BETTER TECH FOR TOMORROW

WHY TEXAS NEEDS A RIGHT TO REPAIR LAW

WRITTEN BY **The Honorable Zach Whiting and Greyson Gee**July 2024

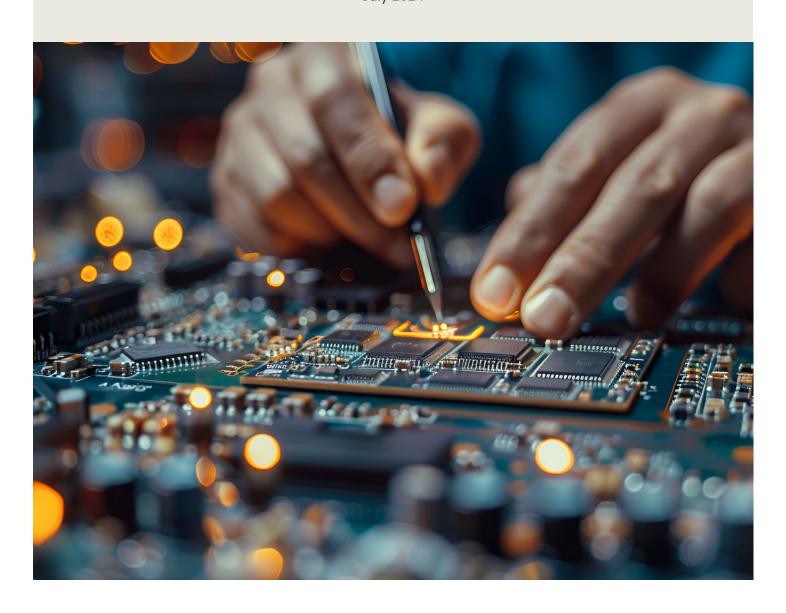


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KEY POINTS

- The right to repair presents a tension between the interests of manufacturers and the personal property rights of consumers.
- Manufacturers engineer
 hurdles to repair that infringe
 on the personal property
 rights of the owner of a
 consumer good. A right-torepair framework recalibrates
 this.
- The prevailing literature demonstrates that the tension between intellectual property and private property is not as hostile as popular commentary suggests and does not preclude state right to repair laws.
- While Congress continues to drag its feet, several states have enacted targeted right to repair laws to give consumers more options and greater control over their personal property.

EXECUTIVE SUMMARY

The right to repair presents a highly consequential and tense policy debate. The fundamental issue is how society—and policymakers—ought to balance the tension between the interests of manufacturers investing resources to create a product and the personal property rights of the owner of consumer goods. This issue comes up in a variety of contexts, from consumer electronics to automobiles, from agricultural equipment to durable medical equipment to heavy machinery and more.

Concretely, the question is whether an individual who owns a consumer good has a right to use, modify, repair, sell, give away, or discard a good at any time, or whether manufacturers have intellectual property rights that temper, limit, or even prevent the exercise of such rights. As this paper argues, these rights are not necessarily at odds to the extent that popular commentary may suggest.

Manufacturers argue that it takes a lot of capital resources to invent, innovate, and manufacture products, and intellectual property laws are designed to protect their products and related proprietary information for a period of time. Thus, some manufacturers contend that having control over the useful lifespan of a product enables them to continue driving innovation and invariably create better, more affordable consumer products. Furthermore, they raise valid concerns about safety, cybersecurity, liability, reputational harm, design choices, and quality of service (FTC, 2021b, p. 1).

On the other hand, the purchaser of a consumer good has a personal property interest in that good, and proponents argue the consumer has a reasonable expectation to be able to use, modify, repair, sell, give away, or discard the good at any time. The goal of a right to repair law is to ensure that individuals have agency over the use of their goods and equitable access to the information

and tools needed to repair something on their own, or with the assistance of an independent third party, and not have to go directly to the manufacturer or authorized repair shop. Alongside this, proponents argue that there are environmental and economic benefits from independent repair and aftermarket parts sectors (Wiens, 2023).

This paper will review the history, the pros and cons, the legislative and legal landscape, and the policy suggestions on the right to repair. Ultimately, the authors conclude that Texas should adopt a comprehensive right to repair framework to emphasize and better protect the consumer property rights that have been long recognized under common law for some 500 years (Perzanowski, 2023, p. 6).

Preface: Types of Property Rights

As an initial matter, it is important to define terms and distinguish between the types of property rights. Property is "any matter or thing capable of private ownership" (Texas Tax Code, Section 1.04(1)). Property is generally divided into two categories: real property and personal property. Real property includes land, objects attached to the land, and certain things on and below the land, such as timber and minerals. Personal property is everything else, tangible and intangible.

While philosophers and jurists have debated property rights for millennia, the recognition and protection of private property rights is a core tenet of American liberty. As Pilon (2022) notes, "[p]roperty is the foundation of every right we have, including the right to be free" (p. 146). It confers agency, autonomy, and dominion. Indeed, "[p]roperty is the most complete right to something; the owner can possess, use, transfer or dispose of it" (LII, 2022b).

Specifically, in the context of right to repair, this paper will often refer to consumer goods or consumer products as "any tangible personal property which is distributed in commerce and which is normally used for personal, family, or household purposes" (15 U.S.C. § 2301(1)). Examples of consumer goods

range from cell phones to washing machines to wheelchairs to tractors. This contrasts with intellectual property rights, which are "the fruits of mental labor" (American Intellectual Property Law Association, n.d., para. 1). Intellectual property includes an author's words, an artist's song, an architect's blueprint, and a company's logo or jingle.

THE QUESTIONS

What is the Right to Repair?

For as long as humans have been making things, we have been repairing them. Repair was always understood as a component of ownership; if something broke, it had to be fixed. In the era of convenience and mass consumerism, however, we need not waste time, energy, and money to fix something—just throw out the old and buy something new.

This shift in cultural attitude has been exacerbated by large corporations' efforts to make repairing things harder (Klosowski, 2021). Accordingly, the right to repair provides consumers with greater choice to fix or modify the personal property which they own. Electronic devices, farm equipment, and other consumer appliances often require that repair services be provided through the product's manufacturer or a third party authorized by a retailer (Wiens, 2023; Repair Association, n.d.). The right to repair would enable the repair of devices and equipment at the discretion of the owner, either through self-repair or by contracting with a third party.

Is it a Right?

It is important to ask whether the right to repair is a "right" at all. Hartline has argued "[t]he right-to-repair movement isn't based on a preexisting right; it's instead asking lawmakers to create a new right at the expense of the existing rights of IP [intellectual property] owners" (McDermott, 2023, para. 7). Hartline (2023) has further argued that "[o]wners of electronic devices have no right to repair them because IP owners have no duty to help them. On the contrary, device owners have the duty not to violate the rights of IP owners when making repairs" (para. 2). On the other hand, Grinvald & Tur-Sinai (2019) argue the word "right" is appropriate, saying:

[I]t might be tempting to characterize the nature of consumers' legal entitlement to repair as a "privilege," ... rather than a right. Yet, the term "right" seems to be more accurate, even with respect to this core layer. For the consumers' entitlement to repair to be meaningful, it must be correlated with a duty of the original manufacturers to *not* interfere with the exercise of the right (for instance, by way of enforcing intellectual property rights against individual consumers who repair their own products). (p. 99)

What is the History of the Right to Repair?

"They don't make 'em like they used to!" is a phrase that often is seen as the tired lamenting of seniors, but there is truth in it. They don't make things like they used to—and this is entirely by design.

The economic downturn of the Great Depression led to the imagining of creative means for market stimulation. One such solution was coined by a pair of industrial designers Roy Sheldon and Egmont Arens in their book, Consumer Engineering: A New Technique for Prosperity. Their primary criticism of the Depression-era American economy was that it failed to accommodate consumer preferences, thus allowing for "misplaced thrift" to curb spending habits, in turn hampering economic growth (Calkins, 1932). The authors bemoan this fact and posit their solution: planned obsolescence. They explain,

[Planned obsolescence] is another device for stimulating consumption. The element of style is a consideration in buying many things. Clothes go out of style and are replaced long before they are worn out. ... Does there seem to be a sad waste in the process? Not at all. Wearing things out does not produce prosperity, but buying things does. ... Any plan which increases the consumption of goods is justifiable if we believe that prosperity is a desirable thing. If we do not, we can turn back the page to earlier and more primitive times when people got along with little and made everything last as long as possible. We have built up a complicated industrial

machine and we must go on with it, or throw it into reverse and go backward. (Calkins, 1932)

The declining economic situation in which Sheldon and Arens wrote compelled them to find ways to stimulate the market. They argued the idea that "[consuming] all we make" was the right solution to our economic challenges (Calkins, 1932). However, this has been pinned as the beginning of the consumerism of our modern age, and the genesis of product manufacturing designed around deterioration and replacement.

The effects of planned obsolescence are widely evident. New car models every year, the inability to refill ink cartridges, and the often irreplaceability of electronic components are all cases in which manufacturers deliberately choose to limit repair, thus necessitating the purchase of new products, often at great expense to consumers—and to the benefit of shareholders.

A popular example of planned obsolescence is the light bulb. Light bulbs prior to 1924 had long lifespans that were continuing to improve (Krajewski, 2023, para. 4). Building upon the work of Thomas Edison, various inventors tested bulbs with different filaments, researching ways in which to increase the lifespan of lightbulbs that were rapidly spreading across the globe. This innovation made lightbulb manufacturers realize that if they continued creating long lasting light bulbs, the need for replacements would decrease, threatening to put them out of business.

