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# FIXING RIGHT-TO-REPAIR LAW: WHY EFFORTS TO HOLD MANUFACTURERS ACCOUNTABLE ARE FALTERING

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# FIXING RIGHT-TO-REPAIR LAW: WHY EFFORTS TO HOLD MANUFACTURERS ACCOUNTABLE ARE FALTERING

David Garrison Golubock*

## I. Abstract

The past year has seen a number of prominent manufacturers face litigation both from consumer classes and from the federal government targeting restrictions on the ability to repair products. At the same time, Congress, as well as legislatures across the country, including Vermont, have introduced legislation that would promote the ability of consumers to repair products. But the "right to repair" movement is already decades old and has already seen waves of legislative proposals introduced in Congress and state legislatures only to wither on the vine. This paper aims to take a hard, fact-based look at the state of the right-to-repair movement today. This paper looks at past failed efforts at reform and examines the reasons for that failure, condenses prior theoretical commentary on the subject into more actionable takeaways, assesses the strength of the current wave of right to repair initiatives and its potential flaws, and compares US efforts with comparable projects overseas.

## II. Introduction

The past year has seen a number of prominent manufacturers face litigation both from consumer classes and from the federal government targeting restrictions on the ability to repair products.[1] At the same time, Congress, as well as legislatures across the country, have introduced legislation that would promote the ability of consumers to repair products.[2]

In March 2023, Tesla was sued in a pair of antitrust class action suits and accused of unlawfully restricting competition in the sale of replacement parts and provision of repair services, causing customers to pay more.[3] A group of similar actions filed against Harley

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[1] *E.g.*, Complaint, Koller v. Harley Davidson Motor Co. Grp. et al., 22-cv-04534 (N.D. Cal. Aug. 5, 2022); Complaint, Assise et al. v. Harley Davidson Inc., 22-cv-00913 (E.D. Wis. Aug. 9, 2022); Complaint, Lambrix v. Tesla, Inc., 23-cv-1145 (N.D. Cal. Mar. 14, 2023); Complaint, Forest River Farms v. Deere & Co., 22-cv-188 (N.D. Ill. Jan. 12, 2022).

[2] *See, e.g.*, Freedom to Repair Act, H.R. 6566, CONGRESS.GOV, https://www.congress.gov/bill/117th-congress/house-bill/6566 (last visited Sept. 5, 2023); S4104A, 2021-2022 Leg. Sess. (N.Y. 2022); *H. 79*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2024/H.79 (last visited Dec. 4, 2023).

[3] Mike Scarcella, *Tesla Hit with 'Right to Repair' Antitrust Class Actions*, REUTERS (Mar. 15, 2023, 10:58 AM), https://www.reuters.com/legal/tesla-hit-with-right-repair-antitrust-class-actions-2023-03-15/.

Davidson were recently consolidated in Wisconsin,[4] while Deere & Co. is the target of a similar class action suit filed in Illinois.[5]

The federal government, in a significant shift, has taken the side of the consumers in these "right to repair" suits. For example, the Department of Justice filed a statement of interest supporting the plaintiffs' class in the John Deere lawsuit.[6] And the Federal Trade Commission (FTC) started a series of aggressive enforcement actions focused on the provision of repair services and sale of repair parts, reaching settlements with Weber Grills[7] and Harley Davidson.[8]

At the state level, legislatures around the country have introduced bills like Vermont's H.79, the Vermont Fair Repair Act, which would require manufacturers to provide consumers and independent repair providers with replacement parts and the knowledge necessary to repair consumer-purchased products.[9]

While this flurry of actions may seem sudden and unexpected, they are the accumulation of a global right-to-repair movement that has been building for more than a decade, and that seeks to enact new legal protections for a consumer's "right to repair" products. This article will examine the roots and development of this movement. The article first discusses its efforts at state-level legislation and the legal barriers to state-level right-to-repair laws. Vermont's right-to-repair debate is used as a case study demonstrating the pitfalls that have hampered state-level reform efforts. The article will then survey federal right-to-reform efforts arising after the Covid-19 pandemic. The first federal legislative proposals for federal litigation will be discussed, contrasting litigation strategies employed by the FTC and recent private class action lawsuits. The article will then survey developments in the right to repair movement overseas by contrasting legislative and regulatory developments in other countries with those seen here in the US. Finally, the article will note recent developments in socioeconomic, academic research relating to consumer repairs – specifically noting how this research appears to undercut the potential efficacy of the US right-to-repair movement as its goals are currently articulated.

## III. Background

Historically, manufacturers of durable consumer goods made little effort, if any, to inhibit the free repair of their products or prevent third parties from providing maintenance services. Manufacturers once prided themselves on the longevity of their products, but this changed, as regional markets became national, manufacturers consolidated,

[4] *See* Mike Scarcella, *Harley-Davidson Hit with Class Actions over 'Right to Repair' Restrictions*, REUTERS (Aug. 10, 2022, 11:59 AM), https://www.reuters.com/legal/litigation/harley-davidson-hit-with-class-actions-over-right-repair-restrictions-2022-08-10/.
[5] *See* Matthew Gault & Jason Koebler, *John Deere Hit with Class Action Lawsuit for Alleged Tractor Repair Monopoly*, VICE (Jan. 13, 2022, 11:01 AM), https://www.vice.com/en/article/xgdazj/john-deere-hit-with-class-actionlawsuit-for-alleged-tractor-repair-monopoly.
[6] Roshan Abraham, *Justice Department Says John Deere Should Let Farmers Repair Their Tractors*, VICE (Feb. 15, 2023, 7:00 AM), https://www.vice.com/en/article/n7zayb/doj-john-deere-right-to-repair-lawsuit.
[7] *U.S. FTC Settles with Weber Grills over 'Right to Repair,'* REUTERS (July 7, 2022, 12:32 PM), https://www.reuters.com/legal/litigation/us-ftc-settles-with-weber-grills-over-right-repair-2022-07-07/.
[8] *FTC Revs Up 'Right to Repair' Fight with Harley-Davidson Agreement*, REUTERS (June 23, 2022, 11:38 AM), https://www.reuters.com/business/autos-transportation/ftc-revs-up-right-repair-fight-with-harley-davidson-agreement-2022-06-23/.
[9] H. 79, 2023-2024 Sess. (Vt. 2023).

companies invested more in research and development, and the demand for consistent growth in profits gave an advantage to short-lived durable goods that generated a consistent stream of replacement sales.[10]

Since the development of national markets for consumer goods, large manufacturers have taken actions to inhibit the ability of consumers to repair their products, and the government has sought to police restrictions on repair – a key step in this evolving balance between manufacturer restrictions and government regulation was the 1956 consent decree between IBM and the Department of Justice, which required IBM to permit consumers to repair their own machines or contract for third party repairs.[11] In the mid-20th century, this consent decree helped to set the balance between manufacturers and consumers, ensuring that consumers retained the ability to buy replacement parts and use third-party repair services.[12]

Over the past thirty years, increasing digitization of consumer goods has dramatically tilted the balance of power towards manufacturers, creating significant barriers to consumer repair.[13] Nearly every consumer product now contains electronic chips holding proprietary software that governs how the mechanical parts of the product actually function.[14] Even if a consumer is inclined to repair a product or take it to a third party, specialized tools and knowledge of the product's software would likely be required.[15] Even replacing mechanical parts in a product often requires accessing the device's software to ensure that the device "recognizes" replacement parts.[16] Increasingly, devices now rely on software and data not contained within the device itself but rather in remote servers accessed through the internet, making the device itself not the locus of any necessary repair.[17]

Concomitantly with this increasing digitization, manufacturers have crept back into the practice of restricting the sale of replacement parts and repair services. Manufacturers now routinely refuse to release repair manuals or make repair parts available to independent repair technicians and require customers to use authorized repair networks.[18] Devices are often constructed in ways that make repair difficult, if not impossible – Apple's AirPod wireless headphones, for example, are held together by glue rather than screws, requiring a would-be repairer to cut through the plastic shell of the device to access the battery.[19]

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[10] For a broader discussion on the historic transition from long-lived durable goods to planned obsolescence, *see generally* VANCE PACKARD, THE WASTE MAKERS (Longmans, Green & Co. eds., 1960); BERNARD LONDON, *Ending the Depression Through Planned Obsolescence* (1932) (London is commonly credited with having coined the phrase "planned obsolescence.").
[11] IBM 1956 Consent Decree at § VII(c) (1956) (No. 72-344).
[12] *Id.*
[13] *See generally* Aaron Perzanowski, *Consumer Perceptions of the Right to Repair*, 96 IND. L. J. 361, 366–67 (2021).
[14] *Id*.
[15] *See generally* Leah Chan Grinvald & Ofer Tur-Sinai, *Smart Cars, Telematics, and Repair*, 54 U. MICH. J. L. REFORM 283, 293–94 (2021).
[16] Perzanowski, *supra* note 13, at 370.
[17] *See generally* Chris Jay Hoofnagle et al., *The Tethered Economy*, 87 GEO. WASH. L. REV. 783, 801 (2019).
[18] *See, e.g.*, *Apple Authorized Service Provider Program*, APPLE, https://support.apple.com/en-hk/aasp-program (last visited Mar. 30, 2023).
[19] Geoffrey A. Fowler, *Everyone's AirPods Will Die. We've Got the Trick to Replacing Them*, WASH. POST (Oct. 8, 2019), https://www.washingtonpost.com/technology/2019/10/08/everyones-airpods-will-

Beyond the physical limitations on repairability, manufacturers now frequently take advantage of their control over device software to inhibit the function of older models of devices, creating software updates that slow performance or simply render older devices non-functional, creating a "planned obsolescence" intended to drive consumers to purchase new devices rather than seeking to repair failing older models.[20] And even where manufacturers do permit repair and maintenance of older models, they charge high prices, tilting the economics in favor of upgrading to a new device.[21]

These kinds of manufacturer practices led to a growing movement among consumers in favor of a "right to repair" consumer products. At present, the main organizing force in the US behind the right-to-repair movement is the Repair Association, a lobbying coalition that was originally founded in 2013 as the Digital Right to Repair Coalition.[22] The coalition includes consumer rights organizations, groups representing technicians and repair professionals affected by repair restrictions, and industry groups.[23]

Apart from lobbying and raising awareness of manufacturers' restrictions on the right to repair, the right-to-repair movement has from its inception proposed legislation that would restrict the types of practices previously discussed by which manufacturers inhibit repairs. The earliest of these proposals was the Motor Vehicle Owners Right to Repair Act (MVORRA), a federal bill that was first proposed in 2001 and then re-introduced every year until 2011, which would have required car manufacturers to provide car owners and third-party technicians with information and tools necessary to "diagnose, service, maintain, or repair" automobiles.[24] That bill never passed in Congress,[25] leading the Repair Association to shift its efforts to the state level.

