repair_Restrictions_USPEF_7.8.20b.pdf [hereinafter PIRG REPORT].

75. *Id.*

76. *Id.*

- “Designing machines to require calibration software to activate new spare parts, and then not making that software available”⁷⁷; and
- “Restricted access to specialty training.”⁷⁸

These restrictions have been especially pernicious given the scarcity of ventilators. Throughout the pandemic, “hospitals worldwide . . . reported inadequate supplies of crucial equipment” such as ventilators and dialysis machines.⁷⁹ Then-N.Y. Governor Andrew Cuomo lamented that getting enough ventilators “remains the challenge,” with “the numbers . . . daunting,” as “you can’t find a ventilator for sale” despite “looking desperately.”⁸⁰ Given the paucity of ventilators, the ability of hospital technicians to make quick repairs is critical. A manager of a biomedical engineering team at a California hospital “recalled multiple times . . . when he had to go into the hospital in the middle of the night to fix a device.”⁸¹ On those occasions, “[d]octors were waiting to use the device,” and if the device is not “up and running in an hour or two hours, that patient will die.”⁸² Nor is there any point in waiting “to see if the manufacturer is going to respond,” because “sometimes the answer is ‘you need a contract’ or ‘no, you can’t buy this part.’”⁸³

Another biomedical professional explained that their hospital “was almost unable to repair one model of their ventilators at the height of the crisis” as the manufacturer “was attempting to cut off access to repair for their technicians—because they were due for the refresher training.”⁸⁴ The irony is not only that “the manufacturer had cancelled all the in-person trainings” but also that the technicians had “no need to be ‘retrained’ on a device they were fixing around the clock.”⁸⁵

77. *Id.*

78. *Id.*

79. Shuhan He, Debbie Lai & Jarone Lee, *The medical right to repair: the right to save lives*, 397 LANCET 1260, 1260 (2021).

80. Jason Koebler, *Hospitals Need to Repair Ventilators. Manufacturers Are Making That Impossible*, VICE (Mar. 18, 2020, 7:15 AM), <https://www.vice.com/en/article/wxekgx/hospitals-need-to-repair-ventilators-manufacturers-are-making-that-impossible>.

81. Nathan Proctor, “*Life and Death*”—*Medical equipment repairers push for Right to Repair during COVID-19 pandemic*, U.S. PIRG (May 19, 2020), <https://uspig.org/blogs/covid-19/usp/%E2%80%9Clife-and-death%E2%80%9D-medical-equipment-repairers-push-right-repair-during-covid-19>.

82. *Id.*

83. *Id.*

84. *Id.*

85. *Id.*

Similar to the claims made by John Deere,⁸⁶ manufacturers have sought to justify their restrictions by claiming that allowing non-authorized repair could impair patient safety. For example, a vice president of a medical device manufacturer trade group warned the U.S. Food and Drug Administration (FDA) that allowing third parties to service medical devices could lead to “device repairs . . . be[ing] performed by untrained personnel with inappropriate equipment and testing; replacement of parts or components of unknown provenance [that] result in an adulterated device; and repairs [being] performed without compliance to servicing standards such as those followed by OEMs [original equipment manufacturers].”⁸⁷

As also was the case with the claims made by Deere,⁸⁸ this safety concern is overblown. As U.S. PIRG Education Fund has explained, “[r]epair of equipment used in hospitals and care facilities is highly regulated.”⁸⁹ In particular, medical devices “must be approved according to stringent standards set by the [FDA]” and “are subject to rules under the National Fire Protection Agency (NFPA).”⁹⁰ Moreover, “there are rules under the Code of Federal Regulations (CFR) 21, Occupational Safety and Health Administration (OSHA), The Joint Commission (TJC), and hospital or Accreditation Association for Ambulatory Health Care (AAAHC) standards.”⁹¹

In 2018, the FDA issued a comprehensive report that concluded that third-party repair did not affect patient safety. Based on medical device reports of death or serious injury, the agency was “not able to establish a conclusive relationship between . . . third party entity servicing and the subsequent adverse event.”⁹² In addition, the FDA relied on a healthcare nonprofit organization’s analysis that concluded that it did not “believe that a safety problem exists with the servicing, maintenance, and repair of medical devices by either third party organizations or OEMs.”⁹³

86. *See supra* Section II.A.4.a.

87. FDA, FDA REPORT ON THE QUALITY, SAFETY, AND EFFECTIVENESS OF SERVICING OF MEDICAL DEVICES 16 (2018), <https://www.fda.gov/media/113431/download> [hereinafter FDA REPORT].

88. *See supra* Section II.A.4.a.

89. PIRG REPORT, *supra* note 74, at 3.

90. *Id.*

91. *Id.*

92. FDA REPORT, *supra* note 87, at 20–22.

93. This entity, ECRI, “the only organization worldwide to conduct independent medical device evaluations,” reached this conclusion after “search[ing] over two million records” and “analyz[ing] private databases of hazards and recalls” and “investigations of hospital-based incidents.” ECRI, *FDA Report Agrees with ECRI Institute that Additional Regulations for Medical Device Servicing Are Not Needed* (May 18, 2018), <https://www.ecri.org/components/HDJournal/Pages/FDA-report-servicing.aspx>.

As a result of these studies and observations, the FDA concluded that “the objective evidence indicates that many OEMs and third party entities provide high quality, safe, and effective servicing of medical devices.”⁹⁴ Not only were there no safety issues but also “[t]he continued availability of third party entities to service and repair medical devices is critical to the functioning of the U.S. healthcare system.”⁹⁵

To put it bluntly, the agency responsible for assessing the safety of medical devices concluded—without hesitation or equivocation—that third-party repair presents no safety concern and serves a crucial role. It goes without saying that manufacturers have every interest in raising ominous warnings. But in the absence of new evidence not yet uncovered, given the exhaustive FDA findings, there should be a strong presumption against safety-based justifications.⁹⁶

This lack of procompetitive justifications is particularly concerning given the extreme nature of the anticompetitive effects. As discussed above,⁹⁷ a lack of ventilators could lead to patients dying. In addition, ventilator manufacturers are likely to have market power from the confluence of several factors. First, given the severe health condition of patients needing ventilators, time is of the essence. Second, purchasers may not know the array of restrictions—such as password-protected service manuals, limited access to training, and the unavailability of necessary software—restricting repair. Third, given that a comprehensive report found that 92% of medical repair professionals “claimed they had been denied service information for ‘critical equipment’” and that 89% “reported that manufacturers had refused to sell spare parts,” it seems likely that multiple manufacturers are restricting repair.⁹⁸

94. FDA REPORT, *supra* note 87, at 23.

95. *Id.* For one example of third-party repairs, see Jay L. Himes & Jonathan S. Crevier, *If It Ain't Working, Fix It—With Competition*, NOT MONOPOLY, CPI ANTITRUST CHRONICLE, Aug. 2020, at 3, <https://www.labaton.com/hubfs/IF%20IT%20AIN%20%80%99T%20WORKING,%20FIX%20IT%20%E2%80%94%20WITH%20COMPETTITION%20-%20CPI%20-%20Himes%208.2020.pdf>; Glynn Moody, *Volunteers 3D-Print Unobtainable \$11,000 Valve For \$1 To Keep Covid-19 Patients Alive; Original Manufacturer Threatens To Sue*, TECHDIRT (Mar. 17, 2020, 1:35 PM), <https://www.techdirt.com/2020/03/17/volunteers-3d-print-unobtainable-11000-valve-1-to-keep-covid-19-patients-alive-original-manufacturer-threatens-to-sue/> (a pharmaceutical worker in Italy used a 3D printer to print replacement valves for breathing devices that the manufacturer refused to provide, doing so for roughly \$1, a fraction of the \$11,000 that manufacturer would have charged).

96. *See also* Koebler, *supra* note 80 (finding it unpersuasive that independents are viewed as unsafe when many of them “work officially for the manufacturers on Monday and Tuesday, and then [do] work for themselves the rest of the week”).

97. *See supra* note 74 and accompanying text.

98. PIRG REPORT, *supra* note 74, at 8.

And fourth, those purchasing ventilators have not switched to manufacturers not employing these restrictions. In short, manufacturers seem to have the market power necessary to impose severe anticompetitive effects.

C. MILITARY EQUIPMENT

Repair restrictions also affect military readiness. In a powerful letter submitted as part of the FTC's call for information, former Marine officer Lucas Kunce and current Marine logistics officer and operations research analyst Elle Ekman provided numerous examples of the harm that the military has suffered from repair restrictions. These limitations prevent "end user[s] from working on [their] own equipment" and include "commercial terms and conditions surrounding technical data schematics, diagnostic software, specialized parts and tools, warranties, bundling of repairs with products, interoperability restraints, the inability to access integrated code . . . required for hardware operation, and end user licensing agreements."⁹⁹

These restrictions are "particularly problematic" given the Defense Department's mission.¹⁰⁰ The reason is that "[m]any of the products and services purchased from contractors must be available in combat situations where contractor presence or reach-back for repairs, data, or diagnostics will likely not be an option."¹⁰¹ Kunce and Ekman explain how the restrictions pose difficult choices such as the one confronting a mechanic who faced a "choice of voiding a warranty or losing the equipment that supported [the unit's] training."¹⁰²

The restrictions also can be expensive and harmful. For example, one category of "costly parts that are economical to repair" must be "shipp[ed] . . . back to the contractor in the continental United States from Okinawa, Japan," because Marines' efforts to fix the problem themselves "would violate repair support contracts."¹⁰³ The result? "[S]ignificant transportation costs and time costs" and even "reduce[d] forward-deployed unit readiness."¹⁰⁴

Lost confidence is another consequence. The Joint Light Tactical Vehicle (JLTV) is an Army-led project to "develop a family of future light tactical

99. Letter from Lucas Kunce & Elle Ekman to The Honorable Joseph J. Simons 5 (Sept. 15, 2019), https://downloads.regulations.gov/FTC-2019-0013-0074/attachment_2.pdf [hereinafter Kunce & Ekman Letter].

100. *Id.*

101. *Id.*

102. *Id.* at 6; *see also id.* (providing example of Marines who "conduct[ed] maintenance on warrantied equipment" and "were reprimanded because they voided the contract when they fixed the equipment").

103. *Id.*

104. *Id.*

vehicles.”¹⁰⁵ An assessment found issues with “ineffective training, poor manuals, and challenges with troubleshooting the vehicle.”¹⁰⁶ In addition, and also consistent with the effect of repair restrictions, “[t]he health monitoring system” was not accurate and “reduce[d] crew and maintainer confidence in the system.”¹⁰⁷

Another potentially deadly result from repair restrictions involves military officers having their hands tied in dangerous situations. The officers often cannot make repair parts “due to manufacturer restrictions” or because of “cost-prohibitive” specifications.¹⁰⁸ As a result, they are not able to “repair[] equipment if a part is unavailable due to supply chain issues in austere environments.”¹⁰⁹ Similarly, in the setting of Medium Tactical Vehicle Replacement (MTVR) used for carrying troops and equipment, a restrictive warranty and the required use of a specific vendor for repairs “mean limiting the capability, flexibility, and experience of Marines who will be needed to conduct these repairs if they are ever in a hostile . . . or D-Day-like situation.”¹¹⁰

Kunce and Ekman explain that “[o]verall, Marines are less capable of repairing equipment in extreme circumstances because they are not allowed to repair the equipment during regular operations and do not have the tooling, diagnostic equipment or diagrams, or hands-on experience.”¹¹¹ This is no small concern, as service members could “need[] to repair equipment in a part of the world with unreliable transportation, limited communication, and no contractor support.”¹¹² The authors conclude that upholding the right to repair could “impact whether America can protect its service members, secure its defense posture, and even win her wars.”¹¹³

Like the situation with farm equipment and ventilators, manufacturers are likely to have market power. First, time pressures are critical for military equipment on the battlefield. Second, purchasers are not likely to know the array of repair restrictions, which include “commercial terms and conditions surrounding technical data schematics, diagnostic software, specialized parts

105. CONG. RSCH. SERV., JOINT LIGHT TACTICAL VEHICLE (JLTV): BACKGROUND AND ISSUES FOR CONGRESS 1 (2020), <https://sgp.fas.org/crs/weapons/RS22942.pdf>.

106. OFF. DIR. OPERATIONAL TEST & EVALUATION, FY18 ARMY PROGRAMS: JOINT LIGHT TACTICAL VEHICLE (JLTV) FAMILY OF VEHICLES (FOV) 89, <https://www.dote.osd.mil/Portals/97/pub/reports/FY2018/army/2018jltv.pdf?ver=2019-08-21-155807-400>.

107. *Id.*

108. Kunce & Ekman Letter, *supra* note 99, at 6.

109. *Id.*

110. *Id.* at 7.

111. *Id.* at 6.

112. *Id.* at 9.

113. *Id.*

and tools, warranties, bundling . . . interoperability restraints, the inability to access [required] code, and end user licensing agreements.”¹¹⁴ Third, the military has not switched to manufacturers not using these restrictions. And fourth, based on the limitations not being “unusual, but . . . a product of [the existing] repair regime,” it is at least plausible that multiple manufacturers are employing them.¹¹⁵

D. TECHNOLOGY

Repair restrictions also appear across the vast expanse of technology products, including smartphones, household devices, and even wheelchairs. This Part details a few types of common restrictions.¹¹⁶

One type is *limiting repair outlets*. In 2012, Nikon informed independent camera repair technicians that it would “no longer make repair parts available” to facilities it did not authorize.¹¹⁷ Although Nikon sought to justify this change based on “the specialized tools that are now necessary to perform repairs on this complex equipment,” critics called this “ridiculous” as “local camera shops are staffed by people who have extensive experience repairing Nikon equipment, and the only reason they wouldn’t have access to the necessary tools is if Nikon uses proprietary or tamper-proof fasteners and won’t sell the tools their own repair techs use.”¹¹⁸ This restriction affected those needing the cameras for their livelihoods through “lost business, shipping costs, and time lost waiting for the Postal Service to shuttle the camera back and forth.”¹¹⁹

Another type is *intentionally preventing products from working*. Apple famously blocked phones “repaired outside of their ‘authorized’ service network,” which

114. *Id.* at 5.

115. *Id.* at 8.

116. In June 2022, the New York legislature passed a bill requiring manufacturers “to make diagnostic and repair information for digital electronic parts and equipment available to independent repair providers and consumers if such parts and repair information are also available to . . . authorized repair providers.” S4104A, Reg. Sess. (N.Y. 2021).

117. Elizabeth Chamberlain, *How Nikon Is Killing Camera Repair*, IIFIXIT (Feb. 14, 2012), <https://www.ifixit.com/News/1349/how-nikon-is-killing-camera-repair>.

118. *Id.* Similarly, Apple has one store for “the 2 million people who live in Nebraska.” Kyle Wiens, *You Bought That Gadget, and Dammit, You Should Be Able to Fix It*, WIRED (Mar. 22, 2017, 6:30 AM), <https://www.wired.com/2017/03/right-to-repair-laws/>.

119. *Id.* In 2020, Nikon ended its authorized repair program, forcing users to mail their broken cameras to one of two facilities in the United States. Kevin Purdy, *Nikon Is Killing Its Authorized Repair Program*, IIFIXIT (Dec. 9, 2019), <https://www.ifixit.com/News/34241/nikon-is-killing-its-authorized-repair-program>. Manufacturers also sometimes “falsely tell users that certain repairs can’t be done, even when independent shops are perfectly capable of performing them.” IIFIXIT, REPAIR MARKET OBSERVATIONS 16 (2019), https://downloads.regulations.gov/FTC-2019-0013-0027/attachment_1.pdf.

resulted in an “Error 53” message¹²⁰ and users losing photos and other data.¹²¹ Apple later apologized, “admitt[ing] that Error 53 was a software mistake,” and “issued a software patch that fixed phones ‘bricked’ by the error.”¹²² Another example occurred with “throttle gate,” in which Apple—without even telling its customers—“was caught slowing down iPhones with old batteries.”¹²³ Commentators called this behavior “sketchy” and even a “scandal” on the grounds that Apple 1) “doesn’t tell you it throttles,” 2) “makes it hard for you to fix the problem,” 3) designs a phone that “requires proprietary tools to open and various components to be removed . . . to replace the only part of the phone that is *guaranteed to go bad*,” and 4) “actively discourages you from trying to fix your own phone.”¹²⁴

A third type is *changing a device’s physical structure* to make it extremely difficult—if not impossible—to repair. For example, Apple began using “a new type of tamper-resistant screw” for which there were “no readily available screwdrivers.”¹²⁵ Since the iPhone worked “with ordinary Phillips screws,” the switch “wasn’t for engineering reasons” but was “to tamper-proof [the] iPhone.”¹²⁶ Another example is using “glue instead of screws to hold things

120. *Independent Repair is Big Business*, REPAIR.ORG, <https://www.repair.org/electronics> (last visited Apr. 25, 2022).

121. Miles Brignall, “Error 53” fury mounts as Apple software update threatens to kill your iPhone 6, *GUARDIAN* (Feb. 5, 2016, 1:59 PM), <https://www.theguardian.com/money/2016/feb/05/error-53-apple-iphone-software-update-handset-worthless-third-party-repair>.

122. *Id.* For another example, see PERZANOWSKI, *supra* note 17, at 7–8 (discussing Google-owned Nest’s 2016 announcement that “it would push an involuntary software update to its \$300 Revolv home automation hubs, rendering them entirely inoperable” despite selling the devices “with the promise of a ‘lifetime subscription’”).

123. Jason Koebler, *Tim Cook to Investors: People Bought Fewer New iPhones Because They Repaired Their Old Ones*, *VICE* (Jan. 2, 2019, 2:56 PM), <https://www.vice.com/en/article/zmd9a5/tim-cook-to-investors-people-bought-fewer-new-iphones-because-they-repaired-their-old-ones>.

124. Jason Koebler, *Apple Throttles iPhones That Have Old Batteries (But Didn’t Tell You About It)*, *VICE* (Dec. 20, 2017, 1:27 PM), <https://www.vice.com/en/article/3k5bdw/apple-throttles-iphones-bad-batteries>.

125. Kyle Wiens, *Apple’s Diabolical Plan to Screw your iPhone*, *iFIXIT* (Jan. 20, 2011), <https://www.ifixit.com/News/14279/apples-diabolical-plan-to-screw-your-iphone>.

126. *iFIXIT*, REPAIR MARKET OBSERVATIONS, *supra* note 119, at 11–12. *See also id.* at 12 (providing other examples including “Nintendo us[ing] rare tri-point screws on their hardware, Amazon us[ing] tri-wing screws on the Fire TV, and Sony us[ing] Torx security screws in the PlayStation 4”); Cory Doctorow, *Apple’s Cement Overshoes*, *MEDIUM* (May 22, 2022), <https://doctorow.medium.com/apples-cement-overshoes-329856288d13> (“[T]he electric clipper monopolist Wahl has started booby-trapping the blades of its hair- and beard-trimmers, spring-loading them so they fly apart if you unscrew them to sharpen them.”). For a discussion of Apple’s “home repair program,” see *Apple’s Cement Overshoes. Id.* (“[T]he program is the perfect way to make it look like the company supports right-to-repair policies without actually encouraging them at all. Apple can say it’s giving consumers access to everything, even the

together,” as glue is “difficult to separate without breaking things.”¹²⁷ A final is “mak[ing] a device difficult or impossible to open,” as Microsoft did with its Surface Laptop, “ultrasonically weld[ing] the chassis together and then glu[ing] a fabric cover down over the top.”¹²⁸

This conduct even applies to motorized wheelchairs, where “locking device[s] . . . prevent[] the hardware or software from being tinkered with,” with manufacturers not “hand[ing] out the corresponding key.”¹²⁹ As a result, those using wheelchairs have “wait[ed] 60 days [or longer¹³⁰] for a simple repair”—or even been denied service¹³¹—suffering a “nightmare scenario.”¹³²

same tools its technicians use, while scaring them away with high prices, complexity, and the risk of losing a \$1,200 deposit.”).

127. iFIXIT, REPAIR MARKET OBSERVATIONS, *supra* note 119, at 12.

128. *Id.* at 14. See also FTC, “NIXING THE FIX” TRANSCRIPT 22 (2019), https://www.ftc.gov/system/files/documents/public_events/1494445/nixing-fix-transcript.pdf (explaining that manufacturers’ “glu[ing] everything shut . . . is a common occurrence with many devices”); *id.* at 23 (a repair technician asked why companies went from “having a battery that was easily removable to now basically gluing them in” and opined that this is not “adding any sort of innovation”).

129. Angela Ufheil, *How a Right to Repair Bill Could Speed Up Wheelchair Fixes*, 5280 (Apr. 8, 2022), <https://www.5280.com/2022/04/how-a-right-to-repair-bill-could-speed-up-wheelchair-fixes/>.

130. *Stories from Coloradans Regarding Problems Fixing Wheelchairs and DME*, COPIRG FOUND. 1, 2, 9 (Mar. 21, 2022), <https://publicinterestnetwork.org/wp-content/uploads/2022/03/Stories-from-Coloradans-regarding-problems-fixing-DME-3.21.22.pdf> (discussing examples including 1) a wheelchair user “end[ing] up with a sore that required surgery” because the manufacturer took three months to replace a power chair; 2) a manufacturer taking “4 months and charg[ing] \$500 for a button” to power a wheelchair that could be “overnight mailed from eBay for about \$20”; and 3) a quadriplegic explaining that “[i]t generally takes at least two months to get repairs made” given the steps of scheduling an appointment for an evaluation, getting insurance approval, ordering parts, and making the repairs). See generally U.S. PIRG, STRANDED: REPAIR RESTRICTIONS IMMOBILIZE WHEELCHAIR USERS 5 (2022), https://uspirgedfund.org/sites/pirg/files/reports/USPIRGEF_Stranded_June2022.pdf (finding, in “survey of 141 manual and power wheelchair users,” that “40% of respondents . . . estimated it takes 7 or more weeks on average to get a repair completed”).

131. *Id.* at 9 (a patient was “denied service from [manufacturer] Numotion” after acquiring wheelchair “from one of their competitors before Numotion bought them out”).

