



SHOWDOWN AT HIGH NOON: WHETHER A PERSON INJURED BY A “LIBERATOR” 3D-PRINTED FIREARM CAN RECOVER ON A PRODUCT LIABILITY CLAIM UNDER THE THIRD RESTATEMENT

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Disclaimer: This note does not address the constitutionality of the “Liberator” or any other 3D-printed firearm pursuant to the Second Amendment. Moreover, this note does not express my personal beliefs regarding the Second Amendment and any construal of this note suggesting that I am “anti-Second Amendment” is a gross misrepresentation of this note’s purpose. I believe that products liability suits hold companies accountable for putting defective products into the stream of commerce, and in turn, encourage companies to produce safe and reliable products for consumers. This note will address whether Defense Distributed could be held liable to a plaintiff in a products liability suit who has been injured due to a manufacturing, design, or lack of warning defect associated with the Liberator pistol under the Third Restatement of Torts. Finally, as the current legality of 3D-printed firearms is in question in the State of New Jersey, I have not acquired the files discussed in this note. Therefore, any examination of defects is purely hypothetical.

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* J.D. Candidate May 2020. Thank you to my parents for your continued support. You now know more about products liability than I’m sure you ever wanted to. Thank you to my girlfriend, Amy Clackner, along with all of my friends, who put up with my constant requests for feedback. Finally, thank you Professor Emily Kline, who helped throughout this note writing process, and thank you to the entire *Rutgers University Law Review* staff.

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I. BACKGROUND

The American colonial gunsmith combined the skills of a blacksmith, whitesmith, founder, and woodworker.¹ For these craftsmen, a firearm was not only a tool, but also a canvas for artistic expression.² Gunsmiths would carve intricate designs into the wooden stock of a rifle and engrave them into the brass patchbox covers.³ Attention to detail was imperative, not only for the artistic pieces, but for the mechanical structure of the firearm.⁴ The gunsmith understood that a person's life hinged on the quality of his work.⁵ From start to finish, it would take an estimated 400 man-hours to construct a serviceable firearm.⁶ Fast forward to 2018, and a firearm can be printed at home in a matter of hours.⁷

In 2012, Cody Wilson founded the non-profit organization Defense Distributed, with the intention of developing a functioning “printable” firearm.⁸ The organization is based out of Austin, Texas, and describes itself as a “private defense firm principally engaged in the research, design, development, and manufacture of products and services for the

1. *Gunsmith*, THE COLONIAL WILLIAMSBURG FOUND., <http://www.history.org/almanack/life/trades/tradegun.cfm> (last visited Mar. 5, 2020).

2. *See id.*

3. Stephen V. Grancsay, *The Craft of the Early American Gunsmith*, 6 METROPOLITAN MUSEUM ART BULL. 54, 59 (1947).

4. *See id.* at 57–59.

5. *See id.* at 59.

6. *Colonial Williamsburg: Past & Present, Behind the Scenes* (Jan. 16, 2006) (discussion with George Suiter, master gunsmith at Colonial Williamsburg). For a transcript of the recorded podcast, see *Gunsmith Transcript*, THE COLONIAL WILLIAMSBURG FOUND. (Jan. 16, 2006), http://www.history.org/media/podcasts_transcripts/Gunsmith.cfm.

7. Kelly McLaughlin, *3-D Printed Guns Allow Public Access to Real, Working Weapons that are Virtually Untraceable—Here's How They Work*, BUS. INSIDER (July 31, 2018, 2:50 PM), <https://www.businessinsider.com/3d-printed-guns-how-they-work-2018-7>; HACKADAY, *First 3d Printed Gun Timelapse*, YOUTUBE (May 16, 2013), <https://www.youtube.com/watch?v=MbdTShDxig4>.

8. Andy Greenberg, *Meet the 'Liberator': Test-Firing the World's First Fully 3D-Printed Gun*, FORBES (May 5, 2013, 5:30 PM), <https://www.forbes.com/sites/andygreenberg/2013/05/05/meet-the-liberator-test-firing-the-worlds-first-fully-3d-printed-gun/#d2dad2a52d70>.

benefit of the American rifleman.”⁹ On May 6, 2013, Defense Distributed uploaded a Computer-Aided Design (“CAD”) file to its website that contained the designs of the “Liberator,” a single-shot plastic firearm.¹⁰ The file contained blueprints for fifteen individual parts that could be printed out of plastic through the use of a three-dimensional (“3D”) printer.¹¹ The only non-plastic piece is the Liberator’s firing pin, which is a hardware store nail.¹² Once all the pieces are acquired, the user must then assemble the firearm by hand.¹³

