VEHICLE MANUFACTURER PRACTICES IN THE DIGITAL ERA: WHAT CAN THE LAW DO WHEN UNFAIR PRACTICES THREATEN FARMERS?

ABSTRACT

Many vehicle manufacturers are now incorporating software into their products in a manner that interferes with use. As an acute example, the vehicle firmware on new tractors now prevents owners from making their own repairs without manufacturer authorization. When farmers are prevented from making their own timely repairs, they face lost profits that could threaten their livelihood. With agriculture as one of North Dakota's most important industries, the potential negative economic consequences of restrictive firmware are enormous. Current law, while offering some protections against overburdensome manufacturer practices, is ultimately ineffective in protecting the interests of owners in this new era. An overview of current law, and its shortcomings, will describe the avenues currently available for protecting the interests of farmers. Without significant judicial expansion of current law, legislation aimed at limiting manufacturer interference in ownership interests may offer the most effective solution.

I. BACKGROUND

Vehicle manufacturers have begun to configure their firmware to prevent owners from performing unauthorized repairs.[1] With such firmware installed onto vehicles, only dealerships and authorized repair shops can make needed repairs and modifications.[2] Farmers are specifically susceptible to the problems that arise when owners are locked out of their equipment after trying to make a repair.[3] Unlike owners of personal or recreational vehicles,

1. Jason Koebler, *Why American Farmers are Hacking Their Tractors with Ukrainian Firmware: A Dive Into the Thriving Black Market of John Deere Tractor Hacking*, MOTHERBOARD (Mar. 21, 2017, 3:17 PM), https://motherboard.vice.com/en_us/article/xykkkd/why-american-farmers-are-hacking-their-tractors-with-ukrainian-firmware.
2. *Id.*
3. *Id.*

farmers depend on their equipment to earn a living. Without the ability to make their own repairs, farmers face a threat to their livelihood.[4] In response, farmers across the country are installing hacked firmware onto their John Deere[5] tractors in order to bypass such measures.[6] Without installing hacked firmware, farmers must wait for dealership technicians to come out to their farm to authorize any repairs they have made.[7] Some farmers have expressed concerns that John Deere may even be able to remotely shut down a tractor.[8]

A license agreement that John Deere requires farmers to sign forbids nearly all unauthorized repair and modification and prohibits farmers from suing for crop loss, lost profits, loss of goodwill, and loss of use of equipment arising from the performance or non-performance of any aspect of the software.[9] Some farmers have expressed concern that John Deere holds a monopoly on repair services for their tractors.[10] Others express concern about what could happen in the years to come when newer models become available and John Deere refuses to service older models, forcing farmers to replace otherwise functioning equipment to avoid a future inability to repair it.[11]

The issue of firmware interfering with normal use of products is not limited to vehicles. Recently, Italy's antitrust organization investigated and determined that Apple and Samsung had issued software updates deliberately designed to slow down customers' phones.[12] The companies were consequently fined.[13] Similarly, a law firm has filed suit alleging that Hewlett Packard designed and implemented a malicious firmware update to disable printers when someone attempts to use its competitors' ink cartridges.[14]

While it appears that firmware can be used by manufacturers to restrict the use of any product or vehicle, the practice is most detrimental when applied to farm equipment because restricting the use of farm equipment can result in serious losses to farmers. In a state like North Dakota, where

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4. *Id.*

5. John Deere is used as a recognizable example throughout this Note, but the legal principles outlined here would equally apply to any farm equipment manufacturer that uses restrictive firmware.

6. Koebler, *supra* note 1.

7. *Id.*

8. *Id.*

9. *Id.*

10. *Id.*

11. *Id.*

12. Dani Deahl, *Apple and Samsung Fined in Italy For Slowing Down Their Phones*, VERGE (Oct. 24, 2018, 11:27 AM), https://www.theverge.com/2018/10/24/18018322/apple-samsung-italy-phone-slowdown-fine-antitrust.

13. *Id.*

14. *HP Printer Firmware*, JOSEPH SAVERI L. FIRM, https://saverilawfirm.com/our-cases/hp/ (last visited Apr. 10, 2019).

agriculture forms a large part of the economy,[15] the impact can be particularly devastating.

II. FIRMWARE COPYRIGHT

Because farmers have limited options in dealing with the problems of firmware, some have resorted to installing hacked copies of the firmware.[16] While this solution restores farmers' abilities to make their own repairs, it voids their warranties and may expose hackers to liability.[17] This section explores the areas of law that serve to shield hackers who produce hacked firmware and the farmers who use it from liability. This section begins with a brief background on copyright law and then explains infringement claims and the defenses available to defendants in an infringement suit.