This realization led to the secret meeting of the "Phoebus Cartel," a group of international manufacturers that decided to control the supply of lightbulbs and reduce the lifespan of the bulbs that they produced (Krajewski, 2023). Animated by the same philosophy that drove Arens and Sheldon, the Phoebus Cartel systematically capped the lifespan of lightbulbs and spearheaded the trend of planned obsolescence in every industry.

This type of collusion, economic shift, and its impact on consumer behavior are arguments in favor of the right to repair. As Perzanowski (2021) notes:

the degree to which lower prices and wider availability of repair will result in an uptick in consumer or third-party repair hinges on consumer expectations and preferences surrounding the reparability of the products they buy. If instead, consumers view their devices as disposable "throwaways"—as one New Hampshire legislator referred to smartphones—then repair legislation is unlikely to have much effect. (p. 379)

For example, according to a 2023 Deloitte consumer survey:

40% of respondents indicated that their usual practice is to replace a defective product with a new one. Another 7% prefer replacement with a used or refurbished product. This means that nearly every half of all products are discarded after they malfunction or become defective, despite the fact that many can be repaired and their useful lives extended. (Choe et al., 2023, para. 6).

Several surveys have examined the reasons for this shift. One American study found that "the high costs of repairs and the limited availability of parts and tools are significant barriers" (Perzanowski, 2021, p. 388). Another German survey noted:

the prohibitively high cost of repairs is the most substantial factor. The expense of repairing a product often rivals the cost of purchasing a new one. ... Another significant deterrent is the unclarity of what a repair will entail. ... (Choe et al., 2023, "Consumers' Reluctance to Choose Repairs")

What are the Arguments For and Against the Right to Repair?

At any time—but particularly in periods of market contraction and high inflation—the right to repair

provides the means to reduce costs and to exercise complete ownership of consumer goods. There are two streams of thought that animate this discussion. On one hand, companies justify imposing repair restrictions by citing the often-complex technological nature of products sold, claims of intellectual property protection, privacy, and consumer safety. On the other hand, consumers argue that their right to control their property is derived from the ownership they have over their products.

What follows is an overview of the primary arguments for and against the right to repair, which will be examined in greater detail throughout the rest of the paper. Indeed, the balance between intellectual property and personal property rights—or, more broadly, manufacturer interests versus consumer desires and agency—is tenuous and plays a central role in this paper.

Arguments For

The primary arguments presented by proponents of the right to repair concern greater consumer choice and convenience, increased competition, lower costs, benefits to small businesses and the workforce, and the environment.

Proponents argue that right-to-repair legislation gives individuals who own a product more choices about how to use, modify, and repair it. First, one way that companies discourage consumers from repairing their own devices is by voiding their manufacturer warranty if they do so. Proposed right-to-repair legislation would remedy this issue by stipulating that manufacturers cannot void warranties when consumers self repair or use an independent third party for repairs. Manufacturers would also be prohibited from using their contracts with authorized repair providers to limit consumer repair rights.

Second, when original equipment manufacturers (OEMs) have a near-vertical monopoly on the lifecycle of a good—meaning the sales, servicing, replacement, disposal, and the like—it increases costs for consumers and insurers. A right-to-repair

law would require manufacturers to provide repair manuals, diagrams, schematics, and tools necessary for repair. Rather than going to the only Ford dealership in town, the only Apple store within 100 miles, or mailing your only cell phone halfway around the world, the right to repair gives consumers greater access to the estimated "325,400 electronics and mobile equipment repair technicians" in the U.S. (Wiens, 2023, p. 8).

Third, a right-to-repair framework is good for small businesses and the workforce. The right to repair allows for more independent repair shops and a vibrant aftermarket parts industry (Special Equipment Market Association, n.d.). According to Wiens (2023), "[t]housands of cell phone and tablet repair shops using iFixit repair guides have sprung up around the country in the last few years representing tens of thousands of new jobs" (p. 9). It allows a single dad to take a second job on the weekend or an entrepreneurial teenager a chance to start a business repairing computers in her garage in the evenings. This is the embodiment of the thesis of Matthew B. Crawford's book Shop Class as Soulcraft (2010), which emphasizes the intrinsic value and dignity of working with one's hands to solve problems and hone craft, something which is being lost in a hyper-digitalized world.

Finally, the right to repair also finds support among environmental groups. According to Cooper (2023):

[e]-waste, the discarded products with a battery or plug, is the world's fastest-growing waste stream. ... [W]e generate around 50 million metric tons of e-waste annually, a figure projected to reach 74 million metric tons by 2030. This rapid growth is fueled by higher consumption rates, short life cycles, and few options for repair and recycling. (para. 4)

Arguments Against

Arguments against right-to-repair legislation come from manufacturers who seek to maintain strict control over the products they produce, even after they are sold. Opponents invoke intellectual property

rights as justification for restricting repair options for consumers. Furthermore, they raise concerns about safety, cybersecurity, liability, reputational harm, design choices, and quality of service (FTC, 2021b, p. 1).

In a comment to the Federal Trade Commission (FTC), the National Association of Manufacturers "explained that individuals and independent repair shops can introduce new security risks by inadvertently disabling key hardware security features or preventing firmware or software from accepting or installing updates" (FTC, 2021b, p. 30). For example, Apple is notorious for the strict control they maintain over their "walled garden," arguing that in the interest of consumers, their products need to be protected from third-party access to prevent compromising the integrity of their hardware and software (Neely, 2024).

Additionally, Tesla has historically opposed the right to repair for similar reasons, including a Massachusetts law requiring manufacturers to provide vehicle data to third party repair businesses—even going as far as asking customers in Massachusetts to lobby against the right to repair law (Lambert, 2020). Tesla wrote in an email to their customers:

As you go to the polls this fall, Tesla asks that you vote no on Question 1. Tesla has long applied an open source philosophy to our patented intellectual property for electric vehicles. ... The requirements, pushed by two national auto shop lobbying groups, would make vehicles more vulnerable to cyberattacks and would make successful attacks more harmful. (Lambert, 2020, para. 5)

Furthermore, numerous manufacturers and trade associations have highlighted potential concerns with self-repair or independent repair for the repairer and the end user (FTC, 2021b, pp. 26-28). According to a joint comment to the FTC,

safety risks are mitigated when repairs are performed by authorized repair persons because their contracts with such 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." (FTC, 2021b, p. 26)

In contrast to these technical arguments, Jin, et al. (2023) made a pure economic argument that a right to repair framework may hurt manufacturers, consumers, and the environment:

We find that, as the RTR legislation continually lowers the independent repair cost, manufacturers may initially cut the new product price and then raise it. This nonmonotone price adjustment may further induce a nonmonotone change in consumer surplus, social welfare, and the environmental impact. Strikingly, the RTR legislation can potentially lead to a lose–lose–lose outcome that compromises manufacturer profit, reduces consumer surplus, and increases the environmental impact despite repair being made easier and more affordable. (p. 1017)

What are Examples of Repair Restrictions?

Repair restrictions can be found across much of the American economy. In every case, consumers are limited in their ability to fix and modify their property and are often forced to procure expensive repair services and parts supplied by OEMs, go to a manufacturer or authorized repair shop, or simply discard the item and buy a new one. The following are examples of repair restrictions that consumers face in certain industries.

Consumer Electronics: Apple

Apple is well known for their unique product lineup and approachable, user-friendly design. However, these characteristics have often come at the expense of repairability for consumers. One commentator argues that Apple notoriously assembles their devices with parts that are sealed together to prevent easy replacement or in a manner that causes intentional damage to the device when

repair attempts are made with the goal of necessitating device replacement (Fowler, 2019). Additionally, Apple's software has been known to "brick" devices that recognize repairs done with non-authorized parts (Wiens, 2016).

These manufacturing techniques are not unique to Apple. Consumer electronics from many manufacturers have highly complex designs, and those same manufacturers are often hesitant to share schematics, parts, or tools so they can maintain a monopoly on repair services, claiming to be acting in the interest of consumer safety and protecting their intellectual property.

To their credit, Apple has expanded their self-repair services and provided more robust options for third parties to provide Apple-authorized repairs. Additionally, Apple recently came out in support of right-to-repair legislation in California and has expressed support for national right to repair legislation being advocated by the Biden administration (Shalal et al., 2023).

Agricultural Equipment: John Deere

There is a vibrant right-to-repair movement within the agricultural industry (Farm Action, n.d.). Farmers across America are proud of their heritage, and many of them view their use of John Deere tractors (or Case IH, if one is so inclined) as integral to that heritage. However, tractors break, and when they do, farmers need to be able to quickly repair them and get them back out in the field. Until recently, John Deere prohibited self-repair of their tractors in a similar way as consumer electronics manufacturers.

In their latest tractors, John Deere uses advanced hardware and software to automate and expedite farming processes. These new features are viewed as boons to productivity, but when they fail, there is no easy fix. Like Apple, John Deere uses software to "brick" devices that are repaired outside of an authorized John Deere repair facility. If a farmer attempts to repair an issue with their tractor on their

¹ In June 2024, the list price for a base model 9R 390 tractor before adding attachments and accessories was \$538,446.00 (John Deere, n.d.).

own, they risk putting their tractor out of commission for longer than they can afford during critical planting or harvesting seasons (Hernandez, 2023).

Along with several agricultural equipment manufacturers, John Deere recently signed a memorandum of understanding with the American Farm Bureau Federation which stipulated that farmers have the right to access manufacturer's tools, software, and documentation related to repair (American Farm Bureau Federation, 2023b). This is a major step forward for the agricultural industry and represents a shift in the views of manufacturers towards opening access to repair services.