132. Ufheil, *supra* note 129; see also Matthew Gault, *Colorado Denied Its Citizens the Right to Repair After Riveting Testimony*, VICE (Apr. 5, 2021, 6:00 AM), <https://www.vice.com/en/article/wx8w7b/colorado-denied-its-citizens-the-right-to-repair-after-riveting-testimony> (a wheelchair user with “life threatening medical issues caused by pressure sores” waited two weeks for company to provide service and—because this “failed to fix the problem”—he had a handyman fix a loose wire so he could avoid “go[ing] to the hospital or worse,” which led to the company voiding his warranty).

Given how frequently wheelchair users need repairs, this is a pressing problem.¹³³

In short, manufacturers have used an array of restrictions that have little to do with innovation and everything to do with preventing repair. In these settings, manufacturers are likely to have market power. First, many users are not likely to know the range of restrictions that include the device's physical structure or software. Second, in certain cases, especially related to wheelchairs or independent photographers needing cameras for their livelihood, the uses are time-sensitive. Third, users' options are further restricted by geographic limitations on repair outlets like those imposed by Nikon. And fourth, there has been no evidence that manufacturers have lost market share as a result of repair restrictions.¹³⁴

III. ANTITRUST'S CONSTRAINTS

Antitrust faces constraints in addressing repair restrictions. This section describes how the caselaw has developed in a way that imposes an array of challenges to plaintiffs bringing cases challenging this conduct.

A. KODAK AND ITS LIMITATIONS

Any assessment of competition's role in addressing the right to repair begins with antitrust law. And the antitrust doctrine most relevant to the right to repair involves "aftermarkets," which include service or parts for a durable product. The leading case on aftermarkets is *Eastman Kodak Company v. Image Technical Services*.¹³⁵ In that case, Kodak manufactured and sold "high-volume photocopiers and micrographic equipment."¹³⁶ The company "implemented a

133. See U.S. PIRG, *supra* note 130, at 5 (93% of survey respondents "indicated that they have required service in the last year, with 68% indicating they needed two or more repairs"). In June 2022, Colorado enacted the Consumer Right To Repair Powered Wheelchairs Act, which requires powered wheelchair manufacturers to provide "parts, embedded software, firmware, tools, or documentation . . . to independent repair providers and owners of the manufacturer's powered wheelchairs." HB22-1031, 73rd Gen. Assemb., Reg. Sess. (Colo. 2022). See generally U.S. PIRG, *supra* note 130, at 15.

134. The automobile industry presents another setting in which these issues have received significant attention. What is unique about this context is the adoption by manufacturers of a nationwide agreement allowing independent repair organizations access to "diagnostic and repair information" and "diagnostic repair tools." Memorandum of Understanding, *supra* note 10, § 2(a), § 2(b)(1). Technological developments have recently increased manufacturers' control, but the industry has witnessed more independent repair servicing than other settings. See *supra* note 10; see also FTC, *supra* note 128, at 177 (explaining that roughly 3/4 of repairers in auto industry are independent).

135. 504 U.S. 451 (1992).

136. *Id.* at 456.

policy of selling replacement parts” for these machines “only to buyers of Kodak equipment who use Kodak service or repair their own machines.”¹³⁷ These policies were “intended . . . to make it more difficult for [independent service organizations (ISOs)] to sell service for Kodak machines.”¹³⁸ In defending its policies, Kodak contended that competition in the equipment market prevented it from “rais[ing] prices of service and parts” above competitive levels because any profits from “a higher price in the aftermarkets . . . would be offset by a corresponding loss in profits from lower equipment sales as consumers began purchasing equipment with more attractive service costs.”¹³⁹

The Supreme Court, however, found that Kodak’s theory did not “accurately explain the behavior of the primary and derivative markets for complex durable goods,” since “significant information and switching costs” could “create a less responsive connection between service and parts prices and equipment sales.”¹⁴⁰ In particular, the high “cost to current owners of switching to a different product” would lead to consumers being “locked in” and thus willing to “tolerate some level of service-price increases before changing equipment brands.”¹⁴¹ The Court found it “reasonable to infer that Kodak ha[d] market power to raise prices and drive out competition in the aftermarkets” and that the company “chose to gain immediate profits by exerting that market power where locked-in customers, high information costs, and discriminatory pricing limited and perhaps eliminated any long-term loss.”¹⁴²

In recognizing a cause of action for aftermarkets claims, *Kodak* laid a foundation for an ambitious agenda of challenges that could target a right-to-repair claim. But the potentially far-reaching nature of the decision would quickly ground to a screeching halt, running into a brick wall of criticism and judicial limitations. Commentators asserted that “significant or long-lived consumer injury based on monopolized aftermarkets is likely to be rare, especially if equipment markets are competitive,”¹⁴³ and called for the decision

137. *Id.* at 458.

138. *Id.*

139. *Id.* at 465–66.

140. *Id.* at 473.

141. *Id.* at 476. *See also* Stephen Calkins, *The Antitrust Conversation*, 68 ANTITRUST L.J. 625, 629 (2001) (explaining how the Court cited amicus briefs to “support its doubts about the frequency with which customers engage in effective lifecycle [pricing]”).

142. *Kodak*, 504 U.S. at 477.

143. Carl Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of Kodak*, 63 ANTITRUST L.J. 483, 485 (1995).

to be overruled.¹⁴⁴ And courts soon constructed an array of limitations, “narrow[ing] the scope of liability,”¹⁴⁵ “severely limit[ing] *Kodak*’s scope so that it is no longer a viable weapon for antitrust plaintiffs,”¹⁴⁶ and “ben[ding] over backwards to construe *Kodak* as narrowly as possible.”¹⁴⁷

Most notably, several courts required plaintiffs to show that defendants changed their service policies “to exploit the installed base of consumers.”¹⁴⁸ For example, the Sixth Circuit stated that “the change in policy in *Kodak* was the crucial factor in the Court’s decision,” holding that “an antitrust plaintiff cannot succeed on a *Kodak*-type theory when the defendant has not changed its policy after locking in some of its customers, and the defendant has been otherwise forthcoming about its pricing structure and service policies.”¹⁴⁹

Other courts have considered factors such as pricing, aftermarket share, and information and switching costs.¹⁵⁰ But even these courts require “the competitive situation in the aftermarket” to be “dissociat[ed] . . . from activities . . . in the primary market.”¹⁵¹ In other words, “a court may conclude that the aftermarket is the relevant market . . . only if the evidence supports an inference of monopoly power in the aftermarket that competition in the primary market appears unable to check.”¹⁵² In a nutshell, since *Kodak*, “few plaintiffs have prevailed on aftermarket claims, and the legacy of the . . . decision has been modest.”¹⁵³

As I explain in the next section, given changes in technology and the nature of today’s restrictions, the rationale underlying *Kodak* claims applies even more

144. Herbert Hovenkamp, *Post-Chicago Antitrust: A Review and Critique*, 2001 COLUM. BUS. L. REV. 257, 288 (2001).

145. *Competition Issues in Aftermarkets – Note from the United States*, OECD (May 26, 2017), <https://www.justice.gov/atr/page/file/1312326/download>.

146. David A.J. Goldfine & Kenneth M. Vorrasi, *The Fall of the Kodak Aftermarket Doctrine: Dying A Slow Death in the Lower Courts*, 72 ANTITRUST L.J. 209, 220 (2004).

147. Hovenkamp, *supra* note 144, at 286; *see also* William E. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 COLUM. BUS. L. REV. 1, 19–20 (2007) (explaining that post-*Kodak* decisions “emphasized principles that discourage intervention” and “imposed significant burdens on plaintiffs . . . seeking to challenge dominant firm conduct”).

148. Goldfine & Vorrasi, *supra* note 146, at 222. *See, e.g.*, *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 783 (5th Cir. 1999); *Digital Equip. Corp. v. Uniq Digital Techs., Inc.*, 73 F.3d 756, 763 (7th Cir. 1996); *Lee v. Life Ins. Co. of N. Am.*, 23 F.3d 14, 20 (1st Cir. 1994).

149. *PSI Repair Servs., Inc. v. Honeywell, Inc.*, 104 F.3d 811, 820 (6th Cir. 1997).

150. *Harrison Aire, Inc. v. Aerostar Int’l, Inc.*, 423 F.3d 374, 384 (3d Cir. 2005).

151. *SMS Sys. Maint. Servs., Inc. v. Digital Equip. Corp.*, 188 F.3d 11, 17 (1st Cir. 1999).

152. *Id.*

153. OECD, *supra* note 145, at 6; *see also* Goldfine & Vorrasi, *supra* note 146, at 220 (“Summary judgment has been awarded to the defendant in almost every single *Kodak*-style lock-in case.”).

powerfully today. Nonetheless, the inertia, compounding effect, and lack of self-reflection in the caselaw have erected significant hurdles in front of plaintiffs.

B. CHANGES SINCE KODAK

Today's right-to-repair cases are a far cry from the aftermarket claims that were brought in the wake of *Kodak*. At that time (and in most of the period since), a manufacturer merely instituted a policy regarding parts or service. Customers often were aware of such a (relatively simple) policy.¹⁵⁴ And the primary harm from being locked in to the original policy was to pay a higher price for service and parts.

The claims today are different. The restrictions range far beyond constraining policies. Instead, as detailed in the FTC's comprehensive report, they include: (1) physical restrictions; (2) unavailability of parts, manuals, and diagnostic software tools; (3) designs that make independent repairs less safe; (4) steering consumers to manufacturers' repair networks using telematics (real-time monitoring) systems; (5) application of patent rights and enforcement of trademarks; (6) disparagement of nonauthorized parts and independent repair services; (7) software locks, digital rights management, and technological protection measures; and (8) end user license agreements.¹⁵⁵ As the executive director of the Repair Association explained at an FTC workshop on the issue, "basically 100 percent of manufacturers have restrictions on repair in every one of their contracts."¹⁵⁶

Purchasers are far less likely to be aware of these restrictions, which are typically used in combination. A *Kodak*-style policy addressing parts and service is easier to discern than software incorporated into products.¹⁵⁷ And when the software is combined with the unavailability of parts and service manuals and an array of other restrictions, the notion of consumer choice is a mirage. Given

154. *See, e.g., Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 783 (5th Cir. 1999) (plaintiffs did not "face substantial information and switching costs" and "engage[d] in life-cycle pricing" by "factor[ing] in not only the purchase price of the equipment, but also the post-acquisition costs of operation, maintenance, and expansion at the time of purchase").

155. FTC, *supra* note 1, at 17–24. *See also, e.g.,* Letter from Motor & Equip. Mfrs. Ass'n to FTC 3 (Apr. 30, 2019), https://downloads.regulations.gov/FTC-2019-0013-0022/attachment_1.pdf (detailing, in 2019, a list of restrictions in the automobile industry and stating that "[n]one . . . existed ten years ago" and "[m]ost were not prevalent five years ago").

156. FTC, *supra* note 128, at 76. *See also id.* ("end user license agreements [are] active when you turn [the device] on").

157. As one commentator explained in 2019, "[o]ver the last two decades, we've gone from a world where software is rarely seen outside of a general-purpose computer to a world where billions of microprocessors are embedded in virtually every type of device." IFIXIT, *supra* note 119, at 11.

the severity of anticompetitive effects taking the form of harms to livelihoods and even premature deaths, all of these developments have an outsized effect.

C. OTHER LEGAL DOCTRINES

The *Kodak* aftermarket claim provides the most relevant antitrust doctrine for a right-to-repair claim. Two other doctrines that could potentially be implicated present even steeper challenges. First is a *tying* claim. Such a claim requires a plaintiff to show (1) two separate products, (2) coercion, (3) market power in the market for the “tying product” (the one the consumer desires), and (4) a not insubstantial amount of commerce in the market for the “tied product” (the one the consumer is forced to take).¹⁵⁸ A tying claim would necessitate a bigger stretch from the caselaw since it calls for an additional finding (not present for an aftermarket claim) of coercion.¹⁵⁹ Moreover, its requirement of market power is harder to satisfy since it cannot rely on the higher market shares that flow from aftermarket limited to a single manufacturer’s product.¹⁶⁰

A second claim is based on access to an “*essential facility*” or, relatedly, a *refusal to license*. An essential-facility claim requires a monopolist to share facilities necessary to compete in a market.¹⁶¹ But in part because these claims

158. See, e.g., *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 461–62 (1992). For a potential tying claim, see Jamie Crooks letter to Holly Vedova, FTC 29 (Mar. 3, 2022), <https://farmaction.us/wp-content/uploads/2022/03/Deere-Right-To-Repair-FTC-Complaint.pdf> (defining tying market as “the parts and diagnostic error codes necessary to repair large Deere equipment” and tied market as “the market for repairs to large Deere equipment”); see also *id.* at 28 (suggesting traditional tying claim based on tying market of “large agricultural equipment” and tied market of “repairs of large agricultural equipment”).

159. While customers may not practically have a choice when confronted with repair restrictions, see *supra* Part III.B and *infra* Part V.A, courts may not consider this to be “coercion.” See, e.g., HOVENKAMP, *supra* note 54, § 10.4, at 531 (stating that “the coercion doctrine has become beguiling in tie-in analysis” as it “mean[s] several things”: (1) being “forced to take the tied product”; (2) “market power in the market for the tying product”; (3) “whether a . . . purchaser would have taken the tied product anyway”; and (4) “whether the tie-in foreclosed other options”). See, e.g., *Rome Ambulatory Surgical Ctr., LLC v. Rome Mem’l Hosp., Inc.*, 349 F. Supp. 2d 389, 407 (N.D.N.Y. 2004) (finding no evidence of coercion, as there were “no viable facts to support an inference of anything but negotiation,” even though plaintiff alleged that payors were required “to contract for outpatient surgery services on an exclusive basis as a condition for contracting for general inpatient acute care hospital services on a discounted basis”).

160. Of course, it is possible that a plaintiff could show market power under the traditional antitrust standards. See *supra* note 158 (describing a complaint that alleges tying of “large agricultural equipment” and repairs of such equipment).

161. *MCI Commc’ns Corp. v. AT&T*, 708 F.2d 1081, 1132 (7th Cir. 1982); see also *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973); *United States v. Terminal R.R. Ass’n*, 224 U.S. 383 (1912).

could be interpreted to cover a wide array of products, courts almost never allow the claims to proceed.¹⁶² A similar result follows from refusals to license, which have been construed narrowly, especially when they involve IP. For example, in *In re Independent Service Organizations Antitrust Litigation (Xerox)*, the Federal Circuit held that a refusal to sell patented parts did not exceed “the scope of the patent grant” and thus could not violate antitrust law.¹⁶³ As a result, the expansion of the law to address an essential-facility or refusal-to-deal claim could apply to countless durable products, not having the natural stopping point offered by an aftermarkets setting in which smaller gaps need to be bridged to demonstrate market power.

IV. SECTION 5’S GAP FILLER

As discussed in Part II,¹⁶⁴ the right to repair implicates significant competition issues. But antitrust law frequently appears hamstrung by *Kodak*’s progeny, unable to fully address these competitive problems.¹⁶⁵ Do we have any other options? Fortunately, we do. The mechanism is Section 5 of the FTC Act, which provides the FTC with authority to address “unfair methods of competition.”¹⁶⁶

It is clear that Section 5 reaches beyond antitrust law. That makes sense. For if it did not, it would be redundant. The drafters intended Section 5 “to be an interstitial statute . . . fill[ing] in the gaps in the other antitrust laws” and meant for it to reach “conduct that violates the policy or ‘spirit’ of the antitrust

162. *See, e.g., Verizon Commc’ns Inc. v. Law Offs. Curtis V. Trinko, L.L.P.*, 540 U.S. 398, 411 (2004) (holding that the Court “ha[s] never recognized” the essential-facilities doctrine and “find[s] no need either to recognize it or to repudiate it here”). Even if the FTC is more able than courts to determine when a refusal to deal is anticompetitive and decide the terms of dealing, it would still be a larger stretch and relatedly provide less guidance to apply Section 5 in the refusal setting as compared to the *Kodak* aftermarkets setting.

163. 203 F.3d 1322, 1328 (Fed. Cir. 2000) (providing immunity unless monopolist engaged in one of three behaviors not typically implicated by a refusal to license: tying patented and unpatented products, obtaining a patent through fraud, and pursuing sham litigation); *see generally Trinko*, 540 U.S. at 408 (emphasizing “high value” Court “ha[s] placed on the right to refuse to deal”) (citation omitted). For a more moderate view, see *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1187 (1st Cir. 1994) (“[A]n author’s desire to exclude others from use of . . . copyrighted work is a presumptively valid business justification...”).

164. *See supra* Part II.

165. *See supra* Part III. *See also* FTC, *supra* note 1, at 16 (“In many instances . . . repair restrictions may reduce consumers’ options for obtaining spare parts and repair services in the aftermarket without running afoul of antitrust law.”).

166. 15 U.S.C. § 45(a)(1).

laws, even though it may not come technically within its terms.”¹⁶⁷ To similar effect, the Supreme Court in *FTC v. Sperry & Hutchinson*, for example, confirmed that the FTC could “consider[] public values beyond simply those enshrined in the letter or encompassed in the spirit of the antitrust laws.”¹⁶⁸ And in its 2015 statement on Section 5, the FTC explained that the provision encompasses “those acts and practices . . . that contravene the spirit of the antitrust laws.”¹⁶⁹

But the critical question is *how far* Section 5 reaches beyond antitrust. Without limits, it could encompass an expansive array of conduct that might not actually harm competition. And without a framework providing intelligible constraints, Section 5 could mean only what three of the five FTC Commissioners at any time believe it means, providing little guidance for future conduct. For example, some have criticized the “trilogy of cases, decided in the 1980s, that rejected . . . extravagant views of Section 5.”¹⁷⁰

Commentators have offered theories to cabin the range of Section 5, including a “frontier” rationale by which “there is not yet an established body of precedent” to support an antitrust violation¹⁷¹ and a “yes, but” rationale by which “a case would meet all the economic and legal requirements of a

167. Neil W. Averitt, *The Meaning of “Unfair Methods of Competition” in Section 5 of the Federal Trade Commission Act*, 21 B.C. L. REV. 227, 251 (1980). See also *id.* at 276–77 (finding it “reasonably clear that the Commission, under Section 5, can go beyond established public policies and . . . frame competition policies on its own initiative” and noting that this was “a concept that is threaded through the entire length of the discussion”); *id.* at 279 (“The language of [Section 5] was . . . made deliberately broad to provide, in all instances, for adequate protection against harms to competition.”).

168. 405 U.S. 233, 244 (1972).

169. *Statement of Enforcement Principles Regarding “Unfair Methods of Competition” Under Section 5 of the FTC Act*, FED. TRADE COMM’N (Aug. 13, 2015), https://www.ftc.gov/system/files/documents/public_statements/735201/150813section5enforcement.pdf; see also Edith Ramirez, Chairwoman, Fed. Trade Comm’n, Address at the Competition Law Center, George Washington University Law School, 4 (Aug. 13, 2015), https://www.ftc.gov/system/files/documents/public_statements/735411/150813section5speech.pdf (“There has never been any question that Section 5’s ban on ‘unfair methods of competition’ reaches beyond the scope of the other antitrust laws.”)

170. Creighton & Krattenmaker, *supra* note 6, at 2 (citing *Official Airline Guides, Inc. v. FTC*, 630 F.2d 920 (2d Cir. 1980); *Boise Cascade Corp. v. FTC*, 637 F.2d 573 (9th Cir. 1980); *E.I. du Pont de Nemours & Co. v. FTC*, 729 F.2d 128 (2d Cir. 1984)). For a contrary view, see Miles Kirkpatrick, *Report of the ABA Section of Antitrust Law Special Committee To Study the Role of the FTC*, 58 ANTITRUST L.J. 43, 62 (1989) (“The FTC is a less dangerous forum than the federal courts for testing legal theories and considering their application in difficult cases since the FTC’s sanctions are civil and prospective and its decisions cannot be used as *prima facie* evidence to support treble damages awards.”).

171. Thomas B. Leary, *A Suggestion for the Revival of Section 5*, ANTITRUST SOURCE (2009) (discussed in Creighton & Krattenmaker, *supra* note 6, at 3).

Sherman Act claim, but cannot be brought . . . because of legal limitations imposed for reasons unrelated to [antitrust’s] goals.”¹⁷² The theory that I build on here is the “gap-filling” rationale articulated by Susan Creighton and Thomas Krattenmaker. This framework applies “where the conduct at issue does not (or arguably does not) meet one of the elements of the Sherman Act.”¹⁷³ The authors’ intended cases “likely raise questions regarding the ‘agreement’ element of Section 1, or the ‘monopoly power’ element of Section 2.”¹⁷⁴ They offer as a “paradigmatic example” of a “gap filling” case the “invitation to collude,” which “do[es] not fit easily within the language of either Section 1 (where is the agreement?) or Section 2 (where is the dangerous probability of success?)” even though “there is little doubt that attempted collusion is conduct that fits comfortably within the ambit of antitrust economic and policy analysis.”¹⁷⁵

For another example, the authors discuss what they call “patent fishing,” which has more typically been linked to patent assertion entities (or, more pejoratively, “patent trolls”).¹⁷⁶ They define the activity as “acquir[ing] patents and then demand[ing] payments from probable non-infringers.”¹⁷⁷ They note that the payments are “much less than the costs of litigation” and that the demands, when “repeated many times, . . . can significantly raise the costs of the producing firms.”¹⁷⁸ They explain that “[t]hese increased costs are inefficiencies and will also likely yield higher prices and a diminution in

172. Creighton & Krattenmaker, *supra* note 6, at 3.

173. *Id.* at 7–8. For my elaboration of the framework, see *infra* Part V.

174. Creighton & Krattenmaker, *supra* note 6, at 8.

175. *Id.* at 8; *see also* Transcript of FTC Workshop on Section 5 of the FTC Act as a Competition Statute 65 (Oct. 17, 2008), https://www.ftc.gov/sites/default/files/documents/public_events/section-5-ftc-act-competition-statute/transcript.pdf (statement of former FTC Chair Robert Pitofsky) (one use of Section 5 “which almost everybody agrees to is [to] fill in the gaps” in “situations where Congress would have covered a transaction or a behavior if it [had] thought of it”); Ramirez, *supra* note 169, at 5 (noting that invitations to collude “generally fall[] through the cracks of Sections 1 and 2 of the Sherman Act” but “can nonetheless violate the spirit of the antitrust laws insofar as [they] threaten[] harm to competition without countervailing benefits”); *see also id.* (applying similar reasoning to “the improper exchange of competitively sensitive non-price information” and “breaching commitments to license standard-essential patents on reasonable terms,” as such conduct “lacks a ‘legitimate efficiency justification’ that would outweigh its ‘likely anticompetitive effects’”). Relatedly, as Herb Hovenkamp has explained, a limited abuse-of-dominance standard could target “higher prices or reduced innovation in a secondary market” (which could result from repair restrictions) that lies outside the range of Section 2. Herbert Hovenkamp, *Monopolizing and the Sherman Act*, WM. & MARY L. REV. (forthcoming 2023) (manuscript at 32), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3963245.