The Liberator can fire a standard .380 handgun round.¹⁴ However, unlike modern handguns, the Liberator does not have a magazine.¹⁵ Instead, the user must remove the barrel from the firearm’s body, load an individual bullet into the barrel, and place the barrel back onto the body.¹⁶ Once loaded, all the user needs to do to fire the Liberator is pull back the hammer and pull the trigger.¹⁷

It is estimated that over 100,000 files of the Liberator were downloaded from Defense Distributed’s website within two days of its release.¹⁸ The organization faced immediate legal backlash.¹⁹ On May 8, 2013, the United States Department of State sent a letter that asserted Defense Distributed “may” have released technical data that was in violation of the International Traffic in Arms Regulations.²⁰ Defense Distributed subsequently removed the Liberator file from its website.²¹ Nonetheless, the files had circulated across the internet and were made

9. *RI Lawmakers Introduce Bill to Outlaw 3-D Printed Plastic Guns*, NBC 10 NEWS, (July 31, 2018), <https://turnto10.com/politics/cicilline-moulton-back-bill-to-outlaw-3-d-printed-plastic-guns>.

10. Holm Belsheim, *Printing Pistols: Litigation Continues Over the Legality of 3-D Printable Firearms*, U. MINN. L. SCH. L. SCI. F. (Oct. 1, 2018), <https://editions.lib.umn.edu/mjlst/printing-pistols-litigation-continues-over-the-legality-of-3-d-printable-firearms/>.

11. Greenberg, *supra* note 8.

12. *Id.*

13. McLaughlin, *supra* note 7.

14. Greenberg, *supra* note 8.

15. *See id.* *See generally Magazine*, DICTIONARY.COM, <https://www.dictionary.com/browse/magazine> (last visited Mar. 5, 2020) (defining a magazine to mean “a metal receptacle for a number of cartridges, inserted into certain types of automatic weapons and when empty removed and replaced by a full receptacle in order to continue firing.”).

16. *See* Greenberg, *supra* note 8.

17. *See id.*

18. Andy Greenberg, *3D-Printed Gun’s Blueprints Downloaded 100,000 Times in Two Days (With Some Help from Kim Dotcom)*, FORBES (May 8, 2013, 5:12 PM), <https://www.forbes.com/sites/andygreenberg/2013/05/08/3d-printed-guns-blueprints-downloaded-100000-times-in-two-days-with-some-help-from-kim-dotcom/#b06a5ca10b88>.

19. *Id.*

20. *Def. Distributed v. U.S. Dep’t of State*, 121 F. Supp. 3d 680, 687–88 (W.D. Tex. 2015).

21. *See id.*

available on major file sharing websites such as the PirateBay for download.²² Simply put, the files were in the public domain, and no government entity could remove them.

On June 29, 2018, Defense Distributed and the Department of State reached a settlement agreement that approved “for public release . . . in any form’ computer-aided design (CAD) files containing the digital blueprints for 3D-printed firearms. The settlement, also . . . [issued] a license to legally publish and share its 3D printable gun files on the internet starting on Aug. 1, 2018.”²³ This settlement was met with immediate resistance from the Attorney Generals of eight states and Washington, D.C., who subsequently filed a lawsuit in the Western District of Washington to enjoin the publication of the files.²⁴ On July 31, 2018, one day before the Liberator could be legally uploaded on Defense Distributed’s website, the U.S. District Court issued a preliminary injunction preventing the dissemination of the file.²⁵ A month later, on August 27, 2018, the district court issued another preliminary injunction stating that the file could not be uploaded to the internet; it could, however, be “emailed, mailed, securely transmitted, or otherwise published within the United States.”²⁶

Defense Distributed responded to the District Court’s ruling via Twitter: “files on sale now: DEF CAD.com.”²⁷ The process for purchasing a file was the same as any other online transaction. An interested buyer would go to the Defense Distributed website and click on the file they wanted to purchase.²⁸ Next, the purchaser would be sent to a checkout page where the buyer would see the suggested price of \$10 and an “add

22. Adi Robertson, *3D-Printed Gun Files Pulled Offline at State Department’s Request*, VERGE (May 9, 2013, 5:49 PM), <https://www.theverge.com/2013/5/9/4316720/3d-printed-gun-files-pulled-offline-after-state-department-letter>.

23. Kelsey Wilbanks, *3D Gun Legality After Defense Distributed Settlement, Ruling*, LAW 360 (Aug. 2, 2018, 2:26 PM), <https://www.law360.com/articles/1069142/3d-gun-legality-after-defense-distributed-settlement-ruling>.

24. Complaint at 1–2, *Washington v. U.S. Dep’t of State*, 318 F. Supp. 3d 1247 (W.D. Wash. 2018) (No. 2:18-CV-01115) (listing the plaintiffs of the case at hand including, Washington, Connecticut, Maryland, New Jersey, New York, Oregon, Massachusetts, and Pennsylvania).