## IV. State-Level Right-to-Repair Legislation

### a. The Massachusetts Auto Repair Law and the Failure of the State Level Right-to-Repair Legislation

Having failed to gain traction with federal legislation after 10 years of introducing MVORRA, the repair lobby shifted to state level initiatives, quickly scoring an early win with the passage in 2012 of a Massachusetts law providing for a consumer right to repair automobiles (the "Massachusetts Auto Repair Law").[26] That law mirrored the provisions of MVORRA, requiring car manufacturers to provide consumers and independent technicians with diagnostic and repair information and tools "on fair and reasonable

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die-weve-got-trick-replacing-them/.

[20] Miles Brignall, *'Error 53' Fury Mounts as Apple Software Update Threatens to Kill Your iPhone 6*, THE GUARDIAN (Feb. 5, 2016), https://www.theguardian.com/money/2016/feb/05/error-53-apple-iphone-software-update-handset-worthless-third-party-repair; Adi Robertson, *Apple Agrees to $500 Million Settlement for Throttling Older iPhones*, THE VERGE (Mar. 2, 2020), https://www.theverge.com/2020/3/2/21161271/apple-settlement-500-million-throttling-batterygate-class-action-lawsuit.

[21] *E.g.*, *Samsung-Authorized Galaxy Repair Services*, SAMSUNG, https://www.samsung.com/us/support/repair/pricing/ (last visited Mar. 30, 2023) (Samsung charges up to $599 for screen module replacement).

[22] *About Us: History*, REPAIR, https://repair.org/history/ (last visited Jan. 18, 2024).

[23] *Members*, REPAIR, https://www.repair.org/members (last visited Jan. 18, 2024).

[24] *E.g.*, H.R. 2735, 107th Cong. (2001); H.R. 1449, 112th Cong. § 3 (2011).

[25] H.R. 1449, 112th Cong. (2011).

[26] H. 4362, 187th Gen. Ct. (Mass. 2012).

terms."[27] A ballot initiative subsequently found strong support for the Massachusetts Auto Repair Law, with 86% of Massachusetts voters favoring the proposal.[28]

While the Massachusetts Auto Repair Law attracted national attention, its impact has been smaller than many commentators anticipated. First, state regulators began negotiations with automakers – in January 2014 the state and automakers reached an agreement that saw automakers voluntarily agree to operate under the terms of the Massachusetts Auto Repair Law.[29] As a voluntary arrangement, this Memorandum of Understanding did not bind non-parties, had no force of law, and provided for a dispute resolution panel made up of members of trade associations to resolve alleged violations.[30] In negotiating this agreement, manufacturers extracted a promise from repair providers to temporarily refrain from supporting similar legislation elsewhere in the country.[31] This decision to negotiate rather than pursue a more aggressive enforcement strategy may well have stemmed from the possibility of a preemption challenge to the law, and discussions of preemption continued to dog efforts in Massachusetts to enact right-to-repair proposals until the Biden administration's 2023 decision not to assert a preemption challenge against the most recent iteration of the state's right-to-repair law.[32]

Despite the mixed results of the Massachusetts Auto Repair Law, the right-to-repair movement set its sights on further state-level legislation. The Repair Association authored a Model State Right-to-Repair Law (the "Model Law"), intended to become the template for state legislation nationwide, starting with the first Digital Right to Repair Bill introduced in South Dakota in 2014.[33] That draft legislation, which has been revised annually since its first publication, focuses on digital electronic equipment and would require manufacturers to "make available to owners and independent repair providers, on fair and reasonable terms, the documentation, parts, and tools used to diagnose, maintain, and repair such equipment."[34] The Repair Association states that since its publication, over 40 states have started work on right-to-repair legislation based at least in part upon the Model Law.[35]

While these state bills differ in detail, they generally contain the same key elements. First, they would require original manufacturers to allow owners and independent repair

[27] *Id.* at § (2)(a).
[28] *2012 - Statewide - Question 1*, MASS. ELECTION STAT., https://electionstats.state.ma.us/ballot_questions/view/6811 (last visited Mar. 30, 2023). To reconcile differences between the original bill and the ballot initiative, Massachusetts subsequently passed H. 3757, 188th Gen. Ct. (Mass. 2013). Massachusetts subsequently updated this legislation to address the use of telematics in vehicle repair. *See* H.B. 340, 191st Gen. Ct. (Mass. 2020).
[29] *See Memorandum of Understanding*, REPAIRER DRIVEN NEWS (Jan. 15, 2014), https://www.repairerdrivennews.com/wp-content/uploads/2022/02/r2r-mou-and-agreement-signed.pdf.
[30] *Frequently Asked Questions about the Right to Repair National Memorandum of Understanding*, ACCC, https://www.accc.gov.au/system/files/GPC%2520-%2520The%2520History%2520of%2520Right%2520to%2520Repair.pdf (last visited Jan. 2, 2024).
[31] *Memorandum of Understanding*, *supra* note 29, at ¶ 2.
[32] Rob Stumpf, *Feds OK Massachusetts Right to Repair Law so the State Can Finally Enforce It*, THE DRIVE (Aug. 23, 2023, 3:30 PM), https://www.thedrive.com/news/feds-ok-massachusetts-right-to-repair-law-so-the-state-can-finally-enforce-it.
[33] *About Us: History*, *supra* note 22.
[34] *Model State Right-to-Repair Law*, REPAIR ASS'N, https://docs.google.com/document/d/1RpxXIzHd4MxxqnZ6lnmr2StXp3HLOAdL/edit (last updated July 2022).
[35] *Working Together to Make Repair-Friendly Public Policy*, REPAIR, https://www.repair.org/legislation (last visited Mar. 30, 2023).

providers to access "on fair and reasonable terms, any documentation, parts, and tools, required for the diagnosis, maintenance, or repair of such digital electronic equipment and parts for such equipment[.]"[36] Second, for equipment containing electronic security features, manufacturers must make available any tools necessary to access and repair the equipment and then re-enable such security features.[37]

While versions of the Model Law have been widely introduced year after year around the country, successes thus far have been extremely limited. To date, only New York has enacted a law based on the Model Law with the passage of the Digital Fair Repair Act in 2022.[38] Even that bill, though inspired by the Model Law, introduced significant carve-outs, which some commentators say renders the New York law ineffective in practice.[39] To start, the New York law is only effective prospectively, covering products manufactured after July 1, 2023, and even for devices manufactured after the effective date, the law contains carve-outs exempting cars, home appliances, and medical devices, among other significant categories.[40] The New York law thus can be characterized as a partial victory at best for the repair lobby, and elsewhere state-level legislative efforts have been fruitless. The reasons for this failure are mixed – a significant obstacle has been the aggressive and well-funded lobbying against state legislation that has helped persuade state legislators not to move forward. Beyond the well-funded opposition, state legislators have balked in the face of numerous federal laws that present obstacles to effective state legislation.

### b. Legal Obstacles to State-Level Right-to-Repair Legislation

Aside from the well-funded lobbying against right-to-repair legislation, state lawmakers have shied away from supporting state-level legislation due to a number of federal laws that potentially conflict with state legislative efforts, leading to a fear that any state laws might ultimately be struck down.

#### *i. The Digital Millennium Copyright Act (DMCA) and Copyright Law*

While federal copyright law might seem to present an irremediable obstacle to state laws requiring the sharing of information necessary for repair, the Copyright Act in fact tacitly recognizes the right of product owners to repair at least with respect to software.[41] Section 117(c) of the Copyright Act creates an exemption that permits the owner or lessee of a machine to copy a computer program where that copy is made solely for the purpose of maintenance or repair of the machine.[42] However, beyond the Copyright Act itself, some of the most significant obstacles to the right to repair have been created using another copyright statute – the Digital Millennium Copyright Act or DMCA.[43]

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[36] *Model Law*, *supra* note 34, at § 3(a).
[37] *Id.* at § 3(b).
[38] S4104A, 2021-2022 Leg. Sess. (N.Y. 2022).
[39] Kyle Wiggers, *New York's Right-to-Repair Bill has Major Carve-Outs for Manufacturers*, TECHCRUNCH (Jan. 3, 2023), https://techcrunch.com/2023/01/03/new-yorks-right-to-repair-bill-has-major-carve-outs-for-manufacturers/.
[40] *Id.*
[41] 17 U.S.C. § 117(c).
[42] *Id.*
[43] *See infra* notes 44–53.

Passed in 1998 in the early stages of the digitization of consumer goods, the DMCA has become one of the key tools that manufacturers rely upon to restrict repair.[44] The DMCA makes it unlawful to circumvent technological protection measures (TPMs) that manufacturers use to restrict access to copyrighted works, including software on consumer products.[45] The DMCA further prohibits trafficking in tools that would enable the circumvention of TPMs.[46] The DMCA accomplishes these restrictions through three liability provisions – first, Section 1201(a)(1) prohibits "circumvention [of] a technological measure that effectively controls access to a work protected by copyright."[47] Second, Section 1201(a)(2) generally prohibits trafficking in any products that are intended to circumvent any "technological measure that effectively controls access" to a protected device.[48] And thirdly, Section 1201(b)(1) more broadly prohibits trafficking in products that are intended to circumvent "protection afforded by a technological measure that effectively protects a right of a copyright owner[.]"[49] Thus, the DMCA gives manufacturers significant cover to impose digital rights management (DRM) technology on their devices that limits the interactions that consumers or third parties can have with the devices, effectively preventing access to software code that may be necessary to diagnose a problem or replace a part.