Automobile Manufacturers: Subaru

In response to a 2020 Massachusetts ballot initiative, Subaru began disabling its in-car suite of services that connected drivers to roadside assistance, collision-detection sensors, and mobile based vehicle control. Under the Massachusetts law, the data related to these services would be required to be openly accessible to independent repair technicians and car owners. Rather than maintain those services in their cars, Subaru opted to completely disable those services to purportedly comply with the new law (Bray, 2023).

Subaru's decision caught many customers by surprise. Massachusetts resident Martha Caron upgraded her 2019 Subaru to a 2023 model for the safety features that it was equipped with. She was befuddled when she learned that her brand new car did not come with those features. According to *The Boston Globe*:

"This is why I made the leap to the 2023 model," said Caron. "Safety."

But when she tried to activate the Starlink system, nothing happened. After multiple phone calls to Subaru, she recalled, "somebody at tech support said to me, why are you bothering if you're in Massachusetts?" (Bray, 2023, paras. 5-6)

A lawsuit challenging the Massachusetts law will be discussed in the "Right to Repair and the Courts" section.

Consumer Electronics: Lexmark

As we discuss below, a major tension within the right-to-repair debate is between notions of personal and intellectual property rights. This tension was exemplified by *Impression Products vs. Lexmark International*, a 2017 U.S. Supreme Court case that revolved around the refilling of printer ink cartridges. Impression Products is a small office supply company in West Virginia that decided to start selling refilled ink cartridges for less than Lexmark (Wiens, 2017).

In a 7-1 ruling, the Court held that Lexmark's claims of control over ink cartridges after they are sold were unconstitutional. Siding with Impression Products, the Court held that Lexmark gave up its patent rights once its ink cartridges were sold (Impression Products, 2017). Chief Justice Roberts explained the implications in the majority opinion:

Take a shop that restores and sells used cars. The business works because the shop can rest assured that, so long as those bringing in the cars own them, the shop is free to repair and resell those vehicles. That smooth flow of commerce would sputter if companies that make the thousands of parts that go into a vehicle could keep their patent rights after the first sale. (Impression Products, 2017, p. 372)

Impression Products clarified a central question in the right-to-repair debate: do companies retain control over their patented property after they've sold it? The Court decidedly said no.

Accessibility: Wheelchairs

Wheelchairs, much like cars and iPhones, break. When they do, being able to repair them in an efficient and cost-effective way is of extreme importance, especially when wheelchairs are depended on for general mobility. Colorado's 2022 right-to-repair law requires powered wheelchair manufacturers to provide parts, tools, and repair manuals to citizens who use powered wheelchairs, thus enabling Coloradans the ability to repair their own chairs.

Under the new law, people like Bruce Goguen from Broomfield, Colorado, can make the minor modifications that are often needed for convenience and comfort without the use of an authorized technician. Before the law was enacted, Goguen and his wife often had to wait weeks for minor adjustments to his wheelchair. According to Kenney (2023):

For Goguen's wife, Robin Bolduc, booking appointments for minor adjustments was frustrating.

"We would have to make an appointment, have them come out and say, 'Gee, I'd like to change it so we're walking just a little bit faster," explained Bolduc.

During those visits, the couple noticed something interesting. The technician wasn't using a specialized device to make the changes. It was a smartphone app. Bolduc wanted access.

"I had been asking for the app for quite a long time," Bolduc said. But she couldn't download the software, which was meant only for employees of the manufacturer and authorized vendors. (paras. 5-8)

LITERATURE REVIEW – COMPETING RIGHTS: PERSONAL PROPERTY VS. INTELLECTUAL PROPERTY

Overview: Personal Property Rights

This paper is not a philosophical or theological treatise on the origins and protections of property rights. That is, whether property rights come from the Divine, nature, society, government, or some combination thereof. Rather, this section lays out the generally accepted principles of property rights as understood from the Magna Carta, through English common law, and ultimately the corpus of American positive and case law—the goal of which is to apply these principles to the right to repair.

Concretely, ownership of a consumer good grants the owner broad rights to use, modify, repair, sell, give away, or discard the property. Alchian (n.d.) identifies that "the three basic elements of private

property are (1) exclusivity of rights to choose the use of a resource, (2) exclusivity of rights to the services of a resource, and (3) rights to exchange the resource at mutually agreeable terms" (para. 5). Blackstone (1765) argued, "[t]he third absolute right, inherent in every Englishman, is that of property: which consists in the free use, enjoyment, and disposal of all his acquisitions, without any control or diminution, save only by the laws of the land" (p. 103).

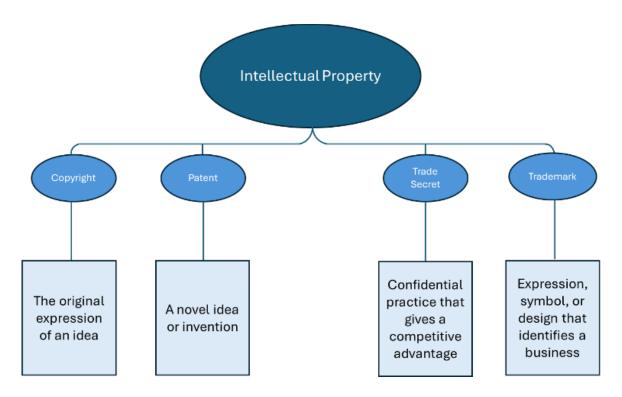
This notion is reinforced by limits on post-sale restraints, which "refers generically to any restriction imposed by a seller on how a purchased good can be used or resold after the initial sale" (Hovenkamp, 2011, p. 101). According to Perzanowski (2023),

The law is generally hostile to post-sale restrictions, including limitations on repair [emphasis added]. For centuries, that has been true as a matter of both personal property and intellectual property law. This hostility grows out of deep concerns over the alienability of goods in the stream of commerce and respect for owners' autonomy to use the products they purchase as they see fit. (p. 6)

Overview: Intellectual Property Rights

Intellectual property law provides robust protections for its holders. While this framework has emerged from centuries of common law, it is ingrained in and expressly protected under American positive law. There are four commonly recognized types of intellectual property: copyrights, trademarks, patents, and trade secrets. According to the Georgetown University Law Center (n.d.):

- Copyright law protects the rights of creators in their works in fine arts, publishing, entertainment, and computer software.
- Trademark law protects a word, phrase, symbol or design that is used by an entity to identify its product or service.
- Patent law grants protection for new inventions which can be products, processes or designs and provides a mechanism for protection of the invention.



Note. Chart reproduced from COMSOL Blog, 2015 (https://www.comsol.com/blogs/can-models-be-protected-by-copyright-law/).

 Trade secrets are business practices, formulas, designs or processes used in a business, designed specifically to provide a competitive advantage to a business. (paras. 2-5)

These distinctions are important in the context of the right to repair, including the jurisdiction over right-to-repair policymaking. According to the Legal Information Institute (2023),

- In the United States, patents and copyright are regulated exclusively by federal law, as outlined in the Intellectual Property Clause.
- Trademarks are areas of shared jurisdiction between federal and state governments, with the federal government deriving their power to regulate trademarks through the Commerce Clause.
- Trade secrets are largely regulated by states through unfair competition laws. (para. 5)

The U.S. Constitution grants Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries" (U.S. Const. art. I, § 8, cl. 8). Pursuant to this power, "Congress has protected copyrights and patents in some form under federal law since 1790" (Constitution Annotated, n.d., para. 1).

The purpose for these protections is manifest—to incentivize creation, innovation, and investment and to discourage theft and misappropriation. According to the U.S. Supreme Court in *Mazer v. Stein* (1954),

The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in "Science and useful Arts." Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered. (p. 219)

However, these protections are not absolute. Indeed, the IP Clause secures these protections for "limited Times" (U.S. Const. art. I, § 8, cl. 8). As a general rule, after being granted, a patent protects an invention for a term of 20 years from the date of application (35 U.S.C. § 154(a)(2)). Legal protections for copyrightable materials are more robust and factor dependent, ranging from author's life plus 70 years to 95 years or 120 years.²

Trademarks and trade secrets are more broadly protected. A registered trademark is protected for a term of ten years and may be renewed indefinitely, so long as it is continuously used in commerce and certain documents are filed with the U.S. Patent and Trademark Office (USPTO) (USPTO, n.d.-b).

According to Curtis, "[a] trade secret is information that has economic value by virtue of not being generally known" (Curtis, n.d., para. 1). Trade secrets are not registered and do not lapse. That is, they remain protected as long as they remain secret through reasonable efforts by the owner. Perhaps the most popular example is the formula for CocaCola, which is kept in "The Vault" in Atlanta, Georgia.

Texas is among the 47 states and the District of Columbia that have enacted the Uniform Trade Secrets Act, an effort of the Uniform Law Commission to provide a degree of consistency and predictability to trade secret protections across the nation (LII, n.d.-a). The Texas Act defines trade secrets as

all forms and types of information, including business, scientific, technical, economic, or engineering information, and any formula, design, prototype, pattern, plan, compilation, program device, program, code, device, method, technique, process, procedure, financial data, or list of actual or potential customers or suppliers,

whether tangible or intangible and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing (Texas Civil Practice and Remedies Code, Section 134A.002(6))

The Texas Act protects trade secrets so long as the owner takes reasonable measures to keep the information secret and the information provides economic value by virtue of it being kept secret (Texas Civil Practice and Remedies Code, Section 134A.002(6)(A)-(B)).3

This is, by design, a general list providing broad protections. Indeed, "[t]rade secrets are important because they protect information crucial to a company's survival and profitability. In other words, trade secrets allow a company to make and sell valuable products that only they know how to make" (Curtis, n.d., para. 3).