25. *Washington v. U.S. Dep’t of State*, 315 F. Supp. 3d 1202, 1205 (W.D. Wash. 2018); Wilbanks, *supra* note 23.

26. *Washington v. U.S. Dep’t of State*, 318 F. Supp. 3d 1247, 1264 (W.D. Wash. 2018).

27. See David Grossman, *Defense Distributed is Selling 3D Printed Gun Files—Through the Mail*, POPULAR MECHANICS (Aug. 28, 2018), <https://www.popularmechanics.com/technology/security/a22853988/defense-distributed-is-selling-3d-printed-gun-filesthrough-the-mail/>.

28. Cyrus Farivar, *8 States Take Aim at 3D Gun Company, Sue to get Files Off the Internet*, ARSTECHNICA (July 30, 2018, 3:36 PM), <https://arstechnica.com/tech-policy/2018/07/20-states-take-aim-at-3d-gun-company-sue-to-get-files-off-the-internet/>.

to cart” button.²⁹ Once the purchase was made, Defense Distributed would mail a file to the buyer on a Defense Distributed branded USB drive.³⁰

Most recently, on September 17, 2018, the New Jersey legislature passed Senate Bill 2465, which criminalized the possession of any 3D-printed firearm or its design files, effectively outlawing the Liberator within the state.³¹ In response, Defense Distributed filed for a preliminary injunction against the enforcement of the new law in the United States District Court for the Western District of Texas,³² but the lawsuit was dismissed.³³ Defense Distributed also filed a lawsuit in the District Court of New Jersey requesting an injunction. The matter is still ongoing.

A. 3D Printing

3D printing is a form of additive manufacturing, where an object is created by adding material layer-by-layer.³⁴ A broad comparison is the construction of a brick building: bricks are stacked together, one on top of the other, until the building is completed. There are four essential steps in the process of 3D printing any object. First, the object needs to be designed.³⁵ This design is done by using a computer-aided design (CAD) software such as Autodesk or Google SketchUp Make.³⁶ Second, the design is converted into an STL (stereolithography) file to make it compatible with a 3D printer.³⁷ Third, the STL file is “sliced.”³⁸ This is the process where the design is divided by the user “into several printable layers and plots the toolpaths for them.”³⁹ In essence, a person is creating an instruction manual for the 3D printer. These instructions control the vital steps of the printing process, including “speed, flow, and the

29. *The Court Banned the Free Distribution of Weapons CAD-files, so the Creator Began to Sell Them*, SUDONULL, <https://sudonull.com/post/11876> (last visited Mar. 19, 2020).

30. Cyrus Farivar & Nathan Mattise, *After Court Order, 3D-Printed Gun Pioneer Now Sells Pay-What-You-Want CAD Files*, ARSTECHNICA (Aug. 28, 2018, 12:18 PM) <https://arstechnica.com/tech-policy/2018/08/in-defiance-of-court-order-3d-printed-gun-pioneer-starts-selling-cad-files/>.

31. N.J. STAT. ANN. § 2C:39-1 (West 2019), amended by N.J.S.B. 2465 (N.J. 2018).

32. Complaint, *Defense Distributed v. Grewal*, 364 F. Supp. 3d 681 (W.D. Tex. 2019).

33. *Defense Distributed v. Grewal*, 364 F. Supp. 3d 681 (W.D. Tex. 2019).

34. *How to 3D Print: Beginner's Guide to 3D Printing*, 3D INSIDER, <https://3dinsider.com/3d-printing-guide/> (last visited Mar. 5, 2020) [hereinafter 3D Insider].

35. *Id.*

36. *Id.*

37. *Id.*

38. *Id.*

39. *Id.*

temperature required for each layer.”⁴⁰ Finally, the “sliced” file, also referred to as the G-code, is uploaded to the 3D printer for printing.⁴¹

The most common type of desktop 3D printer is a Fused Deposition Modeling (FDM) printer, also referred to as a Fused Filament Fabrication (FFF) printer.⁴² These printers have a nozzle called the extruder head (the “hot end”), which moves on an x and y-axis in conjunction with a print bed that moves on a z-axis.⁴³ The printer pulls a spool of solid thermoplastic into the hot end where it is heated into a semi-liquid state and extruded onto the print bed.⁴⁴ The print bed then lowers, and another layer is added.⁴⁵ This process is repeated until you have the completed object.⁴⁶

There are numerous types of thermoplastics, each with varying quality and characteristics. The most popular plastics on the market are Polyactic Acid (PLA) and Acrylonitrile Butadiene Styrene (ABS).⁴⁷ PLA is a biodegradable plastic that is harder than ABS, less prone to warping, and more likely to snap instead of bend.⁴⁸ ABS is made from petroleum-based sources and is extremely strong.⁴⁹ ABS—not as hard as PLA plastic—will bend and is not prone to snapping.⁵⁰