Certain commentators have argued that the DMCA would not, in fact, preempt state right to repair laws.[50] These commentators argue that the DMCA was not intended to be a copyright law but rather an anti-hacking law, and thus it should not benefit from the broad preemptive effects of the Copyright Preemption Statute, 17 U.S.C. § 301.[51] Further, these commentators argue that state right-to-repair laws would be intended as consumer protection laws, not copyright laws.[52] Consumer protection laws are part of the traditional police powers of the states, and some precedent indicates that the preemptive effects of federal law should be construed narrowly when it would override these traditional state functions.[53]

While these arguments against DMCA preemption may have merit, the prospect of a preemption challenge to state right-to-repair laws is very real and something that state legislators have discussed extensively by repeatedly choosing not to advance state-level right-to-repair legislation.[54]

[44] *Is There a Right to Repair?: Hearing Before the H. Comm. on the Judiciary and Subcomm. on Cts., Intell. Prop. & the Internet*, 118th Cong. (2023) 12 (statement of Aaron Perzanowski, Thomas W. Lacchia Professor of Law, University of Michigan Law School).
[45] 17 U.S.C. § 1201(a)(1).
[46] *Id.* §§ 1201(a)(2), 1201(b)(1)(A).
[47] *Id.* § 1201(a)(1).
[48] *Id.* § 1201(b)(1)(A).
[49] *Id.*
[50] *See, e.g.*, Daniel Moore, *You Gotta Fight for Your Right to Repair: The Digital Millennium Copyright Act's Effect on Right-to-Repair Legislation*, 6 TEX. A&M L. REV. 509, 519 (2019).
[51] *Id.*
[52] *E.g.*, Fla. Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142, 156 (1963) (narrowly construing federal statute to avoid preemption of state food safety law).
[53] *Id.*
[54] Moore, *supra* note 50, at 517–18.

### *ii. Patent Law*

In addition to the DMCA, proposed state right-to-repair laws risk running afoul of traditional patent law, which is the exclusive province of federal legislation.[55] On its face, a state law that requires a manufacturer to provide consumers and third parties with patented replacement parts would appear to be forcing that manufacturer to compromise their intellectual property rights. In practice, however, the balance between state mandates and federal preemption is more subtle – courts have previously upheld state laws requiring manufacturers to provide parts and literature relating to their products, finding no federal preemption.[56] Determining whether right-to-repair laws contradict traditional patent protections thus requires a more careful review of the specific provisions of proposed legislation and whether it fits into gaps in existing patent frameworks.

Section 271 of the Patent Act provides that anyone who "uses" a patented invention without a license infringes the patent.[57] Repair of a patented product would appear to be a "use" and thus potentially a violation – patent law, however, already tacitly recognizes principles that amount to permitting a right to repair.[58] For example, the doctrine of patent exhaustion recognizes that the initial authorized sale of a patented product exhausts the patentholder's rights and leaves the purchaser and subsequent re-purchasers with the ability to use or resell the product as they see fit, including by repairing the product.[59] On the other hand, wholesale "reconstruction" or reverse-engineering of a product is still prohibited, leaving consumers, courts, and legislators to navigate the blurry frontier between "repair" and "reconstruction."[60]

Beyond the repair-reconstruct dichotomy, manufacturers have traditionally used contract law to circumvent the exhaustion doctrine, creating post-sale restrictions on repair or structuring transactions as a license of a product, which does not trigger patent exhaustion as an actual sale does.[61] Here, at least, state legislation could have a palpable effect – states are capable of placing restrictions on contracting practices that might render post-sale restrictions unenforceable and could prevent selective use of licenses rather than sales without running afoul of federal legislation. But this would require more subtle legislative drafting than what the Repair Association and state legislators have shown thus far.

### *iii. Trademark Law*

In addition to leveraging patents to inhibit repair, manufacturers have traditionally used trademark law to protect components of products and restrict markets for off-brand and

[55] 28 U.S.C. § 1338(a) (providing exclusive federal jurisdiction for patents).
[56] *See* Kali Murray, *Constitutional Patent Law: Principles and Institutions*, 93 NEB. L. REV. 901, 926–29 (2015).
[57] 35 U.S.C. § 271(a).
[58] *See, e.g.*, Impression Prods., Inc. v. Lexmark Int'l, Inc., 137 S. Ct. 1523, 1529 (2017); Bowman v. Monsanto Co., 569 U.S. 278, 283 (2013); Quanta Comput., Inc. v. LG Elecs., Inc., 553 U.S. 617, 625 (2008).
[59] *Id.*
[60] *See* Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 709 (Fed. Cir. 1992) ("Although the rule is straightforward its implementation is less so, for it is not always clear where the boundary lies: how much 'repair' is fair before the device is deemed reconstructed."); Mark D. Janis, *A Tale of the Apocryphal Axe: Repair, Reconstruction and the Implied License in Intellectual Property Law*, 58 MD. L. REV. 423, 425 (1999) ("The repair-reconstruction dichotomy has baffled and annoyed courts for decades, often driving courts to employ loose language") (internal quotation marks omitted).
[61] Impression Prods., 137 S. Ct. at 1534 (finding license does not trigger patent exhaustion).

refurbished parts.[62] Here, federal law would not prevent state legislation requiring manufacturers to provide replacement parts and information required for repairs, but without federal action, manufacturers can still control the supply of replacement parts through the use of trademarks, inhibiting the growth of off-brand parts supply and parts refurbishment and driving up repair costs for consumers.[63] This might be resolved by more careful PTO review of proposed trademarks to weed out mere parts and components, rather than distinctive items that serve as a source identifier to consumers. However, commentators have noted that at present it remains fairly straightforward for manufacturers to get trademark protection for parts such as car grilles and taillights, allowing manufacturers to restrict the market for replacement parts.[64]

Similarly, independent repair shops often use manufacturer trademarks in advertising their services and indicating the types of products that they repair – this type of trademark use is generally protected under the "nominative fair use" doctrine, which permits third parties to use trademarks where necessary to provide information about their businesses to potential customers.[65] However, the nominative fair use doctrine has some ambiguity in application, with circuits split over the precise elements of the defense.[66] Additionally, many small independent repair shops are wholly unaware of this doctrine and may be easily intimidated when manufacturers wrongly assert that they are committing trademark violations.[67]

### *iv. Trade Secrets Law*

One key facet of any state right-to-repair law is mandated disclosure of information sufficient to permit repair and allow access to software, where necessary. Here, state legislation does not risk running afoul of federal laws such as the Defense of Trade Secrets Act (DTSA), as the DTSA explicitly states that it does not preempt state definitions of a trade secret.[68] However, manufacturers have traditionally used trade secrets laws at both the federal and the state level to inhibit the disclosure of information that would be required for repairs, and trade secrets laws thus represents another hurdle that needs to be addressed in state legislation in order to craft an effective right-to-repair law.

Relatively unsophisticated state legislatures have previously had difficulty crafting statutory text that would address the potential loopholes created by trade secrets. The Model Law states that "[n]othing in this Act shall be construed to require an original equipment manufacturer to divulge a trade secret to an owner or an independent service provider except as necessary to provide documentation, parts, and tools on fair and reasonable terms[,]" addressing the potential trade secret loophole head on.[69] Some commentators have suggested that rather than being a barrier to right-to-repair legislation,

[62] Perzanowski, *supra* note 13, at 373–74.
[63] *See id.*
[64] *See* Leah Chan Grinvald & Ofer Tur-Sinai, *Intellectual Property Law and the Right to Repair*, 88 FORDHAM L. REV. 63, 117 (2019).
[65] *E.g.*, R. G. Smith v. Chanel, Inc., 402 F.2d 562, 566 (9th Cir. 1968).
[66] J. Thomas McCarthy, McCarthy on Trademarks and Unfair Competition, § 23:11 (5th ed. 2019).
[67] *See* Susan Frohling, *OEM Trademarks in the Aftermarket: Exploring the Boundaries*, IPWATCHDOG (Sept. 19, 2018, 5:45 AM), https://www.ipwatchdog.com/2018/09/19/oemtrade-marks-aftermarket-exploring-boundaries/id=101163/ (discussing such cases where manufacturers attempted to enforce their trademarks).
[68] *See* 18 U.S.C. § 1838.
[69] *Model Law*, *supra* note 34, at § 5(a).

states could weaponize trade secrets law, taking advantage of provisions that penalize false assertion of trade secrets.[70] Many states, however, have stopped short of adopting even the language of the Model Law, merely including language to the effect that nothing in the legislation will be construed to compel disclosure of a trade secret, leaving a loophole that would permit the use of trade secrets to circumvent disclosure.[71]

### c. Vermont: A Case Study in Faltering State Legislative Efforts to Protect the Right-to-Repair

The progression in proposed right-to-repair legislation in Vermont is highly representative of the pitfalls that the repair movement has faced in state legislatures nationwide and serves as a useful case study. The state has seen successive waves of legislative interest in right-to-repair legislation and introduced numerous rounds of proposed legislation of varying scope, only to see all of those proposed measures, whether broadly worded or narrowly tailored, die without seeing a final vote.[72]

Right-to-repair legislation first appeared in Vermont in 2018 with the introduction of the first of several bills to be dubbed the "Fair Repair Act."[73] As originally introduced, that bill contained sweeping language that would have required manufacturers of all digital electronic equipment sold in Vermont to make repair information and replacement parts available to independent repair providers and owners on the same terms as such information and parts were made available to authorized repair providers.[74] The 2018 Fair Repair Act saw significant interest in the legislature, receiving favorable reports from numerous committees.[75] However, despite some apparent popular support for the bill, the legislation also faced serious opposition from industry groups, who testified before the legislature and published editorials and open letters opposing its passage.[76]

At the last minute and in the face of this vociferous opposition, a group of legislators proposed amendments that gutted the bill as drafted and instead had the bill create a "Right to Repair Task Force" made up of representatives from the Legislature, Attorney General, and state agencies that would be directed to review issues relating to the right to repair and submit a report to the Legislature.[77] While the amended bill ultimately did not receive a final vote in the 2017-2018 session, the amended "task force" bill was reintroduced in the 2018 special session as House Bill 9 and passed.[78]