A. COPYRIGHT

Copyright law provides protection for a variety of creative works.[18] The main purpose of copyright law is to benefit the public by allowing broad access to creative works while still offering protections for authors and artists.[19] The framers of the Constitution believed that the progress of science would be promoted if authors of works were given certain protections.[20] Copyright law does not simply aim to protect authors, but instead balances the interests of authors against the benefit the public would receive from access.[21] Literary, musical, dramatic, choreographic, pictorial, graphic, and architectural works are all subject to copyright.[22] "The Constitution empowers Congress to grant to authors a limited monopoly for their writings."[23] The owner of a copyright has the exclusive rights in reproducing, selling, and distributing the copyrighted work for a specified time period.[24]

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15. F. LARRY LEISTRITIZ, DAVID K. LAMBERT & RANDAL C. COON, THE ROLE OF AGRICULTURE IN THE NORTH DAKOTA ECONOMY 7 (2002), https://ageconsearch.umn.edu/record/23096/files/aes57s.pdf (explaining that at the time the report was published, agriculture made up one-fourth of North Dakota's economy, ranking second in the nation in the percentage of gross state product derived from agriculture).

16. Koebler, *supra* note 1.

17. *Id.*

18. *See* William S. Strong, *Copyright Law*, *in* INTELLECTUAL PROPERTY PRACTICE § 7.1 (3d ed. 2016).

19. *Id.* § 7.1.7.

20. *Id.*

21. *Id.*

22. *Id.* § 7.2.1.

23. 77 AM. JUR. TRIALS § 2 (2000) (citing U.S. CONST. art. 1, § 8, cl. 8).

24. *Id.*

Copyright protection, however, does not extend to procedures, processes, systems, or methods of operation.[25] In the software context, the utilization of menus is considered an unprotectable method of operation.[26] In *Lotus Development Corp. v. Borland International, Inc.*,[27] Borland copied the menu command hierarchy from one of Lotus's programs.[28] The Supreme Court in that case viewed the menu hierarchy as analogous to the buttons used to control a VCR.[29] Further, Borland only copied the menu hierarchy and not the underlying computer code.[30] As a result, the Court found that Borland had not infringed on Lotus's copyrighted material.

Even if the software is protected by a valid copyright, duplicating it is generally permitted in some circumstances.[31] For example, if copying is a necessary step in using the software, then it will be permitted.[32] Copying software for archival, or backup, purposes is also permitted.[33] Third parties that maintain or repair computers are also allowed to make copies of software in the process of making their repairs.[34]

B. INFRINGEMENT

A copyright holder can sue parties that infringe on the copyright.[35] A successful copyright infringement claim involves (1) proving the ownership of a valid copyright and (2) proving that the defendant copied elements of the work that are original.[36] In proving that the defendant copied elements of the work, the plaintiff must make a showing that the defendant both accessed the copyrighted material and that there is substantial similarity between the copyrighted work and the alleged infringing work.[37] As a strict liability tort, copyright infringement does not require any intent on the part of the defendant to infringe the copyright.[38]

Turning to tractor firmware specifically, John Deere could easily prove copyright infringement. First, it undoubtedly holds the copyright to its

25. Strong, *supra* note 18, § 7.2.2.
26. *Id.*
27. 516 U.S. 233 (1996).
28. Strong, *supra* note 18, § 7.2.2.
29. *Id.*
30. *Id.*
31. *Id.* § 7.6.
32. *Id.*
33. *Id.*
34. Strong, *supra* note 18, § 7.6.
35. *Id.* § 7.8.
36. *Id.* § 7.10.
37. 77 AM. JUR. TRIALS § 48 (2000).
38. Strong, *supra* note 18, § 7.10.

firmware. Second, it can easily prove that the firmware hackers copied elements of its original firmware by showing that the hackers both accessed the firmware and by showing that the hacked firmware is nearly identical to the original firmware – except for the relatively small modifications that allow for bypassing the lockdown or repair authorization functions. While John Deere can likely prove infringement, firmware hackers and farmers have the option to assert the affirmative defenses of *fair use* and *copyright misuse* to shield themselves from liability.

C. FAIR USE DOCTRINE

Fair use doctrine provides an affirmative defense to a claim of copyright infringement.[39] Of the several affirmative defenses unique to copyright, the most important is fair use.[40] Under the fair use doctrine, copyright infringement is sometimes excusable.[41] In determining whether to excuse an instance of infringement, courts consider: (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; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[42]

The first factor to consider is the purpose of the use. A profit-making purpose usually bars the defense of fair use.[43] However, some profit-making purposes survive this analysis. The question asked is whether the user "stands to profit from exploitation of the copyrighted material without paying the customary price."[44] When copies are used for a purpose that is different than that of the original material, courts generally find that the profit-making purpose does not bar a fair use defense.[45]

Second, the nature of the copyrighted work is considered.[46] The main consideration for this factor is that "some works are closer to the core of intended copyright protection than others."[47] In the context of literature, courts

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39. *See, e.g.*, Lexmark Int'l, Inc. v. Static Control Components, Inc., 387 F.3d 522, 537 (6th Cir. 2004).

40. Strong, *supra* note 18, § 7.11.

41. *Lexmark*, 387 F.3d at 537.

42. *Id.*

43. Harper & Row, Publishers, Inc. v. Nation Enters., Inc., 471 U.S. 539, 562 (1985).

44. *Id.*

45. *See* Kelly v. Arriba Soft Corp., 336 F.3d 811, 818–19 (9th Cir. 2003).

46. *Harper*, 471 U.S. at 563.