B. Purpose of Strict Products Liability

Strict products liability safeguards the injured consumer by shifting the cost of injuries that result from defective products onto the manufacturers themselves.⁵¹ In turn, companies internalize these costs by either reducing profits or raising the price of goods.⁵² There are two schools of thought that rationalize the justifications for this system.⁵³ The

40. *Id.*

41. *Id.*

42. *3D Printing Technology Guide: 2019 Types of 3D Printing Technology*, ALL3DP (July 22, 2019), <https://all3dp.com/1/types-of-3d-printers-3d-printing-technology/>. To view the FDM printing process, see Ultimaker, *Nefertiti Bust by project #NefertitiHack—Ultimaker: 3D Printing Timelapse*, YOUTUBE (Sept. 27, 2016), https://www.youtube.com/watch?time_continue=15&v=B1DOjAYvdJQ.

43. 3D Insider, *supra* note 34.

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.*

51. See DAVID G. OWEN, *PRODUCTS LIABILITY LAW* 292 (2d ed. 2008).

52. *See id.*

53. *Id.* at 292–95.

first suggests that cost internalization acts as a deterrent.⁵⁴ If a company were forced to pay for injuries that result from a defect in its product, the company would be induced to eliminate that defect.⁵⁵ Higher safety standards would flow from the burden of increased costs.⁵⁶ The second rationalization is risk-spreading.⁵⁷ Internalization causes the manufacturer to pass costs back to the consumers in the form of higher prices.⁵⁸ When viewed broadly, it seems that this result is counterintuitive, as the company is forcing the consumers to pay what is essentially an “insurance” premium for a defective product.⁵⁹ However, the purpose of strict products liability is to protect “injured” consumers by ensuring that they do not have to pay the entire cost of their injuries.⁶⁰ This form of risk-spreading does just that.

II. INTRODUCTION

The concept of a 3D-printed firearm is enigmatic. Does this firearm work? Is the Liberator safe to fire? A YouTube video posted on May 6, 2013, shows Cody Wilson successfully remote firing the Liberator.⁶¹ The internet is flooded with dozens of videos depicting these successful test fires. However, for every video of success, there’s another showing catastrophic failure. For example, WFAA, an ABC affiliated television station in Dallas, Texas, uploaded a video that shows Michael Flynn, the owner of a 3D printing company, print and test fire a Liberator.⁶² The firearm exploded and the remains of the barrel were propelled twenty-five yards away, while the bullet appeared to fire on an angle into the ground.⁶³ In response, YouTube users unloaded tirades of harsh criticism towards Mr. Flynn, supposedly exposing how he had printed the firearm incorrectly, and stating that such explosions are not common.⁶⁴

54. *Id.* at 292–93.

55. *Id.* at 294.

56. *See id.*

57. *Id.* at 295.

58. *See id.*

59. *See id.*

60. *See id.*

61. Andy Greenberg, *Remote Test-Firing the World’s First Fully 3D Printed Gun*, YOUTUBE (May 6, 2013), https://www.youtube.com/watch?time_continue=7&v=qbKJYmTJkEU.

62. WFAA, *What Happened to a 3D Printed Gun at the Range*, YOUTUBE (Aug. 9, 2018), https://www.youtube.com/watch?v=lLm_CVfzza8.

63. *Id.*

64. *See id.*; Jeff Rodriguez, Comment to *What Happened to a 3D Printed Gun at the Range*, YOUTUBE (Jan. 2019), https://www.youtube.com/watch?v=lLm_CVfzza8 (“Michael Lynn either has no idea what he’s doing, or he deliberately deceived your reporters and viewers. You can see at 3:00 the barrel was printed at partial infill. Given that he’s printing

Is the information found in the comment section of a YouTube video common knowledge to everyone who owns a 3D printer? Could a Defense Distributed USB contain improper designs, or is the design of the Liberator itself causing these explosions? Does Defense Distributed provide instructions to purchasers on how to assemble and print the Liberator, and do they inform the purchasers of what material is best suited for its production? Given that the Liberator is a do-it-yourself firearm that can cause serious injury to the user, the concerns are obvious.