Reconciliation: Why Intellectual Property Law Does Not Preclude State Right-to-Repair Laws Introduction

The foregoing is not merely an intellectual or historical exercise—it bears greatly on the right-to-repair conversation. The fundamental issue in the right-to-repair debate is how to reconcile the oft-recognized tension between personal property rights and intellectual property rights. Concretely, a key conflict in right to repair is whether an individual who owns personal property has a reasonable expectation to use, modify, repair, sell, give away, or discard their property at any time, or whether manufacturers have intellectual property rights that temper, limit, or even prevent the exercise of such rights. Palmer (1989) puts it bluntly, "In short, a system of intellectual property rights is not compossible with a system of property rights to tangible objects" (p. 281).

² According to the U.S. Copyright Office (n.d.-a),

The term of copyright for a particular work depends on several factors, including whether it has been published, and, if so, the date of first publication. As a general rule, for works created after January 1, 1978, copyright protection lasts for the life of the author plus an additional 70 years. For an anonymous work, a pseudonymous work, or a work made for hire, the copyright endures for a term of 95 years from the year of its first publication or a term of 120 years from the year of its creation, whichever expires first. For works first published prior to 1978, the term will vary depending on several factors. To determine the length of copyright protection for a particular work, consult chapter 3 of the Copyright Act (title 17 of the United States Code). (para. 1)

³ This definition is not identical but is substantially similar to the definition of trade secret under federal criminal law (18 U.S.C. § 1839).

However, as the prevailing literature demonstrates, these property rights are not necessarily in the degree of conflict that Palmer, Hartline, and other popular commentary may suggest. In contrast to Hartline, several scholars argue the right to repair is not a new phenomenon, as a matter of law or technology. Ghosh (2022) argues that "the right to repair is continuing, not emerging. ... [It] has deep legal roots and should not be accepted as an innovation when in truth it is a lost tradition" (pp. 1097, 1101). Indeed, according to Perzanowski (2023), "[a]s a legal principle, the right to repair is firmly rooted in half a millennium of common law property doctrine and has been explicitly recognized under U.S. intellectual property law since the mid-nineteen [sic] century" (p. 6).

This stems from a legal principle called exhaustion. The doctrine of exhaustion "holds that when an embodiment of a work protected by some intellectual property right passes from the rights holder to a consumer, the rights holder's power over that particular embodiment is diminished" (Perzanowski, 2023, p. 7). The exhaustion doctrine is well-established across IP law, including in copyright, patent, and trademark law (Perzanowski & Schultz, 2015, p. 1212, fn. 8-9), although repair critic Hartline (2023) seems to argue exhaustion is only a principle of patent law. The law's general

aversion to post-sale restrictions extends to attempts to impose limitations through assertions of IP rights as well. Although copyright, patent, and trademark law constrain the use of personal property to some extent, they nonetheless incorporate a core skepticism with respect to post-sale restrictions that interfere with downstream alienation and use. (Perzanowski, 2023, p. 6)

Ultimately, the authors conclude that IP law is not inconsistent with and does not preclude state-based right-to-repair legislation.

Proviso: Preemption

The right to repair raises questions about federal preemption of state law. That is, because copyright and patent law are constitutionally derived (and trademark law is largely governed by federal law), opponents argue that state-based right-to-repair laws are unconstitutional. This is why many right-to-repair proponents focus on federal reforms. State-based proponents argue that right-to-repair legislation does not impinge on federal aspects of IP because it only—and expressly—speaks to trade secrets, which are governed under state consumer protection laws. Grinvald and Tur-Sinai explicate this discussion noting,

[a]rguably, the proposed model legislation does not align with various aspects of intellectual property law. This may mean that state laws based on the model legislation, if enacted, could be subject to constitutional challenges in their implementation and enforcement. However, in the past, courts have upheld other state-based legislation that similarly attempted to dictate manufacturer actions, even where patent rights were implicated.

In fact, Kali Murray traces how states were historically able to enact state anti-patent statutes pursuant to the Tenth Amendment and the states' "police power" over property and contracts. (Grinvald & Tur-Sinai, 2019 p. 82, fn. 111; Murray, 2015, pp. 926-929)

Furthermore, six state right-to-repair laws have been enacted since 2012 and none have been struck down on preemption grounds. Accordingly, this should not deter right-to-repair efforts in Texas.

The Interplay of Rights

Manufacturers rely on each of the four categories of IP to protect their products as well as to counter right-to-repair efforts. These categories are not discrete, and manufacturers often stack IP protections. For example, according to a landmark FTC report called "Nixing the Fix: An FTC Report to Congress on Repair Restrictions,"

Manufacturers of products with embedded software rely on copyright law to protect their code from being copied. Some manufacturers also secure design or utility patents for products they offer or for their component parts. Manufacturers may also invoke copyright or trade secret law to prevent the public disclosure of their repair protocols and manuals. (FTC, 2021b, p. 25)

That said, Perzanowski (2023) argues,

[L]ongstanding legal rules support the notion that a right to repair one's personal property is an inherent incident of ownership. These doctrines have helped secure the rights of property owners to repair the things they own as they see fit, free from restrictions imposed by manufacturers and retailers. But ... current interpretations and applications of IP law can nonetheless interfere with repair, in a marked departure from these established principles. (p. 10)

What follows is a discussion of the interplay between these various IP protections in the right-to-repair debate.

Copyright

Copyright law "protects original works of authorship as soon as an author fixes the work in a tangible form of expression" (U.S. Copyright Office, n.d.-b, para. 1). The U.S. Constitution's IP Clause establishes Congress' power over copyright to "promote the ... useful Arts, by securing for limited Times to Authors ... the exclusive Right to their respective Writings" (U.S. CONST. art. I, § 8, cl. 8). It is important to "[n]ote that advancements in technology have led to an ever expanding understanding of the word 'writings'" (LII, 2022a, para. 2). It may give a textualist pause that the Constitution's "Writings" now cover things "including paintings, photographs, illustrations, musical compositions, sound recordings, computer programs, books, poems, blog posts, movies, architectural works, [and] plays" (U.S. Copyright Office, n.d.-b, para. 1).4

As a practical matter, the competing rights implicated here surround the copyright (the intellectual property right of the creator) versus the copy (the personal property right of the holder). Under the U.S. Copyright Act, "the owner of a copyright has the exclusive right to reproduce, distribute, perform, display, license, and to prepare derivative works based on the copyrighted work" (LII, 2022a, para. 4). However, as discussed in the limitations and exceptions section below, the law also provides the owner of the copy certain rights to use, enjoy, and convey copyrighted material without needing permission.

More recently, the digital space is a battlefield in copyright law and (for our purposes) in the right-torepair debate. Of note, Congress adopted the Digital Millennium Copyright Act (DMCA) in 1998.5 In part, Section 1201 of the DMCA provides strong protections against unlawfully "circumvent[ing] a technological measure" designed to protect the digital code of copyrighted work (17 U.S.C. § 1201(a)(1)(A); 17 U.S.C. § 1201(a)(3)(A)). Practically, circumvention is a means of bypassing a digital lock to gain access. Because software is embedded in thousands of consumer goods, from coffee makers and refrigerators to automobiles and tractors, manufacturers rely heavily on DMCA to help protect their products. However, these protections are not absolute. Several limitations and exceptions are discussed below: fair use, the first sale doctrine, the DMCA safety valve, and other critiques.

Fair Use

First, Section 107 of the Copyright Act of 1976 provides an exception called "fair use." Fair use "permit[s] the unlicensed use of copyright-protected works in certain circumstances ... such as criticism, comment, news reporting, teaching, scholarship, and research" (U.S. Copyright Office, 2023, para. 7). According to Section 107, courts rely on four primary factors to determine fair use:

⁴ Meese, et al. (2005) survey the muddy history of this clause. In short, they note "[t]here is little direct evidence about the Patent and Copyright Clause's original meaning" (p. 120). They refer to the clause as "largely an afterthought" that was hardly debated and received no objection (p. 121). Accordingly, there has been little pushback against the expansion of the word "Writings" by Congress and the Supreme Court.

⁵ Readers may be familiar with the DMCA which, among other things, punishes the pirating of songs and movies.

- (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work. (17 U.S.C § 107)

Advocates find ample space within the fair use doctrine to justify the right to repair. First, commentators, courts, and, to a degree, federal agencies generally reject the argument that copyright law bars reproduction or dissemination of manuals, diagrams, parts lists, and the like (Perzanowski, 2023, pp. 10-12). This is an important point. Manufacturers, for example, have sent cease and desist letters to companies like iFixit that host a large database of manuals for repair purposes (Walsh, 2020). Perzanowski (2023) doubts a court would be persuaded by such an argument because "most of the content of repair manuals is simply not subject to copyright," and even if it was, "the reproduction and distribution of manuals would likely constitute a fair use [emphasis added]" (p. 11). Indeed, a federal district court ruled against Gulfstream's lawsuit to stop the copying and dissemination of various aircraft manuals on these grounds (Gulfstream Aerospace, 2006).

Beyond their IP arguments, it has been alleged that manufacturers erect "repair restrictions," such as controlling or limiting availability of things like manuals, parts, and diagnostic software (FTC, 2021b, pp. 18-19). This is a departure from the days when department store catalogs contained extensive repair manuals, diagrams, schematics, and the like, and when the 1911 Model T actually came with a manual and toolkit (Wiens, 2023, p. 1; Peterson, 2018). The FTC report (2021) pushed back against this current practice:

Advocates find ample space within the fair use doctrine to justify the right to repair. First, commentators, courts, and, to a degree, federal agencies generally reject the argument that copyright law bars reproduction or dissemination of manuals, diagrams, parts lists, and the like.