47. 20A1 BRENT A. OLSON, MINNESOTA PRACTICE SERIES § 15:92 (perm. ed., rev. vol. 2018) (citing Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 586 (1994)).

often place higher value on factual works than works of fiction.[48] Consequently, works of fiction are likely to receive less protection.[49]

Third, courts will consider the amount and substantiality of the original copyrighted material used.[50] The analysis does not rely on a precise measurement of the material copied.[51] Rather, courts focus on the amount of work copied along with the substantiality of the copy in relation to the original.[52] Consequently, it is possible for a court to find against the application of fair use, even for a minor infringement, if the copied portion is taken from the "heart" of the copyrighted work.[53]

Fourth, a court will take into account the effect on the market.[54] This final factor is considered to be the most important.[55] Fair use is properly applied when copying does not materially impair the marketability of the copied work.[56] Therefore, if an infringer's work adversely affects the value of any of the rights in the copyrighted work, then the use is not fair, and the defense is unlikely to apply.[57]

If farmers or hackers attempted to shield themselves from liability under the fair use doctrine, they would likely not be successful. First, assuming that hacked firmware is distributed free of charge, neither farmers nor hackers stand to profit from exploitation of the copyrighted material without paying the customary price – although a counterargument is that farmers would profit by not having to pay for repairs from an authorized dealership or repair shop. If, however, hackers were to sell hacked firmware for a profit, then this factor would weigh against a finding of fair use.

Second, the nature of firmware suggests that a court would not apply fair use doctrine. Because firmware is not literature, a court will likely consider how similar hacked firmware is to the information that the equipment manufacturers intended to protect under copyright. The philosophy underlying copyright is the promotion of the arts and science. It is difficult to argue that distribution of hacked firmware promotes science, and it certainly is not art. At best, in a limited sense, the hacked firmware may be helping to advance agriculture.

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48. *Harper*, 471 U.S. at 563.
49. *Id.*
50. *Id.* at 564.
51. 3 LAWRENCE A. WAKS & BRAD L. WHITLOCK, TEXAS PRACTICE GUIDE BUSINESS TRANSACTIONS § 15:78 (perm. ed., rev. vol. 2018).
52. *Id.*
53. *Id.* (citing *Harper*, 471 U.S. at 564–65).
54. *Harper*, 471 U.S. at 566.
55. *Id.*
56. *Id.* at 566–67.
57. *Id.* at 568.

Third, the fact that the hacked firmware is likely identical to the original firmware except for the modifications meant to override the lockdown features shows that the hacked firmware is substantially the same as the original. This further weighs against the application of fair use.

Fourth, the effect of hacked firmware on the market is likely negligible. The availability of hacked firmware does not significantly affect the marketability of John Deere's firmware, for example, because John Deere primarily sells its firmware along with its vehicles. Weighing all four factors, it is unlikely that a court would find in favor of applying the fair use doctrine.

D. COPYRIGHT MISUSE

In addition to fair use, misuse of copyright by the copyright holder has been held by some courts to be a valid defense against copyright infringement.[58] In *Lasercomb America, Inc. v. Reynolds*, the Fourth Circuit Court of Appeals drew from patent misuse law to craft an affirmative defense of copyright misuse.[59] The court detailed the legal history of patent and copyright law, which both serve to disseminate knowledge by rewarding inventors and authors with exclusive rights, to justify crafting a new defense.[60] Essentially, because patent misuse is a valid defense, and both patent law and copyright law share the same underlying polices, the court found it appropriate to adapt the patent misuse defense to copyright law.[61]

Under the misuse doctrine, infringement will be excused if the copyright is used to secure a monopoly or is contrary to public policy.[62] The question to ask is "whether the copyright is being used in a manner violative of the public policy embodied in the grant of a copyright."[63] The public policy embodied in the grant of a copyright is the promotion of the arts and sciences, not to stifle competition or thwart existing fundamental social policy.[64] Whether the doctrine is valid or not is an open question because the Supreme Court has not yet ruled on the copyright misuse defense.[65]

A court is unlikely to apply the misuse doctrine to tractor firmware because John Deere's copyright and its conduct are not violative of the public policy embodied by the grant of the copyright itself. That is to say, John Deere's use of the copyright is not contrary to the promotion of the arts and

58. *See, e.g.*, Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 977 (4th Cir. 1990).
59. *Id.*
60. *Id.*
61. *Id.* at 974.
62. *Id.* at 977.
63. *Id.* at 978.
64. *Lasercomb*, 911 F.2d at 975 (citing US. CONST. art. I, § 8, cl. 8).
65. *Id.* at 976.

sciences – the copyright has not stopped anyone from creating new or better software or inventing a new method for repairing farm equipment. If, however, John Deere used the copyright to secure a monopoly in the tractor repair business by forcing farmers to use authorized dealers and repair shops to the exclusion of competitors, then a court could find the doctrine applicable. To determine whether this would be the case, the next section discusses monopolies in the context of antitrust law and its application to farm equipment firmware.