Products liability law in America is complex by its very nature. There is no federal products liability law, and in turn, states are free to choose whatever legislation they deem appropriate to determine the liability of manufacturers.⁶⁵ The American Law Institute published the *Third Restatement of Torts: Products Liability* (the “Third Restatement”) in 1998 to provide guidance to states in their navigation of products liability suits.⁶⁶ The Third Restatement is a codification of the basic principles of Products Liability,⁶⁷ and has been accepted as law in several states.⁶⁸

Pursuant to the Third Restatement, “[o]ne engaged in the business of selling or otherwise distributing products who sells or distributes a defective product is subject to liability for harm to persons or property caused by the defect.”⁶⁹ A plaintiff who is injured must prove that the product is defective because it “contains a manufacturing defect, . . . is defective in design . . . , or is defective because of inadequate instructions or warnings.”⁷⁰ Furthermore, the product must be “tangible personal property distributed commercially for use or consumption.”⁷¹

This note will argue that Defense Distributed is a commercial seller of a tangible product, and therefore, can be held liable for harm caused

in open air without any warping, that’s almost certainly PLA plastic which is weaker and more brittle than the specified plastic for the Liberator pistol: ABS[. . .] with a solvent dip. The brittle failure would also suggest PLA plastic, rather than ABS.”); George’s Masonry, Comment to *What Happened to a 3D Printed Gun at the Range*, YOUTUBE (Jan. 2019), https://www.youtube.com/watch?v=ILm_CVfzza8 (“Barrel needs an acetone treatment. Defense Distributed was able to get 11 shots out of a Liberator barrel, but it takes more than just printing it out.”).

65. See Legal Info. Inst., *Products Liability*, CORNELL L. SCH., https://www.law.cornell.edu/wex/products_liability (last visited Mar. 5, 2020).

66. See OWEN, *supra* note 51, at 24–25.

67. See *Restatement of the Law Third, Torts: Product Liability*, A.L.I., https://www.ali.org/publications/show/torts-third/#_tab-appendix (last visited Mar. 5, 2020).

68. Cami Perkins, *The Increasing Acceptance of the Restatement (Third) Risk Utility Analysis in Design Defect Claims*, 4 NEV. L.J. 609, 616–20 (2004).

69. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 1 (AM. LAW INST. 1998).

70. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (AM. LAW INST. 1998).

71. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 19 (AM. LAW INST. 1998).

by the Liberator due to a manufacturing defect, design defect, and inadequate instructions or warnings, pursuant to the Third Restatement.

III. ARE THE LIBERATOR DESIGNS A TANGIBLE PRODUCT?

The Third Restatement § 19 states,

A product is tangible personal property distributed commercially for use or consumption. Other items, such as real property and electricity, are products when the context of their distribution is sufficiently analogous to the distribution and use of tangible personal property that it is appropriate to apply the rules stated in this Restatement.⁷²

Tangible personal property is perceptible to the touch.⁷³ There is no question that the Liberator is a tangible object; however, Defense Distributed does not sell a physical Liberator.⁷⁴ Buyers do not open a box to see a fully constructed firearm after they order it online. Defense Distributed sells a CAD design file of the Liberator that is loaded onto a USB drive.⁷⁵ A design file is not “perceptible to the touch,” and at face value, the only tangible object that Defense Distributed sells is the hardware that the file is located on.⁷⁶ However, tangibility is not an end-all bar to a products liability suit. Comment (b) of section 19 states, “For purposes of this Restatement, most but not necessarily all products are tangible personal property.⁷⁷ In certain situations, however, intangible personal property . . . may be products.”⁷⁸ Therefore, a claimant must establish that the CAD file of the Liberator is intangible personal property that falls under the exception of comment (b).

The question of whether the CAD file of a three-dimensional printed object is a product would be one of first impression. Legal scholars believe that the data contained on the CAD file can be likened to information,⁷⁹ which has undergone significant litigation to determine if it is subject to

72. *Id.*

73. *Tangible*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/tangible> (last visited Mar. 5, 2020).

74. *See* Farivar & Mattise, *supra* note 30.

75. *Id.*

76. *Id.*

77. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 19 cmt. b (AM. LAW INST. 1998).

78. *Id.*

79. *See* Nora Freeman Engstrom, *3-D Printing and Product Liability: Identifying the Obstacles*, 162 U. PA. L. REV. ONLINE 35, 38 (2013).

products liability.⁸⁰ Courts have separated information into two categories: technical data and expressive content.⁸¹

The foremost case holding that information is a product subject to products liability is *Aetna Casualty & Surety Co. v. Jeppesen & Co.*⁸² In *Aetna*, a Bonanza Airlines plane crashed while attempting to land in Las Vegas, Nevada.⁸³ All passengers on board were killed as a result of the crash.⁸⁴ The plaintiffs brought a wrongful death suit against Jeppesen & Co., the publisher of the aeronautical approach chart that the pilots had used during their attempted landing under a theory of products liability.⁸⁵ The chart that the pilots used contained information that “depict[ed] graphically the instrument approach procedure for the particular airport as that procedure has been promulgated by the Federal Aviation Administration (FAA).”⁸⁶ The plaintiff’s theory was that the information contained on the approach chart was defective, as its images were improperly scaled by the defendants.⁸⁷ Expert testimony supported this theory, and stated that the pilot’s reliance on the defective scale resulted in the crash.⁸⁸ In turn, the court held that the conveyance of the FAA information onto the aeronautical chart was a product and stated,