[T]here is scant evidence to support manufacturers' justifications for repair restrictions. Moreover, the specific changes that repair advocates seek to address manufacturer repair restrictions (e.g., access to information, manuals, spare parts, and tools) are well supported by comments submitted for the record and testimony provided at the Workshop. (p. 6)

Second, Congress spoke up in response to a court case in 1993 which found an independent service provider violated copyright law.

In response to this flawed holding, Congress enacted § 117(c) of the Copyright Act, which explicitly permits owners or lessees of machines to make—or to authorize providers to make—copies of computer programs in the course of maintenance or repair. Since then, the U.S. Copyright Office has repeatedly concluded that diagnosis, repair, and maintenance activities are "generally noninfringing." (Perzanowski, 2023, p. 8)

Specifically to that point, the U.S. Copyright Office has found that "diagnosis, maintenance, and repair of software-enabled consumer devices are likely to be fair uses where the purpose is to restore device functionality" and, that "[p]roperly construed, section 117 should adequately protect most repair and maintenance activities" (Perzanowski, 2023, p. 8, fn. 50).

Third, DMCA Section 1201(f) includes a narrow anticircumvention exemption for reverse engineering for purposes of enabling interoperability. Prior to the adoption of Section 1201, courts generally recognized reverse engineering as fair use. Rather than cabining reverse engineering, Nimmer (2000) argues that the text and legislative history of Section 1201(f) were "designed to ensure that the judicial extension of fair use to reverse engineering not be undercut" (p. 702). Despite the narrow exemption for reverse engineering under copyright law, it is generally more accepted under a trade secret theory, as the authors discuss in a later subsection.

First Sale Doctrine

The first sale doctrine is perhaps the most recognized and invoked exhaustion rule. After a copyrighted, patented, or trademarked good is conveyed, the IP owner's rights are exhausted or diminished. Here, the doctrine provides that the intellectual property owners' rights are cut off from "prevent[ing] distributions of a particular product after the first sale of that product, allowing the purchaser to resell, rent, gift, or otherwise transfer the product" (Ghosh, 2022, pp. 1102-1103). For example, the first sale doctrine

gives the owners of copyrighted works the rights to sell, lend, or share their copies without having to obtain permission or pay fees. The copy becomes like any piece of physical property; you've purchased it, you own it. You cannot make copies and sell them—the copyright owner retains those rights. But the physical book is yours. (American Library Association, 2023, para. 1)

The first sale doctrine is an applied version of the principle of post-sale restraint to which "[t]he law is generally hostile" (Perzanowski, 2023, p. 6). The Supreme Court noted that "[t]he 'first sale' doctrine is a common-law doctrine with an impeccable historic pedigree," which goes back at least to the 15th century

(Kirtsaeng, 2013, p. 538). For his part, the eminent 16th and 17th century jurist Lord Coke wrote extensively about "the common law's refusal to permit restraints on the alienation of chattels" (Kirtsaeng, 2013, p. 538). Today, the first sale doctrine is codified in 17 U.S.C. § 109.

For our purposes, the first sale doctrine provides a critically important balance between the competing property rights in the right-to-repair debate. According to Perzanowski & Schultz (2015),

Just as fair use balances the competing interests of original and follow-on creators, exhaustion [including the first sale doctrine] accounts for and accommodates the rights of both creators and consumers. And it recognizes that those rights are not at odds with the goals of the copyright system, but at its core. Meaningful consumer rights to use and transfer their personal property are essential to the ultimate goals of the copyright system, public access to, and enjoyment of, new creative works. (pp. 1212-1213)

The Safety Valve: DMCA Section 1201 Exemptions

Also known as a safety valve, DMCA Section 1201 allows individuals and groups to petition the Librarian of Congress once every three years "to determine whether the prohibition on circumvention is having, or is likely to have, an adverse effect on users' ability to make noninfringing uses of particular classes of copyrighted works" (U.S. Copyright Office, 2021, para. 1). The most recent final rule was published in late 2021 for the three-year period from October 2021 to October 2024, and the Copyright Office is in the rulemaking process for the new 2024 rule. The Librarian has granted exemptions on things like vehicle software (2015); software for smartphones and home

⁶ According to Hess (2022):

Reverse engineering, sometimes called back engineering, is a process in which software, machines, aircraft, architectural structures and other products are deconstructed to extract design information from them. Often, reverse engineering involves deconstructing individual components of larger products. The reverse engineering process enables you to determine how a part was designed so that you can recreate it. Companies often use this approach when purchasing a replacement part from an original equipment manufacturer (OEM) is not an option. (para. 3)

There are exceptions to the exception—that is, there are limits on the rights of the copy owner to convey their property. Among the categories that the first sale doctrine does not apply are licensed works, digital transmissions, digital rentals, and unauthorized copies (Copyright Alliance, n.d.). This is a great source of the tension between the asserted rights of copy owners and the various exemptions argued above in the fair use section. That is, some manufacturers would argue that a right to repair is not protected by either fair use or the first sale doctrine.

appliances (2018); and "software-enabled consumer devices, video game consoles, and medical devices" (2021) (Perzanowski, 2023, p. 13).

Other Critiques

Beyond fair use, the first sale doctrine, and the safety valve, commentators have criticized the copyright framework from several angles. First, the Electronic Frontier Foundation (2023) has argued in an ongoing Section 1201 case that the DMCA is "constitutionally invalid on its face. ... It has burdened Americans' First Amendment-protected right to access and learn from digital works, including works they already own or embedded in physical objects they own" (paras. 2-3). Furthermore, the Center for Democracy & Technology (Stallman, 2016) and Foundation for American Innovation (Hogg, 2024), among others, have been critical of and urged reforms to the DMCA as being not consumer friendly, too burdensome on petitioners and administrative staff, arbitrary, not going far enough, and questioning its constitutionality.

Patents

The other portion of the U.S. Constitution's IP Clause establishes Congress' power over patents to "promote the Progress of Science … by securing for limited Times to … Inventors the exclusive Right to their respective … Discoveries" (U.S. Const. art. I, § 8, cl. 8). A patent protects the rights of an inventor "to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States" (35 U.S.C. § 154(a)(1)). According to the U.S. Patent and Trademark Office which administers the law, "[w]hat is granted is not the right to make, use, offer for sale, sell or import the invention, but the right to stop others from doing so" (USPTO, n.d.-c, "What is a patent?" section).

The two types of patents relevant to our discussion are utility patents and design patents. Traditionally, utility patents speak to the operable nature of an object, while design patents speak to the aesthetics of an object. A utility patent is the most common type and "may be granted to anyone who invents

or discovers a new and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvements of these" (USPTO, n.d.-a, "Utility Patents" section). Examples include "computer software, investment strategy, medical equipment, tools, chemical compositions, genetically altered life forms, and improvements" (Justia, 2023, para. 3).

A design patent is a less common type and may be granted "to anyone who has invented a new, original ornamental design for an article of manufacture. ... The design patent protects only the appearance of an article, not its functional features" (USPTO, n.d.-a, "Design Patents" section). The shape of the iPhone, Coca-Cola bottles, and even the Statue of Liberty have received design patents (Kenton, 2024).

As with the other types of IP, patents are not an absolute barrier to the right to repair. Recall that the first sale doctrine applies to patents as well and is historically rooted. Even Hartline (2023) acknowledges this. According to Perzanowski (2023):

"Patent law has its own long history of embracing repair as an inherent right of owners of patented devices. Under the patent exhaustion doctrine, the sale of a patented article ends the patentee's control over its sale, use, or repair. This fundamental limitation on the scope of a patentee's rights dates back to the mid-1800s." (p. 8)

These historical roots have also been reinforced in the courts. Perzanowski (2023) continues:

Just a few years ago, the Court reaffirmed in *Impression Products v. Lexmark* that "once a patentee sells an item ... the patent laws provide no basis for restraining the use and enjoyment of the product. Allowing further restrictions would run afoul of the 'common law's refusal to permit restraints on the alienation of chattels." (p. 8)

Design patents are increasingly easy to obtain because fees have been lowered over the years to around \$5,000 and there is an allowance rate of over 90% versus only 44% for utility patents.

However, patent law, particularly in the design space, has become greatly liberalized in the past few decades—with courts going beyond what Congress intended—which has tipped the scales favoring IP rights. Perzanowski (2023) notes, "Longstanding principles of design patent law focused attention on the design as a whole, not its constituent parts It wasn't until 1980 that courts explicitly embraced claims identifying a mere fragment of an article of manufacture" (pp. 17-18).

Furthermore, design patents are increasingly easy to obtain because fees have been lowered over the years to around \$5,000 and there is an allowance rate of over 90% versus only 44% for utility patents. According to Perzanowski (2023), "[i]n 1980, the PTO granted around three thousand design patents. In 2019, it handed out nearly 35,000, more than a tenfold increase" (p. 15). Quoting Crouch, a well-known IP scholar, Burstein (2018) argues that "the USPTO's high allowance rates indicate that the agency has silently 'abdicat[ed] ... its gatekeeper function in the realm of design patents'" (p. 611).

Manufacturers regularly assert their rights against patent infringement. For example, in 2011, Apple sued Samsung for allegedly copying its design, including a touch screen and home button. An initial \$1 billion jury award to Apple was later settled for an undisclosed amount. Apple also sued Samsung and won a \$120 million verdict in 2017 related to the slide-to-unlock function (Kastrenakes, 2018).