176. Creighton & Krattenmaker, *supra* note 6, at 8.

177. *Id.*

178. *Id.*

consumer surplus.”¹⁷⁹ But “because the patent fisher does not itself gain from the market power that its fishing can create . . . it is not obvious that conventional antitrust would speak to this behavior.”¹⁸⁰

My use of the gap-filling theory is not identical: Creighton and Krattenmaker envision a gap filler plugging an entirely missing element, whereas mine would expand the evidence considered for a currently existing element.¹⁸¹ But in augmenting the evidence available for showing market power, I borrow the rationale from the theory. As discussed above, the size of the gap filled by my use of Section 5 is less than for other antitrust theories.¹⁸² In particular, in cabining Section 5 to cases in which only one element of an antitrust claim is absent but the conduct “fits comfortably within the ambit of antitrust economic and policy analysis,”¹⁸³ the framework reaches beyond antitrust, but in a limited, predictable manner. And the benefit of using Section 5 in this setting is that it avoids a narrowly restrictive caselaw that developed in response to the problem of service and parts policies, while applying the rationales underlying an aftermarkets claim in a setting marked by more suffocating, hidden restrictions and more severe anticompetitive harms.¹⁸⁴

179. *Id.*

180. *Id.* For a discussion of how patent assertion entities could potentially violate antitrust law, see Mark S. Popofsky & Michael D. Laufert, *Antitrust Attacks on Patent Assertion Entities*, 79 ANTITRUST L.J. 445, 452–61 (2014); Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2179–80 (2013); Michael A. Carrier, *Patent Assertion Entities: Six Actions the Antitrust Agencies Can Take* 2 CPI ANTITRUST CHRONICLE 1, 5–11 (2013).

181. My use of the theory is limited to expanding the range of evidence considered where the evidence analyzed by courts does not fully capture anticompetitive harm. Market power inquiries are generally designed to reveal the cases in which the defendant has the ability to affect the market and bring about anticompetitive harm. While an expansion of market power could reach broadly, the five developments I discuss in the next Part limit the universe of cases in which a gap filler would be justified and offer a more appropriate alternative to the change in policy required by many courts.

182. *See supra* Section III.C.

183. Creighton & Krattenmaker, *supra* note 6, at 8.

184. *See supra* note 170 and accompanying text (citing Kirkpatrick, which noted that “FTC is a less dangerous forum . . . since [its] sanctions are civil and prospective and its decisions cannot be used as prima facie evidence to support treble damages awards”). *See also* Stephen Calkins, “*Unfair Methods of Competition*” in the 1990s: *The Example of Frequent-Flyer Programs*, in *MARKETING AND ADVERTISING REGULATION* 374, 374–75 (1990) (suggesting that “the government should evaluate the competitive effects of airline frequent flyer programs . . . and consider prohibiting them” as an “unfair method of competition”).

Given the inherent uncertainty of how Section 5 should be applied, there is always the risk that a court will find its use unjustified. *See supra* note 170 and accompanying text. But given its limited and supported application here, especially in a setting where courts have erected significant antitrust barriers, those risks may be worth taking.

V. A TEMPLATE FOR A SECTION 5 RIGHT-TO-REPAIR CASE¹⁸⁵

As discussed above, the *Kodak* aftermarket claim cannot practically be relied on in challenging a right-to-repair claim. This Part offers a framework for using Section 5 to remedy this deficiency while being cognizant of the criticism that has been leveled against the doctrine. The key gap filler is market power. The first Section develops five settings that provide the equivalent of market power. The second and third Sections then discuss the foundational aspects of a Section 5 case: anticompetitive effects and procompetitive justifications.

A. (RELAXED) MARKET POWER

A critical issue in *Kodak* claims is whether a plaintiff can demonstrate market power in the aftermarket. The critiques of the ruling have contended that such aftermarket power is unlikely where primary markets are competitive. This is especially the case when buyers can engage in “lifecycle pricing”¹⁸⁶ at the time of their original purchase and switch to other manufacturers with less restrictive policies. However persuasive such critiques were at the time of (or shortly after) the decision, developments in the past several years have rendered them less likely to apply.

My Section 5 gap filler expands beyond the restrictive caselaw requirements of market power in the primary market or a manufacturer’s policy change after purchase. It offers five scenarios that functionally prevent consumers from having a choice: (1) multiple manufacturers’ restrictive terms; (2) control over a separate level of the distribution chain; (3) users’ lack of knowledge of restrictions; (4) revealed market power over time; and (5) time-sensitive uses.

First, *multiple manufacturers* could impose similarly restrictive terms. As a result, even if the particular manufacturer with whom the customer is dealing does not have significant market power, the use by other firms of analogous terms could effectively prevent choice. If multiple manufacturers have adopted similarly restrictive policies, a seemingly low market share of the manufacturer with whom the user is dealing is not as meaningful as it otherwise would be

185. This Article offers a framework for a Section 5 unfair-method-of-competition case. It does not address other potential avenues to address right-to-repair claims such as rulemaking or a consumer-protection claim. See, e.g., Joshua D. Sarnoff, *How the FTC Could, but Won't, Use Its Rulemaking Authority to Allow Aftermarket Parts*, TRUTH ON MKT. (May 10, 2022), <https://truthonthemarket.com/2022/05/10/how-the-ftc-could-but-wont-use-its-rulemaking-authority-to-allow-aftermarket-parts/> (discussing rulemaking).

186. Lifecycle pricing considers “both the price of the original good and the cost of subsequent maintenance.” HOVENKAMP, *supra* note 54, § 10.3b.

because the user cannot turn to other manufacturers with different policies. In such a case, the FTC need not show that the manufacturers conspired or entered into an agreement to impose similar terms. Rather, the absence of effective consumer choice supports the market power needed for an unfair-method-of-competition claim.¹⁸⁷

Second, a manufacturer could have control over a *separate level of the distribution chain* needed to service the product.¹⁸⁸ For example, farmers using John Deere tractors need to obtain service at certified Deere dealers. And such dealers may be the only repair facilities in the vicinity. As discussed above,¹⁸⁹ in Montana’s “58 million acres of farmland,” there are “only three large John Deere chains with a combined 19 locations serving Montana farms.”¹⁹⁰ Such geographic power functionally provides a monopoly. Even if Deere’s market share in the primary equipment market does not technically rise to the level of monopoly power, it essentially has such power given that farmers cannot realistically transport their tractors hundreds of miles for service, especially during harvesting season when timing issues are critical.¹⁹¹

Third, today’s range of more intrusive restrictions leads to users *lacking knowledge*.¹⁹² One of the main strands underlying hostility to *Kodak* aftermarket claims is the purchaser’s ability to consider the policies of a single manufacturer, engage in lifecycle pricing that considers these costs, and make comparisons with rivals. But today’s use of not only simple parts and servicing policies but also a range of more hidden restrictions, including restrictions accomplished by software, makes this virtually impossible.¹⁹³ The typical

187. The harms presented in this paragraph align with “shared monopoly” concerns. See C. Scott Hemphill & Tim Wu, *Parallel Exclusion*, 122 *YALE L.J.* 1182, 1243–45 (2013) (noting “judicial resistance to recognizing shared monopoly as an antitrust violation,” but highlighting “useful tool” of Section 5 for conduct that “clearly violate[s] the policy of the Sherman Act,” especially in the case of “independently incentivized but nonetheless harmful exclusionary tactics, where the methods used lack a plausible or cognizable efficiency justification”).

188. A consumer’s lack of choice in repair shops provides additional evidence of being locked in to the manufacturer’s product.

189. See *supra* notes 50–53 and accompanying text.

190. *Id.*

191. Conceptions of geographic market power could be relevant in this determination, but given courts’ focus on the primary market, likely will not play a central role.

192. For a list of factors that “make harm from aftermarket monopolization more likely and more severe,” see Lorenzo Coppi, *Aftermarket monopolization: the emerging consensus in economics*, 52 *ANTITRUST BULL.* 53, 68–69 (2007) (discussing “large number of uninformed customers” and “low-quality information”). Although inquiries based on knowledge could reach expansively to many settings, this Article focuses on the aftermarket setting, which is unique in how decisions are made over a sustained time period.

193. E.g., FTC, *supra* note 1, at 34 (owner of mobile phone and computer repair shop could “confidently say that all of my customers have no idea whether or not their devices are

purchasers at the end of the twentieth century understood that they needed to pay a price for service and that *Kodak*-type restrictions could lead to higher prices. In contrast, today's users often do not know that they are not able to repair their equipment and that this (perhaps longstanding) ability is blocked by software.¹⁹⁴

Fourth is *revealed market power over time*. The farming example above showed dramatic harms to livelihoods, with the examples of medical and military equipment revealing harms to lives. Despite these suffocating policies being in place, multiple generations of purchasers are *still* buying the products. The inability to switch away from such restrictive policies provides an indication of equipment owners' sustained market power.

Fifth is the importance of *time-sensitive uses*. In the agricultural, ventilator, and military settings discussed above, delay has dramatic consequences. Users suffering equipment breakdowns when a tractor is needed to harvest crops, a ventilator is required to keep critically ill patients alive, or equipment needs to quickly be fixed on the battlefield face timing constraints that increase the manufacturer's market power. Given the importance of hours and even minutes in such settings, users will not have the luxury of deliberately looking to other manufacturers in a theoretically competitive primary market for alternatives.

The presence of a single one of these factors might not be enough to demonstrate market power. But where multiple manufacturers impose similar restrictions or users continue to suffer significant anticompetitive effects, it might. And the presence of multiple factors pushes the outcome strongly in the direction of a Section 5 case.

These five settings address the problems highlighted by courts and commentators. For example, a plaintiff does not need to show a policy change if purchasers are not aware of the restrictions in the first place. There is no functional choice if multiple manufacturers have similar policies, all the repair shops in the area are affiliated with a single manufacturer, or timing constraints

repairable" and heard "[s]o many times . . . 'had I known I couldn't fix it I would not have purchased it'"); *id.* (U.S. PIRG senior official explained that "the problem is the point of sale" as "consumers don't have enough information"); Eric Ober, Benedetta Dell'anno, Jean-Roger Drèze, Herrmann L., Luciano A., Maltry R., Oehme I., Schmon B. & Ventère J.-P., *Planned obsolescence: the government's choice?*, PLATE: PRODUCT LIFETIME AND THE ENVIRONMENT 318 (2017) ("The lack of information concerning durable and repairable products causes an asymmetry in the market balance and leaves consumers unable to make the best buying decisions regarding . . . their own needs.").

194. For a complaint that Deere blocked pricing information, see Crooks, *supra* note 158, at 29–30 (refusal to make such information available allowed Deere to be "essentially free to charge whatever it likes for repairs").

limit effective options. And the theoretical ability to switch manufacturers is not persuasive when purchasers *continue* to buy equipment even though restrictive policies adversely affect livelihoods and lives. Users, in other words, practically have no choice.

The five categories of gap-filling I propose achieve the functional effect of the market power requirement. They also are consistent with the statutory standard, which limits the range of unfair practices targeted by the FTC to those that “cause[] or [are] likely to cause substantial injury to consumers” and are “not reasonably avoidable by consumers.”¹⁹⁵

B. UNPARALLELED ANTICOMPETITIVE EFFECTS

Once market power—or at least its functional equivalent—is shown, the analysis should consider anticompetitive and procompetitive effects.¹⁹⁶ First, there are uniquely severe anticompetitive effects in these scenarios. Antitrust’s typical anticompetitive effects have been higher prices and lower output, and to a lesser extent, reduced innovation and quality. The first two effects are relatively easy to measure, and (where significant enough) make consumers’ lives worse.

But as concerning as these effects are, there is a whole level of harm higher than that—in fact, *significantly higher*. Consumers are not “just” experiencing an anticompetitive market with higher prices, but also suffering *direct* effects on their lives and livelihoods. These effects are not typical. And they present a compelling argument for the FTC to use Section 5.

195. 15 U.S.C. § 45(n). *See also* William E. Kovacic & Marc Winerman, *Competition Policy and the Application of Section 5 of the Federal Trade Commission Act*, 76 ANTITRUST L.J. 929, 949 (2010) (suggesting use of Section 5 where “a particular element of proof needed to show a Sherman Act violation” is “relaxed”).

196. *See, e.g., Statement of Enforcement Principles Regarding “Unfair Methods of Competition” Under Section 5 of the FTC Act*, FED. TRADE COMM’N (Aug. 13, 2015), https://www.ftc.gov/system/files/documents/public_statements/735201/150813section5enforcement.pdf (describing that by 4-1 vote, FTC “adhere[d] to the . . . principle[]” that an act “will be evaluated under a framework similar to the rule of reason,” in other words, that the act “must cause, or be likely to cause, harm to competition or the competitive process, taking into account any associated cognizable efficiencies and business justifications”). By a 3-2 vote, the FTC in 2021 withdrew the 2015 statement, objecting to the application of a framework “similar to the rule of reason” because of “significant administrability concerns” and the difficulty of plaintiffs winning these cases. *Statement of the Commission On the Withdrawal of the Statement of Enforcement Principles Regarding “Unfair Methods of Competition” Under Section 5 of the FTC Act*, FED. TRADE COMM’N (July 9, 2021), https://www.ftc.gov/system/files/documents/public_statements/1591706/p210100commnstmtwithdrawalsec5enforcement.pdf. But even outside the particular setting of the Rule of Reason as applied in the courts, a consideration of anticompetitive and procompetitive effects would seem to be essential in ascertaining a restraint’s net competitive effect.

In the setting of medical equipment, the anticompetitive effects include lost lives. When COVID-19 was ravishing the nation's hospitals, ventilators sitting idle waiting for repair were ventilators that could not be used. Given the need for this equipment to keep patients alive, such an effect resulted in patients dying.

The anticompetitive effects also include lives in the military context. If the military is not able to fix its equipment, soldiers will be unprepared for battle, and the United States may not be able to “protect its service members, secure its defense posture, and even win her wars.”¹⁹⁷

The effects also encompass livelihoods. Farmers are not able to fix their equipment. This is not a machine they use for idle pleasure. It is not even equipment they use because it is merely important in their lives. No. It is their *literal livelihood*. Farmers use these machines to make a living. If they cannot use their tractor, they will not be able to harvest their crops.

Even worse, in this setting, timing is everything. Time spent waiting for a repair is time not harvesting. And because the window is short, it has irreversible effects. Until John Deere and other manufacturers took control of the tractors through software, farmers could repair the equipment themselves. Now, they cannot.¹⁹⁸

The unique harms in this setting are exacerbated by the more traditional antitrust harms of higher prices. In its report, the FTC concluded that “[w]ithin the aftermarket industry, dealer prices for OEM parts are almost always the highest,” with “[a]lternative parts . . . sell[ing] at a fraction of dealer prices.”¹⁹⁹ For example, the FTC cited empirical research that “some independent servicers maintain diagnostic imaging equipment for \$150-\$250 per hour,” far less than “manufacturer servicing at rates reportedly ranging from \$500-\$600 per hour (with a four-hour minimum).”²⁰⁰ Even if lives are not affected by technology restrictions, livelihoods could be. And at a minimum, price and service quality are.²⁰¹

197. Kunce & Ekman Letter, *supra* note 99, at 9.

198. Timing issues also have occurred in other settings. *See supra* notes 117–119 (photo equipment) and 129–133 (motorized wheelchairs) and accompanying text.

199. *See also* FTC, *supra* note 1, at 40 (citing LKQ empirical research, at 5).

200. FTC, *supra* note 1, at 40 (citing empirical research of International Association of Medical Equipment Remarketers and Services, at 1–2).

201. Nor is lifecycle pricing likely to explain the prices given the presence of factors like multiple manufacturers' use of similar restrictions, consumers' lack of knowledge, and revealed market power over time. *See supra* Section V.A and accompanying text.

In short, the anticompetitive effects side of the equation is unparalleled. The effects on lives and livelihoods are direct in ways not presented in previous Section 5—or, for that matter, antitrust—cases.

C. QUESTIONABLE PROCOMPETITIVE JUSTIFICATIONS

As severe as the anticompetitive effects are, the FTC still should consider whether they are justified by procompetitive effects. The two most fundamental justifications that manufacturers have offered are based on safety and IP.²⁰² These are potentially weighty excuses, and if they were strongly supported, the FTC would need to make careful determinations. But as discussed in this section and above,²⁰³ the lack of support generally makes these justifications an uphill climb for the manufacturers.

1. *Safety*

Manufacturers have claimed that “repair restrictions protect repair workers and consumers from injuries that could result from fixing a product or using an improperly repaired product.”²⁰⁴ In particular, their contracts with authorized repair persons “ensure that they have been properly trained” and “have the necessary skills to safely and reliably repair products to OEM specifications and standards with OEM-quality parts.”²⁰⁵

These safety concerns, however, have not been supported. The FTC’s Call for Empirical Research “specifically asked for data concerning “[t]he risks posed by repairs made by consumers or independent repair shops,” and in

202. Manufacturers additionally have offered justifications based on cybersecurity, liability and reputational harm, and quality of service, but the FTC’s comprehensive analysis has found them wanting. *See* FTC, *supra* note 1, at 31 (“The record contains no empirical evidence to suggest that independent repair shops are more or less likely than authorized repair shops to compromise or misuse customer data.”); *id.* at 33 (finding “no empirical evidence” to support manufacturers’ “concerns about reputational harm or potential liability resulting from faulty third party repairs”); *id.* at 38 (discussing “evidence that consumers are generally satisfied with repairs made by independent repair shops” and concluding that “[t]he record does not establish that repairs conducted by independent repair shops would be inferior to those conducted by authorized repair shops if [they] were provided with greater access to service manuals, diagnostic software and tools, and replacement parts as appropriate”). *See also* Brief of iFixit et al. at 10–11, *All. for Auto. Innovation v. Healey*, No. 1:20-cv-12090-DPW (D. Mass. June 7, 2021) (“Experts widely disfavor . . . ‘security through obscurity’ . . . [by which] secrecy [provides] the means to prevent unwanted intrusion into technological systems . . . both because secrecy is unlikely to deter a capable adversary and because it allows vulnerabilities to persist undetected and uncorrected, multiplying and broadening the avenues into sensitive systems for malicious actors.”).

203. *See supra* notes 61–65 and 92–95 and accompanying text.

204. FTC, *supra* note 1, at 26.

205. *Repair Locations*, CONSUMER TECH. ASS’N, <https://www.cta.tech/Landing-Pages/Greener-Gadgets/Repair-Locations> (last visited Apr. 27, 2022).

response, “several manufacturers and their associations submitted comments and were provided the opportunity to participate in the Workshop.”²⁰⁶ Despite this, “manufacturers provided no data to support their argument that injuries are tied to repairs performed by consumers or independent repair shops.”²⁰⁷ In addition, the FTC concluded that manufacturers did not “provide[] factual support for their statements that authorized repair persons are more careful or that individuals or independent repair shops fail to take appropriate safety precautions” or that “independent repair workers who enter homes pose more of a safety risk to consumers than authorized repair workers.”²⁰⁸

A leading repair organization explained that “[c]orporate lobbyists paint a bleak picture of third-party shops,” but this “couldn’t be further from the truth,” as (1) independent repair shops “are fully capable of performing the same repairs that manufacturers do—plus some repairs” they won’t do, (2) “[m]any independent repair technicians have gone through the same training and certification processes that manufacturers require . . . of their own technicians,” (3) it is “not uncommon for independent repair shops to have former technicians from big manufacturers on staff,” and (4) “many common repairs don’t require extensive expertise.”²⁰⁹

These conclusions have been observed in particular industries. In the setting of medical devices, as discussed above, based on an exhaustive analysis, the FDA issued a report that concluded that “the objective evidence indicates that many OEMs and third party entities provide high quality, safe, and effective servicing of medical devices”²¹⁰ and that “[t]he continued availability of third party entities to service and repair medical devices is critical to the functioning of the U.S. healthcare system.”²¹¹

206. FTC, *supra* note 1, at 28.

207. *Id.* See also FTC, *supra* note 128, at 53 (senior official at Consumer Technology Association “not aware that anybody has studied” issue of “authorized repair providers perform[ing] higher quality or more secure repairs than owners or independent repair providers”). The manufacturers cited only a single safety event—“a mobile phone thermal runaway occurring in Australia in 2011”—and even that did not “support the proposition that phones repaired by individual or independent repair shops are more likely to result in [these] events.” *Id.* at 28 n.146.

208. *Id.* at 28.

209. IFIXIT, *supra* note 119, at 8–9. See also *supra* note 96 (discussing repairers that simultaneously work for manufacturers and themselves). In addition, as one participant in the FTC workshop on the issue explained: “any good business owner who wants to keep their brand and reputation is going to make sure they have technicians that can repair appropriately.” FTC, *supra* note 128, at 56.

210. FDA REPORT, *supra* note 87, at 23.

211. *Id.* See *supra* notes 92–95 and accompanying text.

In the agricultural setting, as discussed above,²¹² “[t]here is a clear difference between resetting an error code and ignoring or overriding safety codes.”²¹³ Nor were there safety issues after European regulations gave independent repair organizations access to “technical manuals[,] . . . diagnostic trouble codes[,] . . . information needed to install . . . software,” and other tools.²¹⁴

Finally, the automobile industry even claimed that the right to repair could result in sexual predators. Wait, what? Yes, reaching for the fear card, the industry claimed that legislation considered in Massachusetts would “lead women to be stalked and sexually assaulted” because the law would allow “anyone [to] access the most personal data stored in your vehicle” and “a sexual predator could use the data to stalk their victims.”²¹⁵ Strong claims indeed. But a television station that investigated the issue found that the claims were “very out of context,”²¹⁶ and “cybersecurity experts” found that the charge “ha[d] no grounding in reality.”²¹⁷

In short, the safety claims that manufacturers have made have not been corroborated.