While the information conveyed in words and figures on the Las Vegas approach chart was completely correct, the purpose of the chart was to translate this information into an instantly understandable graphic representation. This is what gave the chart its usefulness, [and] this is what the chart contributed to the mere data amassed and promulgated by the FAA. It was reliance on this graphic portrayal that Jeppesen invited.⁸⁹

80. See, e.g., *Winter v. G.P. Putnam’s Sons*, 938 F.2d 1033, 1034 (9th Cir. 1991); *Aetna Cas. & Sur. Co. v. Jeppesen & Co.*, 642 F.2d 339, 342 (9th Cir. 1981); *Sanders v. Acclaim Entm’t. Inc.*, 188 F. Supp. 2d 1264, 1277 (D. Colo. 2002).

81. See, e.g., *Winter*, 938 F.2d at 1036.

82. *Aetna*, 642 F.2d at 341–42.

83. *Id.* at 341.

84. *Id.*

85. *Id.*

86. *Id.* at 341–42.

87. *Id.* at 342 (“The ‘defect’ in the chart consists of the fact that the graphic depiction of the profile, which covers a distance of three miles from the airport, appears to be drawn to the same scale as the graphic depiction of the plan, which covers a distance of 15 miles. In fact, although the views are the same size, the scale of the plan is five times that of the profile.”).

88. *Id.*

89. *Id.*

The aeronautical charts were purchased for the information that was depicted on them.⁹⁰ This information assisted pilots in landing airplanes, and as noted by the court, if the information is not depicted properly, catastrophic results occur.⁹¹ The holding conforms to the goals of products liability.⁹² The airlines purchased a product to assist their pilots in landing aircraft.⁹³ It was defective, and the defendant company should be held liable.⁹⁴ Thereafter, aeronautical charts were held to be a product in a string of subsequent products liability suits.⁹⁵

In contrast, in *Winter v. Putnam* the court distinguished technical information, which could be considered a product, from expression, which is not.⁹⁶ In *Winter*, the plaintiffs purchased *The Encyclopedia of Mushrooms* as a reference guide “to help them collect and eat wild mushrooms.”⁹⁷ After relying on the information within the book, the plaintiffs ate mushrooms that they believed to be safe.⁹⁸ Unfortunately, both plaintiffs became extremely ill and required liver transplants.⁹⁹ In response, the plaintiffs filed suit, alleging that the incorrect information within the Encyclopedia constituted a product, and in turn, subjected the defendant publisher to strict products liability.¹⁰⁰ The court refused to “expand products liability law to embrace the ideas and expression in a book.”¹⁰¹ Specifically, the court highlighted the dangers of expanding products liability to information within a book, hypothesizing that no author would write about any topic that could lead to physical injury.¹⁰² The court then differentiated the information found in *Aetna* from the expression found in *Encyclopedia of Mushrooms*:

Aeronautical charts are highly technical tools. . . . The best analogy to an aeronautical chart is a compass. Both may be used to guide an individual who is engaged in an activity requiring certain knowledge of natural features. . . . In contrast, *The*

90. *Id.* at 343.

91. *See id.* at 341.

92. *See id.* at 342–43.

93. *Id.* at 343.

94. *See id.*

95. *See, e.g.,* Brocklesby v. United States, 767 F.2d 1288, 1294–95 (9th Cir. 1985); Salomey v. Jeppesen & Co., 707 F.2d 671, 676–77 (2d Cir. 1983); Fluor Corp. v. Jeppesen & Co., 170 Cal. App. 3d 468, 475 (1985).

96. *Winter v. G.P. Putnam’s Sons*, 938 F.2d 1033, 1034 (9th Cir. 1991).

97. *Id.*

98. *Id.*

99. *Id.*

100. *Id.*

101. *Id.* at 1036.

102. *See id.* at 1035.

Encyclopedia of Mushrooms is like a book on how to use a compass.¹⁰³

Furthermore, in dictum, the court stated that computer software that “fails to yield the result for which it was designed” may be considered technical information.¹⁰⁴ This statement appears to foreshadow the court’s belief that computer software is a product subject to products liability.