Note. Sample designs of Apple and Samsung phones at the heart of the patent lawsuit. Graphic from Vincent, J., 2017 (https://www.theverge.com/2017/10/23/16519546/apple-samsung-patent-lawsuit-damages-retrial-october).

Furthermore, a classic battlefield in the patent and right to repair space relates to the OEM and aftermarket parts in the automotive industry.⁸ This has been a topic of conversation for decades, something with which Congress has grappled and yet failed to act on.⁹ According to a press release by the Quality Parts Coalition (2015), "[o]ver the past 10 years, major car companies have secured nearly a thousand U.S. design patents on individual cosmetic collision repair parts such as hoods, fenders and mirrors" (para. 3). Sramcik (2019) notes that

[d]uring the past five years, the number of design patents granted to OEMs has grown to nearly 25 percent of all the patents awarded to auto manufacturers. ... More importantly, parts typically identified as "crash parts" account for anywhere from 50 percent to 93 percent of the design patents awarded to OEMs. (para. 5)

For their part, OEMs argue their parts are safer, higher quality, and more reliable. They further argue that counterfeit parts are dangerous to consumers and cost OEMs significant revenue every year (Corsearch,

⁸ Since Massachusetts first adopted automotive right to repair laws, some aftermarket trade associations and automobile manufacturers have signed memorandums of understanding to extend the right to repair protections nationwide. As in other industries, this is not an adequate substitute for a comprehensive right to repair framework (aftermarketNews, 2023).

⁹ This underscores the need for enhanced state-based consumer protections. For example, in the automotive space, Massachusetts has enacted several automotive right-to-repair laws and ballot initiatives in 2012, 2013, and 2020.

2018). On the other hand, repair advocates argue this model is monopolistic, hurts competition, stifles innovation, gives consumers less choice, and increases the cost of auto repairs for consumers and insurers. OEMs like Ford have sued aftermarket parts dealers for design patent infringement and have won (Squire Patton Boggs, 2019). The effect of decisions like this grant auto manufacturers, for example, a 14-year monopoly¹⁰ over something ornamental like a knob or taillight, requiring customers and insurers to buy Ford OEM parts and often have them installed at a Ford authorized dealership or repair shop (Foote, 2023). While vibrant non-OEM aftermarkets exist in many sectors,¹¹ the numerous hurdles, taken together, hurt consumer property rights.

Finally, repair advocates criticize manufacturers for using physical and hardware designs (often design patented) to stifle repair efforts. For example, parts and casings may be glued, soldered, welded, or held together with uniquely shaped screws, nuts, and bolts (Lowery, 2024; Holtmeyer, 2024; Perzanowski, 2023; Staub, 2023; Wiens, 2023; FTC, 2021b; Perzanowski, 2021). Further, remember that IP rights are often stacked. A smartphone, with copyrighted software, a utility-patented battery glued inside, next to a motherboard attached to an internal frame with special screws, housed inside a design-patented case that is soldered together makes it very difficult for a trained repair shop employee—let alone a lay customer—to repair or replace parts.

A right-to-repair framework is not designed to abrogate patent rights, and it does nothing to civil and criminal penalties for those that steal, counterfeit, or otherwise misappropriate these rights. However, it also voices a justifiable frustration with the thumbon-the-scale that hurts personal property rights.

Trademarks

According to LII (n.d.-b), "[a] trademark is any word, name, symbol, or design, or any combination thereof,

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used in commerce to identify and distinguish the goods of one manufacturer or seller from those of another and to indicate the source of the goods" (para. 1). As Frohling (2018) notes, "Boiled down to its most basic tenet, trademark law prohibits unauthorized use of others' trademarks if that use is likely to confuse consumers about source, sponsorship or affiliation" (para. 4).

Intellectual property rights apply "as soon as you start using your trademark with your goods or services. ... You're not required to register your trademark. However, a registered trademark provides broader rights and protections than an unregistered one" (USPTO, n.d.-e, paras. 7-8). Trademarks are registered with and administered by the U.S. Patent and Trademark Office.¹³

Numerous commentators argue that trademarks are another tool that manufacturers use to stifle exercise of personal property rights (Carrier, 2022; Ghosh, 2022; FTC, 2021b; Perzanowski, 2021; Grinvald & Tur-Sinai, 2019). However, manufacturers have legitimate concerns about the importation of counterfeit products from overseas. Accordingly, some manufacturers register their trademarks with the U.S. Customs and Border Protection (CBP) to seize goods at ports of entry (USPTO, n.d.-d). In 2023, CBP seized 19,522 shipments containing nearly 23 million counterfeit items, at a value of more than \$2.41

¹⁰ The SMART Act (H.R. 1707, 2023) would shorten automobile design patents from 14 year to 2.5 years (Issa, 2023).

¹¹ Indeed, one of the authors has replaced an AC knob with a non-OEM part.

¹² For more discussion, see the "What are Examples of Repair Restrictions?" section.

¹³ The Texas Secretary of State's office regulates state trademarks and service marks (Texas Secretary of State, n.d.).

billion, of which China was responsible for nearly \$1.5 billion worth of counterfeited goods (CPB, 2024). To combat this, manufacturers have also taken steps to trademark as many components of a good as possible, including, for example, putting "logo[s] on internal parts like batteries, processors, and cables ... some no bigger than a grain of rice" (Perzanowski, 2021, p. 374).

Ultimately, trademark rights are not absolute. Recall that the first sale doctrine and exhaustion also apply to trademarks which "generally allows the resale of products without the need for further authorization by the original manufacturer or trademark owner" (Grinvald & Tur-Sinai, 2019, p. 75, fn. 61). Exhaustion extends to repair: "[n]ot only can the owner of a trademarked good resell it, they can repair it" (Perzanowski, 2023, p. 9).

Other questions arise in the context of refurbished goods. According to Perzanowski (2021), "the resale of authentic goods bearing trademarks is generally lawful, whether those goods are new or refurbished. So long as refurbished goods are not presented to consumers as new, the first sale doctrine permits their resale" (p. 374).

Another concern for manufacturers is the reuse and restamping of trademarked names or logos on aftermarket parts. Here, the principle of customer confusion is important. Frohling (2018), whose article provides a helpful survey of the issues and case law, notes that "nominative fair use" is a typical standard that courts apply (para. 9). Using a trade name or word mark to signal that an aftermarket part is compatible with a name brand good is generally allowed. Conversely, using a trade name or word mark to deceive a customer about the authenticity of the part is generally not allowed. For example, the U.S. Supreme Court did not require a reseller to remove a trademarked name from refurbished spark plugs which were clearly labeled as repaired (Champion Spark Plug, 1947). Furthermore, "[m]ore recently,

courts have endorsed the right of refurbishers to reapply trademarked logos to products before reselling them, on the condition that they were properly labeled" (Perzanowski, 2023, pp. 9-10).

The use of visual logos and design by an aftermarket seller is a more challenging proposition. According to Frohling (2018), "[w]hen aftermarket sellers use logos of the OEMs, when the use of the OEM trademark extends beyond conveying compatibility, or when aftermarket sellers adopt deceptively similar packaging or numeric designations, courts very well may find likelihood of confusion" (para. 10). Grinvald & Tur-Sinai (2019) further note, "where repair shops and resellers use the original manufacturer's logo (or 'stylized' mark), courts more readily find trademark infringement" (p. 109).

Trade Secrets

Trade secrets are broadly defined to protect virtually any information as long as it provides independent economic value to the owner and the owner takes reasonable measures to protect it. Recall that trade secrets are not filed. Rather, they are protected so long as the holder of the trade secret can prevent the veil from being lifted. Trade secrets are generally governed by state competition laws, and companies often enforce trade secret protections through non-disclosure agreements.

However, as with other areas of IP law, trade secrets protections are not absolute. For example, "[t]rade secrets may be obtained by lawful means such as independent discovery, reverse engineering, and inadvertent disclosure resulting from the trade secret holder's failure to take reasonable protective measures" (LII, n.d.-a, "Elements of a Trade Secret Claim" section). Notwithstanding the limited application of reverse engineering under digital copyright law (17 U.S.C. § 1201(f)), reverse engineering is generally allowed under state trade secret laws and U.S. Supreme Court precedent. According to Vijh (2021):

¹⁴ In 2016, Congress made it a federal crime to misappropriate trade secrets in interstate and foreign commerce (18 U.S.C. § 1831 et. seq.). However, Section 1838 provides a construction provision that the Act does not "preempt or displace any other remedies" under state laws (18 U.S.C. § 1838).

The United States Supreme Court has ruled that state trade secret laws may not rule out "discovery by fair and honest means," such as reverse engineering. ... The Supreme Court also upheld the legitimacy of reverse engineering ... where it declared that the "public at large remained free to discover and exploit the trade secret through reverse engineering of products in the public domain or by independent creation." ... In California, reverse engineering is not a wrongful act in the eyes of law, and similarly, in Texas, unless reverse engineering is not prohibited, it is considered as a "fair and legal means" to obtain information. ("Trade Secret Law" section) [internal citations omitted]

That is a reason why grocery store chains do not need to break into the World of Coca-Cola vault to create and sell their own generic versions of Coca-Cola. Same with generic versions of Doritos, Windex, and Duracell batteries.

In the context of the right to repair, independent discovery and reverse engineering are means by which an individual or repair shop could seek to repair or modify a consumer good. Furthermore, "unlike information that gives an advantage over competitors, repair information does not derive independent economic value from being secret" (Carrier, 2022, p. 6). Finally, if Company A provides certain information, manuals, parts lists, schematics, tools, etc. to another—for example, by posting publicly or giving to a consumer, authorized or independent repair shop, or aftermarket parts company—this disclosure is no longer protected as a trade secret and cannot be claimed to bar repair (Grinvald & Tur-Sinai, 2019).