2. Intellectual Property

Manufacturers have contended that “vigorous assertion of their intellectual property rights sustains the health of the vibrant and innovative technology industry and fosters innovation.”²¹⁸ At times they have sought to justify their

212. See *supra* notes 61–65 and accompanying text.

213. O'REILLY, *supra* note 18, at 17.

214. O'REILLY, *supra* note 23, at 10.

215. Matthew Gault, *Auto Industry TV Ads Claim Right to Repair Benefits “Sexual Predators,”* VICE (Sept. 1, 2020), <https://www.vice.com/en/article/qj4ayw/auto-industry-tv-ads-claim-right-to-repair-benefits-sexual-predators>.

216. Karen Anderson, *5 Investigates: Ads over Massachusetts Right to Repair campaign full of misleading claims*, WCVB5 (Aug. 7, 2020, 6:38 PM), <https://www.wcvb.com/article/5-investigates-ads-over-massachusetts-right-to-repair-campaign-full-of-misleading-claims/33549057>.

217. *Id.* For similar fear-mongering, see Ben Lovejoy, *Apple fighting new “right to repair” legislation after successfully lobbying against it in the past*, 9TO5MAC (Feb. 15, 2017, 4:04 AM), <https://9to5mac.com/2017/02/15/apple-nebraska-right-to-repair/> (“[I]ndustry lobbyists told lawmakers in Minnesota that broken glass could cut the fingers of consumers who try to repair their screens.”); Jason Koebler, *Apple Tells Lawmaker that Right to Repair iPhones Will Turn Nebraska Into a “Mecca” for Hackers*, VICE (Feb. 17, 2017, 3:21 PM), <https://www.vice.com/en/article/pgxgpg/apple-tells-lawmaker-that-right-to-repair-iphones-will-turn-nebraska-into-a-mecca-for-hackers> (describing how Apple claimed that Nebraska—then considering right-to-repair legislation—“would become the mecca for bad actors”).

218. FTC, *supra* note 1, at 25 (citing comments from Association of Home Appliance Manufacturers and National Association of Manufacturers). Manufacturers garner significant profit streams from controlling repair markets, but that is not a justified IP-based defense. See

restrictions by pointing to multiple types of IP. Because the primary focus has been copyright law, this section focuses on this justification. But three other forms of IP—design patents,²¹⁹ trade secrets, and trademarks—are worth quick attention because manufacturers sometimes have relied on them and because—as discussed more fully below²²⁰—of the attenuated link between these laws and the need for incentives in this setting.

Design patents protect “new, original and ornamental design[s].”²²¹ Manufacturers have frequently obtained design patents in the automobile industry. Ford, for example, has claimed that its “designers create the appearance of headlamps, hoods and other parts to appeal aesthetically to customers,” that “[g]iven the importance of vehicle design, [the company] invests heavily in design and protects some of its artistic products through design patents,” and that a “knock-off business model free-rides off [its] investment and creativity.”²²² Design patent protection is understandable when “the design . . . make[s] some type of material aesthetic contribution to the art,” having “some visual content that actually matters to consumers of the relevant product.”²²³ But it does not seem appropriate for the “internal parts of a product, which no one buys for their appearance,” implicated in repair settings.²²⁴

Letter from Tim Cook to Apple investors, APPLE (Jan. 2, 2019), <https://www.apple.com/newsroom/2019/01/letter-from-tim-cook-to-apple-investors/> (Apple CEO Tim Cook admitted that company lost significant profits because of “customers taking advantage of significantly reduced pricing for iPhone battery replacements”).

219. In its report, the FTC stated that “only two commenters noted that manufacturers’ assertion of patent rights impedes independent repair,” with the one comment that provided concrete examples focusing on design patents. FTC, *supra* note 1, at 22, 26.

220. See *infra* notes 252-254 and accompanying text.

221. 35 U.S.C. § 171.

222. *Auto. Body Parts Ass’n v. Ford Glob. Techs., LLC*, No. 2:15-cv-10137-LJM-SDD, 2017 WL 2304509, at 1 (E.D. Mich. Jan. 31, 2017).

223. Sarah Burstein, *Costly Designs*, 77 OHIO ST. L.J. 107, 135 (2016).

224. Leah Chan Grinvald & Ofer Tur-Sinai, *Intellectual Property Law and the Right to Repair*, 88 FORDHAM L. REV. 63, 115 (2019). See also Joshua D. Sarnoff, White Paper on Protecting the Consumer Patent Law Right of Repair and the Aftermarket for Exterior Motor Vehicle Repair Parts: The PARTS Act, S. 812; H.R. 1879, 115th Cong. 4, 24 (Nov. 1, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3082289.

In *Automotive Body Parts Association v. Ford Global Technologies, LLC*, 930 F.3d 1314, 1319 (Fed. Cir. 2019), the Federal Circuit upheld design patents on automobile vehicle hoods and head lamps even though “the owner simply wants the body parts that will return [the car] to the way it looked when it was new.” *Auto. Body Parts Ass’n v. Ford Glob. Techs., LLC*, 293 F. Supp. 3d 690, 699 (E.D. Mich. 2018). As Leah Chan Grinvald and Ofer Tur-Sinai explain, however, the “fact that parts are not sold as separate items in the market other than for purposes of repair seems to be a relevant factor,” and “it is not clear that . . . the court gave sufficient attention to underlying policy considerations” because “patent protection for

As Sarah Burstein has explained: “internal, mechanical parts are going to be created regardless of whether design patent protection is available,” “[t]he public gains nothing by protecting them,” “patenting such designs raises serious concerns related to circumvention of the utility patent system,” and providing separate protection for spare parts . . . provides a windfall to the . . . manufacturer.”²²⁵

Manufacturers have used *trademarks* to block “the importation of replacement parts.”²²⁶ To do this, they have placed trademarks on “internal parts like batteries, processors, and cables” that users never see and “logos . . . no bigger than a grain of rice.”²²⁷ The setting in which these issues arise—counterfeiting and blocking importation of purportedly trademark-protected goods—is one where trademark defenses are less likely to be fully considered.²²⁸ But such use is at odds with trademark law and policy in several ways.

repair parts does not promote the decorative arts or provide other public benefits.” 88 FORDHAM L. REV. at 115–16.

225. Burstein, *supra* note 223, at 135–37. For a discussion of how the Federal Circuit has “appl[ie]d stringent and rigid standards” that have limited the U.S. Patent and Trademark Office’s (PTO’s) ability to reject applications for being obvious and that have made it “incredibly difficult—if not practically impossible—to reject any designs for a lack of ornamentality,” see Sarah Burstein, *Is Design Patent Examination Too Lax?*, 33 BERKELEY TECH. L.J. 607, 621, 624 (2018). See also, e.g., *In re Webb*, 916 F.2d 1553, 1555 (Fed. Cir. 1990) (interpreting “the ‘normal and intended use’ of an article to be a period in the article’s life, beginning after completion of manufacture or assembly and ending with the ultimate destruction, loss, or disappearance of the article” even though such a test does not consider the patent’s visibility or the article’s decorative purpose); see generally Sarah Burstein & Saurabh Vishnubhakat, *The Truth About Design Patents*, 71 AM. U. L. REV. 1221, 1270 (2022) (“[T]he available data suggest a high grant rate (upwards of 85–90%) for design applications between the late 1990s and the present [2021].”).

For a discussion of how the granting of design patents on parts has had a detrimental effect in the automobile industry, see Sarnoff, *supra* note 224, at 1 (“For decades, a robust competitive aftermarket for repair parts existed” but “the recent granting to and assertion by [original equipment manufacturers] of partial-product design patents for repair parts now threatens the repair parts aftermarket and the valuable consumer and insurance savings that have resulted.”).

226. Grinvald & Tur-Sinai, *supra* note 224, at 117; see also *id.* (providing example of U.S. Customs and Border Protection “routinely seiz[ing] replacement parts manufactured by . . . automobile parts supplier on the basis that the parts are ‘counterfeit’”).

227. Aaron Perzanowski, *Consumer Perceptions of the Right to Repair*, 96 IND. L.J. 361, 374 (2021).

228. See, e.g., Mark P. McKenna, *Criminal Trademark Enforcement and the Problem of Inevitable Creep*, 51 AKRON L. REV. 989, 1016 (2017) (“[I]here is virtually no law dealing with functionality in any counterfeiting context.”); *id.* at 1015 (“In a series of enforcement actions, Customs has seized imported replacement automobile parts on the ground that the parts (usually front grilles) are counterfeits because they copy registered marks in the grille designs” but “[t]he problem is that the grille designs are often necessary in the context of a replacement

First, it is not consistent with trademark law’s purpose, which is to prevent customer confusion²²⁹: consumers will be aware of the fact that an independent servicer—which it chose—repaired their products.²³⁰ Second, under trademark law, repairers are allowed to refurbish parts as long as they do not “‘deceive the public.’”²³¹ Third, manufacturers have targeted independent repairers’ use of the manufacturers’ trademarks even though—in referring to the plaintiff’s product itself—repairers’ use of the trademark will typically be justified based on the doctrine of “nominative use.”²³² Finally, the functionality defense would prohibit enforcement of a trademark embedded in a system necessary for the device to work.²³³

part—in the sense that car owners want parts that restore their cars to their original design, and sometimes even in the sense that the parts must have a particular design in order to fit the vehicle.”).

229. *E.g.*, *Fabick, Inc. v. JFTCO, Inc.*, 944 F.3d 649, 655 (7th Cir. 2019).

230. *Grinvald & Tur-Sinai*, *supra* note 224, at 116.

231. *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125, 129 (1947) (quoting *Prestonettes v. Coty*, 264 U.S. 359, 368 (1924)); *see id.* at 130 (repair does not violate trademark owner’s rights “so long as the manufacturer is not identified with the inferior qualities of the product resulting from . . . reconditioning by the dealer”); *Nitro Leisure Prod., L.L.C. v. Acushnet Co.*, 341 F.3d 1356, 1362 (Fed. Cir. 2003) (for refurbished products, “consumers are not likely to be confused by—and indeed expect—differences in the goods compared to new, unused goods”).

232. *See New Kids on the Block v. News Am. Pub., Inc.*, 971 F.2d 302, 308 (9th Cir. 1992) (“[N]ominative use of a mark—where the only word reasonably available to describe a particular thing is pressed into service—lies outside the strictures of trademark law: Because it does not implicate the source-identification function that is the purpose of trademark, it does not constitute unfair competition; such use is fair because it does not imply sponsorship or endorsement by the trademark holder.”) (emphasis in original).

For example, in *Toyota Motor Sales, U.S.A., Inc. v. Tabari*, 610 F.3d 1171, 1180 (9th Cir. 2010), the court did not allow Toyota to prevent auto brokers from using its “Lexus” mark because “the wholesale prohibition of nominative use in domain names . . . would be unfair to merchants seeking to communicate the nature of the service or product” and “would be unfair to consumers, who would be deprived of an increasingly important means of receiving such information.” *See also Leah Chan Grinvald & Ofer Tur-Sinai, Smart Cars, Telematics and Repair*, 54 U. MICH. J.L. REFORM 283, 318 (2021) (citing *Ford Motor Co. v. Autel US Inc.*, No. 14-13760, 2015 WL 5729067, at *7–8 (E.D. Mich. Sept. 30, 2015), in which manufacturers targeted independent repairers’ use of the manufacturers’ trademarks on electronic menu screens).

233. *See, e.g., Sega Enterprises Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1528 (9th Cir. 1992) (overturning preliminary injunction because trademark owner’s security system “display[ing] its trademark . . . whenever the initialization code for the . . . system is utilized . . . has the effect of regulating access to the [videogame] console” and “because there is no indication in the record of any public or industry awareness of any feasible alternate method of gaining access”). *See generally Inwood Lab’s, Inc. v. Ives Lab’s, Inc.*, 456 U.S. 844, 851 (1982) (product feature is functional “if it is essential to the use or purpose of the article or . . . it affects the cost or quality of the article”); *Qualitex Co. v. Jacobson Prod. Co.*, 514 U.S. 159, 164 (1995) (“[T]he functionality doctrine prevents trademark law, which seeks to promote competition

Manufacturers also have sought to block independent repair organizations by using *trade secrets*. They have claimed that allowing these groups to service their products would “increase[] the likelihood of trade secrets becoming public knowledge”²³⁴ and “place[] OEMs, suppliers, [and] distributor and repair networks at risk.”²³⁵ Despite these claims, three doctrines should prevent manufacturers from being successful. First, unlike information that gives an advantage over competitors, repair information does not derive independent economic value from being secret.²³⁶ Second, protection does not apply when independent repairers can discover the information legally through reverse engineering.²³⁷

And third, when information “is readily shared with authorized dealers (and their repair personnel) all over the country,”²³⁸ the owner may not have engaged in reasonable efforts to maintain secrecy.²³⁹ This could be the case “even where manufacturers have entered into confidentiality agreements with their authorized dealers” because the dealers’ repair personnel may not have “entered into similar agreements with their employers.”²⁴⁰ In fact, the repair information could be so widely available and generally known that it is not considered a secret at all.²⁴¹

In the realm of *copyright* law, manufacturers of video games and gaming consoles, to pick one example, have asserted that “repair restrictions in the

by protecting a firm’s reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature.”)

234. Letter from Telecommunications Industry Association to FTC 2-3 (Sept. 16, 2019), https://downloads.regulations.gov/FTC-2019-0013-0072/attachment_1.pdf.

235. Electronics Products Manufacturers’ Opposition to HB 2279 3 (Jan. 8, 2018), <https://api.ctia.org/docs/default-source/legislative-activity/coalition-letter-in-opposition-to-washington-hb-2279----digital-right-to-repair.pdf>.

236. Uniform Trade Secrets Act § 1(4) (Unif. L. Comm’n 1985), <https://www.uniformlaws.org/viewdocument/final-act-128?CommunityKey=3a2538fb-e030-4e2d-a9e2-90373dc05792&tab=librarydocuments>.

237. Reverse engineering is the process of “working backward to find the method by which [the product] was developed.” *Id.* at § 1.

238. Grinvald & Tur-Sinai, *supra* note 224, at 123.

239. Uniform Trade Secrets Act § 1(4) (Unif. L. Comm’n 1985).

240. Grinvald & Tur-Sinai, *supra* note 232, at 323.

241. Uniform Trade Secrets Act § 1(4) (Unif. L. Comm’n 1985) (information must derive value from “not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use”). For a discussion of cases in which courts found trade secrets in products sold to the public, see Michael Risch, *Hidden in Plain Sight*, 31 BERKELEY TECH. L.J. 1635, 1649–51 (2016). See also Michael Hiltzik, *Column: How Apple and other manufacturers attack your right to repair their products*, L.A. TIMES (Nov. 16, 2018, 7:30 AM), <https://www.latimes.com/business/hiltzik/la-fi-hiltzik-right-repair-20181116-story.html> (“No one puts trade secrets in their repair manuals.”).

form of . . . TPMs are needed to protect video games from being pirated.”²⁴² In particular, they contend that “some game console repairs may require replacing hardware components or parts of components, and some of these hardware fixes may require’ circumvention of a console’s anti-piracy TPMs.”²⁴³

For several reasons, the copyright justification is not compelling in this setting. First, any reasonable assessment of the relationship between IP and competition law makes clear that IP rights are not absolute. Second, copyright-based policies favor the right to repair. Third, copyright doctrine supports this conclusion.

First, IP-based conduct is not immune from competition law. The Supreme Court in *FTC v. Actavis*²⁴⁴ confirmed its decades-long approach of applying antitrust scrutiny to IP-based conduct. The Court held that it “would be incongruous to determine antitrust legality by measuring [a] settlement’s anticompetitive effects solely against patent law policy, rather than by measuring them against procompetitive antitrust policies as well.”²⁴⁵ In other words, “patent and antitrust policies are both relevant in determining the ‘scope of the patent monopoly’—and consequently antitrust law immunity—that is conferred by a patent.”²⁴⁶ Citing cases going back to 1926, the Court explained that it “has struck down overly restrictive patent licensing agreements—irrespective of whether those agreements produced supra-patent-permitted revenues.”²⁴⁷

242. FTC, *supra* note 1, at 25; *see also* Letter from Microsoft Corp. to FTC at 10, May 31, 2019, <https://securerepairs.org/wp-content/uploads/2019/06/MSFT-COMMENT.pdf> (cited in FTC, *supra* note 1, at 25 n.128) (“[U]nfettered access to diagnostic and proprietary hardware tools increases the potential for malicious actors to circumvent anti-piracy controls.”).

243. FTC, *supra* note 1, at 25. For an example regarding patents, see National Association of Manufacturers letter to FTC 1 (Sept. 16, 2019), https://downloads.regulations.gov/FTC-2019-0013-0079/attachment_1.pdf. *See also* FTC, *supra* note 1, at 25 (describing the National Association of Manufacturers letter as contending that “any requirement” to “make available patented replacement parts for repair would be contrary to the statutorily protected right of a patent holder to exclude others from making, using, or selling their patented invention”).

244. 570 U.S. 136 (2013).

245. *Id.* at 148.

246. *Id.*

247. *Id.* at 150. In addition to antitrust-based scrutiny within the scope of the IP right, the doctrine of copyright misuse prevents owners from leveraging their copyrights outside this realm. For example, in *Philips North America LLC v. Advanced Imaging Services, Inc.*, the court denied a manufacturer’s motion to dismiss an independent repair organization’s claim challenging a software update with “no legitimate business reason” based on the allegation that the defendant “locked . . . ISOs out of its systems . . . to prevent competition in the servicing market under the guise of protecting their copyrighted material.” 2022 WL 1138076, at *4, *5 (E.D. Cal. Apr. 18, 2022). *See also, e.g.*, *Assessment Techs. of WI, LLC v. WIREdata, Inc.*, 350 F.3d 640, 647 (7th Cir. 2003) (copyright misuse doctrine “prevents copyright holders from leveraging their limited monopoly to allow them control of areas outside the monopoly”)

To similar effect, the D.C. Circuit in *United States v. Microsoft* rejected Microsoft’s assertion that the license restrictions it imposed on original equipment manufacturers were justified as the “exercis[e] of] its rights as the holder of valid copyrights.”²⁴⁸ The court explained that “Microsoft’s primary copyright argument borders upon the frivolous” as “[t]he company claims an absolute and unfettered right to use its intellectual property as it wishes.”²⁴⁹ But the court made clear that “[t]hat is no more correct than the proposition that use of one’s personal property, such as a baseball bat, cannot give rise to tort liability.”²⁵⁰ The court instead cited the longstanding proposition that “[i]ntellectual property rights do not confer a privilege to violate the antitrust laws.”²⁵¹

Second, Section 5 provides leeway to consider policy considerations not as directly relevant in the caselaw. The most fundamental question in copyright law is how to assess the tradeoff between incentives and access.²⁵² In the right-to-repair setting, access concerns should be paramount. For starters, manufacturers have never shown that they need to control the market for service and parts to incentivize the creation of products with protectable expression.²⁵³ Nor would they need to do so to be motivated to service or provide parts for faulty products because—in addition to the lack of connection with protecting expression—the need to fix the products is reason enough.²⁵⁴ This favoring of access gains support from courts’ treatment of reverse engineering as fair use. Because courts have found that using reverse

(citation omitted); *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 793 (5th Cir. 1999) (copyright owner “used its copyrights to indirectly gain commercial control over products [it] does not have copyrighted,” namely, its microprocessor cards”); *Prac. Mgmt. Info. Corp. v. Am. Med. Ass’n*, 121 F.3d 516, 520 (9th Cir. 1997) (finding misuse where copyright owner licensed coding system “in exchange for . . . agreement not to use a competing . . . system”); *DSC Commc’ns Corp. v. DGI Techs., Inc.*, 81 F.3d 597, 601 (5th Cir. 1996) (noting “attempt[] to use . . . copyright” on “operating system software . . . to obtain a patent-like monopoly over unpatented microprocessor cards”); *Lasercomb Am., Inc. v. Reynolds*, 911 F.2d 970, 978 (4th Cir. 1990) (licensing agreement prevents licensee from “independently implement[ing]” software for 99 years). See generally Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1124–26 (2003) (discussing cases).

248. *United States v. Microsoft Corp.*, 253 F.3d 34, 62 (D.C. Cir. 2001).

249. *Id.* at 63.

250. *Id.*

251. *Id.* (citation omitted).

252. E.g., Jorge L. Contreras, *The Open Covid Pledge: Design, Implementation and Preliminary Assessment of an Intellectual Property Commons*, 2021 UTAH L. REV. 833, 846 n.56 (citing sources).

253. See, e.g., FTC, *supra* note 128, at 120 (manufacturers have “already been paid for all of their IP” and “all of their R&D”).

254. See also *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1208 (2021) (“The fact that computer programs are primarily functional makes it difficult to apply traditional copyright concepts in that technological world.”).

engineering to create a competing system is fair use,²⁵⁵ the lesser step of repairing the system itself also would be.²⁵⁶ Finally, users expect the right to repair their product²⁵⁷ and innovation relies in significant part on users' contributions—the “user innovation” highlighted by Eric von Hippel.²⁵⁸

Third, copyright doctrine supports the right to repair. The “first sale” doctrine in Section 109 of the Copyright Act “allows those who have acquired products . . . considerable freedom to use, modify, and resell those products as they wish, even if the products are protected . . . by IP rights.”²⁵⁹ As Pamela Samuelson has explained, this right “serves many positive functions” including “promot[ing] broader public access to products[,] . . . enabl[ing] preservation of products[,] . . . protect[ing] privacy and autonomy,” and fostering “more innovation.”²⁶⁰

Additionally, Section 117(c) allows the copying of computer programs for “maintenance or repair” of a machine.²⁶¹ The drafters explained that “[w]hen a computer is activated, certain software or parts thereof is automatically copied into the machine’s random access memory, or ‘RAM.’”²⁶² Court holdings that such copying is a “reproduction” reserved to the copyright owner “call[] into question the right of an independent service provider . . . to even activate” a computer “for the purpose of servicing the hardware

255. *E.g.*, *Sega Enterprises, Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1514–15 (9th Cir. 1992) (finding fair use where Accolade reverse engineered Sega’s video game programs to create its own games); *Sony Comput. Entertainment v. Connectix Corp.*, 203 F.3d 596, 598 (9th Cir. 2000) (finding fair use where Connectix made software program whose purpose was “to emulate on a regular computer the functioning of the Sony PlayStation console”).