This concept of expression versus technical data was further solidified in *Sanders v. Acclaim Entertainment Inc.*¹⁰⁵ In *Sanders*, family members of the victims in the Columbine High School shooting brought suit against movie and video game defendants under a theory that the information these companies distributed in their products was defective, i.e. too violent.¹⁰⁶ In sum, it was alleged that the “defective” violent content caused the shooters in the Columbine massacre to perpetuate their atrocities.¹⁰⁷ The court rejected this argument and reaffirmed that “intangible thoughts, ideas, and expressive content are not ‘products’ as contemplated by the strict liability doctrine.”¹⁰⁸

The question is whether the Liberator design stored on a CAD file is technical or expressive information. In *Winter*, the court analogized the technical information in an aeronautical chart to a compass: The information is the “guide” to the completion of a task.¹⁰⁹ Conversely, a CAD does not guide the 3D printer when printing an object.¹¹⁰ As previously stated, the file needs to be sliced and converted into a G-Code before printing.¹¹¹ It’s the G-Code that actually guides the printer in manufacturing an object.¹¹² If a court chooses to accept the term “guiding” as the determinative factor in differentiating technical and expressive information, then a CAD file is not technical. This potential action by the court creates a puzzling scenario. Surely, a CAD file does not fall under the category of expressive information found in *Winter*¹¹³ or *Sanders*.¹¹⁴

103. *Id.* at 1036.

104. *Id.*

105. *Sanders v. Acclaim Entm’t, Inc.*, 188 F. Supp. 2d 1264 (D. Colo. 2002).

106. *See id.* at 1277.

107. *See id.*

108. *Id.* at 1279.

109. *Winter*, 938 F.2d at 1036.

110. 3D Insider, *supra* note 34.

111. *Id.*; *see also* Dibya Chakravorty, *Standard Tessellation Language: STL File Format (3D Printing)—Simply Explained*, ALL3DP (Feb. 14, 2019), <https://all3dp.com/what-is-stl-file-format-extension-3d-printing/>.

112. *See* 3D Insider, *supra* note 34.

113. *See Winter*, 938 F.2d at 1036.

114. *See Sanders v. Acclaim Ent. Inc.*, 188 F. Supp. 2d 1264, 1279 (D. Colo. 2002).

The designs are not the plot from a movie or video game, nor do they reach the level of a how-to guide. Indeed, the file does not show a step-by-step process of how the 3D printer manufactures the object.¹¹⁵ It appears as if Defense Distributed has created a grey area of products liability by selling a file that is one step removed from “guiding” the 3D printer.

Arguably the most difficult aspect for a sitting products liability judge is to apply dated case law to new technology. When *Winter* was decided in 1991, 3D printers had been on the market for only five years.¹¹⁶ Moreover, with the first versions of 3D printers costing upwards of \$100,000,¹¹⁷ it was not possible for the common household to purchase. In almost thirty years since *Winter*, the cost of printers has dropped significantly, averaging around \$700 to \$2000,¹¹⁸ and the number purchased worldwide has skyrocketed to more than 528,000 within the past few years.¹¹⁹ Like computers in the 1990s, the market is growing at an exponential rate.¹²⁰ The dictum in *Winter* is a prime example of how the courts are willing to adapt to the ever changing world of technology: “Computer software that fails to yield the result for which it was designed may be another [product].”¹²¹ This statement does not include an analysis of how the information in computer software works as a guide. It is reasonable to believe that this result is the court’s attempt to establish a different rule for emerging technologies and separate it from the clearly dated case law. In turn, it is arguable that a Liberator file is comparable to software, and therefore a product.¹²² Thus, when it fails to perform

115. See Chakravorty, *supra* note 111.

116. 3D Insider, *supra* note 34 (“3D printing is an emerging technology that first was introduced in the year 1986; however, it wasn’t until the 1990’s that it began to draw serious attention from all corners of the technology world.”).

117. See *The Evolution of 3D Printing: Past, Present, and Future*, 3D PRINTING INDUSTRY, <https://3dprintingindustry.com/news/evolution-3d-printing-past-present-future-90605/> (last visited Mar. 5, 2020).

118. See *How Much Does a 3D Printer Cost?*, 3D INSIDER, <https://3dinsider.com/cost-of-3d-printer/> (last visited Mar. 5, 2020).

119. TJ McCue, *Wohlers Report 2018: 3D Printer Industry Tops \$7 Billion*, FORBES (June 4, 2018, 4:03 AM), <https://www.forbes.com/sites/tjmccue/2018/06/04/wohlers-report-2018-3d-printer-industry-rises-21-percent-to-over-7-billion/#5bc60eb72d1a>.

120. Samuel Adams, *Half Million 3D Printers Sold in 2017—On Track for 100M Sold in 2030*, 3D PRINTING INDUSTRY (Apr. 6, 2018, 11:46 AM), <https://3dprintingindustry.com/news/half-million-3d-printers-sold-2017-track-100m-sold-2030-131642/> (“This expected continuous growth in the number 3D printers sold will lead to 1 [million] machines sold in 2020, even in a very conservative scenario In a more optimistic scenario, we forecast over 1.5 [million] 3[D] printers will be sold in 2020.”).

121. *Winter v. G.P. Putnam’s Sons*, 938 F.2d 1033, 1036 (9th Cir. 1991).