III. ANTITRUST

This section provides an overview of antitrust law and outlines how current antitrust law could be used to prevent vehicle manufacturers from continuing to limit owners from effecting their own repairs or modifications. Antitrust law encompasses the laws relating to monopoly, restraints or limitations on commercial competition, and unfair competitive practices.[66] While substantive antitrust law has ancient origins, American antitrust law started in 1890 with the enactment of the Sherman Antitrust Act ("Sherman Act").[67] The Clayton Antitrust Act ("Clayton Act") and the Federal Trade Commission Act ("FTC Act"), both passed in 1914, are the other two most important antitrust laws.[68] Subsequent antitrust laws have been either amendments to these statutes or merely procedural rather than substantive.[69]

These three statutory schemes form the backbone of American antitrust law. State antitrust laws, by and large, tend to follow the federal law on this subject.[70] Because of the paucity and brevity of statutory law in this area, the process of antitrust lawmaking has largely been confined to courts.[71]

66. 24 AM. JUR. TRIALS 1 § 2 (1977).

67. *Id.*; *see* Sherman Antitrust Act of 1890, ch. 647, 26 Stat. 209 (codified as amended at 15 U.S.C. §§ 1–38).

68. 24 AM. JUR. TRIALS 1, *supra* note 66, § 2; *see* Clayton Antitrust Act of 1914, Pub. L. No. 63-212, 38 Stat. 730 (codified as amended at 15 U.S.C. §§ 12–27, 29 U.S.C. §§ 52–53); Federal Trade Commission Act of 1914, Pub. L. No. 111-203, 38 Stat. 717 (codified as amended at 15 U.S.C. §§ 41–58).

69. 24 AM. JUR. TRIALS 1, *supra* note 66, § 2.

70. *Id.* § 1.

71. Devan K. Flahive, Robinson & McElwee PLLC, *Dual Natural Gas Markets: The Antitrust Paradox of Deregulating a Market Tied to a Natural Monopoly*, *in* 37 ENERGY & MINERAL LAW FOUNDATION § 7.02 (2016).

A. GENERAL DISCUSSION

The Sherman Act forms the backbone of antitrust law and is designed to protect the market from anticompetitive behavior.[72] The foundation of an antitrust claim is the alleged adverse effect on the market.[73] The Sherman Act aims to protect the public from the failure of the market.[74] The statute protects competition, not competitors.[75] As such, some unfair business practices are beyond the reach of the Sherman Act.[76] "Antitrust laws exist to protect the competitive process and to prevent and control large aggregations of economic power and their abuse."[77]

Antitrust law was originally geared towards the regulation of monopolies and regulating the size of large firms.[78] There are two conflicting theoretical economic approaches to antitrust analysis.[79] The "norm-oriented" Chicago School approach and the "fact-oriented" post-Chicago approach.[80] Antitrust law and the Sherman Act were "erected upon a rough political ideal of the social value of curbing the excesses of private economic power."[81]

The traditional purpose of antitrust law was to prevent the centralization of private economic power.[82] But the political "passions" behind the antitrust movement faded as lawyers and economists transformed antitrust into a legal specialty.[83] As a specialty, it peaked during the Warren Court.[84] It has been declining ever since.[85] The 1980s, for example, began a "minimalist" policy of non-enforcement that allowed large firms to thrive with looser regulatory oversight.[86] Antitrust laws are now enforced more leniently than ever.[87]

Chicago School thinking evaluates the legality of business practices under antitrust principles in terms of whether those practices promote or hinder

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72. *See* 54 AM. JUR. 2D *Monopolies and Restraints of Trade* § 31 (2019) (explaining that protection of competition and competitors is distinguished; competition and unfair conduct is distinguished).
73. *Id.*
74. *Id.*
75. *Id.*
76. *Id.*
77. Thomas J. Horton, *Restoring American Antitrust's Moral Arc*, 62 S.D. L. REV. 11, 16 (2017).
78. Gary Minda, *Antitrust at Century's End*, 48 SMU L. REV. 1749, 1752 (1995).
79. *Id.*
80. *Id.*
81. *Id.*
82. *Id.*
83. *Id.*
84. Minda, *supra* note 78, at 1752.
85. *Id.*
86. *Id.*
87. *Id.*

economic efficiency in production.[88] However, the old method of analyzing antitrust is considered by some to be improper when applied to high-tech markets.[89] In the current era, joint ventures and strategic alliances are beneficial to the development of computer technology because no single company has all the skills necessary for innovation.[90] Further, in postindustrial markets, competition has a new meaning.[91] While competition was originally based on different metrics, it is now linked to technology and information.[92] This new form of competition is based on the development of technology utilized for processing and disseminating information as opposed to goods or services.[93] Technological industries compete on the basis of offering new and better systems, not new and better products.[94] Technological competition is therefore simply different from the traditional form of competition.[95]

Antitrust law needs to adapt to the new political, social, and economic conditions of the postindustrial marketplace.[96] Further, technological manipulation could become a new predatory strategy used by firms to foreclose competition.[97] As applied to tractor firmware, several statutory schemes rooted in antitrust law provide potential sources of relief for farmers. These statutes are the subject of the next subpart.