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[70] *See* Grinvald & Tur-Sinai, *supra* note 64, at 123–24.
[71] *See, e.g.*, H.R. 3030, 100th Gen. Assemb., Reg. Sess. § 35 (Ill. 2017).
[72] *See infra* notes 84-87.
[73] S. 180, Gen. Assemb., 2017-2018 Sess. (Vt. 2018).
[74] *Id.*
[75] *Id.*
[76] *E.g.*, Teri Robinson, *Vermont State Repair Bill Could Leave Equipment Vulnerable to Cybersecurity Attacks*, SC MEDIA (Feb. 6, 2018), https://www.scmagazine.com/news/compliance/vermont-state-repair-bill-could-leave-equipment-vulnerable-to-cybersecurity-attacks; *Coalition Letter in Opposition to Vermont S. 180 – Digital Right to Repair*, CTIA (Feb. 12, 2018), https://www.ctia.org/positions/documents/coalition-letter-in-opposition-to-vermont-s-180-digital-right-to-repair; *Vermont S. 180: Vermont Fair Repair Act*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/Documents/2018/WorkGroups/Senate%20Economic%20Development/Bills/S.180/S.180~George%20Whitaker~Letter%20to%20Committee~2-6-2018.pdf (last visited Apr. 19, 2018); Mickey McCarter, *SIA to Testify Against Vermont Right to Repair Bill*, SEC. INDUS. ASS'N (Feb. 6, 2018), https://www.securityindustry.org/2018/02/06/sia-testify-vermont-right-repair-bill/.
[77] S.D. 180, 2017-2018 Sess. (Vt. 2018) (as amended and passed by the Senate).
[78] H. 9, Vermont General Assembly, https://legislature.vermont.gov/bill/status/2018.1/H.9 (last visited

The task force heard testimony from 19 witnesses, yet in January 2019 it submitted to the legislature only a brief 15-page report.[79] That report consisted largely of the task force's own minutes and authorizing statute, containing only a very brief four-page section with "Task Force Responses[.]"[80] Even these responses were insubstantial:

- In considering "the scope of products to include" in any right-to-repair legislation, the task force merely stated its finding that "right to repair legislation may raise common issues across many industries, but specific industries may raise specific concerns … The Task Force does not make a specific recommendation concerning the scope of products to include in any right to repair legislation."[81]

- In reviewing economic costs and benefits of potential legislation, the task force offered no conclusions as to the potential effects of any right-to-repair legislation, merely offering the anodyne recommendation that "any legislative action in this area be crafted to result in a net gain to the Vermont economy."[82]

- Discussing the potential legal risks arising from potential state right-to-repair laws including the possibility of federal preemption and potential litigation, the task force offered a three-sentence conclusion – noting that right-to-repair legislation "may pose legal risks," the task force stated that it had "heard conflicting testimony from several attorneys concerning the potential legal issues arising in constitutional law and consumer protection," closing with the vague recommendation that "any legislation in this area should be crafted to protect intellectual property rights and avoid legal uncertainty."[83]

Thus, the creation of Vermont's Right to Repair Task Force delayed the passage of any right-to-repair legislation by multiple years and consumed the legislature's time and resources while producing no substantive conclusions or actionable recommendations.

After the failure of the first Fair Repair Act and the inconclusive task force report, a pair of smaller right-to-repair bills appeared. Senate Bill 67, the Agricultural Right-to-Repair Bill, was introduced in 2021 and aimed to require manufacturers of electronics-enabled agricultural equipment to provide information, parts and tools to consumers and independent repair providers to permit repair and maintenance of their products.[84] The bill also required manufacturers to provide information permitting the circumvention of electronic security locks for purposes of repair and maintenance.[85] Senate Bill 262, the Personal Electronic Device Right-to-Repair Act, was introduced in 2022 and contained analogous provisions to the Agricultural Right-to-Repair Bill but applied to

Apr. 19, 2023).
[79] VT. GEN. ASSEMBLY, RIGHT TO REPAIR TASK FORCE: FINAL REPORT 1–15 (2019), https://legislature.vermont.gov/assets/Legislative-Reports/Final-Report-R2R-Task-Force-v2.pdf.
[80] *Id.* at 3–7.
[81] *Id.* at 3.
[82] *Id.*
[83] *Id.* at 4.
[84] H. 67, 2021-2022 Sess. (Vt. 2021).
[85] *Id.*

manufacturers of personal electronic devices with the capability to store, record, or transmit text, photographic, audio, or video data.[86] Both bills died in committee.[87]

The new legislative session has seen the introduction of two additional right to repair bills in Vermont.[88] House Bill 79 (Senate Bill 46) revives the former broad language of the Vermont Fair Repair Act, while House Bill 81, confusingly titled the "Fair Repair Act," largely mirrors the provisions of the former Agricultural Right-to-Repair Bill and would be narrowly focused on agricultural equipment.[89] Even though nearly identical provisions had been introduced in preceding legislative sessions and met with determined resistance from industry groups, sponsoring legislators were apparently surprised by the significant opposition these bills have received.[90] Representative Katherine Sims, a sponsor of both bills, stated that "it's been eye-opening. I've never seen anything like it," speaking of organized lobbying against H. 81.[91] H. 81 passed in the Vermont House with 137 of 139 votes on May 5, 2023, and was referred to the Senate Committee on Rules, where no action has been taken since.[92] The broader Vermont Fair Repair Act remains stalled in committee in the House, and has seen no activity since its first introduction in January. While time remains in this legislative session, it appears possible that both bills may meet the same fate as their predecessors.[93]

It is worth noting, perhaps, that pro right-to-repair legislation is not alone in being stalled in the Vermont legislature. Indeed, since 2013 a different group of Vermont legislators has repeatedly introduced a series of more pro-industry bills that would regulate the use of aftermarket parts in automobile repairs covered by car insurance, creating somewhat greater barriers to the use of parts not purchased from original manufacturers.[94] These bills have also all failed to advance, repeatedly dying in committee.[95]

In sum, repeated efforts to pass legislation preventing manufacturers from restricting access to knowledge and parts necessary for repairs have failed in Vermont, and the current legislative projects appear likely to meet the same fate. These efforts are demonstrative of the stumbling blocks that have faced state-level legislation nationwide: in state after state, poorly compensated, part-time legislators lacking technical and legal expertise rely on the same untailored template legislation from outside sources like the Repair Association, lean on the limited resources of legislative counsel and outside

[86] S. 262, 2021-2022 Sess. (Vt. 2022).
[87] *S. 67*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2022/S.67 (last visited Apr. 19, 2023); *S. 262*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2022/S.262 (last visited Apr. 19, 2023).
[88] H. 79, 2023-2024 Sess. (Vt. 2023); H. 81, 2023-2024 Sess. (Vt. 2023).
[89] *Id.*
[90] Sarah Mearhoff, *As the 'Right to Repair' Debate Comes to Montpelier, Lawmakers Face a 'Flood' of Opposition from National Interest Groups*, VTDIGGER (Mar. 23, 2023), https://vtdigger.org/2023/03/23/as-the-right-to-repair-debate-comes-to-montpelier-lawmakers-face-a-flood-of-opposition-from-national-interest-groups/.
[91] *Id.*
[92] *H. 81*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2024/H.81 (last visited Dec. 4, 2023).
[93] *H. 79*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2024/H.79 (last visited Dec. 4, 2023); *S. 46*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2024/S.46 (last visited Dec. 4, 2023).
[94] *E.g.*, H. 362, 2013-2014 Sess. (Vt. 2013); H. 522, 2021-2022 Sess. (Vt. 2022).
[95] *H. 362*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2024/H.362 (last visited Jan. 18, 2024); *H. 522*, VT. GEN. ASSEMBLY, https://legislature.vermont.gov/bill/status/2022/H.522 (last visited Dec. 4, 2023).

nonprofits for legal advice, and fail to coordinate their efforts and put forth coherent public campaigns to counterbalance lobbying efforts from manufacturers. The pitfalls of the right-to-repair debate in Vermont serve to illustrate why state-level initiatives show little promise of bringing significant change in the future.

## V. Federal Right-to-Repair Legislation

With right-to-repair initiatives largely stymied at the state level by aggressive lobbying, the shadow of federal preemption, and unsophisticated state legislatures, recent years have seen a turn back towards efforts on the federal level, a shift that accelerated during the pandemic.

After the abandonment of MVORRA in 2011, nearly a decade passed with very limited efforts to introduce right-to-repair legislation at the federal level. The notable exception to this absence was the Promoting Automotive Repair, Trade, and Sales Act of 2017 (PARTS Act).[96] That bill would merely have created a narrow exception to design patent infringement to allow the production of collision repair parts for cars, but the bill died without ever even receiving a committee hearing.[97]

The apparent lack of interest at the federal level in the right-to-repair changed rapidly with the onset of the Covid-19 pandemic in 2020. Government entities around the country scrambled to assemble sufficient supplies of critical medical equipment, particularly ventilators.[98] As hospitals struggled to revive mothballed equipment and keep devices operating, they found themselves handicapped by manufacturer rules requiring repair and maintenance only by authorized technicians, resulting in delays and exposure of outside personnel to Covid-19.[99]

In the face of this public health emergency, the federal government finally made efforts towards right-to-repair legislation, albeit faltering and limited efforts. In August 2020, Congress introduced the Critical Medical Infrastructure Right-to-Repair Act of 2020 (CMIRRA).[100] That bill would have permitted owners or licensees of critical medical infrastructure to circumvent copyright, patent and digital access protections to repair or maintain that critical medical infrastructure.[101] However, the scope of CMIRRA was extremely limited, applying only during the Covid-19 public health emergency as defined by the Secretary of Health and Human Services.[102] Even this extremely circumscribed bill fell in the face of an aggressive lobbying campaign by medical device manufacturers and never made it out of committee.[103]

[96] PARTS Act, S. 812, 115th Cong. (2017).
[97] *See id.*
[98] *E.g.*, *Coronavirus (Covid-19) Pandemic: Supply Chain Stabilization Task Force*, FED. EMERGENCY MGMT. AGENCY (Mar. 30, 2020), https://www.fema.gov/fact-sheet/coronavirus-covid-19-pandemic-supply-chain-stabilization-task-force.
[99] *See generally* Ofer Tur-Sinai & Leah Chan Grinvald, *Repairing Medical Equipment in Times of Pandemic*, 52 SETON HALL L. REV. 461, 463–64 (2021).
[100] Critical Medical Infrastructure Right-to-Repair Act of 2020, H.R. 7956, 116th Cong. (2020).
[101] *Id.* at § 3(a).
[102] *Id.*
[103] *See* Critical Medical Infrastructure Right-to-Repair Act of 2020, S. 4473, 116th Cong. (2020).