Grinvald & Tur-Sinai (2019) argue that trade secrets are the "biggest roadblock" to a right-to-repair law (p. 122). The Model State Digital Electronics Right to Repair Act (MSDERRA), drafted by the Repair Association, speaks expressly to the concerns manufacturers raise about trade secrets. Each of the right-to-repair bills introduced in Texas' 88th Legislature contain similar language (HB 515, 2023; HB 1606, 2023; SB 1654, 2023). According to the MSDERRA (2023):

Nothing in this section shall be construed to require an original equipment manufacturer to divulge any trade secret to any owner or independent service provider, except as necessary to perform diagnosis, maintenance, or repair on fair and reasonable terms. (Section 5(a))

Grinvald & Tur-Sinai object to the "except as" clause, arguing that this could have the unintended consequence of modifying trade secret law. They further note that some proposed right-to-repair laws reject the "except as" clause and instead provide a blanket protection for trade secrets: "[n]othing in this Act shall be construed to require an original equipment manufacturer to divulge a trade secret" (Grinvald & Tur-Sinai, 2019, p. 122). Their argument is unpersuasive. First, the so-called unintended consequences are pure speculation. This concern has not been realized, including Massachusetts law dating to 2012. Second, they concede that the absence of the "except as" clause is either a restatement of the law or completely defeats the goal of right-to-repair reform.

Conclusion

As the prevailing literature demonstrates, the tension between intellectual property and private property is not as hostile as popular commentary suggests. It is not either/or, one over the other—it is both/and. That is, the law must seek to provide a balance to these competing rights. Advocating for the right to repair does not unduly infringe upon or eliminate intellectual property. Rather, it reasserts recognition of and respect for personal property rights that have been protected under the law for hundreds of years.

LEGISLATIVE AND LEGAL LANDSCAPE

This section will review federal and state right-torepair efforts, the status of right to repair in Texas, as well as recent litigation in this space.

Federal Right-to-Repair Efforts

While this paper argues that Texas should adopt a state-based right-to-repair law, it is important to survey the federal landscape. In July 2021, President Biden issued an executive order which, among

other things, advocated for robust reforms to give consumers more control over repairing their personal property, and encouraged the FTC to study the issue and, if appropriate, take action (The White House, 2021). Furthermore, the White House hosted a roundtable discussion on how to implement a right-to-repair framework (The White House, 2023).

In May 2021, the FTC released a landmark report to Congress which "concluded that manufacturers use a variety of methods—such as using adhesives that make parts difficult to replace, limiting the availability of parts and tools, or making diagnostic software unavailable—that have made consumer products harder to fix and maintain [emphasis added]" (FTC, 2021a, para. 2). Furthermore, in response to the Biden executive order, in July 2021 the FTC "unanimously [emphasis added] voted to ramp up law enforcement against repair restrictions that prevent small businesses, workers, consumers, and even government entities from fixing their own products" (FTC, 2021a, para. 1). Since then, the FTC has taken actions against several companies, which is discussed in greater detail in the "Right to Repair and the Courts" section to follow.

Congress has considered the issue but so far nothing has advanced. In July 2023, a House Judiciary subcommittee held a robust hearing on the right to repair (Judiciary Committee, 2023).

Furthermore, several bipartisan bills have been introduced, including the Freedom to Repair Act (H.R. 6566, 2022), at least three agriculture-related bills (S. 3549, 2022; H.R. 5604, 2023; H.R. 6879, 2023), and the regular introduction of bills related to aftermarket parts in the auto industry (H.R. 1707, 2023).

State Right-to-Repair Efforts

The Repair Association is an association of repair businesses that petition for right-to-repair legislation at the federal level and in all 50 states (Repair Association, n.d.). The Repair Association provides resources and model legislation for state legislators and tracks legislative progress in every state. As of February 2024, six states have adopted right-to-repair laws: Massachusetts, Colorado, California, New York, Minnesota, and Maine. According to NCSL, "[t]hirty-three states and Puerto Rico considered right to repair legislation during the 2023 legislative session" (NCSL, 2023, para. 4).

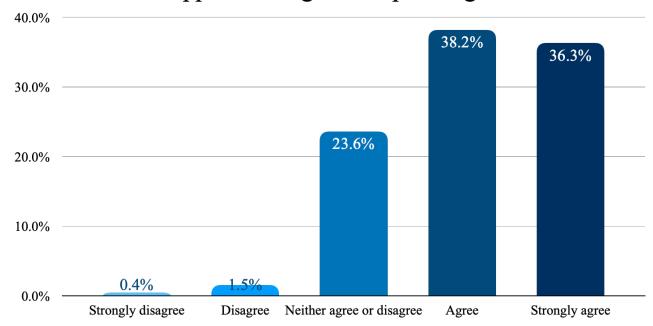
The first right-to-repair laws were adopted by the Legislature and through ballot initiatives in Massachusetts. According to NCSL (2023):

In 2012, Massachusetts enacted both an automobile right to repair bill (HB 4362) and a similar ballot initiative, followed by a 2013

State and Bill Number	Effective	Penalties	Repair Documentation	Parts and Tools	Consumer Electronics	Farm Equipment	Medical Devices	Wheelchairs
California – SB-244	07/01/24	\$1,000/day						
Colorado – HB22-1031	01/01/23	\$20,000						•
Colorado – HB23-1011	01/01/24	\$20,000				•		
Minnesota – HF 1337	07/01/24	>\$25,000		•	•			
New York – S4106	12/28/23	\$500						

Note. Chart reproduced from the Repair Association, n.d. (https://www.repair.org/legislation).

Support for Right to Repair Legislation



"Right to Repair legislation would require manufactures of electronic devices, appliances, and machinery to make information, parts, and tools necessary for repairs available to consumers and independent repair. Based on what you know or your first impression, would you support Right to Repair legislation?"

74.5%

of Americans would support Right to Repair legislation. 1.9%

of Americans would not support Right to Repair legislation.

n=1062, $\pm\,3\%$ accuracy, survey conducted 03/30/20

Note. Chart reproduced from Waveform, 2020 (https://www.waveform.com/pages/right-to-repair-april-2020-report).

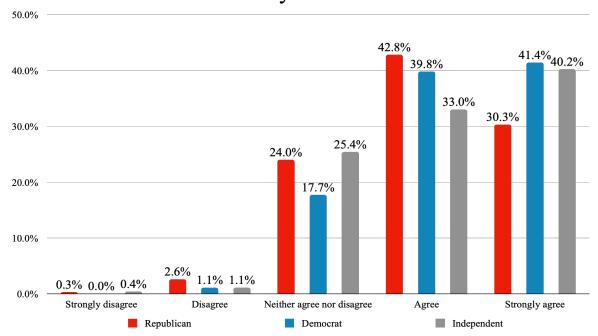
measure (HB 3757) that reconciled the two new laws. In 2020, Massachusetts voters approved an initiative to expand the automobile right to repair law to include telematics; the law is currently facing a legal challenge from automobile manufacturers. (para. 2)

In 2022, Colorado adopted a right to repair law for powered wheelchairs (HB 1031). In 2023, four states enacted other right to repair laws through their respective legislatures:

 Colorado requires agricultural equipment manufacturers to provide resources for individuals to repair their own agricultural equipment.

- California requires manufacturers to provide the means to diagnose, maintain or repair for seven years for products with a price point more than \$100; three years for products under \$100.
- New York requires manufacturers to provide consumers with parts or tools for electronic equipment manufactured for the first time and sold or used in New York after July 1, 2023.
- 4. Minnesota enacted the Digital Fair Repair Act [which requires manufacturers of digital

Support for Right to Repair Legislation by Political Party Affiliation



"Right to Repair legislation would require manufactures of electronic devices, appliances, and machinery to make information, parts, and tools necessary for repairs available to consumers and independent repair. Based on what you know or your first impression, would you support Right to Repair legislation?"

73.1%

of **Republicans** would support Right to Repair legislation.

81.2%

of **Democrats** would support Right to Repair legislation.

73.2%

of **Independents** would support Right to Repair legislation.

n=1062, \pm 3% accuracy, survey conducted 03/30/20

Note. Chart reproduced from Waveform, 2020 (https://www.waveform.com/pages/right-to-repair-april-2020-report).

electronic devices to provide documents, parts, and tools to independent repair providers or the owner of the device]. (NCSL, 2023, para. 5)

Maine adopted the Automotive Right to Repair Act by ballot initiative in November 2023, with 84% voting in support (Neufeld, 2023). As the Massachusetts Legislature has done with right-to-repair ballot initiatives, Maine lawmakers are considering legislation in the 2024 legislative session to make any necessary changes to the law (Neufeld, 2023).

Public Opinion

Advocates for right-to-repair legislation have the

support of the public. According to polling from Waveform, a wireless hardware reseller, 74.5% of Americans would support right-to-repair legislation, with only 1.9% opposed. However, 55.4% of respondents were not familiar with the right to repair, thus highlighting the need to educate lawmakers and constituents on the issue (Waveform, 2020).

Additionally, the right to repair is not a partisan issue. According to Waveform, the majority of Republicans, Democrats, and independents support right-to-repair legislation, with 73.1% of Republicans, 81.2% of Democrats, and 73.2% of independents responding favorably (Waveform, 2020).