256. *See also infra* note 271 for a discussion of courts’ concern with applying the DMCA to protect functional products.

257. Perzanowski, *supra* note 227, at 392 (“More than 80%” of consumers surveyed “expressed their belief that they have the right to repair devices themselves or to rely on the repair shop of their choice.”).

258. *See* ERIC VON HIPPEL, *DEMOCRATIZING INNOVATION* 8 (2005) (explaining that users tend to develop “functionally novel” innovations that incorporate information about their desires in contrast to manufacturers that develop “improvements on well-known needs”). *See also, e.g.*, Grinvald & Tur-Sinai, *supra* note 232, at 292 (“Where repair markets are open, consumers, independent repair shops, and tool developers have the ability and motivation to create new methods of repair, develop or improve diagnostic and repair tools, and create user-generated tips, manuals, and kits that could significantly benefit others.”).

259. Pamela Samuelson, *Freedom to Tinker*, 17 *THEORETICAL INQUIRIES* L. 563, 572–73 (2016).

260. *Id.* at 573–74. *See also* *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 542 (2013) (rejecting interpretation of Copyright Act that would have required product manufacturers to obtain “the permission of the holder of each copyright on each” component part before product is imported into United States).

261. 17 U.S.C. § 117(c).

262. H.R. REP. NO. 105-796, at 76 (1998) (Conf. Rep.).

components.”²⁶³ Section 117(c) serves a purpose that the drafters believed was “important”²⁶⁴ and supports repair.²⁶⁵

Moreover, even though copyright law—in particular, the DMCA—makes unlawful the circumvention of technological protection measures that prevent access to copyrighted works, the legislative history and case law suggest that it was not intended to be applied in right-to-repair settings. The DMCA created a triennial exemption process that allows the Register of Copyrights to conduct a rulemaking proceeding and grant exemptions for individual uses every three years.²⁶⁶ In 2015, 2018, and 2021, the Register granted an exemption allowing the circumvention of TPMs for agricultural machines.²⁶⁷ The Register found that the exemption was warranted because “facilitating diagnosis, repair, and modification of vehicles may constitute a noninfringing activity as a matter of fair use,” Section 117 of the Copyright Act, or both.²⁶⁸ The exemption is helpful in protecting those who circumvent the TPMs themselves, but it does not cover trafficking in circumvention tools, “render[ing] it effectively meaningless for those who lack the technical knowledge to access and manipulate increasingly complex embedded computer systems.”²⁶⁹

The DMCA drafters’ intentions make clear that liability is not warranted in this setting. The DMCA prohibits the circumvention of TPMs protecting

263. *Id.* For a discussion of the limits of the provision, see PERZANOWSKI, *supra* note 17, at 120 (explaining that “if software necessary for repair isn’t already stored on the machine, owners and repair providers are not entitled to obtain or make copies”).

264. H.R. REP. NO. 105-796, at 76 (1998) (Conf. Rep.).

265. As discussed above, the fair use defense protects the typical repair activity of reverse engineering. *See supra* note 255 and accompanying text.

266. 17 U.S.C. § 1201(a)(1)(B)–(D).

267. For example, the 2015 exemption covered “computer programs that are contained in and control the functioning of a motorized land vehicle such as a . . . mechanized agricultural vehicle . . . when circumvention is a necessary step . . . to allow the diagnosis, repair, or lawful modification of a vehicle function.” Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 80 Fed. Reg. 65944–01 at 65963 (Oct. 28, 2015).

268. *Id.* at 65954; *see also id.* (“owners of vehicles and agricultural machinery are adversely impacted as a result of TPMs that protect the copyrighted computer programs on the ECUs that control the functioning of their vehicles”).

269. Kyle Wiens, *Copyright Office Ruling Issues Sweeping Right to Repair Reforms*, iFIXIT (Oct. 25, 2018), <https://www.ifixit.com/News/11951/1201-copyright-final-rule>. *See supra* note 27 and accompanying text; *see also* Grinvald & Tur-Sinai, *supra* note 224, at 109 (noting that anti-trafficking provision “prevents repair shops from posting content online and distributing information related to disabling digital locks” and that distributors may be “exposed to criminal liability” for doing so). For a discussion of how John Deere started requiring farmers to sign licenses agreeing to give up rights protected by the exemption shortly after it was granted in 2015, *see supra* notes 27–33 and accompanying text.

access to a work containing copyrighted material.²⁷⁰ But the legislative history confirms that the software in functional devices was not the intended target.²⁷¹

In enacting the DMCA, Congress was concerned that copyright owners would not “make their works . . . available on the Internet” because of the “massive piracy” resulting from the “ease with which digital works [could] be copied and distributed worldwide virtually instantaneously.”²⁷² The legislation was designed to encourage the availability of the “movies, music, software, and literary works that are the fruit of American creative genius.”²⁷³

The problem is that the DMCA’s language covers more than just online movies and music. The statute encompasses any measure that protects any work “protected by this title”—in other words, any copyrighted work. And that extends to software that plays a role in functional equipment.²⁷⁴

The drafters worried about potential abuse of the DMCA, crafting an interoperability exemption so that computer programs could exchange information.²⁷⁵ The House and Senate Judiciary Committees sought to ensure that the exception would foster “competition and innovation” in the software industry.²⁷⁶ The drafters explained that the exemption “allow[ed] legitimate software developers to continue engaging in certain activities for the purpose of achieving interoperability” and that “manufacturers, consumers, retailers, and professional servicers . . . should not be prevented from correcting an interoperability problem . . . resulting from a technological measure.”²⁷⁷ In fact, the Register of Copyrights rejected a request for a specific exemption to the

270. 17 U.S.C. § 1201(a)(1)(A).

271. The caselaw also warns of expansive DMCA interpretations that encompass functional products. *See* *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 552 (6th Cir. 2004) (Merritt, J., concurring) (“Congress did not intend to allow the DMCA to be used offensively” but sought only “to reach those who circumvented protective measures ‘for the purpose’ of pirating . . . copyright-protected works such as movies, music, and computer programs.”); *Chamberlain Grp., Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1204 (Fed. Cir. 2004) (warning of manufacturer “add[ing] a single copyrighted sentence or software fragment to its product, wrap[ping] the copyrighted material in a trivial ‘encryption’ scheme, and thereby gain[ing] the right to restrict consumers’ rights to use its products in conjunction with competing products,” which “would allow virtually any company to attempt to leverage its sales into aftermarket monopolies—a practice that both the antitrust laws . . . and the doctrine of copyright misuse . . . normally prohibit”).

272. S. REP. NO. 105-190, at 8 (1998).

273. *Id.*

274. *See* MICHAEL A. CARRIER, INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW 184 (2009).

275. 17 U.S.C. § 1201(f).

276. S. REP. NO. 105-190, at 13; H. COMM. ON THE JUDICIARY, 105TH CONG., SECTION-BY-SECTION ANALYSIS OF H.R. 2281, at 14 (Comm. Print. 1998).

277. 144 CONG. REC. E2138; *see generally* CARRIER, *supra* note 274, at 181–83.

DMCA on the grounds that the statute's interoperability exception was "a far more robust remedy for insuring competitive activity in the marketplace."²⁷⁸ The drafters' intent in general and the interoperability exception in particular strengthen the case for not allowing manufacturers to use the DMCA to block the repair of functional products.

Manufacturers have used copyright to target the use of not only software but also service manuals. Just to give two examples, Toshiba sent a cease-and-desist letter to an individual that "distribut[ed], by download, copyright[ed] repair manuals . . . that are proprietary"²⁷⁹ and Apple called linking to its manual "an infringement of [its] copyrights," which resulted in its "insist[ing] that [the user] immediately take all necessary steps to remove the . . . manual . . . from [its] site."²⁸⁰ Copyright's originality standard is low,²⁸¹ and courts have found that "manuals can possess sufficient originality to allow copyright protection, thin as it may be."²⁸²

But a service manual, which "contain[s] useful information for diagnosing and repairing . . . common failures,"²⁸³ is largely factual in nature. No one is interested in the manual because they are looking for flowery prose or creative expression. Absent access to the manual, the machine cannot be fixed. This seems to violate the fundamental idea-expression dichotomy.²⁸⁴ And the manual's factual, functional, non-market-displacing use seems to present a

278. Memorandum from Marybeth Peters, Register of Copyrights to James H. Billington, Librarian of Congress 178 (Oct. 27, 2003), <https://cdn.loc.gov/copyright/1201/docs/registers-recommendation.pdf>.

279. Letter from John Ryan, Toshiba to Mr. Hicks (July 31, 2012), https://www.wired.com/wp-content/uploads/blogs/opinion/wp-content/uploads/2012/11/toshiba_timhicks_takedownletter.jpeg.

280. Andrew Orlovski, *Apple sues itself in the foot (again)*, REGISTER (May 4, 2006, 4:14 AM), https://www.theregister.com/2006/05/04/apple_sa_deep_links/.

281. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991) ("[The requisite level of creativity is extremely low; even a slight amount will suffice.>").

282. *Honeywell Int'l, Inc. v. W. Support Grp., Inc.*, 947 F. Supp. 2d 1077, 1084 (D. Ariz. 2013) (aircraft maintenance manuals). *See also, e.g.*, *Eagle Access Control Sys., Inc. v. USA Power Gate, Inc.*, No. CV 07-3789 SVW (RCx), 2008 WL 11334485, at *4 (C.D. Cal. Dec. 18, 2008) (gate "is subject to 'thin' copyright protection").

283. PERZANOWSKI, *supra* note 17, at 7–8; *see* Kyle Wiens, *The Shady World of Repair Manuals: Copyrighting for Planned Obsolescence*, WIRED (Nov. 12, 2012, 6:00 PM), <https://www.wired.com/2012/11/cease-and-desist-manuals-planned-obsolence/> ("Repair isn't economically viable without manuals.")

284. For an example of the factual nature of manuals, *see* PERZANOWSKI, *supra* note 17, at 117 (discussing medical equipment manufacturer Steris's manual, one-third of which "is a long list of part names and numbers" and "the bulk of [which] is a collection of methods and processes beyond the scope of copyright").

quintessential example of fair use.²⁸⁵ Nor are incentives needed to create service manuals, which manufacturers must offer for their products.²⁸⁶

* * *

In short, the safety concerns upon which manufacturers have relied are not supported. And those based on IP lie far afield from the creativity and innovation at the core of the IP regimes. The weak justifications, in a setting with extreme anticompetitive effects and uncertain antitrust liability, present an ideal setting for application of FTC Section 5. In not being tied narrowly to the caselaw, Section 5 has room to consider policy justifications. And when it comes to IP, those policies strongly favor the access side of the incentives/access divide.

D. THE CONSUMER-WELFARE RECONCILER

Use of Section 5 in this setting also offers benefits in bridging the divide that has recently opened in antitrust debate on the issue of “consumer welfare.” For the past fifty years, this concept has served as the lodestar of antitrust law. The term first received attention after Robert Bork introduced it in the *Antitrust Paradox*.²⁸⁷ One of the ironies of the concept is that Bork used

285. In explaining why a database of repair manuals constitutes fair use, the Electronic Frontier Foundation analyzed the four factors and concluded that 1) the use is transformative, as “[w]hatever copyrightable elements exist in the[] manuals . . . are irrelevant to the project’s purpose of disseminating and explaining factual repair information . . . to save lives”; 2) the works “are highly factual and already published”; 3) the project “must copy entire manuals, or risk leaving out crucial details or context the technician will need to make the repair”; and 4) the documents “are incidental to the sale of a corresponding medical device” and “allowing manufacturers a copyright monopoly over repair information risks creating a corollary monopoly” on device maintenance, which would be “a misuse of copyright to inhibit competition in an adjacent market for non-copyrightable goods and services.” Letter from Kit Walsh & Cynthia Replogle, EFF to Russell Wheatley, Steris Corp. 2-3 (June 10, 2020), https://www.eff.org/files/2020/06/10/ifixit_correspondence_to_steris_executed.pdf. See also *id.* (“Given that the market for medical devices is about medical devices, it would be difficult for Steris to plausibly argue that it lacks adequate other incentives to document how to maintain the devices that are its bread and butter,” and “[t]he benefit to the public far outweighs any speculative harm to any legitimate interest in restricting their availability.”). See generally *Gulfstream Aerospace Corp. v. Camp Sys. Int’l, Inc.*, 428 F. Supp. 2d 1369, 1378, 1380 (S.D. Ga. 2006) (finding fair use of manuals because nature of work was “predominantly factual,” author’s “desire for copyright protection has nothing to do with needing an incentive to create its manuals,” and author’s “monopolization efforts should not get an assist from the [c]ourt through an expansive reading of copyright law”).

286. See, e.g., *The Importance Of Buying a Good Service Manual*, LINKEDIN (May 29, 2020), <https://www.linkedin.com/pulse/importance-buying-good-service-manual-my-premium-manual-source/>.

287. ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 7 (1978).

it to refer to the welfare of not only consumers but also producers.²⁸⁸ Despite that, the term became the widely acknowledged goal of antitrust. It put the focus on consumers, whose interest in lower prices, higher output, better quality, and more innovation served as an effective surrogate for antitrust's objectives. And it addressed some of the acknowledged problems of the previous antitrust era, in which the lack of an overriding objective reduced predictability and antitrust “was characterized by over-enforcement, poor quality economics or none at all, and many internal contradictions.”²⁸⁹ In the past few years, neo-Brandeisians have objected to the term, asserting that it does not promote the objectives antitrust should be supporting, including those relating to small businesses, and that it focuses solely on price.²⁹⁰

There have been many stringent hurdles to robust antitrust enforcement since the 1970s. But it is not clear that consumer welfare deserves the lion's share of the blame it has shouldered. In their attempt to avoid punishing innocent companies, antitrust courts “have often imposed almost impossibly high burdens of proof on plaintiffs.”²⁹¹ And in fact, the consumer-welfare framework has made room not just for price and output, but also innovation²⁹² and labor.²⁹³ Regardless of how this question is resolved, the right-to-repair setting is one in which the two sides' goals align.

The reason is that, stated most generally, the interests of consumers overlap with those of workers, user innovators, and independent repair

288. Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7, 7–10 (1966).

289. Herbert Hovenkamp & Fiona Scott Morton, *Framing the Chicago School of Antitrust Analysis*, 168 U. PA. L. REV. 1843, 1844 (2020).

290. Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 716 (2017).

291. A. Douglas Melamed, *Antitrust Law and Its Critics*, 83 ANTITRUST L.J. 269, 273 (2020).

292. E.g., *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) (en banc). See generally A. Douglas Melamed & Nicolas Petit, *The Misguided Assault on the Consumer Welfare Standard in the Age of Platform Markets*, 54 REV. INDUS. ORG. 741, 752 (2019) (describing judicial “condemn[ation] of] practices—unrelated to price—that threatened to raise entry barriers and thus to reduce or delay innovation”).

293. E.g., Complaint, *United States v. Adobe Systems, Inc.*, No. 1:10-cv-01629 (D.D.C. Sept. 24, 2010). See Melamed & Petit, *supra* note 292, at 753 (Department of Justice treated as “facially anticompetitive” a series of bilateral agreements among large technology firms that “refrain[ed] from soliciting, cold calling, recruiting, or otherwise competing for each other's computer engineers and scientists” because it “disrupted the normal price setting mechanisms that apply in the labor setting”). See also Stephen Calkins, *Remarks Intended for Delivery on the Acceptance of the American Antitrust Institute's 2019 Award for Antitrust Achievement*, ANTITRUST INST. (June 20, 2019), https://www.antitrustinstitute.org/wp-content/uploads/2019/08/Calkins_201-Antitrust-Achievement-Award.pdf (calling the term “conceptually correct” but suggesting use of phrase “competition welfare standard” and stating that the notion that “‘consumer welfare’ is concerned exclusively with price . . . is not and never has been true”).

shops.²⁹⁴ The consumer-welfare divide tends to appear when a large company uses efficiencies to benefit consumers, harming small-business rivals as a result. For example, if consumers benefit from large retailers' efficiencies, then what is good for consumers could be bad for small businesses, and vice versa. Here, in contrast, the consumer stands in for the effects on price, output, lives, and livelihoods. That would not necessarily be true if there were significant efficiencies from repair restrictions. But based on the evidence unearthed in empirical studies, the FDA's comprehensive report, and the FTC workshop, that doesn't appear to be the case.

In fact, a focus on consumers or end-users is particularly apt here. The primary entity affected by anticompetitive repair restrictions is the user—the patient who needs a ventilator, the military officer seeking to repair equipment in the field, the farmer trying to get their tractor to work, and the user struggling with their non-working device. The harm these users suffer from repair restrictions is not theoretical. In fact, the effect on lives and livelihoods is as direct as can be imagined.

VI. CONCLUSION

The right to repair is crucial. Consumers suffer by not being able to fix their products in a range of industries, including agriculture, medical, military, and technology. As applied by today's courts, antitrust will often not be able to be applied effectively to address these harms. My Section 5 framework is consistent with the rationale underlying *Kodak* while protecting consumers who effectively lack choice. Given the severe effects on lives and livelihoods and questionable justifications, a competition-based tool promises real benefits.

294. See, e.g., FTC, *supra* note 128, at 24 (noting “billions of dollars in potential loss for small businesses because of the possibility of losing the refurbishing market”).

TOWARD A CANADIAN RIGHT TO REPAIR: OPPORTUNITIES AND CHALLENGES

Anthony D. Rosborough[†]

ABSTRACT

This Article draws a picture of the past, present, and future of the right to repair in Canada. It looks to early successes toward automotive right to repair, challenges faced in proposing consumer protection reforms in Ontario and Quebec, and the utility of a proposed copyright “Technological Protection Measure (TPM) exception” allowing circumvention for repair purposes. In light of right to repair priorities identified by Canada’s current federal government, the Article identifies a selection of reforms that could achieve these goals. Such reforms include creating regulations under the *Copyright Act* governing the use and implementation of TPMs, passing an exception to the *Trademarks Act* to facilitate the importation of replacement parts, and expanding access to remedies under the *Competition Act*. The creation of a federal sustainability index with repairability scores is also addressed. The Article then looks to potential obstacles and challenges in realizing upon right to repair reforms in Canada, including constitutional restrictions on Parliament’s legislative power and the need to find grassroots support for the right to repair as a social movement. Looking to the future of the right to repair in Canada, the Article contends that a greater degree of federal-provincial cooperation is needed to address the multifaceted and interwoven laws which touch upon repair.

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† PhD Researcher, European University Institute (Italy). B.A., University of King’s College; J.D., Schulich School of Law at Dalhousie University; L.L.M., University of Glasgow. The author would like to thank the editors of the *Berkeley Technology Law Journal* for their patience, careful edits, as well as Aaron Perzanowski and Pamela Samuelson for their enduring encouragement and support.

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I. INTRODUCTION

Throughout the 1990s, *The Red Green Show* was a staple of Canadian comedy television. Both loathed and loved by viewers across the country, the show's sketches centered around Red Green, a simple man who assailed the status quo. Red was emblematic of the Canadian rural every-person who, with self-deprecating humor and honesty, fashioned wholly inadequate and comedic solutions to common repairs and household projects. During segments titled "Handyman Corner" and "If It Ain't Broke, You're Not Trying," Red perilously attempted to repair things such as a cracked car windshield using a hammer and nail, only exacerbating the problem, and retrofitted common household appliances for various purposes. Virtually all of Red's repairs and projects involved duct tape, his "secret weapon."

The Red Green Show strongly featured self-repair and DIY activities partly because of their resonance with Canadian culture and folklore in a broader sense. Despite Canada's increasingly urbanized population,¹ much of its culture stems not from the urbanite vicissitudes or trends within city centers, but instead stories of the rural vernacular and small-town self-reliance. Repair and frugal ingenuity are ubiquitous themes throughout the cultural works of Canadiana, including the community-building aspects of repair in CBC's *Corner Gas*, the moral ambiguity in refurbishing and selling abandoned shopping carts in *Trailer Park Boys*, and the heroic marine salvage efforts depicted in the late Stan Rogers' folk song "The Mary Ellen Carter." Overall, the great expanse of

1. According to a World Bank study, 81.56% of the total population of Canada lives in cities as of 2020. See Aaron O'Neill, *Urbanization in Canada 2020*, STATISTA.COM (Jan. 11, 2002), <https://www.statista.com/statistics/271208/urbanization-in-canada/>.

Canada's landscape and the frequent harsh winters make repair and maintenance prominent fixtures in Canadian life.

But unlike the wooden ships, cars, appliances, and devices of decades past, the repair work of today requires more than duct tape, a cavalier attitude, or commonly available tools. The culmination of embedded computer systems, onerous warranties and terms of use, intellectual property protections, and restrictive design techniques have made the repair of common devices increasingly out of reach for most people.² In response, Canada's right to repair movement has gradually assembled a coalition of consumer rights advocates, environmental groups, community repair enthusiasts, and scholars to propose a series of legal reforms to resolve the legal and market tools used by manufacturers to create these restrictions.³ Taking influence from both the United States and the European Union, Canada has begun to focus its attention on enacting its own set of right to repair reforms. Though Canadian public opinion on the right to repair provides reason to be optimistic in these efforts,⁴ the complexity of Canada's federal system and the power wielded by special interests have revealed underlying challenges. Nevertheless, for reasons of supporting market competitiveness, reducing waste, and increasing consumer choice, Canada's current government has made enacting the right to repair a key policy priority.⁵

So far, efforts toward enshrining the right to repair into law have fallen short of comprehensive. To date, private members' bills at the federal and provincial levels have sought only isolated reforms with varying success. In the absence of a regulatory scheme devised through federal-provincial cooperation, individual policymakers have instead pursued piecemeal amendments to existing provincial and federal statutes. The lack of concerted government action can be partially attributed to the relative complexity and legislative overlap of Canada's many laws touching upon repair, conceptual ambiguity as to precisely which legal reforms are needed to enable such a right, and the constitutional division of federal and provincial legislative powers. As

2. For a comprehensive overview of the many ways in which manufacturers have discouraged and prevented repair, see generally AARON PERZANOWSKI, *THE RIGHT TO REPAIR* 72–109 (2002).