B. STATUTORY APPLICATION TO TRACTOR FIRMWARE

Antitrust law is based on the Sherman Antitrust Act of 1890, the Clayton Antitrust Act of 1914, and the Federal Trade Commission Act of 1914. There is some overlap between the three statutes, so a violation under one may also be a violation under another.[98]

1. *Sherman Antitrust Act of 1890*

The Sherman Act prohibits monopolies, contracts, and combinations that would unduly interfere with trade and commerce.[99] A claim under the Sherman Act must show: (1) the existence of conspiracy; (2) the intention on the

88. *Id.*
89. *Id.* at 1771.
90. Norman E. Rosen, *Introductory Note*, 61 ANTITRUST L.J. 859, 859–60 (1993).
91. Minda, *supra* note 78, at 1772.
92. *Id.*
93. *Id.*
94. *Id.*
95. *Id.*
96. *Id.* at 1776.
97. Minda, *supra* note 78, at 1777.
98. FEDERAL CONTROL OF BUSINESS § 30 (perm. ed., rev. vol. 2018).
99. *See* 54 AM. JUR. 2D, *supra* note 72, § 31; 15 U.S.C. §§ 1–7 (2018).

co-conspirators' part to restrain trade; and (3) actual injury to competition.[100] The general definition of conspiracy applies to the Act's use of the term.[101] Under the Sherman Act, a conspiracy exists when two or more conspirators agree to act to restrain trade or create a monopoly.[102] A violation cannot arise, however, from a good faith attempt to influence the enforcement or passage of laws, even if the intent is to destroy competition.[103]

A key element of a claim under the Sherman Act involves the intention of the co-conspirators. A claim under the Sherman Act must prove that there was "concerted action" designed to effect the restraint on trade.[104] Concerted action exists when two or more parties combine to act as one for their benefit in the restraint of trade.[105] The Sherman Act can only prohibit a restraint on trade if the restraint is the result of a contract, combination, or conspiracy.[106] As such, restraints that are accidental or coincidental are not prohibited by the Sherman Act.

Because the Sherman Act only prohibits restraints on trade that involve a conspiracy between two or more parties, unilateral activity, no matter how anti-competitive, cannot give rise to a claim under the Sherman Act.[107] As long as a company is acting alone, it is beyond the reach of the Sherman Act. Further, courts have construed the language of the Sherman Act narrowly so as to limit the types of activity that fall under the Sherman Act.[108] Not every contract, combination, or conspiracy will fall under the Sherman Act.[109] For example, a parent corporation and its wholly owned subsidiary cannot, for purposes of the Sherman Act, conspire to restrain trade because the two entities are controlled by a single center of decision-making.[110]

Some types of restraint on trade are considered per se violations of the Sherman Act. Per se violations of the Sherman Act are deemed violations

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100. 54 AM. JUR. 2D, *supra* note 72, § 31 (citing Coalition for ICANN Transparency, Inc. v. VeriSign, Inc., 611 F.3d 495 (9th Cir. 2010)).

101. 1 LOUIS ALTMAN & MALLA POLLACK, CALLMANN ON UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES § 4.23 (4th ed. 2018).

102. *Id.*

103. *Id.*

104. 54 AM. JUR. 2D, *supra* note 72, § 31.

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.*

109. *Id.*

110. Am. Needle, Inc. v. Nat'l Football League, 560 U.S. 183, 194 (2010); *see also* 24 AM. JUR. TRIALS 1, *supra* note 66, § 3 ("A parent corporation and its wholly owned subsidiary are legally incapable of conspiring with each other under § 1 of the Sherman Act; the coordinated activity of a parent and its wholly owned subsidiary must be viewed as that of a single enterprise for purposes of § 1.").

without an inquiry into the surrounding circumstances.[111] Horizontal price-fixing, division of markets and allocation of customers, group boycott, concerted refusal to deal, interlocking directorates, and conspiracies to foreclose competitors from a substantial market all constitute per se violations of the Sherman Act.[112] Tying arrangements, which are covered by the Clayton Act, are sometimes per se violations.[113]

For restrictive tractor firmware specifically, the theory for a violation under the Sherman Act would be that John Deere intentionally conspired with its authorized dealerships to create a monopoly on the repair of its tractors. As a result, independent repair shops that are refused access to diagnostic tools suffer an economic injury when they are unable to properly perform service and repairs on a large portion of new John Deere tractors, resulting in a loss of customers. While the requirement of proving injury is straightforward, proving an actual concerted effort between John Deere and dealerships to limit competition would likely be difficult. Conspiracy charges in any form are often nebulous and difficult to prove in the absence of concrete evidence. Finding documents or company employees' statements—that likely do not even exist—to prove the intent required for a Sherman Act conspiracy would be nearly impossible.