Another bill, The Fair Repair Act, was introduced in August 2020 contemporaneously with CMIRRA and reintroduced in June 2021.[104] The Fair Repair Act would have had a much broader effect than CMIRRA, requiring original equipment manufacturers to make documentation, parts, and tools available to independent repair providers in a timely manner and on fair and reasonable terms.[105] However, the Fair Repair Act was met with no greater success than CMIRRA, failing to progress beyond the committee stage.[106]

More recently, House lawmakers introduced the Freedom to Repair Act in February 2022.[107] Similar to the Fair Repair Act, this bill would permit the circumvention of digital access restrictions for the purposes of diagnosis, maintenance, or repair of digital electronic equipment.[108] So far, this bill has also failed to advance.[109]

Although the Covid-19 pandemic brought to the attention of federal legislators the problems posed by manufacturer restrictions on repair, federal legislators have yet to advance legislation that would remedy the problem in the face of manufacturer-led lobbying. Given the complexities of passing any legislation in the current narrowly divided Congress, it remains unlikely that controversial right-to-repair measures will become federal law in the near future.

## VI. Federal Enforcement Efforts and Private Lawsuits

Although legislative efforts may not be meeting with success, the executive branch has been taking concrete actions to push back against manufacturer restrictions on repair since the beginning of the Covid-19 pandemic.

In May 2021, the FTC issued a report criticizing restrictive repair practices by manufacturers, favoring a consumer right-to-repair, and stating that "there is scant evidence to support manufacturers' justifications for repair restrictions."[110] Shortly thereafter, President Biden signed the executive order on "Promoting Competition in the American Economy" (EO 14036).[111] Among the seventy-two initiatives included in EO 14036 were provisions stating that the Biden administration's policy is to "enforce the antitrust laws to combat the excessive concentration of industry, the abuses of market power, and the harmful effects of monopoly and monopsony – especially as these issues arise in . . . healthcare markets (including insurance, hospital, and prescription drug markets), [and] repair markets[.]"[112] The executive order also directed the FTC to make rules to remedy the "unfair anticompetitive restrictions on third-party repair or self-repair of items, such as the restrictions imposed by powerful manufacturers that prevent farmers from repairing their own equipment."[113]

[104] Fair Repair Act, H.R. 4006, 117th Cong. (2021).
[105] *See id.*
[106] *Id.*
[107] Freedom to Repair Act, H.R. 6566, 117th Cong. (2022).
[108] *See id.*
[109] *Id.*
[110] FED. TRADE COMM'N, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS 6 (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.
[111] Exec. Order No. 14,036, 86 Fed. Reg. 36,987 (July 9, 2021).
[112] *Id.*
[113] *Id.*

A fact sheet released at the same time as EO 14036 expanded on these policy initiatives and included sections on agriculture and technology.[114] The fact sheet specified that EO 14036 called on the FTC to take action to protect the ability of consumers to freely repair farm equipment and consumer technology devices such as cell phones.[115]

Just twelve days after the publication of EO 14036, the FTC issued a policy statement aimed at advancing repairability, stating that the FTC would target repair restrictions that were found to violate antitrust laws or prohibitions on unfair or deceptive acts or practices.[116] Commissioner Rohit Chopra issued a statement noting that while restraints on repair had negative effects on fair competition, consumers, and small businesses, the pandemic had also exposed how unfair restrictions on repair "can be matters of life and death."[117]

Since then, the FTC has initiated enforcement activity focused on repair restrictions, and early successes suggest that this activity is likely to continue. The FTC has exercised its authority under various statutes to pursue manufacturers,[118] and commentators have speculated about other potential avenues for enforcement that the FTC could pursue in the future. Private individuals have also initiated actions against manufacturers based on repair restrictions, using some of the same statutes that the FTC has relied on, as well as some novel causes of action.[119]

U.S. antitrust law has grown over more than a century through the gradual aggregation of several complex statutes. It is helpful to briefly review the bases of authority for suits by the FTC and private citizens. The Sherman Act and the FTC Act are the two primary statutes underpinning the FTC's enforcement authority.[120] The Sherman Act, first passed in 1890, focuses on conduct by which businesses seek to monopolize markets, prohibiting anticompetitive agreements or unilateral conduct aimed at monopolization.[121] The FTC Act, passed in 1914, created the FTC and expanded upon the Sherman Act by empowering the FTC to enforce the Sherman Act as well as more broadly prohibiting unfair competition and unfair or deceptive market practices, regardless of whether they are aimed towards monopolization of a market.[122]

Beyond the Sherman Act and the FTC Act, several other statutes expand the bounds of antitrust law and create causes of action for private citizens as well as the federal government. The Clayton Act and the Magnuson-Moss Warranty Act (the "Warranty

[114] *Fact Sheet: Executive Order on Promoting Competition in the American Economy*, THE WHITE HOUSE (July 9, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/.
[115] *Id.*
[116] *Policy Statement of the Federal Trade Commission on Repair Restrictions Imposed by Manufacturers and Sellers*, FED. TRADE COMM'N, https://www.ftc.gov/system/files/documents/public_statements/1592330/p194400repairrestrictionspolicystatement.pdf (last visited Jan. 18, 2024).
[117] *Prepared Remarks of Commissioner Rohit Chopra*, FED. TRADE COMM'N (July 21, 2021), https://www.ftc.gov/system/files/documents/public_statements/1592354/final_chopra_prepared_remarks_on_right_to_repair.pdf.
[118] *See infra* note 128.
[119] *See e.g.*, *infra* note 138.
[120] *The Antitrust Laws*, FED. TRADE COMM'N, https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/antitrust-laws (last visited Jan. 3, 2024).
[121] Sherman Act, 15 U.S.C. §§ 1-7.
[122] Federal Trade Commission Act, 15 U.S.C. §§ 41-58.

Act") are especially relevant to this expansion.[123] The Clayton Act, passed in 1914 alongside the FTC Act, expanded U.S. antitrust laws by prohibiting certain pricing practices, barring the use of exclusive dealings requirements to create monopolies, and setting requirements for mergers and acquisitions, among other changes.[124] Perhaps more importantly, the Clayton Act created a private right of action for anyone injured by a violation of any antitrust statute and authorizing a private claimant to seek treble damages.[125] The Warranty Act, the most recent of these relevant antitrust statutes, was enacted in 1975 and specifically focused on regulation of consumer warranties.[126] The Warranty Act requires sellers who provide customers with written warranties for consumer products to disclose the terms of the warranties simply and plainly, establishes a cause of action for consumers and empowers the FTC to create regulations governing consumer warranties.[127]

To date, the FTC's enforcement actions against manufacturers, such as Harley Davidson and Weber Grills, have largely focused on the Warranty Act.[128] While this Act is not as well-known as the Sherman Act and the FTC Act, it has the advantage of being vastly more specific, not targeting ambiguously worded "anticompetitive conduct" but rather singling out consumer warranties.[129] Further, the Warranty Act neatly targets conduct that is not protected by the intellectual property laws discussed above, thereby preventing manufacturers from employing patent or trademark law arguments to complicate litigation.[130] Here, the relevant sections of the Warranty Act in the administrative complaints against those defendants focus on the practice of "tying."[131] This practice involves conditioning a warranty on use of articles or services under a particular brand, *i.e.* indicating that the warranty will be void if consumers contract for repairs from anyone other than the manufacturer.[132]

The FTC has also asserted claims under the FTC Act alleging unfair or deceptive practices.[133] Again, however, the FTC has avoided claims that might permit defenses relating to intellectual property, opting instead to employ the FTC Act in conjunction with the Warranty Act to focus on the language of consumer warranties.[134] The FTC singles out manufacturer representations that condition the validity of a warranty the utilization

[123] *See* Clayton Antitrust Act, 15 U.S.C. §§ 1–28; Magnuson-Moss Warranty Act, 15 U.S.C. §§ 2301–12.
[124] *Id.* §§ 1–28.
[125] *Id.* § 15.
[126] *Id.* §§ 2301–2312.
[127] *Id.*
[128] *E.g.*, Complaint at 2–3, In the Matter of Weber-Stephen Products LLC (F.T.C.), https://www.ftc.gov/system/files/ftc_gov/pdf/6.27.22%20Weber%20admin%20complaint.pdf; Complaint at 2–3, In the Matter of Harley-Davidson Motor Co. Grp., LLC (F.T.C.), https://www.ftc.gov/system/files/ftc_gov/pdf/2123140HarleyDavidsonComplaint.pdf; Complaint at 2–3, In the Matter of MWE Investments, LLC (F.T.C.), https://www.ftc.gov/system/files/ftc_gov/pdf/2223012WestinghouseComplaint.pdf.
[129] *See Businessperson's Guide to Federal Warranty Law*, FED. TRADE COMM'N, https://www.ftc.gov/business-guidance/resources/businesspersons-guide-federal-warranty-law (last visited Jan. 3, 2024).
[130] *See id.*
[131] Weber-Stephen Products, *supra* note 128, at 2–3; Harley-Davidson, *supra* note 128, at 3; MWE Investments, *supra* note 128, at 2–3.
[132] *See* Lesley Fair, *FTC Announces Three Right-to-Repair Cases: Do Your Warranties Comply with the Law?,* FED. TRADE COMM'N (July 7, 2022), https://www.ftc.gov/business-guidance/blog/2022/07/ftc-announces-three-right-repair-cases-do-your-warranties-comply-law.
[133] *Id.*
[134] *See* Weber-Stephen Products, *supra* note 128, at 2.