3. See THE CANADIAN REPAIR COALITION, <http://www.canrepair.ca/about-us/> (last visited Feb. 16, 2023).

4. OpenMedia and iFixit generated a poll in 2019 to measure Canadians' opinion on the right to repair. 75% of Canadians support right to repair legislation, and 76% of people have discarded an electronic device prematurely because repairing it was too expensive. See *Poll: 75% of People in Canada Support Right to Repair Legislation*, OPENMEDIA (June 12, 2019), <https://openmedia.org/press/item/poll-75-people-canada-support-right-repair-legislation/>.

5. *A Right to Repair Your Home Appliances*, LIBERAL PARTY CAN., <https://liberal.ca/our-platform/a-right-to-repair-your-home-appliances/> (last visited May 14, 2022).

a result, there is a need to survey Canada's efforts toward the right to repair and to transpose the normative ideals of the movement into concrete proposals for future legislative reforms.

This Article seeks to hit on precisely those two points. It surveys the progress to date on right to repair reforms in Canada, and then identifies some potential opportunities for further legislative reform. It also highlights some potential constitutional obstacles and normative challenges in moving the right to repair movement forward in the Great White North. Part II begins with a survey of right to repair reforms in Canada to date. It looks to some early successes toward automotive right to repair, proposed consumer protection reforms in Ontario and Quebec, and a proposed "Technical Protection Measure (TPM) Exception" allowing circumvention for repair purposes. Part III canvasses a selection of federal reforms that could further enable the right to repair. These include creating regulations governing the use and implementation of TPMs, passing an exception to the *Trademarks Act* to facilitate the importation of replacement parts, and expanding access to remedies under the *Competition Act*. The creation of a federal sustainability index with repairability scores is also addressed. Finally, Part IV assesses some potential obstacles to enacting right to repair legislation at the federal level, including constitutional restrictions on Parliament's legislative power and the need to find grassroots resonance with the right to repair as a social movement.

This Article is not intended to provide a comprehensive or exhaustive list of potential reforms to enable the right to repair in Canada. Rather, the intent is to survey a handful of potential reforms that may encourage discussion among policymakers and right to repair advocates in Canada. To this end, its analysis focuses primarily on the opportunities for *federal* legislation supporting the right to repair. Further legal research and analysis of potential provincial reforms is needed, particularly in relation to addressing restrictive terms of use and product warranties discouraging repair. The Article's overall contention is that federal-provincial cooperation is essential for the success of the right to repair in Canada.

II. THE CURRENT STATE OF REPAIR IN CANADA

To date, proposals for right to repair legislation in Canada have moved forward in three broad domains. The first is long line of federal competition law reform proposals aimed at providing access to parts, tools, and information for independent repairers in the automotive industry. The second takes shape around amending provincial consumer protection acts—notably those in Ontario and Quebec. The third is a focus on expanding the permitted

exceptions to Canada's anti-circumvention laws under the *Copyright Act* for the purposes of repair. Each of these areas is discussed in greater detail below.

A. AUTOMOTIVE RIGHT TO REPAIR

Canada is one of the first jurisdictions globally to consider legislation with an explicit automotive right to repair focus. The first such proposal came in 2007 in the form of MP Brian Masse's private members' Bill C-425.⁶ Following a federal election in 2008, the bill was reintroduced in 2009 as Bill C-273.⁷ It sought to amend Canada's *Environmental Protection Act*⁸ and *Competition Act*⁹ to provide independent automobile technicians with the same diagnostic information and tools made available to manufacturers and franchised dealers.

Though the bill received considerable support and debate during its first and second readings in Parliament,¹⁰ concerns were raised to the Minister of Industry regarding whether the Canadian Competition Tribunal could compel auto manufacturers to provide tools and information protected by intellectual property rights.¹¹ This ambiguity coupled with the potential to inadvertently cause negative impacts in other industries was reason enough for the Minister of Industry to explore alternatives to legislation. The solution settled upon was a voluntary agreement between automotive manufacturers and aftermarket industry groups in September of 2009, the Canadian Automotive Service Information Standard (CASIS).¹² As the result of CASIS' conclusion, Bill C-273 was abandoned.

The CASIS agreement includes some notable right to repair wins, with corresponding concessions. As far as wins are concerned, CASIS guarantees independent technicians access to the tools, training, and information necessary for automotive diagnosis and repair. As for the concessions,

6. An Act to amend the Competition Act and the Canadian Environmental Protection Act, 1999 (right to repair) 2007, HC Bill [C-425] (Can.) <https://www.parl.ca/legisinfo/en/bill/39-1/c-425/>.

7. An Act to amend the Competition Act and the Canadian Environmental Protection Act, 1999 (right to repair) 2009, HC Bill [C-273] (Can.) <https://www.parl.ca/legisinfo/en/bill/40-2/c-273/> [hereinafter Bill C-273].

8. Environmental Protection Act, 1999, S.C. 1999, c 33 (Can.).

9. Competition Act, R.S.C. 1985, c C-34 (Can.).

10. Bill C-273.

11. Kelly Moffatt & Meredith Ashton, *Voluntary agreement a viable alternative to Bill C-273 (right to repair)*, LEXOLOGY (Dec. 31, 2009), <https://www.lexology.com/library/detail.aspx?g=0a20f656-2e82-4458-8d41-f417b2f750c9/>; see, e.g., HC Deb (11 May 2009) (144 col. 1105, <https://www.ourcommons.ca/DocumentViewer/en/40-2/house/sitting-55/hansard>).

12. An Agreement Respecting The Canadian Automotive Service Information Standards (Sept. 29, 2009) (CASIS), http://www.cvma.ca/wp-content/uploads/2017/03/Canadian_Automotive_Service_Information_Standard_Sep_2009.pdf.

however, CASIS includes an acknowledgement that the tools, diagnostics information, and training materials remain the “exclusive property” of manufacturers.¹³ The result is that some tools and information that may not otherwise be protectable subject matter under intellectual property laws can be given the same level of exclusivity through contract.

More than ten years after the CASIS agreement was concluded, MP Brian Masse once again introduced a private members’ bill that expands upon the obligations of manufacturers.¹⁴ Beyond contractual guarantees for parts and tools through CASIS, Bill C-231 proposes to compel access to software and empower the Canadian Competition Tribunal to make orders for compliance. Manufacturers are obligated to provide independent repairers with “technical updates, diagnostic software or tools and any related information.”¹⁵ With the rise and prominence of electronic vehicles (EVs), and the growing importance of onboard software for the diagnosis and repair of cars, Bill C-231 is seen as a necessary update to the CASIS agreement. Bill C-231 has completed its first reading but will only receive scrutiny from parliamentarians upon its second reading, the date for which is still to be determined. Given that intellectual property concerns in relation to tools and information led to Masse’s Bill C-273 being abandoned back in 2009, it is reasonable to speculate that similar concerns will arise as Bill C-231 moves ahead.

Though far from addressing all the impediments to repair in the automotive context, Canada has shown a relatively long and concerted effort toward securing an automotive right to repair. Over the course of several decades, the effort has resulted in concrete and meaningful repairability assurances through the CASIS agreement. Proposed legislative reforms have also drawn attention to the importance of repairability for aftermarket competition in a broader sense.

B. PROVINCIAL CONSUMER PROTECTION REFORMS

Two of Canada’s most populous provinces, Ontario and Quebec, saw the introduction of right to repair bills amending their consumer protection acts in 2019. Then-Ontario opposition MPP Michael Coteau introduced the first of these efforts with Bill 72.¹⁶ The bill was inspired by Coteau’s own strife with

13. *Id.* § III(1)(b) at 8.

14. An Act to amend the Competition Act (vehicle repair) 2022, HC Bill [C-231] (Can.), <https://www.parl.ca/DocumentViewer/en/44-1/bill/C-231/first-reading/> (last visited Feb. 16, 2023).

15. *Id.* § 75.1(1)(a), at 1.

16. An Act to amend the Consumer Protection Act, 2002 respecting the repair of electronic products 2019, Legis. Assemb. Ont. Bill [72] (Can.), <https://www.ola.org/en/legislative-business/bills/parliament-42/session-1/bill-72/> [hereinafter Bill 72].

a broken smartphone screen and his inability to have it repaired at a reasonable cost.¹⁷ To these ends, Bill 72 addressed “electronic products,” defined as tangible goods that “work at least in part because of electronics that are part of them or attached to them.”¹⁸ It proposed to amend Ontario’s *Consumer Protection Act*¹⁹ by requiring the provision of parts, tools, and information by “brand holders” – a concept intended to be more effective than applying to manufacturers who may not have a presence in Canada.

The bill mandated brand holders to provide documentation, replacement parts, software and other tools used for diagnosis, maintenance, or repair at “request of a consumer or consumer electronics repair business.”²⁰ Beyond these core obligations, Bill 72 set limits on what brand holders may charge for documentation, parts, software, and tools.²¹ For example, electronic copies of documentation must be provided at no cost, while parts, software, and tools must be provided to consumers and independent repairers without price discrimination.²² On this latter point, the bill was ahead of its time. As recent gripes over Apple’s self-repair program demonstrate,²³ enforcing price restrictions on parts, tools, and information can go a long way in making repairs more feasible for consumers.

As one might expect, the introduction of Bill 72 resulted in a significant amount of attention and resistance from industry groups, the Ontario Chamber of Commerce (OCC), and manufacturers.²⁴ These groups spent considerable energy persuading Ontario’s MPPs that Bill 72 would not be in the best interests of the province.²⁵ Some of the reasons cited were poorly argued, including the OCC’s assertion that the bill would make it easier for criminals to carry out cyberattacks. Coteau also received attention and was approached directly by the Electronics Product Stewardship Canada, an industry group that represents companies like Apple and Panasonic, to

17. Online Interview with Michael Coteau, Member of Parliament, (Apr. 12, 2022).

18. Bill 72, § 54.1.

19. Consumer Protection Act, 2002, S.O. 2002, c 30 (Ontario) [hereinafter Consumer Protection Act].

20. Bill 72, § 52.2(1).

21. See, e.g., Bill 72, § 54.2(3) (limiting the amounts brand holders may charge for copies of repair manuals and related information).

22. See, e.g., Bill 72, § 54.2(3) (placing the “fair price” limitations on parts, software, and tools).

23. See Brian X. Chen, *I Tried Apple’s Self-Repair Program With My iPhone. Disaster Ensued.*, NEW YORK TIMES. (May 25, 2022), <https://www.nytimes.com/2022/05/25/technology/personaltech/apple-repair-program-iphone.html/>.

24. Interview with Coteau, *supra* note 17.

25. Interview with Coteau, *supra* note 17.

reconsider the bill altogether.²⁶ In a brazen move by Apple, Coteau was even personally visited by corporate representatives who offered to replace his broken phone for no charge.²⁷

Though Coteau remained steadfast in his support for the bill, the lobbying efforts and other tactics were ultimately successful in Ontario.²⁸ They cumulatively crafted a narrative that Bill 72 would harm competitiveness and consumer choice in Ontario, imperil the intellectual property rights of manufacturers, and pose hazards to user safety. During debate over the bill in May of 2019, Government MPP Stephen Crawford remarked that the bill would “mean that companies would choose not to sell their products in this province,” and that the intellectual property concerns would open small business owners and consumers to “legal action by the original manufacturer of their device.”²⁹ Despite the bill’s widespread support from consumer rights and environmental groups, Mr. Crawford’s more critical view of the bill represented that of government MPPs, leading to the bill being lost on second reading.³⁰

Though ultimately unsuccessful, Ontario’s Bill 72 stands out as the most direct and poignant proposal to legislate the right to repair in Canada to date. By applying to the broad category of “electronic products,” the bill would have had sweeping implications for a whole host of consumer devices. Given that Ontario is Canada’s most populous province, the success of Bill 72 would have undoubtedly inspired similar efforts across the country.

However, lessons can be learned from the bill’s failure. For one, its breadth may have formed part of the reason for trepidation among Ontario’s provincial policymakers at the time it was being considered. The repeated references to intellectual property concerns throughout Bill 72’s debates also suggests that policymakers may be hesitant to impose right to repair obligations on manufacturers, which may conflict with the *Copyright Act* and other federal intellectual property statutes. Finally, the failure of Bill 72 suggests that right to repair bills in Canada are not above age-old party politics. As an opposition

26. Jordan Pearson, *Right to Repair Killed After Big Tech Lobbying In Ontario*, MOTHERBOARD (May 2, 2019), <https://www.vice.com/en/article/9kxayy/right-to-repair-bill-killed-after-big-tech-lobbying-in-ontario/>.

27. Interview with Coteau, *supra* note 17.

28. These were discussed in the Vice article, and in particular, showed a comparison between Apple’s “safety” narrative and that later articulated by the Ontario Chamber of Commerce in the Consumer Protection Act.

29. Legis. Assemb. Ont. (2 May 2019), No. 100 col. 1420 (Can.), https://www.ola.org/sites/default/files/node-files/hansard/document/pdf/2019/2019-07/02-MAY-2019_L100.pdf.

30. *Id.* at 1420–40.

MPP at the time, Coteau's bill was regarded by at least some government MPPs as "trying to show the government doesn't care about consumers."³¹ Conjecture of this sort reveals that, private members' bills introduced by opposition members may be judged more from the position of partisanship than on their merits.

Only a few months after Bill 72 was introduced in Ontario, another right to repair private members' bill was introduced in the National Assembly of Quebec.³² Bill 197 was introduced by the MNA for Chomedey, Mr. Guy Ouellette and drafted in conjunction with law students from the University of Sherbrooke.³³ With the title, "An Act to amend the Consumer Protection Act to fight planned obsolescence and assert the right to repair goods," the bill adopts a somewhat different approach from Ontario's Bill 72.³⁴ In some respects, the Quebec bill is narrower by mandating the provision of parts, tools, and repair at reasonable prices only for goods that are "the object of a contract."³⁵ Ostensibly, this means goods for which there is a warranty relationship between the consumer and its manufacturer. On the other hand, Quebec's Bill 197 envisions a much broader set of reforms when compared to Ontario's Bill 72. In addition to a general obligation to provide parts, tools, and information for warranted goods, the bill establishes a sustainability rating and product labelling system for household appliances.³⁶ It also tasks the Bureau de normalisation du Québec (BNQ), a standards body, with establishing this rating system after studying various products and devices.³⁷

31. *Id.*

32. An Act to amend the Consumer Protection Act to fight planned obsolescence and assert the right to repair goods 2019, Nat'l Assemb. Que. Bill [197] (Can.), <http://m.assnat.qc.ca/en/travaux-parlementaires/projets-loi/projet-loi-197-42-1.html>.

33. Independent Members, *Bill 197 against planned obsolescence and the right to repair – M.N.A. Guy Ouellette presents innovative bill to control planned obsolescence and the right to compensation*, GOV'T QUÉBEC (Apr. 10, 2019, 1:37 PM), <https://www.quebec.ca/en/news/actualites/detail/bill-197-against-planned-obsolescence-and-the-right-to-repair-mna-guy-ouellette-presents-innovative-bill-to-control-planned-obsolescence-and-the-right-to-compensation>.

34. Bill 197.

35. In its *Summary on the brief presented to the Office of Consumer Protection on the durability and repairability of goods*, Canada' Competition Bureau recommended expanding the scope of Quebec's Bill 197 beyond those covered by a contract, stating that "[t]he Bureau encourages the Office's proposal to expand the availability guarantee to include goods other than those covered by a contract under section 39 CPA", recognizing that "...the definition of goods covered by the guarantee should take into account the increasing complexity of consumer goods and should be able to be adapted to future technological developments." See SUMMARY OF THE BRIEF PRESENTED TO THE OFFICE OF CONSUMER PROTECTION ON THE DURABILITY AND REPAIRABILITY OF GOODS, COMPETITION BUREAU CAN. (Jan. 20, 2022), <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04534.html>.

36. Bill 197, § 13.

37. Bill 197, § 12.

The Quebec bill takes a more punitive approach than Ontario's Bill 72. It prevents merchants and manufacturers from terminating product warranties as the result of independent repair.³⁸ Drawing influence from a 2014 French governmental Decree no. 2014-1482,³⁹ the Quebec bill also creates a new regulatory offence of "planned obsolescence" with a minimum fine of \$10,000.⁴⁰ It defines planned obsolescence as a "set of techniques for reducing the mean time to first failure of goods destined for sale or for lease."⁴¹ Finally, the Quebec bill tasks the Minister of Consumer Protection with preparing a report every three years on the efficacy of consumer protection laws and advice for further amendments.⁴²

The Quebec bill received unanimous and multi-partisan support in the Quebec National Assembly in April of 2021,⁴³ leading to its adoption in principle. It has since been relegated to a type of legislative purgatory, however, awaiting further study from a National Assembly committee.⁴⁴ In response, MNA Guy Oulette has commented that there may be a lack of "serious desire to tackle" repairability and sustainability issues in Quebec.⁴⁵

Perhaps one reason for the slow progress is the multifaceted structure of the bill and what it aims to achieve. For example, defining the type of conduct that may constitute "planned obsolescence" may be tricky in practice, as deliberately shortening the lifespan of products can be indistinguishable from simply poor design or construction.⁴⁶ Moreover, the bill's proposal to task a standards organization with establishing a sustainability rating system could be an enormous undertaking if it means starting from scratch. With similar rating systems being incorporated elsewhere,⁴⁷ it is likely that Quebec would draw

38. Bill 197, § 5.

39. Loi 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte [Law 2015-992 of August 17, 2015 on Energy Transition for Green Growth (Energy Transition Law)], JOURNAL OFFICIEL DE LA REPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Aug. 18, 2015, p. 1426, No. 1.

40. Bill 197, § 10.

41. Bill 197, § 1(1)(k.1).

42. Bill 197, § 14.

43. Bill 197.

44. Steve Rukavina, *Quebec environmental watchdog urges province to adopt 'right to repair' law*, CBC News (Jan. 26, 2022), <https://www.cbc.ca/news/canada/montreal/quebec-right-to-repair-proposal-1.6328159/>.

45. *Id.*

46. See Eleonore Maitre-Ekern & Carl Dalhammar, *Regulating Planned Obsolescence: A Review of Legal Approaches to Increase Product Durability and Repairability in Europe* 25 REV. EUR. COMP. INT. ENVIRON. L. 3, 387–88 (2016).

47. See, e.g., *Repairability Index*, MINISTRY ECOLOGICAL TRANSITION & TERRITORIAL COHESION & MINISTRY ENERGY TRANSITION (FR.) (July 26, 2022), <https://www.ecologie.gouv.fr/indice-reparabilite/>.

strong influence from established indices. But even a *carte blanche* adoption of existing repairability rating systems could be a significant undertaking for the province. Finally, the intellectual property concerns that featured prominently in the Ontario debates remain unaddressed in relation to the Quebec bill.

Being a first mover also has its disadvantages. As will be discussed further in Part IV, the establishment of a provincial sustainability or repairability rating system may paradoxically complicate efforts toward a Canada-wide system at the federal level. Though Quebec consumer laws have generally taken a more interventionist approach than the common law provinces in Canada,⁴⁸ imposing new positive obligations on manufacturers specific to one province may also limit consumer choice in Quebec while provoking lobbying responses from industry groups similar to those seen in Ontario. What both the Ontario and Quebec examples demonstrate, however, is that assurances are needed at the federal level through amendments to Canada's intellectual property statutes.

C. ANTI-CIRCUMVENTION REFORMS

Canada incorporated anti-circumvention provisions into its *Copyright Act* as part of the 2012 *Copyright Modernization Act*.⁴⁹ Its approach to TPMs is more restrictive than the requirements as set out in the WIPO World Copyright Treaty, adopting the more far-reaching “access control” concept originating from the United States’ *Digital Millennium Copyright Act*.⁵⁰ The incorporation of access control TPMs into Canadian law has been met with enormous criticism and concern among scholars⁵¹ and public interest groups⁵² over the past decade. These concerns have centered around the negative impacts on the fair dealing, imperilment of the public domain,⁵³ harms to competitive

48. For a discussion on the history and rationale of consumer protection laws in Quebec, see Chana Shulamit Edelstein, *Missed Opportunity: A Critique of the Supreme Court of Canada's Characterization of Quebec Consumer Protection Law in Marcotte* (Aug. 2016) (L.L.M. thesis, McGill University), <https://escholarship.mcgill.ca/concern/theses/bv73c321g>.

49. S.C. 2012, c 20, §§ 47–48 (Can.).

50. 17 U.S.C. § 1201.

51. See Ian Kerr, *Digital Locks and the Automation of Virtue*, in FROM “RADICAL EXTREMISM” TO “BALANCED COPYRIGHT”: CANADIAN COPYRIGHT AND THE DIGITAL AGENDA (Michael Geist ed., 2010); see also Carys Craig, *Digital Locks and the Fate of Fair Dealing in Canada: In Pursuit of “Prescriptive Parallelism,”* 13 J. WORLD INTELL. PROP. 4, 503–39 (2010).

52. See Christine Dobby, *Canada's copyright overhaul and the digital locks controversy*, FIN. POST (Sept. 29, 2011), <https://financialpost.com/technology/canadas-copyright-conundrum-and-the-digital-locks-controversy/>.

53. See Pascale Chapdelaine, *Digital Locks, Physical Objects and Immaterial Works*, in COPYRIGHT USER RIGHTS: CONTRACTS AND THE EROSION OF PROPERTY, 129–50 (2016).

innovation,⁵⁴ and the moral implications of limiting user choice.⁵⁵ In many respects, these concerns mirror the longstanding critiques of anti-circumvention laws formulated by scholars and experts in the United States.⁵⁶

Following the heavy-handed decision of Canada's Federal Court in *Nintendo of America, Inc. v. King*, awarding damages of over \$22 million for the installation of mod chips in game consoles,⁵⁷ federal policymakers began to look more seriously at the potential public interest costs of anti-circumvention laws. In its 2019 *Statutory Review of the Copyright Act*, the House of Commons' Standing Committee on Industry, Science and Technology (the INDU Committee) produced a report which included an analysis of Canada's anti-circumvention laws and proposed to "modernize copyright policy" to permit repair and other non-infringing activities.⁵⁸ The INDU Committee recommended that the Government of Canada:

examine measures to modernize copyright policy with digital technologies affecting Canadians and Canadian institutions, including the relevance of technological protection measures within copyright law, notably to facilitate the maintenance, repair or adaptation of a lawfully-acquired device for non-infringing purposes.