Status of the Right to Repair in Texas

Senator Lois Kolkhorst and Representative Terry Meza have been the leading advocates for state-based right-to-repair solutions in Texas. During the 87th legislative session, Representative Meza introduced bills related to powered medical equipment (HB 2541, 2021), digital electronic equipment (HB 3198, 2021), and heavy equipment (HB 4063, 2021). During the 88th legislative session, Representative Meza again introduced bills related to heavy equipment (HB 515, 2023) and digital electronic equipment (HB 1606, 2023), and Senator Kolkhorst introduced a bill related to agricultural machinery (SB 1654, 2023).

While Senator Kolkhorst's SB 1654 is the only bill to receive a hearing in the last two legislative sessions, each provides the necessary foundation for future right-to-repair legislation, whether 1) comprehensive (preferred as a means of maximizing consumer agency) or 2) specific to certain types of consumer goods (good but necessitates advancing numerous bills).

The Right to Repair and the Courts

In addition to the policy debates in legislatures and agencies, the courts are currently grappling with the legal questions presented by the right to repair.

Automobile Data

Massachusetts voters approved a vehicle data access ballot initiative in November 2020 which "require[s] car makers to allow consumers and car repair shops wireless access to the vehicle's telematic data, so independent shops can service the vehicles" (Gaydos, 2023, para. 9). Later that month, a trade association for major automobile manufacturers filed suit arguing, among other things, that this state law is preempted by federal law.

While the litigation was pending, car companies like Subaru and Kia prevented owners from accessing this telematic data. As Wired noted, this prevented a Massachusetts Subaru owner from accessing the same features that his neighbors—living one mile away in Rhode Island—had access to. That is, "[n]o remote engine start in the freezing New England winter;

no emergency assistance; no automated messages when the tire pressure was low or the oil needed changing" (Marshall, 2022, para. 1). Critics argued they did this to sidestep compliance. The companies said it was to avoid violating the law which they argued was not technically feasible.

Frustrated with how long this case was dragging on, Massachusetts Attorney General Andrea Campbell attempted an end-around of her own, announcing the state would enforce the law on June 1, 2023. Raising cybersecurity concerns, the National Highway Traffic Safety Administration (NHTSA) sent a letter to nearly two dozen vehicle manufacturers on June 13, 2023, telling them not to comply with the Massachusetts law on cybersecurity and preemption grounds (Letter from Kerry E. Kolodziej to vehicle manufacturers, 2023a, p. 1). In an interesting turn of events, on August 22, 2023, NHTSA sent a letter to the Massachusetts attorney general's office reversing course, noting that "NHTSA strongly supports the right to repair" (Letter from Kerry E. Kolodziej to Eric A. Haskell, 2023b, p. 1). However,

the agency acknowledged that the open data platform required by the law still does not exist, and indicated that federal and state lawmakers had agreed to allow vehicle manufacturers "a reasonable period of time to securely develop, test, and implement this technology." (Marshall, 2023, para. 6)

In its August 2023 letter, NHTSA also criticized manufacturers because "[d]isabling vehicle telematic functions as an attempt to comply with the Data Access Law would harm vehicle owners, first responders, and other telematics users" (Letter from Kerry E. Kolodziej to Eric A. Haskell, 2023b, p. 2). The agency also noted it would have "substantial concerns about the detriment to safety if vehicle telematics functionality were disabled, and believes such a result would disserve vehicle owner safety without advancing the right to repair" (p. 2).

The original 2020 lawsuit is ongoing (WBUR, 2023).

Tesla

In March 2023, plaintiffs filed class action lawsuits against Tesla in federal court in California. The lawsuits alleged that Tesla "unlawfully curb[ed] competition" by "design[ing] its electric vehicles, warranties and repair policies to discourage owners and lessees from using independent shops outside of Tesla's control" (Scarcella, 2023b, paras. 1-2). In November 2023, a federal judge dismissed the consolidated antitrust lawsuits before trial but will allow the plaintiffs to file an amended complaint (Stempel, 2023).

<u>Harley-Davidson</u>

In June 2022, the FTC brought an action against Harley-Davidson. The FTC alleged that Harley-Davidson "illegally restrict[ed] customers' right to repair their purchased products" because its "warranties included terms that conveyed that the warranty is void if customers use independent dealers for parts or repairs" (FTC, 2022, para. 1). Under the consent decree, Harley-Davidson was required to amend its warranties and "note clearly and conspicuously in public statements that using third-party parts or repair services will not void the warranty" (Khan, 2022, para. 3).

Following the FTC action, federal antitrust lawsuits were filed against Harley-Davidson in six states seeking damages for alleged right to repair violations. In February 2023, those cases were consolidated and transferred to federal district court in Wisconsin (Transfer Order, 2023). The case is pending.

John Deere

In November 2023, a federal judge in Illinois allowed a consolidated antitrust lawsuit against John Deere to go forward. According to Scarcella (2023a), the plaintiffs alleged John Deere "conspired with dealerships to control where and how machines are maintained and repaired. The complaint said farmers are 'prevented from using trusted, less expensive, and more conveniently located skilled mechanics who are not affiliated with Deere " (paras. 10-11).

<u>American Farm Bureau Federation Memorandums</u> <u>of Understanding</u>

In early 2023, the American Farm Bureau Federation (AFBF) signed memorandums of understanding (MOUs) with major agriculture manufacturers John Deere, CNH Industrial, AGCO, and Kubota. AFBF noted that these MOUs bring right-to-repair protection to approximately 70% of the machinery market (American Farm Bureau Federation, 2023a). Under the MOUs, the manufacturers agree to give customers greater access to diagnostic and repair codes, manuals, product guides, and tools to perform their own repairs.

Of note, as part of the MOUs, AFBF agreed to stay out of the right-to-repair policy debate. According to the MOUs, "AFBF agrees to encourage state Farm Bureau organizations to recognize the commitments made in this MOU and refrain from introducing, promoting, or supporting federal or state 'Right to Repair' legislation that imposes obligations beyond the commitments in this MOU" (American Farm Bureau Federation, 2023b, p. 4).

POLICY RECOMMENDATIONS

Some argue that state right-to-repair policymaking is preempted—a concern the authors attempted to dispatch in a previous section. Beyond that, as in other policy spheres, some argue that a federal right-to-repair standard is preferable to a patchwork of state laws. Is It is hard to argue against uniformity. However, continued inaction from Congress should not and—in the case of six states—has not been a deterrent to state action. Accordingly, and as a means of furthering the Lone Star State's efforts on consumer agency, the authors argue that Texas should adopt a robust right-to-repair framework.

A comprehensive right-to-repair law that covers the broadest swath of consumer goods is ideal. Short of this, Texas should consider several standalone right-to-repair bills related to digital electronic equipment, agricultural goods, motor vehicles, and heavy equipment, among other categories lawmakers deem

While this paper focuses on state-based solutions, potential federal fixes on preemption, DMCA, and measures discussed in the "Federal Right to Repair Efforts" section would be improved, pro-consumer efforts.

appropriate. Foundational legislative language for each of these exists from bills introduced in previous legislative sessions (HB 515, 2023; HB 1606, 2023; SB 1654, 2023), other state laws and bills (NCSL, 2023), and proposed model legislation (MSDERRA, 2023).

First, it is important to provide comprehensive definitions for terms like "authorized repair provider," "independent repair provider," "digital electronic equipment," "documentation," "tool," "part," and "original equipment manufacturer," among others.

Second, the bill should require that manufacturers provide documentation, parts, tools, and (when necessary) the ability to disable and reset electronic locks which may be done through a secure system to protect privacy and cybersecurity considerations. This is the portion that may give some pause because it requires a company to do something. On the other hand, it can also be viewed through another lens: preventing companies from violating the personal property rights of consumers. Ultimately, this provision is the most important part of enforcing the right to repair. It is what allows consumers the fullest exercise of private property rights—and to prevent companies from exercising post-sale restraint on those personal property rights.

That said, the third point is that there are important limitations and protections for manufacturers. The bill should expressly protect trade secrets "except as necessary to provide documentation, replacement parts, and tools" (MSDERRA, Section 5(a)).16 Furthermore, the bill should provide for an exchange "on fair and reasonable terms," defined at length, and factors in the presence of a warranty, cost of the good, actual cost to manufacturer, and the like. That means companies can charge customers for these things. The bill should also limit liability for manufacturers and authorized repair providers for repair work done by the owner or an independent repair provider.

Finally, the bill should provide for enforcement by the consumer protection division in the Office of the Attorney General under the Deceptive Trade Practices Act (DTPA), including capped fines. Enforcement under the DTPA is a better, more generally accepted approach than creating a private right of action and a litigious environment.

Ultimately, sector-specific right-to-repair bills that contain these elements further the broader policy goal of providing consumers more choice and agency in the use of their personal property.

CONCLUSION

The right to repair appropriately recalibrates the tension between intellectual and personal property rights. Adopting a right-to-repair law does not unduly infringe on or eliminate intellectual property. It is, however, a strong rejection of the inverse—the technopolist assumption that intellectual property rights in a digital economy can somehow infringe on or eliminate personal property rights-including the right to repair-that have been recognized for hundreds of years under common and positive law.

As a matter of policy, the right to repair gives consumers greater choice and agency over the use of their personal property, it creates competition, boosts the economy, supports jobs in the repair and aftermarket sectors, reduces waste, is good for the environment, and is a commonsense consumer protection measure.

Ultimately, the aphorism "they just don't make 'em like they used to" need not be grudgingly accepted. As this paper makes incontrovertible, there has been a concerted effort by industry to unnecessarily complicate the manufacturing of products to supplant consumer convenience with manufacturer hegemony. In the face of the increased digitization of consumer goods, the Texas Legislature should adopt a comprehensive right-to-repair law (or several sector-specific laws) to restore control, agency, and property rights for Texans.

The "except as" clause was discussed at length in the "Trade Secrets" section.

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