of "genuine" parts from a manufacturer rather than third-party alternatives.[135] Such claims, the FTC argues, constitute deceptive practices, as the Warranty Act bars sellers from conditioning warranties on consumers' exclusively using brand-specific articles or services without a waiver from the FTC.[136] Establishing deceptive practices sets a relatively low bar, requiring only a showing of a representation or omission likely to mislead consumers. This combination of the FTC Act and the Warranty Act is not novel – the FTC previously employed the same strategy in 2018 when it threatened enforcement action against several computer hardware manufacturers that placed stickers on their devices, warning that third-party repairs could void consumer warranties.[137]

Recent consumer class actions have followed the FTC in their reliance on the Magnuson-Moss Warranty Act.[138] Some of these class actions have further mirrored the FTC by citing the FTC Act.[139] However, these private actions have departed from the FTC's conservative approach, incorporating a much broader array of claims and legal strategies.[140] Actions against John Deere and Tesla, as well as a case originating in Wisconsin against Harley-Davidson, have all included sweeping claims of monopolization and unlawful product tying practices in restraint of trade under the Sherman Act and Clayton Act.[141] A California action against Harley Davidson contains additional claims under California consumer protection statutes, and that action as well as the action against John Deere contain common law claims such as fraudulent concealment, promissory estoppel, and unjust enrichment.[142]

These private actions appear to be employing the "throw it at the wall and see if it sticks" approach to complaint writing, and so far none of these cases have advanced far enough to see how successful these various claims may be – the Harley-Davidson and John Deere cases have been consolidated as multi-district litigation in Wisconsin and Illinois, respectively,[143] slowing their progress. However, both the John Deere case and the Tesla case have seen dispositive motions.[144]

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[135] *Id.* at 1–2; Harley-Davidson, *supra* note 128, at 2; MWE Investments, *supra* note 128, at 2.
[136] *See* Weber-Stephen Products, *supra* note 128, at 3; Harley Davidson Motor Co., *supra* note 128, at 3; MWE Investments, *supra* note 128, at 3.
[137] Matthew Gault, *FTC Gives Sony, Microsoft, and Nintendo 30 Days to Get Rid of Illegal Warranty-Void-if-Removed Stickers*, VICE (May 1, 2018, 1:09 PM), https://www.vice.com/en_us/article/xw7b3z/warranty-void-if-removed-stickers-sony-microsoft-nintendo-ftc-letters.
[138] Koller, *supra* note 1, at 8–11, 20-21; Assise, *supra* note 1, at 14–15, 17–21; Lambrix, *supra* note 1, at 35–36; *contra* Forest River Farms supra note 1 (lacking a Warranty Act claim).
[139] Koller, *supra* note 1, at 10–12.
[140] *E.g.*, *Id.* at 2; Assise, *supra* note 1, at 1; Lambrix, *supra* note 1, at 1; Forest River Farms, *supra* note 1, at 1–6.
[141] *E.g.*, Assise, *supra* note 1, at 17–22; Lambrix, *supra* note 1, at 31–35; Forest River Farms, *supra* note 1, at 41–44.
[142] *E.g.*, Koller, *supra* note 1, at ¶¶ 72–81, 92–110; Forest River Farms, *supra* note 1, at ¶¶ 201–214.
[143] MDL 3030 Transfer Order at 1-2, In re: Deere & Company Repair Services Antitrust Litigation, 3:22-cv-50188 (N.D. Ill. June 1, 2022) (consolidating six actions against John Deere in MDL 3030 in N.D. Ill.); MDL 3064 Transfer Order at 1-2, In re: Harley Davidson Aftermarket Parts Marketing, Sales Practices and Antitrust Litigation, (E.D. Wis. Feb. 8, 2023) (consolidating five actions against Harley-Davidson in MDL 3064 in E.D. Wis.).
[144] Order Granting Defendant's Motion to Dismiss at 1, Lambrix et al. v. Tesla, 3:23-cv-01145-TLT (N.D. Cal. Nov. 17, 2023) [hereinafter *Tesla Motion to Dismiss*]; In re Deere & Co. Repair Serv. Antitrust Litig., No. 3:22-CV-50188, 2023 WL 8190256, at *34 (N.D. Ill. Nov. 27, 2023).

The court granted a motion to dismiss in the Tesla case.[145] The court first found an insufficient showing of a market, noting that while plaintiffs had adequately alleged a submarket for electric vehicles within the broader vehicle market, they failed to sufficiently allege an aftermarket for Tesla-specific repair services and parts.[146] Citing *Epic Games*, Inc. v. Apple, Inc.,[147] the court noted that plaintiffs had failed to allege (1) a lack of information about aftermarket restrictions, (2) information costs that prevent accurate life-cycle pricing, and (3) the existence of switching costs that keep consumers from switching brands.[148] That dismissal, however, came with leave to file an amended complaint,[149] leaving the door open for the plaintiffs to refile with new allegations.

In the John Deere MDL, the case withstood a motion for judgment on the pleadings by Harley Davidson, with the court finding that the plaintiffs had Article III and antitrust standing to bring suit and that they had plausibly alleged a primary market, an aftermarket, and a lack of knowledge of repair restrictions by consumers.[150] While Deere sought to rely on the same arguments regarding market allegations as Tesla, the court noted that it relied on cases decided at later stages in litigation, while however, the court emphasized that this finding was largely due to the early stage of the litigation, noting that many of the decisions relied on by Deere occurred at summary judgment.[151] The court's order noted that "claims based on single brand aftermarket repair restrictions are rare[,]"[152] and cited to *Epic Games, Inc. v. Apple Inc.*,[153] but its analysis of aftermarket allegations instead focused on *Authenticom, Inc. v. CDK Global, LLC*,[154] a case from the Northern District of Illinois, and ultimately found that the key factors in alleging a single-brand aftermarket were "a change in policy after the consumer has made a significant expenditure in the product"[155] and "a lack of knowledge and availability of information regarding repairs after the consumer has made a significant expenditure in the product."[156] These factors appear similar but not identical to those of *Epic Games* and may be more lenient, indicating that the divergent outcomes in the Deere and Tesla cases may in part be due to a divergence between district courts in the Ninth and Seventh Circuits over the pleading requirements for an antitrust claim based on a single-brand aftermarket.

*Eastman Kodak Co. v. Image Technical Services, Inc.* confirms that a manufacturer's restrictions on the sale of replacement parts to owners and independent technicians may constitute unlawful monopolization of a repair market and that the Sherman and Clayton Act claims seen in the class action suits can be viable.[157] Yet both *Epic Games* and *Authenticom* rely on *Eastman Kodak* and come to markedly different tests for how to assess a claim based on an alleged single-brand aftermarket, demonstrating that while such claims may in theory be viable, in practice they may need to thread the needle in anticipating and satisfying the correct set of criteria in their aftermarket allegations.

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[145] *Tesla Motion to Dismiss, supra* note 144, at 1.
[146] *Id.* at 7–11.
[147] 67 F.4th 946, 977 (9th Cir. 2023).
[148] *Tesla Motion to Dismiss*, *supra* note 144, at 10–11.
[149] *Id.* at 1.
[150] In re Deere & Co. Repair Serv. Antitrust Litig., No. 3:22-CV-50188, 2023 WL 8190256, at *16 (N.D. Ill. Nov. 27, 2023).
[151] *Id.* at *29.
[152] *Id.* at *19.
[153] 559 F. Supp. 3d 898 (N.D. Cal. 2021).
[154] 313 F. Supp. 3d 931 (N.D. Ill. 2018).
[155] *Id.* at *19.
[156] *Id.*
[157] 504 U.S. 451, 451 (1992).

Commentators have noticed that there are a number of plausible theories beyond those used in the FTC's draft complaints and the existing class actions that would permit the FTC or private parties to bring actions targeting manufacturer restrictions on repairs including unlawful monopolization and unfair practices.[158] Existing case law suggests several avenues for demonstrative anti-competitive conduct based on the types of repair restrictions at issue here – first, firms that unilaterally refuse to deal with competitors and use market power to cut off access to parts may violate the Sherman Act.[159] Second, manufacturers that tie products together to force consumers into further purchases through market power may be liable for antitrust violations.[160] And the design of a device itself may result in antitrust violations, where it prevents interoperability with devices of competitors, degrades performance of competing products, or otherwise inhibits consumers' market access.[161] Lastly, the FTC's authority to pursue unfair trade practices could be used to assert unlawful trade practices, alleging that repair policies that result in inflated prices for consumers result in a substantial injury to consumers.[162]

In short, the legal bases for claims based on repair restrictions are evolving, and the landscape for manufacturer liability is still very much in flux – while the FTC's threatened actions have quickly brought manufacturers to heel without any actual litigation, the pending consumer suits will show just how vulnerable they actually are. The outcome of dispositive motions in the Harley-Davidson, John Deere, and Tesla actions may leave manufacturers feeling either well insulated or severely exposed to liability based on existing repair restrictions.

## VII. Outside the US

In addition to the United States, the last several years have brought a flurry of right-to-repair rulemaking and legislation around the world, with some countries succeeding in advancing major legislative and regulatory projects, far beyond the scope of the new FTC enforcement initiatives seen domestically.