2. *Clayton Antitrust Act of 1914*

The Clayton Act makes it illegal to sell or lease any commodity in interstate commerce on a condition that the buyer or lessee not use or deal in the commodities of one of the seller's or lessor's competitors where the effect would be to lessen competition or to create a monopoly.[114] Such an arrangement, where a seller conditions the purchase of a product on the purchase of a second product, is referred to as "tying."[115] Tying arrangements also include instances where the buyer either does not want the second product or would prefer to purchase the second product elsewhere.[116] Additionally, the Clayton Act applies equally to services.[117] That is to say, an arrangement that conditions the purchase of a product on the purchase of a service does fall

111. ALTMAN & POLLACK, *supra* note 101, § 4:20.
112. *Id.* § 50.
113. *Id.*
114. *See* 24 AM. JUR. TRIALS 1, *supra* note 66, § 8; 15 U.S.C. §§ 12–17 (2018).
115. Ernest H. Schopler, Annotation, *What Constitutes Separate and Distinct Products or Services for Purposes of Determining Whether Tying Arrangement Violates § 1 of Sherman Act (15 U.S.C.A. § 1) or § 3 of Clayton Act (15 U.S.C.A. § 14)*, 46 A.L.R. Fed. 516 § 1[a] (1980).
116. *Id.*
117. Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 462–63 (1992).

under the Clayton Act. Likewise, an arrangement that conditions the purchase of a service on the purchase of a product also falls under the Clayton Act.

To prove a tying arrangement a plaintiff must show: (1) the involvement of two separate products or services; (2) the sale of one product or service is conditioned on the purchase of another; (3) the seller has market power in the tying product; and (4) the amount of interstate commerce in the tied product is not insubstantial.[118]

For a product and a service to be considered separate for tying arrangement purposes, there must be sufficient consumer demand so that it is economically efficient for a firm to provide service separately from the product.[119] However, tying arrangements can be found between functionally linked products, where one product is useless without the other.[120] "Market power is the power 'to force a purchaser to do something that he would not do in a competitive market.'"[121] The existence of market power is often inferred from the seller's possession of a predominant share of the market.[122]

Proving the existence of a tying arrangement is usually straightforward.[123] The normal defense against an allegation of tying is that the arrangement serves a legitimate business purpose.[124] However, courts are often unsympathetic to tying arrangements and skeptical of asserted justifications.[125]

Under this statute, the product would be John Deere tractors and the service would be the subsequent repairs and regular maintenance performed on them. As the leading farm equipment manufacturer in the world, John Deere undeniably has market power.[126] And the amount of interstate commerce in selling their tractors is also substantial. The problem is that it is not possible to show that John Deere has conditioned the sale of their tractors on the procurement of service at their authorized dealerships. While John Deere has provided only authorized dealers with the diagnostic tools necessary to perform service and owners are effectively forced into procuring service at authorized dealers, it is not the case that the sale of the tractors has actually been conditioned on procuring service at authorized dealerships. Farmers are, in

118. Monsanto Co. v. Scruggs, 459 F.3d 1328, 1338 (Fed. Cir. 2006).
119. *Eastman*, 504 U.S. at 462.
120. *Id.* at 463 (citing Jefferson Par. Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 19 n.30 (1984)).
121. *Id.* at 464 (quoting Jefferson Par. Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 14 (1984)).
122. *Id.*
123. *See* 24 AM. JUR. TRIALS 1, *supra* note 66, § 8.
124. *Id.*
125. *Id.*
126. John Deere was the largest farm machinery manufacturer in 2017. *See The World's Largest Farm Machinery Manufacturers in 2017, Based on Revenue (in Million U.S. Dollars)*, STATISTA, https://www.statista.com/statistics/461428/revenue-of-major-farm-machinery-manufacturers-worldwide/ (last visited Apr. 12, 2019).

fact, free to perform their own repairs and wait for a dealership representative to later digitally authorize the repairs. For this reason, the Clayton Act cannot do anything to help tractor owners.

3. *Federal Trade Commission Act of 1914*

The Federal Trade Commission Act prohibits "unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce."[127] The FTC Act also prohibits false advertisements that are likely to induce the purchase of food, drugs, devices, or cosmetics.[128] False advertisements are deemed to be unfair or deceptive acts under the FTC Act.[129] The omission of a material fact can be considered false advertisement.[130]

While today the FTC Act provides extensive protection against false advertisement, early interpretations of the FTC Act did not prohibit false advertisements to such a degree.[131] Instead, early cases required a showing that the false advertisement in question constituted an undue restraint of trade.[132]

In *Federal Trade Commission v. Winsted Hosiery Co.*,[133] the Supreme Court held that false advertisements violate the FTC Act even if they are not intended to mislead the public.[134] Rather than focusing solely on whether the false advertisement created unfair competition between manufacturers, the Court instead looked to whether the public was misled.[135] This change significantly broadened the FTC Act's reach.

Over time, the courts began to expand the power of the FTC Act even further.[136] The Supreme Court held that the FTC Act was not confined to prohibiting acts that were illegal at common law or that were prohibited by the Sherman Act.[137] The FTC Act gives the Federal Trade Commission the power to attack false advertising in three ways: (1) as an unfair method of competition, (2) as a deceptive practice, or (3) as misleading in a material respect.[138]

Assuming that tractors would be classed as devices, which would allow for them to fall under the FTC Act, there are two questions to ask under this

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127. 15 U.S.C. § 45 (2018); *see* FEDERAL CONTROL OF BUSINESS, *supra* note 98, § 30.
128. 15 U.S.C. § 52.
129. *Id.* §§ 45(a)(1), 52.
130. *Id.* § 52.
131. *See* FEDERAL CONTROL OF BUSINESS, *supra* note 98, § 30.
132. *Id.*
133. 258 U.S. 483 (1922).
134. *Winsted Hosiery*, 258 U.S. at 493–94.
135. *Id.*
136. *See* FEDERAL CONTROL OF BUSINESS, *supra* note 98, § 30.
137. *Id.*
138. *Winstead Hosiery*, 258 U.S. at 493–94.