In 2021, the Government of Canada partially took up that task in "A Consultation on a Modern Copyright Framework for Artificial Intelligence and the Internet of Things,"⁵⁹ a report prepared by Industry, Science and Economic Development Canada. The Consultation surveyed the ways that TPMs can negatively impact repair activities, called for further evidence from

54. Anthony D. Rosborough, *If a Machine Could Talk, We Would Not Understand It: Canadian Innovation and the Copyright Act's TPM Interoperability Framework*, 19 J.L. & TECH. 141–71 (2021).

55. See Kerr, *supra* note 44.

56. See, e.g., Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519 (1999); Pamela Samuelson & Jason Schultz, *Should Copyright Owners Have to Give Notice of Their Use of Technical Protection Measures?*, 6 J. ON TELECOMM. & HIGH TECH. L. 41 (2007); Andrew Adams & Ian Brown, *Keep Looking: The Answer to the Machine is Elsewhere*, 19 COMPUT. & L. 6, 32–35 (2009); and Dan Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095 (2003).

57. 2017 FC 246.

58. STANDING COMM. ON INDUSTRY, SCI. & TECH., HOUSE OF COMMONS, STATUTORY REVIEW OF THE COPYRIGHT ACT (June 2019), <https://www.ourcommons.ca/Content/Committee/421/INDU/Reports/RP10537003/indurp16/indurp16-e.pdf> [hereinafter STANDING COMM. ON INDUSTRY, SCI. & TECH. REVIEW].

59. INNOVATION, SCI. & ECON. DEV. CAN., A CONSULTATION ON A MODERN COPYRIGHT FRAMEWORK FOR ARTIFICIAL INTELLIGENCE AND THE INTERNET OF THINGS (2021), <https://ised-isde.canada.ca/site/strategic-policy-sector/sites/default/files/attachments/2022/ConsultationPaperAIEN.pdf>.

stakeholders, and identified two ways forward in terms of legislative reform.⁶⁰ The first approach is to introduce a targeted exception permitting circumvention of TPMs for repair purposes.⁶¹ The alternative approach is to establish a periodic review process analogous to the United States' Librarian of Congress' § 1201 rulings under the DMCA.⁶²

For now, the first approach seems to be preferred. In February of 2021, Liberal MP Bryan May introduced Bill C-272 in Canada's Parliament.⁶³ It creates a new exception permitting circumvention of TPMs, which protect access to computer programs where the "sole purpose" is "diagnosing, maintaining, or repairing a product in which the computer program is embedded."⁶⁴ Bill C-272 received unanimous and multi-partisan support in Canada's parliament at both its first and second readings.⁶⁵ On June 2, 2021, it was referred to committee for further review.⁶⁶ As the result of the federal election held during the autumn of 2021, however, Bill C-272 died on the Order Paper.⁶⁷ This necessitated the bill's reintroduction as C-244 in February of 2022,⁶⁸ and an effective reset of the legislative process and timeline. Though some concerns were raised during debate about the bill's breadth and potential ambiguities, the consensus among parliamentarians is that these considerations should form part of a parliamentary committee's "clause by clause" review.⁶⁹

The TPM Repair Exception proposed by Bill C-244 would go a long way in alleviating the concerns of independent repairers and provincial policymakers in enacting consumer protection reforms. Nevertheless, there are

60. STANDING COMM. ON INDUSTRY, SCI. & TECH. REVIEW at 72.

61. STANDING COMM. ON INDUSTRY, SCI. & TECH. REVIEW at 22.

62. 17 U.S.C. §§ 1201(a)(1)(B)–(D) (2000).

63. An Act to amend the Copyright Act (diagnosis, maintenance or repair) 2021, HC Bill [C-272] (Can.), <https://www.parl.ca/DocumentViewer/en/43-2/bill/C-272/first-reading/>.

64. *Id.* at § 41.121(1).

65. *See* HC Deb (22 Feb. 2021) (150) col. 1635 (Can.), <https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-63/hansard>; HC Deb (2 June 2021) (150) col. 1600 (Can.) <https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-109/hansard>.

66. *See* HC Deb (22 Feb. 2021) (150) col. 1635 (Can.), <https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-63/hansard>; HC Deb (2 June 2021) (150) col. 1600 (Can.) <https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-109/hansard>.

67. When an election is called in the British parliamentary system, pending bills die with the dissolution of that parliament and session. They need to be later reintroduced as new bills once the election is over and parliament has resumed its next sitting with a newly elected government.

68. HC Deb (8 Feb. 2022) (151) col. 1010 (Can.), <https://www.ourcommons.ca/DocumentViewer/en/44-1/house/sitting-26/hansard>.

69. HC Deb (15 Apr. 2021) (150) col. 1850 (Can.), <https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239225>.

drawbacks in pushing forward with this approach. By permitting circumvention for the sole purpose of “diagnosing, maintaining, or repairing” devices, much would hinge on the nature of the activity in question. It is foreseeable that at least some activities within the realm of repair would be argued by manufacturers as being outside the scope of the new exception. For example, a device may not be repairable in a restorative sense but instead require a more innovative solution to continue working – a custom part, modification to onboard software, or removal of certain components. Likewise, users may wish to circumvent TPMs to restore features that have been removed⁷⁰ by manufacturers through software updates and converted to paid add-ons.⁷¹ In such instances, it is not clear that circumventing a TPM would fall within the ambit of diagnosis, maintenance, or repair – even if the intent is to make the device work as expected or originally configured.

By placing the emphasis on the purposes for circumvention rather than the TPM’s relationship to copyright, the proposed TPM Repair Exception risks adopting an overly static approach to TPMs. As we have seen over the past two decades, today’s plethora of Internet of Things (IoT) and software embedded devices, products, and machinery increasingly resemble services as opposed to products.⁷² TPMs play a significant role in providing manufacturers with the means to continually alter the terms of how devices are used and the types of functions they are willing to perform. In effect, the ability of manufacturers to remotely adjust device functionality may also allow them to indirectly determine which activities constitute “diagnosis, maintenance, or repair.” While the TPM Repair Exception proposed through Bill C-244 is promising, it is likely that a more responsive and malleable approach to TPM regulation in Canada is needed in the long run.

Despite some drawbacks in its proposed implementation, the multi-partisan and unanimous support among parliamentarians for the TPM Repair Exception reveals that right to repair legislation resonates with Canadian policymakers. It also demonstrates willingness on behalf of parliamentarians to take on intellectual property reforms to facilitate broader right to repair legislation. And given the reluctance of Canada’s provinces to enact right to repair legislation that may interfere with IP, federal responsiveness and appetite for reform is crucial. Though far from comprehensive, the TPM

70. Samuelson & Schultz, *supra* note 56, at 57–58.

71. See, e.g., How some treadmill owners have hacked its onboard software to restore features originally offered for free: Matt Burgess, *Locked out of “God mode,” runners are hacking their treadmills*, ARSTECHNICA (Nov. 20, 2021), <https://arstechnica.com/information-technology/2021/11/locked-out-of-god-mode-runners-are-hacking-their-treadmills/>.

72. See, e.g., Chris Jay Hoofnagle, Aniket Kesari & Aaron Perzanowski, *The Tethered Economy*, 87 GEO. WASH. L. REV. 783 (2019).

Repair Exception shows promise in offering the provinces some of the assurances they need to push ahead with right to repair reforms at the consumer protection level.

D. THE RIGHT TO REPAIR AS A FEDERAL PRIORITY

In addition to receiving the general support of parliamentarians, Canada's executive branch has also signaled that the right to repair is a key policy priority moving forward. Following the Liberal Party of Canada's success in the 2021 federal election, the Prime Minister's Office issued ministerial mandate letters calling upon certain ministers to engage in collaboration and policy development toward the right to repair. In these letters, the Prime Minister requested that the Minister of Environment and Climate Change “[w]ork with the Minister of Innovation, Science and Industry to implement a ‘right to repair’ to extend the life of home appliances, particularly electronics, and require businesses to inform Canadians of the environmental impacts of consumer products.”⁷³ The Prime Minister also requested that the Minister of Industry, Science and Industry “requir[e] manufacturers to supply repair manuals and spare parts, and by amending the *Copyright Act* to allow for the repair of digital devices and systems.”⁷⁴ Finally, targeting specifically home appliances, the Prime Minister requested that the Finance Minister “introduce a 15 per cent tax credit of up to \$500 to cover the cost of repairs performed by technicians.”⁷⁵

Ministerial mandate letters are far from binding commitments on the part of the government, and commentators have lamented their use by the Prime Minister as more of a shallow public relations exercise than clear policy-setting.⁷⁶ Nevertheless, they provide a window into the government's legislative priorities. The 2021 mandate letters reveal a consistent emphasis across multiple ministries on right to repair reforms. They suggest that some

73. Letter from Justin Trudeau, Off. Prime Minister Can., Minister of Environment and Climate Change Mandate Letter, (Dec. 16, 2021), <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-environment-and-climate-change-mandate-letter/> [hereinafter Environment Mandate Letter]; Letter from Justin Trudeau, Off. Prime Minister Can., , Minister of Innovation, Science and Industry Letter, (Dec. 16, 2021), <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-innovation-science-and-industry-mandate-letter/>; Letter from Justin Trudeau, Off. Prime Minister Can., Deputy Prime Minister and Minister of Finance Mandate Letter, (Dec. 16, 2021), <https://pm.gc.ca/en/mandate-letters/2021/12/16/deputy-prime-minister-and-minister-finance-mandate-letter/>.

74. Environment Mandate Letter.

75. Environment Mandate Letter.

76. Eugene Lang, *Ministerial mandate letters: Another nail in the coffin of cabinet government*, POLY OPTIONS (Feb. 15, 2022), <https://policyoptions.irpp.org/magazines/february-2022/ministerial-mandate-letters-another-nail-in-the-coffin-of-cabinet-government/>

of the policies being considered include adjustments to intellectual property laws, amendments to Canada's competition laws, and the creation of a federal sustainability or reparability index. Though there are many ways to implement these goals through legislative reform, the following Part III canvasses a few potential paths forward in these areas.

III. OPPORTUNITIES FOR FUTURE REFORMS

A. INTELLECTUAL PROPERTY LAWS

1. *The Copyright Act's TPM Provisions*

Though Bill C-244, proposing a new TPM Repair Exception, implements a repair-specific exception to permit TPM circumvention, the *Copyright Act* as currently enacted provides an alternative route that may have some advantages. As opposed to legislating exceptions for specific purposes, section 41.21(1) of the *Act* empowers the government to establish regulations, which can exclude certain TPMs or classes of them from protection.⁷⁷ Such regulations may be created where the effect of TPMs in certain products or devices is to “unduly restrict competition in the aftermarket sector.”⁷⁸ Beyond impacts on secondary markets, section 41.21(2) also permits the creation of regulations excluding TPMs from protection based on “any other relevant factor.”⁷⁹ Though repair impediments invoked by TPMs do not always manifest as competitive restraints in aftermarkets, restrictions on repair as a non-infringing use with strong public benefits would very likely be considered “relevant factors.”

Taken together, enacting regulations under section 41.21 could provide a much more responsive and adaptable approach to TPM policy than enacting targeted exceptions allowing circumvention for enumerated purposes. In theory, section 41.21 could be relied upon to establish a regulatory body, which periodically reviews and classifies TPMs in various products and devices. In some ways, this would bring Canada's TPM framework more in line with the periodic exemptions and Librarian of Congress review process in the United States. This regulatory body could assess the extent to which TPMs negatively impact repair activities and otherwise undermine non-infringing uses. Rather than merely permitting circumvention of TPMs for repair purposes, a regulatory body under section 41.21 could exclude certain classes of TPMs from protection altogether. The effect would be to place less weight on whether an activity falls within “diagnosis, maintenance, or repair” and instead

77. Copyright Act, R.S.C. 1985, c C-42, § 41.21(1) (Can.).

78. Copyright Act, R.S.C. 1985, c C-42, § 41.21(1) (Can.).

79. Copyright Act, R.S.C. 1985, c C-42, § 41.21(2)(vi).

on the role played by the TPM in protecting access to works or device functionality.⁸⁰

Though “any other relevant factor” suggests broad latitude to refuse protection for whole classes of TPMs, the Canada-United States-Mexico free trade agreement (CUSMA) imposes some restraints here. In particular, Article 20.66(4)(h) allows additional exceptions or limitations permitting circumvention of TPMs only where “an actual or likely adverse impact on those non-infringing uses is demonstrated by substantial evidence in a legislative, regulatory, or administrative proceeding in accordance with the Party’s law.”⁸¹ This requirement, however, could be overcome relatively easily by tasking the regulatory body with hearing evidence in relation to the adverse impacts of TPMs.

However, Article 20.66(5) of CUSMA might provide more difficulty for a regulatory body tasked with assessing TPMs. This provision requires that any new exceptions or limitations to anti-circumvention laws must not “impair the adequacy of legal protection or the effectiveness of legal remedies against the circumvention of effective technological measures.”⁸² Neither CUSMA nor Canada’s *Copyright Act* provides guidance on how to proportionately measure the “adequacy of legal protection or the effectiveness of legal remedies” in relation to TPM exceptions. This requirement may mean that, where TPMs inadvertently hinder repair but also “effectively protect access” to onboard software, a purpose-specific TPM exception may be the only option available. This is because excluding these TPMs from protection altogether might impair the “adequacy of legal protection.” Therefore, a regulatory body created under section 41.21 would have to take care to ensure that any exceptions or decisions to exclude certain TPMs from protection altogether would be consistent with Canada’s obligations under CUSMA.

Though undoubtedly requiring technical expertise and resources, a regulatory body overseeing TPM implementations could have several advantages. For one, it could more responsively address situations where TPMs in products and devices only function to inhibit repair or other activities that are in the public interest. A TPM regulatory body could also provide a

80. The importance of identifying and classifying types of TPMs (or classes of them) was also identified by Canadian Competition Bureau in its submission to Industry, Science and Economic Development Canada. See COMPETITION BUREAU SUBMISSION TO THE CONSULTATION ON A MODERN COPYRIGHT FRAMEWORK FOR ARTIFICIAL INTELLIGENCE AND THE INTERNET OF THINGS, COMPETITION BUREAU CAN. (Sept. 28, 2021), <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04602.html#sec03-1/>.

81. United States-Mexico-Canada Agreement art. 20.66(4)(h), Nov. 30, 2018, 134 Stat. 11 (entered into force July 1, 2020).

82. *Id.* at art. 20.66(5).

platform for empirical research regarding industry practices and the relationship between TPM restrictions and consumer expectations.⁸³ This would have the potential to generate knowledge and refine expertise regarding the appropriate purpose, scope, and configuration of TPMs and the types of restrictions they create in various products. This could address the longstanding need to better understand the breadth of manufacturing and design techniques, which fall within the ambit of anti-circumvention law and the public interest impacts.

2. *The Trademarks Act's Counterfeit Products Provisions*

Trademark protections have been occasionally invoked by manufacturers after attaching tiny and barely visible trademarks on replacement parts.⁸⁴ This allows manufacturers to control importation and distribution under the auspices of preventing the distribution of counterfeit goods.⁸⁵ In one well-cited instance, Henrik Huseby, an independent electronics repairer in Norway, was successfully sued by Apple for importing iPhone compatible replacement screens with allegedly counterfeit Apple logos.⁸⁶ The trademarks at issue were tiny logos painted with black ink placed on sections of the screen assembly, which would not be seen by the user once installed into the phone. Nevertheless, the importation and distribution of replacement parts bearing Apple's nearly imperceptible trademark was enough to run afoul of the counterfeit goods provisions under Norway's trademark laws.

While there are no reported instances of manufacturers engaging in similar tactics in Canada, the *Trademarks Act* currently provides all the tools to do so. The relevant provisions were incorporated into the *Trademarks Act* as the result of the 2014 *Combating Counterfeit Products Act*.⁸⁷ Not only do these provisions make it unlawful to import goods or packaging bearing trademarks without the manufacturer's consent,⁸⁸ but they also provide trademark owners with

83. Precisely this type of study was called for by Pamela Samuelson and Jason Schultz in a 2007 article. See Samuelson & Shultz, *supra* note 56, at 70.

84. Jason Koebler, *DHS Seizes Aftermarket iPhone Screens From Prominent Right-to-Repair Advocate*, VICE, (May 11, 2018, 1:26 PM), <https://www.vice.com/en/article/evk4wk/dhs-seizes-iphone-screens-jessa-jones/>.

85. See Chloé Mikolajczak, *Apple crushes one-man repair shop in Norway's Supreme Court, after three-year battle*, REPAIR.EU, (June 4, 2020), <https://repair.eu/news/apple-crushes-one-man-repair-shop/>; see also PERZANOWSKI, *supra* note 2, at 158–59.

86. Maja van der Velden, *Apple uses trademark law to strengthen its monopoly on repair*, UNIV. OSLO FAC. L. (July 3, 2020, 7:00 AM), <https://www.jus.uio.no/english/research/areas/sustainabilitylaw/blog/companies-markets-and-sustainability/velden--apple-uses-trademark-law.html>.

87. S.C. 2014, c 32 (Can.).

88. Trademarks Act, R.S.C. 1985, c. T-13, § 51.03(1) (Can.).

assistance from the Canada Border Services Agency (CBSA). Under the “Request for Assistance” provisions of the *Act*, the CBSA may conduct investigations, provide samples of the goods to the trademark owner for inspection, and detain allegedly infringing imported goods.⁸⁹ Registered trademark owners can file a simple form to initiate investigation and enforcement.⁹⁰ And running afoul of the counterfeit products provisions can result in hefty fines or even imprisonment.⁹¹

Counterfeit goods provisions serve an important role in preventing unfair competition and misleading consumers. But manufacturers should not be able to rely on them to in turn suppress competition and restrict consumer choice by inhibiting independent repair. For this reason, Canada should consider including an exception to the general prohibition on the importation of trademarked products as part of its right to repair mandate. For purely illustrative purposes, the wording of a replacement parts exception could take shape around addressing products which are:

component parts necessary for the normal use of a complex product and when incorporated into the complex product, the goods, labels, or packaging which bear the registered mark are not perceptible during its normal use and operation.

Including an allowance for products of this nature would build upon the existing “personal use” exception. That provision allows for the import and export of counterfeit goods when intended only for personal use. Similarly, a replacement parts exception would facilitate the import and export of products inadvertently bearing registered marks, which are unlikely to result in brand depreciation or mislead consumers. This would further Canadian trademark law’s objective of preventing confusion in the marketplace while safeguarding against unfair competition.

B. SPECIAL REMEDY UNDER THE *COMPETITION ACT*

Many of the techniques used by manufacturers to restrict repair are also impediments to market competition. And the market for repair is not merely a handful of cottage industries, it forms a substantial part of Canada’s economy. In 2020 alone, the Canadian automotive repair and maintenance industry earned \$20.1 billion, while the precision equipment and industrial

89. *Id.* § 51.04(1).

90. BSF738 – REQUEST FOR ASSISTANCE, CAN. BORDER SERVS. AGENCY (Sept. 21, 2017), <https://www.cbsa-asfc.gc.ca/publications/forms-formulaires/bsf738-eng.html>.

91. Trademarks Act, R.S.C. 1985, c. T-13, §§ 51.03(1), 51.01(6) (Can.).

machinery industries generated \$11.6 billion.⁹² If independent repair businesses cannot obtain parts, tools, or information to carry out repairs reliably and safely, then it concentrates both technical knowledge and market power in the hands of only a few manufacturers. For these and other reasons, Canada's right to repair reforms should not only look to recalibrating the scope and exercise of intellectual property rights, but also market competition policy and restrictive trade practices.

Competition law in Canada includes both common law economic torts as well as the statutory rules as set out in the *Competition Act*.⁹³ The *Act* is administered by the Competition Bureau, and disputes are either heard by either the Competition Tribunal, a special administrative body, or Canada's Federal Court.⁹⁴ Though repair restrictions have never been assessed under Canada's *Competition Act* as anti-competitive conduct, the *Act* may nevertheless offer an important legislative platform to enable and bolster the right to repair.

The *Act* includes a whole host of provisions which may curtail anti-competitive practices inhibiting repair.⁹⁵ An exhaustive survey of these provisions is beyond the scope of this Article, but one provision that could prove useful is the "special remedy" as set out at § 32.⁹⁶ It empowers the Federal Court to order compulsory licensing, declare void, or restrain the exercise of intellectual property rights where they are used to unduly restrain trade or weaken competition.⁹⁷ With its ability to tailor the exercise of IP rights, section 32 is novel. Though the *Act* makes clear that any orders issued under section 32 must remain compliant with Canada's international treaty obligations,⁹⁸ it is one of the few instances where competition law can have a direct bearing on the exercise of IP rights.⁹⁹ And though certainly manufacturers can restrict repair in ways that have little to do with intellectual

92. *Repair and maintenance services subsector, 2020*, STAT. CAN. (Jan. 11, 2022), <https://www150.statcan.gc.ca/n1/daily-quotidien/220111/dq220111b-eng.htm>.

93. Competition Act, R.S.C. 1985, c C-34 (Can.) [hereinafter Competition Act].

94. *Id.* § 36(3) (describing jurisdiction of federal court); *see also* Competition Tribunal Act, R.S.C. 1985, c 19 (2nd supp), § 3(1) (Can.) (creating the tribunal).

95. *See* Competition Act §§ 75 (refusal to deal), 78 (abuse of dominant position).

96. Competition Act § 32.

97. Competition Act § 32(1).

98. Competition Act § 32(1).

99. In stark contrast to § 32, the Competition Act clarifies at § 79(5) that in the case of abuse of a dominant position, "an act engaged in pursuant only to the exercise of any right or enjoyment of any interest derived under the *Copyright Act*, *Industrial Design Act*, *Integrated Circuit Topography Act*, *Patent Act*, *Trademarks Act* or any other Act of Parliament pertaining to intellectual or industrial property is not an anti-competitive act."

property rights,¹⁰⁰ many of the common tactics rely on the exclusive rights guaranteed by IP.¹⁰¹

As currently enacted, however, section 32 contains procedural limitations that limit its efficacy for enabling the right to repair. Namely, it empowers the Federal Court to make such an order only on “an information exhibited by the Attorney General of Canada.”¹⁰² For example, this means that independent repairers, businesses, or trade associations cannot rely on section 32 as the basis for a private claim. Instead, the utility of the provision relies entirely on the Competition Bureau’s assessment of how IP rights are being wielded by manufacturers.