### a. The European Union and the United Kingdom

The European Commission adopted a package of regulations in October 2019 including requirements for the repairability of certain categories of household consumer goods including dishwashers, washing machines, and refrigerators.[163] Those regulations required manufacturers to make certain types of spare parts and technical information

[158] *See, e.g.*, Perzanowski, *supra* note 13, at 390–91.
[159] *See, e.g.*, Image Tech. Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1212 (9th Cir. 1997) (affirming Sherman Act violations against manufacturer that refused to sell parts to independent service providers).
[160] *E.g.*, Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 12 (1984).
[161] *E.g.*, U.S. v. Microsoft Corp., 253 F.3d 34, 46 (D.C. Cir. 2001) (finding software settings that restricted user ability to remove software or use competing software was predatory); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1369–72 (Fed. Cir. 1998) (arguing defendant's modification of medical devices that prevented interoperability was predatory); FED. TRADE COMM'N, IN THE MATTER OF INTEL CORPORATION 13 (Oct. 29, 2020), https://www.ftc.gov/sites/default/files/documents/cases/101102inteldo.pdf (finding redesign of products to degrade performance of competitors' products was predatory).
[162] *See* Fed. Trade Comm'n, FTC Policy Statement on Unfairness, Opinion Letter (Dec. 17, 1980).
[163] Commission Regulation 2019/2021, 2019 O.J. (L 315) 241, 242 (EC).

available to independent repairers.[164] The EU regulations were revised and expanded in February 2021 to increase the list of parts and components to which the reparability requirement applied.[165] The United Kingdom published its own ecodesign regulations in July 2021 which closely mirrored the EU's published regulations, applying similar requirements to similar categories of household products.[166]

In July 2022, the European Parliament issued a policy statement calling for a broader European Commission proposal on the right to repair in late 2022.[167] MEPs stated that right-to-repair legislation was necessary to give consumers a choice between long-lasting, repairable products.[168] The European Parliament's press statement specifically called for incentives for consumers to choose repair over replacement, rules on consumer information regarding repairability, better product labelling, design directives regarding durability and repairability, and better mechanisms for holding manufacturers and sellers liable.[169] In response to this statement, the European Commission issued a proposed directive "on common rules promoting the repair of goods" on March 22, 2023.[170] That directive would require companies selling consumer goods in the EU to offer repairs free of charge within a legal guarantee period, as well as adding consumer rights to repair devices outside of legal guarantee periods.[171] This proposed directive will still need to be negotiated with individual member states before it can become law. However, statistics indicate a broad consensus among EU citizens favoring greater repairability of consumer goods, indicating that legislation in some form specifically addressing reparability is likely in the near future.[172]

More importantly, the EU is going further than focusing on mere repairability – instead, the EU is engaging in an aggressive expansion of existing "ecodesign" regulations for consumer goods.[173] The first wave of EU ecodesign regulations, as promulgated in directives in 2005 and 2009, applied to certain categories of goods and left significant discretion to member states in setting standards, which ultimately focused more on energy efficiency than repairability.[174] In 2022, however, the EU took a leap forward, proposing

[164] *Id.*
[165] Commission Regulation 2021/341, 2021 O.J. (L 68) 108, 109 (EU).
[166] Ecodesign for Energy-Related Products and Energy Information Regulations 2021, SI 2021 No. 745 (Eng.).
[167] *Right to repair: MEPs Want More Durable and More Easily Repairable Products*, EUR. PARLIAMENT (July 4, 2022), https://www.europarl.europa.eu/news/en/press-room/20220401IPR26537/right-to-repair-meps-want-more-durable-and-more-easily-repairable-products.
[168] European Parliament Press Release 20220401IPR26537, Right to Repair: MEPs Want More Durable and More Easily Repairable Products (Apr. 7, 2022).
[169] *Id.*
[170] *Proposal for a Directive of the European Parliament and of the Council on Common Rules Promoting the Repair of Goods and Amending Regulation (EU) 2017/2394, Directives (EU) 2019/771 and (EU) 2020/1828*, COM (2023) 155 final (Mar. 22, 2023).
[171] *Id.* at 4; *see also* Brandon Vigliarolo, *Europe's Right-to-Repair Law Asks Hardware Makers for Fixes for up to 10 Years*, THE REG. (Mar. 22, 2023), https://www.theregister.com/2023/03/22/new_eu_right_to_repair/.
[172] *Why Is the EU's Right to Repair Legislation Important?* EUR. PARLIAMENT (Apr. 4, 2022), https://www.europarl.europa.eu/news/en/headlines/society/20220331STO26410/why-is-the-eu-s-right-to-repair-legislation-important.
[173] *See, e.g.*, Council Directive 2005/32, 2005 O.J. (L 191) 1 (EC); Council Directive 2009/125, 2009 O.J. (L 285) 1 (EC).
[174] *Id.* For examples of state-level implementing legislation, *see generally* Council Directive 2009/125, 2009 O.J. (L 285) 1 (EC) of the European Parliament and of the Council establishing a framework for the setting of ecodesign requirements for energy-related products.

a new Ecodesign for Sustainable Products Regulation that would cover a broader swathe of consumer goods and set a wide range of requirements relating to environmental sustainability in general, looking into whole lifecycle of a product from the way that it is constructed to the manner in which it can be disassembled, recycled, and disposed of.[175] The European Commission recently completed a period of public consultation on that proposed regulation and anticipates adopting a final regulation in the first quarter of 2024.[176] While the final form of these regulations thus remains uncertain, commentators anticipate that the final scheme will involve comprehensive regulation of product durability, reparability, efficiency, recyclability, manufacturing, and waste generation, among other categories, as well as creating a "digital product passport" system to track key product-related info and creating a framework to prevent the destruction of unsold consumer products.[177]

Beyond the EU-wide regulatory initiatives, France has taken the lead with its own steps to encourage the repairability of consumer goods.[178] In 2019, France passed a law requiring manufacturers to provide consumers with information on the repairability of equipment, creating a "repairability index" with scores indicating how easy a product is to repair.[179] This index became active in 2021 and currently applies to only five categories of goods: smartphones, laptops, televisions, washing machines, and lawnmowers.[180]

### b. Australia

In 2021, Australia passed legislation focused on increasing access to repair information in the auto industry.[181] Taking effect in July 2022, the Motor Vehicle Information Scheme requires manufacturers to provide to supply information permitting repairs to independent repairers at fair market value, setting penalties for violators.[182]

Outside of the auto industry, the concept of a right to repair does seem to be gaining traction in Australia, and more legislation may be drafted in the near future. In December 2021, the Australian Productivity Commission released a report finding "significant and unnecessary" barriers to repair for some products, proposing a range of measures to enhance consumer rights to repair.[183] The commission report contained some concrete

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[175] *Proposal for a Regulation of the European Parliament and of the Council Establishing a Framework for Setting Ecodesign Requirements for Sustainable Products and Repealing Directive 2009/125/EC*, COM (2022) 142 final (Mar. 30, 2022).
[176] *New Product Priorities for Ecodesign for Sustainable Products*, EUR. COMMISSION, https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13682-New-product-priorities-for-Ecodesign-for-Sustainable-Products_en (last visited June 13, 2022).
[177] *E.g.*, *The EU Ecodesign for Sustainable Products Regulation: What It Means for Businesses*, ANTHESIS (July 14, 2022), https://www.anthesisgroup.com/ecodesign-sustainable-products-regulation/; *Latest EU Ecodesign and Energy Labeling Developments*, INCOMPLIANCE (Sept. 30, 2022), https://incompliancemag.com/article/latest-eu-ecodesign-and-energy-labeling-developments/.
[178] *The French Repair Index: Challenges and Opportunities*, RIGHT TO REPAIR (Feb. 3, 2021), https://repair.eu/news/the-french-repair-index-challenges-and-opportunities/.
[179] *Id.*
[180] *One Year on, Has the French Repair Index Kept Its Promises?,* RIGHT TO REPAIR (Mar. 7, 2022), https://repair.eu/news/one-year-on-has-the-french-repair-index-kept-its-promises/.
[181] *Competition and Consumer Amendment (Motor Vehicle Service and Repair information Sharing Scheme) Act 2021*, (Cth) (Austl.).
[182] *MVIS Information for Data Providers, Repairers and RTOs*, AUSTRALIAN COMPETITION & CONSUMER COMM'N, https://www.accc.gov.au/by-industry/cars-and-vehicles/motor-vehicle-information-scheme-mvis/mvis-information-for-data-providers-repairers-and-rtos (last visited Apr. 10, 2023).
[183] *Right to Repair Inquiry Report*, AUSTRALIAN GOV'T PRODUCTIVITY COMM'N (Dec. 1, 2021),

recommendations, calling for a new guarantee for manufacturers to provide software updates for a reasonable time period and singling out sectors, such as agricultural machinery, as having particularly harmful barriers to repair.[184] It remains to be seen what regulations or legislation, if any, will be introduced following this report.

### c. Canada

Canada, too, has recently moved to set new standards for the repairability of devices.[185] In 2021, Canadian legislators introduced Bill C-272, which would have targeted technological protection measures that restrict access to information required for product repairs.[186] This bill died in committee, but was reintroduced as Bill C-244 in 2022.[187] The Standing Committee on Industry and Technology presented its report on the bill in Parliament on March 30, 2023, paving the way for potential passage of the legislation later this year.[188] If passed, the legislation would amend Canada's copyright act to permit individuals to circumvent technological protection measures in a product without violating copyright law if this circumvention is done for the sole purpose of diagnosis, maintenance, or repair of the product.[189] As currently drafted, the bill would not require manufacturers to share information with consumers and third-party repairers, which might complicate efforts to circumvent protection measures and engage in third-party repairs.[190]

## VIII. Reconciling Right-to-Repair Law with Repair Economics and Sociology

As the debate over the right to repair has developed over the past several decades in legal and legislative circles, economists and sociologists have similarly examined the practices surrounding the repair of consumer goods. Unfortunately, the legal and socioeconomic debates surrounding repair have each occurred in a vacuum, and the legal/legislative repair debate has not been informed by contemporary socioeconomic research surrounding the actual motivations and consequences of the repair of consumer goods.

There are several different threads of socioeconomic thought surrounding repair. First, a number of researchers have examined cultural practices surrounding repair.[191] These researchers note the importance of local customs and values in determining whether consumers are inclined to engage in repairs, noting that even where manufacturers do

https://www.pc.gov.au/inquiries/completed/repair/report.

[184] *Id.* at 2, 13.

[185] *Bill C-272,* PARLIAMENT OF CAN. (Feb. 22, 2021), https://www.parl.ca/DocumentViewer/en/43-2/bill/C-272/first-reading.

[186] *Id.*

[187] *C-244: An Act to Amend the Copyright Act (Diagnosis, Maintenance and Repair)*, LEGISINFO (Nov. 22, 2021), https://www.parl.ca/legisinfo/en/bill/44-1/c-244.