statute. First is whether John Deere, by failing to explicitly inform buyers that they would not be able to affect their own repairs, engaged in a deceptive practice. Second, whether that same conduct could be misleading to the public in a material respect. As the FTC Act is currently interpreted, it is possible that a court could find that John Deere's conduct meets the threshold of a deceptive practice. As in *Winstead Hosiery*, the public has been misled by John Deere's conduct. By failing to explicitly state that their tractors are not readily repairable by owners, farmers have been deceived into purchasing tractors that are less useful than expected. Moreover, because an omission of a material fact can give rise to a misleading advertisement, John Deere's conduct in not explicitly informing potential purchasers that its tractors can only be repaired by authorized dealers is potentially a violation of the FTC Act.

IV. CONTRACT LAW

Contract law is implicated in restrictive tractor firmware because: (1) the purchases and sales of vehicles are contracts and (2) vehicles and accompanying firmware are subject to user-end agreements. The most clearly applicable contract principles in this situation are warranty, unconscionability, and public policy.

A. WARRANTY

Under North Dakota law, which is based on the Uniform Commercial Code, a warranty that goods will be merchantable is implied in a contract for their sale if the seller is a merchant with respect to goods of that kind, unless the contract excludes such a warranty.[139] The goods must "pass without objection in the trade under the contract description."[140] And the goods must be "fit for the ordinary purposes for which such goods are used."[141]

If a seller, at the time of contracting, has reason to know of any particular purpose for which the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods, then there is an implied warranty that the goods will be fit for that particular purpose.[142] An implied warranty of fitness is subject to some exclusions and exceptions,

139. N.D. CENT. CODE § 41-02-31(1) (2017).
140. *Id.* § 41-02-31(2)(a).
141. *Id.* § 41-02-31(2)(c).
142. *Id.* § 41-02-32.

however.[143] There is a cause of action for damages when there is a breach of the implied warranties of either merchantability or fitness.[144]

Under the contracts of sale in this situation, buyers of tractors were bargaining for tractors that would pass without objection in the trade and be fit for the ordinary purposes that tractors are used for. It is apparent that tractors that cannot be easily repaired by farmers in remote areas—and remote areas are where farmers work most often—are both objectionable in the trade of farming and unfit for farming. Moreover, situations have likely arisen where dealers know from past business relationships that a particular farmer normally repairs his or her own equipment. In that situation, the implied warranty of fitness for a particular purpose would come into play. Still, though, John Deere and other farm equipment manufacturers almost certainly include a warranty exclusion, or an "as is" clause, in their contracts. This voids the implied warranties of merchantability and fitness for a particular purpose and likely leaves farmers without a remedy under a warranty theory.

B. UNCONSCIONABILITY

Courts have the power to deny enforcement of a contract that is deemed unconscionable.[145] To be deemed unconscionable, there must have been both procedural abuses during the formation of the contract, and there must be substantive abuses relating to the terms of the contract.[146] Courts look at the contract from the perspective of the time that it was entered into and do not rely on hindsight.[147] The question for the court is whether, under the circumstances, the terms of the agreement are so one-sided as to be unconscionable.[148] The underlying purpose of the doctrine is the prevention of oppression and unfair surprise.[149] The determination is a question of law for the court to decide.[150] The inquiry into whether a particular contract is unconscionable is

143. *Id.* Generally, to exclude or modify an implied warranty of merchantability, the language must mention merchantability. If an implied warranty of merchantability is excluded or modified via writing, then the writing must be conspicuous. Excluding or modifying any implied warranty of fitness must be done in a conspicuous writing. *Id.* § 41-02-33. Unless the circumstances indicate otherwise, all implied warranties are excluded by expressions like "as is." *Id.* § 41-02-33(3)(a).

144. Bakke v. Magi-Touch Carpet One Floor & Home, Inc., 2018 ND 273, ¶ 11, 920 N.W.2d 726.

145. Strand v. U.S. Bank Nat'l Ass'n ND, 2005 ND 68, ¶ 4, 693 N.W.2d 918.

146. *Id.*

147. *Id.*

148. *Id.* (quoting Weber v. Weber, 1999 ND 11, ¶ 11, 589 N.W.2d 358).