In its *Intellectual Property Enforcement Guidelines*, the Competition Bureau further clarifies that it will only make such a recommendation where “no appropriate remedy is available under the relevant IP statute,” and only if “the alleged competitive harm stems directly from the refusal and nothing else.”¹⁰³ In practice, the Competition Bureau has made clear that it will only refer a matter to the Attorney General under section 32 in “very rare circumstances.”¹⁰⁴

As part of its commitment to the right to repair, Canada could consider expanding the application of section 32 to enable any interested person to commence a proceeding in Federal Court. This would greatly expand the utility of section 32 by removing the bottleneck created by the Bureau’s need to refer matters to the Attorney General. It would also be consistent with recent reforms to the *Act*, which have introduced a private right of application for “a person granted leave” to allege that they have been harmed by an abuse of dominance.¹⁰⁵ By broadening access to section 32 in the same way, the *Act* would better address instances where abuses of dominance are carried out through the exercise of intellectual property rights.

100. For example, through the use of warranties which prevent independent repair and servicing. See Whitson Gordon, *The Most Common Ways Manufacturers Prevent You From Repairing Your Devices*, iFIXIT.COM, (Apr. 17, 2019), <https://www.ifixit.com/News/15617/the-most-common-ways-manufacturers-prevent-you-from-repairing-your-devices/>.

101. See PERZANOWSKI, *supra* note 2, at 110–66.

102. Competition Act § 32(2).

103. INTELLECTUAL PROPERTY ENFORCEMENT GUIDELINES, COMPETITION BUREAU CAN. (Mar. 13, 2019), <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04421.html#sec07>.

104. *Id.* at 6(3).

105. An Act to implement certain provisions of the budget tabled in Parliament on April 7, 2022 and other measures 2022, HC Bill [C-19] § 262(1) (Can.), <https://www.parl.ca/DocumentViewer/en/44-1/bill/C-19/first-reading>.

Expanding access to section 32 would further modernize Canadian competition law and help it better respond to repair restrictions as well as digital marketplaces.¹⁰⁶ Canada's Competition Bureau has also shown a strong interest in enabling the right to repair recently.¹⁰⁷ Though the preponderance of its attention has been focused on expanding exceptions and limitations to anti-circumvention laws, a less "special" section 32 remedy could delegate some of the responsibility for policing and enforcing abusive uses of IP rights.

As some scholars have pointed out, a delegation of this sort is desperately needed.¹⁰⁸ It would be unrealistic to rely on the Competition Bureau to police all anti-competitive uses of IP rights single-handedly. After all, the Bureau received its first budget increase in 2021 after over a decade of fiscal neglect,¹⁰⁹ and Canada shows a poor track record in resolving competition disputes expediently and efficiently. The last dispute involving allegations of anti-competitive conduct through the exercise of IP took the better part of a decade to conclude, leaving several key questions unanswered.¹¹⁰

Admittedly, expanding the application of section 32 is far cry from the comprehensive scrutiny and overhaul that the *Competition Act* deserves. And even if the application of section 32 were expanded, its remedies would not necessarily be a walk in the park for claimants to receive.¹¹¹ Claimants would still need to demonstrate that suitable alternatives are unavailable under the

106. Canada's Standing Committee on Industry, Science and Technology has pointed to the necessity for a review and overhaul of the Competition Act. See *Competitiveness in Canada*, STANDING COMM. ON INDUS., SCI. & TECH. (2021), <https://www.ourcommons.ca/Committees/en/INDU/StudyActivity?studyActivityId=11192572>.

107. In response to Industry, Science and Economic Development Canada's *Consultation on a Modern Framework for Artificial Intelligence and the Internet of Things*, the Competition Bureau advocated strongly for additional TPM exceptions for the purposes of repair and interoperability in order to reduce consumer costs and increase market competition and innovation. See COMPETITION BUREAU SUBMISSION TO THE CONSULTATION ON A MODERN COPYRIGHT FRAMEWORK FOR ARTIFICIAL INTELLIGENCE AND THE INTERNET OF THINGS, COMPETITION BUREAU CAN. (Sept. 28, 2021), <https://strategis.ic.gc.ca/eic/site/cb-bc.nsf/eng/04602.html#sec04>.

108. See Vass Bednar & Robin Shaban, *Canada's Competition Act needs an overhaul*, THE GLOBE & MAIL (June 20, 2021), <https://www.theglobeandmail.com/business/commentary/article-canadas-competition-act-needs-an-overhaul/>.

109. *Id.*

110. *The End of a 7-Year Saga: Supreme Court of Canada refuses leave to appeal in abuse case against Toronto Real Estate Board*, MCCARTHY TETRAULT (Aug. 24, 2018), <https://www.mccarthy.ca/en/insights/articles/end-7-year-saga-supreme-court-canada-refuses-leave-appeal-abuse-case-against-toronto-real-estate-board/>.

111. See Yves Faguy, *A new recourse against abuse of dominance*, CBA NAT'L. (May 28, 2022), <https://www.nationalmagazine.ca/en-ca/articles/law/business-corporate/2022/a-new-recourse-against-abuse-of-dominance/>.

relevant IP statute, and that the manufacturer's restrictions on access to repair are enabled *only* through the exercise of IP.

But expanding the application of section 32 could nevertheless serve as an important interim measure to prevent manufacturers from wielding their intellectual property rights purely to restrict access to repair. As the voluntary CASIS agreement and abandonment of Bill C-273 evidences, addressing anti-competitive repair restrictions enabled through IP requires the coordination of both doctrines. An expanded section 32 could serve as a useful mechanism for this coordination and the development of precedent.

C. A FEDERAL REPAIRABILITY INDEX

In the Prime Minister's mandate letter to the Minister of Environment and Climate Change, the government identified a right to repair-focused commitment to require "businesses to inform Canadians of the environmental impacts of consumer products."¹¹² One way to realize this commitment in the context of the right to repair would be to incorporate repairability scores into a federal sustainability index. In assessing various products to establish repairability ratings, Canada could draw influence from established repairability indices and scoring systems elsewhere, including France's *L'indice de réparabilité*¹¹³ and iFixit's scoring systems.¹¹⁴

The creation of a sustainability index with product repairability scores would not be entirely unprecedented. The *Canadian Environmental Protection Act*¹¹⁵ (CEPA) already maintains an Environmental Registry of documentation relating to the environmental impacts of various products, as well as codes of practice and regulations.¹¹⁶ This registry would be a logical place for incorporating a sustainability index with repairability scores into CEPA.

To require that manufacturers make this information publicly available, however, CEPA would have to be further amended to include section mandating disclosure in relation to a specific range of products or devices. Setting the scope here is important. Much like the European Union's *EcoDesign Directive*¹¹⁷ and France's repairability index, Canada should identify a selection

112. Environment Mandate Letter.

113. *Repairability Index*, *supra* note 47.

114. iFixit, *Laptop Repairability Scores* (last visited May 15, 2022), *Laptop Repairability Scores*, iFIXIT, <https://www.ifixit.com/laptop-repairability/> (last visited May 15, 2022).

115. Canadian Environmental Protection Act, S.C. 1999, c 33, § 12 (Can.).

116. *Canadian Environmental Protection Act Registry*, GOV'T CAN., <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry.html/>.

117. *The new ecodesign measures explained*, EUR. COMM'N (Oct. 1, 2019), https://ec.europa.eu/commission/presscorner/detail/en/qanda_19_5889/.

of key product categories that would form part of its initial scoring system. One key category in this regard is products likely to contribute to e-waste, a pressing issue for which there is currently no federal policy or regulation. Given the growing volume of electronics waste in Canada,¹¹⁸ implementing repairability scores for electronic devices could be an effective starting point for a sustainability index.

Enabling the right to repair requires more than curtailing the anti-competitive use of intellectual property rights or ensuring access to tools and information. It also requires arming consumers with the information they need to make informed decisions about the sustainability and repairability of products. To ensure consistency and uniformity in repairability scoring and consumer protection, Canada's federal government should take a leadership role devising such an index within CEPA's current framework.

IV. OBSTACLES & CHALLENGES

Even though the right to repair has been identified as a key policy priority by Canada's federal government, there may be some impediments to fully achieving the goals stated in the ministerial mandate letters. For one, Canada's constitution restricts the scope of federal legislative authority to certain subjects. Any federal reforms enacted in pursuit of the right to repair must be careful not to encroach on the exclusive legislative jurisdiction of the provinces. Secondly, Canada must ensure that the right to repair under Canadian law is not merely an extraneous or transplanted set of norms established elsewhere. In other words, the right to repair movement in Canada and its policy reforms should reflect the idiosyncrasies of the Canadian political and cultural landscape. These caveats and potential obstacles are briefly discussed below.

A. THE LIMITS OF FEDERAL LEGISLATIVE AUTHORITY

In legislating the right to repair, Canada's federal government is subject to some constitutional constraints. Canada's *Constitution Act, 1867* sets the distribution of federal and provincial legislative powers at sections 91 and 92, respectively.¹¹⁹ For the most part, Canada's preeminent intellectual property

118. Gordon Dewis & Peter Van Wesenbeeck, *Trash talking: Dealing with Canadian household e-waste*, STAT. CAN. (May 24, 2016), <https://www150.statcan.gc.ca/n1/pub/16-002-x/2016001/article/14570-eng.html/>.

119. Constitution Act, 1867, 30 & 31 Vict., c 3 (U.K.), *reprinted in* R.S.C. 1985, app II, no 5 (Can.) [hereinafter Constitution Act].

statutes are enacted under one of three heads of federal power.¹²⁰ “Copyrights”¹²¹ and “patents of invention and discovery”¹²² are clearly enumerated, whereas the jurisdiction for the federal parliament to legislate in respect of trademarks has been generally asserted¹²³ as falling under “The Regulation of Trade and Commerce.”¹²⁴ Canada’s *Competition Act* is another legislative scheme that is enacted under section 91’s “trade and commerce” power.¹²⁵

In legislating right to repair reforms, Canada’s parliament would need to ensure that proposed legislation falls within a federal head of power. In the case of enacting TPM regulations under section 41.21 of the *Copyright Act*, constitutionality may be less of a concern. In that scenario, Parliament would be merely creating regulations under an existing provision of the *Act* that may only have incidental effects outside of copyright regulation. The situation would be different, however, in the case of creating a federal sustainability index with product repairability scores. So too would it be different for amending the *Competition Act* to broaden access to section 32’s “special remedy” to safeguard against the monopolization of repair. In those instances, Parliament would likely need to demonstrate that the proposed legislation falls within its general “trade and commerce” power.

The Supreme Court of Canada set down a five-part test for determining whether proposed legislation falls within the trade and commerce power in *General Motors of Canada Ltd. v City National Leasing*.¹²⁶ The proposed act or amendment must be: (1) part of a general regulatory scheme; (2) monitored by the continuing oversight of a regulatory agency; (3) concerned with trade as a whole rather than with a particular industry; (4) a nature that the provinces jointly or severally would be constitutionally incapable of enacting; and (5) jeopardized by the failure to include one or more provinces or localities in a legislative scheme.¹²⁷

120. Jeremy F. de Beer, *Copyrights, Federalism, and the Constitutionality of Canada’s Private Copying Levy* 51 MCGILL L. J. 735 (2006), 739–740.

121. Constitution Act § 91(23).

122. Constitution Act § 91(23).

123. See *Kirkbi AG v. Rivtik Holdings Inc.*, 2005 SCC 65, [2005] 3 S.C.R. 302 (Can.); *MacDonald v. Vapour Canada Ltd.*, [1977] 2 S.C.R. 134, 166 (Can.).

124. Constitution Act § 91(2). However, there has been some scholarly debate on the extent to which some provisions of the Trademarks Act fall within this head of power. See, e.g., Tony Bortolin, *Constitutionality of Canadian Trademark Legislation Revisited*, 36 CAN. INTELL. PROP. REV. 6 (2021).

125. Competition Act.

126. (1989), 1 S.C.R. 641, 668 (Can.).

127. *Id.*

Whether Parliament can meet the *General Motors* test would depend on its overall approach to a general right to repair regulatory scheme. If the scheme contained itself to regulating the anti-competitive exercise of intellectual property rights in ways that inhibit repair across all industries, it would stand a better chance of meeting the *General Motors* test. Such a scheme could feasibly be monitored by the Competition Bureau, and its focus on the exercise of intellectual property rights would satisfy the fourth and fifth branches of the test. On the other hand, if Parliament enacted a regulatory scheme which sought also to regulate other impediments to repair (e.g., warranty terms and consumer contracts), then Parliament may find itself encroaching on provincial jurisdiction.

The result is that Parliament must be careful in setting the width of the net it casts in pursuit of right to repair legislation. In creating a federal sustainability index with repairability scores, Parliament must also consider an analogous system being proposed as part of Quebec's Bill 197.¹²⁸ Should Quebec push ahead with creating this index, it may become more difficult for Parliament to later legislate in the area given the fourth and fifth branches of the *General Motors* test. Overall, these caveats and limitations in the exercise of federal legislative power point strongly to the need for strong federal-provincial cooperation moving forward.

B. THE NEED FOR A GRASSROOTS RIGHT TO REPAIR RATIONALE

As a global movement touching upon many industries, livelihoods, and communities, the right to repair can be justified on many grounds. Advocates in the United States have generally followed a rationale of consumer protection, reduced costs, and increasing consumer choice.¹²⁹ The European Union, on the other hand, has generally followed a circular economy, sustainability, and waste reduction rationale.¹³⁰

Looking at even a superficial level, the distinction between these two rationales is palpable. The organizational structure and mission statements evoked by advocacy groups in the United States and Europe reveals much about their rationales for reform. Repair.org, for example, is a trade association

128. Bill 197, § 12.

129. See *Nixing the Fix: An FTC Report to Congress on Repair Restrictions*, FED. TRADE COMM'N 38–40 (May 2021), https://www.ftc.gov/system/files/documents/reports/nixing-fix-ftc-report-congress-repair-restrictions/nixing_the_fix_report_final_5521_630pm-508_002.pdf.

130. See, e.g., *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A new Circular Economy Action Plan*, EUR. COMM'N COM 98 final (Mar. 11, 2020), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2020:98:FIN>.

representing businesses that offers varying levels of membership and access. Its mission statement strongly emphasizes consumer rights and personal property ownership with, “You bought it, you should own it. Period.,” and “You should have the right to use it, modify it, and repair it whenever, wherever, and however you want.”¹³¹ The emphasis, therefore, is largely on the individual consumer and negative liberties.

The EU’s Repair.eu, on the other hand, looks to resolving impediments to repair somewhat differently. Coining itself as a group of “sustainability activists,” Repair.eu is governed by a steering group of mostly environmental NGOs and citizens organizations. Its focus is oriented toward extending product lifespan and reducing electronics waste through a more interventionist approach. “We’re fighting to remove the barriers to repair our products, so they can last longer,” their mission statement reads.¹³² The environmental rationale also informs Repair.eu’s advocacy approach, which generally evidences much more attention on enacting new regulations to govern product design and informing consumers about end-of-life impacts.¹³³ Indeed, the European Union’s *EcoDesign Directive* is consistent with this rationale.¹³⁴

Though both approaches are compelling in their own right, there remains a need for the right to repair to find its own *raison d’être* in Canada. In some respects, the distinct rationales for the right to repair in the United States and Europe reflect differences in their social and cultural values as well as legal traditions. Similarly, the right to repair in Canada needs to find resonance with Canadians in the context of the country’s unique sociopolitical landscape and cultural identity.

One aspect of repair that may strike such a chord is its potential to empower rural and remote communities. Though 88% of Canadians live in urban centers, the remaining 12% of its population is spread across three quarters of the country’s vast and often remote landmass.¹³⁵ When people live far away from urban centers manufacturers are based, this can make self and independent repair a necessity for survival. As many farmers have come to understand, relying on dealer-certified technicians to have their machinery

131. *About us*, REPAIR.ORG, <https://www.repair.org/aboutus/> (last visited Feb. 17, 2022).

132. *Who we are*, REPAIR.EU, <https://repair.eu/about/> (last visited Feb. 17, 2022).

133. See, e.g., Marie Castelli, BackMarket & Orla Butler, *Trilogues: our continued push for strong battery regulations*, REPAIR.EU (May 17, 2022), <https://repair.eu/news/trilogues-our-continued-push-for-strong-battery-regulations/>.

134. Dewis & Van Wesenbeeck, *supra* note 118.

135. *Population growth in Canada’s rural areas, 2016 to 2021*, STAT. CAN. (Feb. 9, 2022), <https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-x/2021002/98-200-x2021002-eng.cfm/>.

repaired can result in significant delays and costs.¹³⁶ Therefore, the normative basis for Canada's right to repair should include the importance of repair to the country's rural and remote communities.

Decentralizing repair also decentralizes technical knowledge and expertise. Ethnographic studies have found that when repair is something that can be shared and taught, it can also strengthen bonds between people and their communities.¹³⁷ In the case of Canada's rural indigenous communities in particular, repair can serve as a conduit for community empowerment, while taking control and shaping the use of ICTs in furtherance of self-determination. To some degree, the right to repair for Canada's rural indigenous communities can enable the development of so-called "digital self-determination" through the sustainability and maintenance of community-based media, networking, and development projects.¹³⁸

Showing some promise here, the importance of repair for Canada's rural communities has not been lost on policymakers. When MP Brian Masse campaigned for his most recent automotive right to repair bill, he made sure to visit rural communities located far away from dealerships, noting that the bill would prevent Canadians from having to travel "hundreds of kilometers in rural communities...to get to the manufacturer's authorized dealer."¹³⁹ Right to repair advocates and policymakers in Canada should not lose sight of these social dynamics of access to repair. In addition to the benefits for market competition, consumer choice, and reducing environmental waste, the rationale for the right to repair in Canada must be in tune with the urban and rural dynamics that shape much of Canada's society and politics.

V. CONCLUSION

The foregoing hits on two general themes. For one, there is ample appetite among Canadian policymakers to pursue right to repair reforms. Apart from Ontario's Bill 72, proposed right to repair bills have generally found multi-

136. *Population growth in Canada's rural areas, 2016 to 2021* STAT. CAN. (Feb. 9, 2022), <https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-x/2021002/98-200-x2021002-eng.cfm>.

137. Syed Ishtiaque Ahmed, Steven J. Jackson & Rashidujjaman Rifat, *Learning to Fix: Knowledge, Collaboration and Mobile Phone Repair in Dhaka, Bangladesh*, ICTD '15 (May 15-18, 2015, Singapore), <https://dl.acm.org/doi/10.1145/2737856.2738018/>.

138. Rob McMahon, *Digital Self-Determination: Aboriginal Peoples and the Network Society in Canada 16–21* (May 31, 2013) (Ph.D. dissertation, Simon Fraser University), <http://summit.sfu.ca/item/13532/>.

139. Chris Thompson, *Masse reintroduces bill to provide motorists more car repair freedom*, WINDSOR STAR (Feb. 4, 2022), <https://windsorstar.com/news/local-news/masse-reintroduces-bill-to-provide-motorists-more-car-repair-freedom/>.

partisan support across every region of the country. Canada's federal government has also signaled that pursuing right to repair reforms are a key part of its strategy moving forward.

On the other hand, realizing Canada's commitments toward the right to repair requires a more unified strategy than what has devised to date. Unlocking the right to repair requires navigating the limits of federal and provincial jurisdiction to tackle the interwoven nature of competition policy, consumer protection, and intellectual property rights. Disharmony and inconsistency between federal and provincial repair legislation in these areas risks creating the inefficiencies and harms to consumer choice cynically threatened by manufacturers and industry groups. To effectively coordinate efforts toward the right to repair, a greater degree of federal-provincial cooperation will almost certainly be needed.

As for potential federal reforms, Parliament is left with many more tools at its disposal than what has been proposed through private members' bills to date. This includes enacting regulations under the *Copyright Act* to better address the anti-competitive uses of TPMs, facilitating the importation of replacement parts, and establishing a sustainability index with repairability scoring under the auspices of environmental protection.

Beyond the reforms addressed in this Article, there are many other reforms that could and should be considered. One example is a new framework of exceptions under Canada's *Industrial Design Act*¹⁴⁰ to permit manufacturing of replacement parts that perform both an aesthetic and utilitarian function. Before such a framework can be articulated, however, further research is needed on the relationship between Canadian industrial design rights and their practical impacts on repairability. Another avenue for reforms exists at the municipal level, where cities retain an enormous potential to address efficiency standards and the end-of-life impacts of products. A recently approved bylaw in the District of North Vancouver requiring reclamation of lumber from home demolitions is one such example.¹⁴¹ But in all cases, it is crucial that

140. Industrial Design Act, R.S.C. 1985, c I-9 (Can.).

141. Rafferty Baker, *New bylaw aims to save wood from the landfill during home demolitions in North Vancouver*, CBC NEWS (June 18, 2022), <https://www.cbc.ca/news/canada/british-columbia/north-vancouver-wood-salvage-demolition-bylaw-1.6493461>; see also *Agenda – Regular Meeting of Council*, District Council, 61–90 (District of North Vancouver, B.C., June 13, 2022), <https://app.dnv.org/councilsearchnew/> (outlining the “Proposed Demolition Waste Reduction Bylaw”)(enter “06/13/2022” as beginning and end dates in date fields in “Full Search” panel, with “Meeting type” value set to “All Meetings” and “Topic” value set to “Select topic” [unchanged]; click “Search” button; when new page loads, go to list of links for “Regular Meeting” under “Past Meetings” heading; click “Agenda with reports” to download PDF of Agenda).

policymakers proposing reforms pay close attention to the limitations of legislative jurisdiction within Canada's federal system. The benefits of the right to repair would be lost if Canadians did not make use of it. Repair must not only be shown to be legally permissible, but also feasible and within the capabilities of everyday people. This points to a need to reorient Canada's cultural affinity for repair and self-reliance with today's paradigm of widespread computerization and embedded system design. On this point, Canadian right to repair advocates must stress the importance of repair to rural and remote communities, with a particular focus on Canada's indigenous peoples.