[188] *Id.*

[189] *Bill C-244,* PARLIAMENT OF CAN. (Oct. 18, 2023), https://www.parl.ca/DocumentViewer/en/44-1/bill/C-244/third-reading.

[190] *Id.*

[191] *See, e.g.*, Sahra Svensson-Hoglund et al., *A Process Approach to Product Repair from the Perspective of the Individual*, 3 CIRCULAR ECON. SUSTAINABILITY 1327 (2022); D. Matthew Godfrey et al., *Repair, Consumption, and Sustainability: Fixing Fragile Objects and Maintaining Consumer Practices*, 49 J. CONSUMER RSCH. 229 (2022); Angelina Korsunova et al., *Consumer Decision-Making on Repair in a Circular Economy: A Process Model Based on Experiences Among Young Adults and Stakeholders in Finland,* 405 J. CLEANER PROD. 137052 (2023).

facilitate repairs, consumers often prefer to buy new products rather than repair old ones.[192] These academics point to consumer preferences favoring novelty over repair and social trends favoring the use of consumer goods to display wealth as weighing against repair in certain cultures.[193] Further, these writers point to consumer laziness, noting that repair is often a more time-consuming and idiosyncratic process than replacement and that independent repair providers are increasingly scarce.[194] For consumers in countries that do not retain a robust tradition of repair, a lack of familiarity with the repair process, uncertainty as to potential cost, and the perceived difficulty of finding a repairer lead many consumers to opt for replacement over repair even when it is economically disadvantageous.[195] In short, commentators in this category indicate that there are a wide range of cultural factors that affect the repair/replace decision, and legislation requiring manufacturers to provide replacement parts and repair information may not trigger any significant change in consumer repair habits.[196]

Second, beyond these cultural factors weighing against a consumer's decision to pursue repair, other writers have examined the repair experience and the repair industry itself.[197] On the one hand, these writers note that the number of repair professionals has decreased precipitously over the last few decades because work as a handyman is perceived as low-wage, undesirable blue-collar work.[198] This means that the few remaining repair technicians command higher wages, resulting in higher repair costs. Similarly, fewer repair providers means fewer local repair shops, requiring consumers to travel further and resulting in a less personal, trustworthy provider than a "local" repair shop.[199] On the consumer side, the increasing miniaturization of manufacturing components and the difficulty of disassembling goods makes do-it-yourself repairs an increasingly complex and time-consuming proposition, even if replacement parts and instructions are available.[200] While the mobility of modern consumers means they are less likely to repair larger goods like household appliances that they may be likely to leave behind in a move.[201]

Lastly, a number of researchers have focused more intensively on the economics of repair, both from the consumer side and the manufacturer side. One group of economists, Chen Jin, Luyi Yang, and Cungen Zhu, have written a paper directly informed by new potential right-to-repair laws that examines the incentives that these laws would create for

[192] Svensson-Hoglund, *supra* note 191, at 1328, 1340; Godfrey, *supra* note 191, at 245; Korsunova, *supra* note 191, at 7.
[193] Svensson-Hoglund, *supra* note 191, at 1329; Godfrey, *supra* note 191, at 248; Korsunova, *supra* note 191, at 7.
[194] Svensson-Hoglund, *supra* note 191, at 1339; Godfrey, *supra* note 191, at 240–41; Korsunova, *supra* note 191, at 4.
[195] Svensson-Hoglund, *supra* note 191, at 1341; *See* Godfrey, *supra* note 191, at 235; Korsunova, *supra* note 178, at 6.
[196] Svensson-Hoglund, *supra* note 191, at 1353; Godfrey, *supra* note 191, at 248 Korsunova, *supra* note 191, at 7–8.
[197] *See, e.g.*, John McCollough, *Consumer Discount Rates and the Decision to Repair or Replace a Durable Product: A Sustainable Consumption Issue*, 44 J. ECON. ISSUES 183 (2010); Ardeshir Raihanian Mashhadi et al., *Mining Consumer Experiences of Repairing Electronics: Insights and Business Lessons Learned*, 137 J. CLEANER PROD. 716 (2016).
[198] McCollough, *supra* note 197, at 188–89.
[199] *Id.* at 189.
[200] Mashhadi, *supra* note 197, at 717, 721.
[201] *Id.*

manufacturers and how they might influence production.[202] These researchers broke out consumer goods into three categories: low production cost, intermediate cost, and high cost.[203] For low production cost goods, the paper theorizes that even with right to repair legislation, manufacturers would likely obtain the most profit by simply reducing the price and quality of new goods.[204] Thus, resulting in strong incentives for consumers to continue to buy new goods rather than engage in repair.[205] This tendency would result in greater waste and environmental damage by intensifying manufacturing and disposal of goods.[206] For goods with high production costs, these researchers assert that manufacturers already experience low demand for new products, and consumers feel the need to get their money's worth and make the most out of the substantial investment sunk into the product – for this category of goods, then, these researchers assert that right-to-repair laws will likely not substantially change manufacturer or consumer behavior, as manufacturers are already forced to accommodate consumer repairs and will simply continue to do so.[207] Lastly, for intermediate production cost goods, the manufacturer strategy is likely to change depending on the cost of repairs.[208] Where the cost of repairs remains high after the passage of a right-to-repair law, it would likely be advantageous for manufacturers to adopt a volume strategy similar to that described for low-cost goods, again resulting in greater waste and disposability.[209] However, as repair costs decreased, a volume strategy might eat into profits for intermediate-cost goods, leading manufacturers to switch to a warranty and repair paradigm similar to that seen for high-cost goods, where manufacturers do not attempt to disincentivize repairs but instead focus on making manufacturer repairs more competitive than independent repairs.[210] In sum, this article indicates that far from reducing environmental impact, right to repair laws that simply require manufacturers to supply replacement parts and information enabling independent repairs may, in many instances, encourage manufacturers to craft more disposable products, resulting in greater waste and environmental harm without necessarily saving consumers any money.[211]

Separate from this work, another group of economists examined the economics of repair from the consumer perspective, examining consumer decisions to repair two types of vacuum cleaners and washing machines.[212] While these researchers found that maximizing repair throughout the product lifecycle was the most cost-effective for consumers across all three product categories, they noted that the idiosyncrasies of consumer behavior meant that consumers might not choose the most cost-effective approach, instead perceiving items that required multiple repairs as being in some way undesirable compared to a new replacement product.[213]

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[202] Chen Jin et al., *Right to Repair: Pricing, Welfare, and Environmental Implications*, 69 MGMT. SCI. 1017 (2023).
[203] *Id.* at 1018–19.
[204] *Id.* at 1019.
[205] *Id.*
[206] *Id.*
[207] *Id.* at 1018–19, 1025, 1027.
[208] *Id.* at 1025–1027.
[209] *Id.* at 1019, 1027.
[210] *Id.*
[211] *Id.* at 1033.
[212] Jan Brusselaers et al., *Economic Consequences of Consumer Repair Strategies for Electrical Household Devices,* 33 J. ENTER. INFO. MGMT. 747 (2020).
[213] *Id.* at 760.

Existing US proposals for right-to-repair legislation and federal regulatory and litigation efforts are focused on requiring manufacturers to provide replacement parts and know-how to permit independent repairs by consumers and independent repair providers. To sum up recent socioeconomic research into repair transactions, however, it appears that this approach may, in fact have little impact in creating more repair of consumer goods – ingrained consumer preferences and economic incentives for manufacturers may result in even greater disposability and churn of consumer goods in many categories.[214] In light of these findings, it appears that the best approach to encourage greater repairability of consumer goods would be not to focus so exclusively on repair, but rather take a more holistic approach in regulating the design of consumer goods in general, as the EU proposes to do with its ecodesign regulations. By managing the design of consumer goods both at the beginning of their lifespan, by regulating the materials used and the design, as well as at the end of their lifespan, by requiring manufacturers to plan for disposal and disassembly, this approach seems likely to avoid creating the perverse incentives of repair-focused measures and move towards an ecosystems where goods are repairable and sustainable and both consumers and manufacturers are incentivized to engage in the repair process. Whether a similar regulatory scheme could be implemented in the US is another question – it might seem that a system such as this, born out of a more regulation-tolerant EU, would be unlikely to succeed in the US. However, the federal government already monitors and regulates energy efficiency through voluntary programs such as Energy Star, and it already has multiple programs which effectively regulate the manufacturing processes for certain goods by placing limitations on the provenance of components, promoting US-made over foreign-made goods.[215] Ecodesign regulations might be seen as merely be an intensification of existing regulations on consumer goods, and might not feel like a significant expansion of federal regulation. Ultimately, the success of any system would likely depend on its portrayal by political actors and how jarring its initial adoption would be to consumer prices and habits.

## IX. Conclusion

The US right to repair movement, more than a decade since its inception, has sparked a lot of policy debate but little palpable reform. After years of seeing federal and state legislative efforts come to naught, the last couple of years have seen another wave of interest in the right to repair. This time, the backing of the federal government and enforcement action by the FTC as well as private class actions by consumers may lead to greater change. However, it remains to be seen whether US politicians have the will for the sustained push that would be required to pass any federal legislation, and the litigation strategies underpinning the push for right-to-repair reforms through the courts remain untested. Even if these efforts do prove successful, socioeconomic research indicates that the legal regimes being contemplated may not in fact lead consumers to engage on more product repairs, and may perversely result in greater waste and disposability. Elsewhere, other advanced democracies have succeeded in comprehensive product design regulations far more sophisticated than those envisioned even by the most ambitious repair advocates in the US, and US consumers are increasingly at a disadvantage compared to their counterparts in the EU and elsewhere, yet the political realities of the

[214] *See generally* Svensson-Hoglund*, supra* note 191; Godfrey, *supra* note 191; Korsunova, *supra* note 191.
[215] *See How Energy Star Works*, ENERGY STAR, https://www.energystar.gov/about/how_energy_star_works (last visited Jan. 3, 2024).

US make it highly unlikely that any comparable system could be put in place in this country.