149. *Id.*

150. *Id.* at ¶ 5.

fact-specific.[151] Claims are considered on a case-by-case basis and assessed under the totality of the circumstances.[152]

Procedural unconscionability looks at the formation of the contract and the fairness of the bargaining process.[153] Factors to consider include inequality of bargaining power, oppression, and unfair surprise.[154] As a result, courts are more likely to find unconscionability in consumer transactions rather than in commercial contracts between experienced parties because of the relative inequality in bargaining power.[155] An adhesion contract, which is offered on a "take it or leave it" basis, may be further indication of procedural unconscionability.[156] Substantive unconscionability, on the other hand, looks to the "harshness or one-sidedness" of the contractual provision in question.[157]

The contractual provisions that immunize John Deere from liability for any lost profits stemming from issues with the tractor firmware could potentially be voided by a court under a theory of unconscionability. Both procedural and substantive unconscionability are present in the contracts. From a procedural perspective, the formation of the contract involves an imbalance in bargaining power. Consumers generally lack the sophistication of dealers, and the contracts are almost certainly offered on a "take it or leave it" basis, with little to no room for bargaining. The element of unfair surprise is also a factor weighing in favor of procedural unconscionability because owners are likely surprised to learn, after purchase, that certain repairs and modifications will render their tractor inoperable. This is patently unfair to farmers that believed they were bargaining for a functioning and freely repairable tractor. The requirement of substantive unconscionability is also likely met because a contract for the sale of a vehicle that is rendered inoperable every time it requires necessary and routine repairs unless the owner visits an authorized dealership is very close to what one would think a "harsh" deal would be. Again, unconscionability claims are necessarily fact-intensive, so individual cases would vary significantly. Even so, unconscionability provides one possible avenue of relief for farmers.

151. *Strand*, 2005 ND 68, ¶ 5, 693 N.W.2d 918.
152. *Id.*
153. *Id.* at ¶ 13.
154. *Id.*
155. *Id.*
156. *Id.*
157. *Strand*, 2005 ND 68, ¶ 20, 693 N.W.2d 918.

C. VOID FOR PUBLIC POLICY

Courts also have the power to void contracts that are injurious to the public or against the public good.[158] Acting on this power is exceedingly rare, though, because courts normally will not interfere with the freedom to contract and should not enable parties to escape their contractual duties on the ground of public policy unless preservation of the public welfare demands it.[159] Courts have the authority to declare a contract void as against public policy when it is inconsistent with fair and honorable dealing, contrary to sound policy, and offensive to good morals.[160] In North Dakota specifically, "Any provision of a contract is unlawful if it is . . . contrary to good morals."[161]

The provisions that shield John Deere from liability could be voided by a court on public policy grounds. However, whether a court would actually do so is not clear and seems unlikely simply because of the difficulty of meeting the high standard required. Generally, to declare a contract void on these grounds, the contract must be unmistakably and expressly against public policy.[162] Even a contract that undermines public policy to some degree will be enforced unless that public policy is overpowering.[163] In this situation, while there may be some unfairness to farmers in these contracts, the agreements likely do not go so far as to violate fundamental moral principles. Therefore, a court is unlikely to void a tractor firmware liability shield provision on public policy grounds, and other forms of relief are probably more appropriate.

V. "RIGHT TO REPAIR" LEGISLATION

"Right to Repair" legislation seeks to address the rising problem of firmware that restricts owners from making their own repairs. Although it ultimately did not pass, Oklahoma's Right to Repair Farming Equipment Act of 2017 is an example of such legislation. The Act proposed the following provisions: (1) mandate that manufacturers provide owners and independent repair providers access to diagnostic tools; (2) mandate that the tools provided are the same tools that the manufacturer and the manufacturer's authorized dealers have access to; (3) mandate that diagnostic tools and information are provided in standard formats, expressly prohibiting proprietary formats, and

158. Johnson v. Peterbilt of Fargo, Inc., 438 N.W.2d 162, 163 (N.D. 1989).
159. *Id.* at 164.
160. Meyer v. Hawkinson, 2001 ND 78, ¶ 20, 626 N.W.2d 262.
161. N.D. CENT. CODE § 9-08-01 (2017).
162. 17A C.J.S. *Contracts* § 281 (2019).
163. *Id.*

require that the tools and information be distributed on terms more favorable than those under which the tools and information are distributed to authorized dealers; (4) provide tools and information necessary to reset immobilizers; and (5) provide for criminal penalties for violators.[164]

A bill such as the one proposed in Oklahoma would, if passed, adequately protect the interests of farmers. Mandating that manufacturers make repair and diagnostic tools available to owners and independent repair shops would put farmers back into the position they were in before the introduction of John Deere's new firmware. Farmers would once again be free to have their tractors repaired and maintained at any repair shop – or to simply make the repairs on their own. Mandating that diagnostic tools and information be distributed fairly and in standard, non-proprietary formats is a key piece of the legislation. Without such a provision, manufacturers would be able to distribute the needed tools and information in ways that would further hinder their actual use. As an agricultural state with thousands of farmers that rely on this equipment, North Dakota should adopt "Right to Repair" legislation similar to the proposed Oklahoma bill to ensure that farmers are treated fairly and honestly when purchasing the equipment they need to earn a living.

VI. CONCLUSION

Current law does not adequately address the interests of farmers and other owners of vehicles who need to make their own repairs. Legislation aimed at addressing this issue is necessary unless courts are willing to drastically broaden the reach of existing law. In the meantime, farmers will continue to pay the price of being forced to conduct repairs through authorized John Deere dealerships. In a state like North Dakota where agriculture is a primary industry, the impact of this inability to perform repairs will be significant if the legislature or the courts fail to act. North Dakota should therefore implement "Right to Repair" legislation to protect its farmers and hold businesses accountable to consumers.

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164. H.B. 2551, 56th Leg., 2d Sess. (Okla. 2017) (proposed bill that did not pass).

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