122. Lucas S. Osborn, *Regulating Three-Dimensional Printing: The Converging Worlds of Bits and Atoms*, 51 SAN DIEGO L. REV. 553, 568–69 (2014).

what it is designed for, i.e. create a working firearm, it is defective and subject to products liability.¹²³

Finally, it would be interesting to see Defense Distributed argue that its CAD file is not a product despite openly stating on its website that they are engaged in “the research, design, development, and manufacture of *products*.”¹²⁴ Moreover, it appears that its customers also believe the files are products.¹²⁵ Thus, Defense Distributed will either have to concede that it believes the CAD files are a product or backtrack publicized comments.

Public policy has previously dictated the instances where an intangible product constitutes “property.” In the latter half of the twentieth century, state courts were presented with cases of people injured by the electricity produced by power companies.¹²⁶ Instead of rejecting recovery on the basis of black letter law, courts either ignored the fact that electricity is intangible, or accepted the reality that electricity is a product, despite its intangibility, and allowed recovery.¹²⁷ Electricity had commercial value, and that was sufficient to satisfy the court’s decisions.¹²⁸ The support for these decisions has been so favorable that electricity is now codified in the Third Restatement as tangible

123. See *Winter*, 938 F.2d at 1036.

124. Max Martin, *1st Amendment Win 2nd Amendment Win*, FIREARMS CHANNEL (July 21, 2018), <https://firearmschannel.com/1st-amendment-win-2nd-amendment-win/>.

125. BETTER BUSINESS BUREAU, <https://www.bbb.org/us/tx/austin/profile/gun-dealers/defense-distributed-0825-1000112495/customer-reviews> (last visited Mar. 19, 2020).

126. See, e.g., *Aversa v. Pub. Serv. Elec. & Gas Co.*, 451 A.2d 976, 977 (N.J. Super. Ct. Law Div. 1982) (“Plaintiff entered the switchhouse with a coemployee, plaintiff Peter Frankowski. Once inside the switchhouse Aversa looked for notices or warnings as to the voltage in the switchhouse, and seeing none, proceeded to the primary service wire, climbed two or three steps up a ladder and placed his voltage testing meter at a point directly above the disconnect switch. An electrical flash occurred whereby Aversa sustained the force of the electrical arc in the upper part of his body. Plaintiff Frankowski was thrown back from the force of the flash.”).

127. See *Ransome v. Wis. Elec. Power Co.*, 275 N.W.2d 641, 648 (Wis. 1979) (concluding that classifying electricity as a product is warranted by social policies in order to impose strict liability on sellers who place it in the stream of commerce); *Elgin Airport Inn, Inc. v. Commonwealth Edison Co.*, 410 N.E.2d 620, 623–24 (Ill. App. Ct. 1980) (holding that electricity is intangible, but is “artificially manufactured, can be measured, bought and sold, changed in quantity or quality, delivered wherever desired and has been held . . . to be personal property whose unlawful asportation is larceny” and is therefore subject to strict products liability); *Aversa*, 451 A.2d at 979 (without any reliance on New Jersey case law, the court held that when “electricity is no longer in transmission in the public right of way, but has been introduced into the stream of commerce by a *sale thereof or otherwise*, the liability of the electric company . . . may be based upon a product liability cause of action.”). See also *Petroski v. N. Ind. Pub. Serv. Co.*, 354 N.E.2d 736, 747 (Ind. Ct. App. 1976) (holding that electricity does not need to be sold in order for strict liability to be imposed; all that is required is for electricity to be placed in the stream of commerce).

128. See *Elgin Airport Inn, Inc.*, 410 N.E.2d at 623–24.

property.¹²⁹ The CAD file of the Liberator has commercial value; it is bought, sold, and transported to persons throughout the country.¹³⁰ As the saying goes, if it looks like a duck and quacks like a duck, it is probably a duck. The CAD file of the Liberator has all the characteristics of a product. Therefore, regardless of the Third Restatement's current definition of product, it is reasonable to assume that courts would not bar a products liability claim for an injury caused by the Liberator simply because the CAD file is intangible.

IV. IS DEFENSE DISTRIBUTED A COMMERCIAL SELLER?

An issue commonly presented in the discussion of products liability for 3D-printed objects is whether the person who prints the object is in the "business of selling."¹³¹ The common hypothetical is a neighbor who prints a household object for a friend.¹³² This object inevitably malfunctions and causes an injury to the friend.¹³³ The person in this scenario has been coined the "3-D hobbyist" by Nora Engstrom in her note *3-D Printing and Products Liability: Identifying the Obstacles*.¹³⁴ To be held liable under the Third Restatement, a person must be "engaged in the business of selling or otherwise distributing."¹³⁵ Typically, the 3D

129. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 19 (AM. LAW INST. 1998).

130. See Farivar & Mattise, *supra* note 30.

131. Engstrom, *supra* note 79, at 37–38; Zachary M. DuGan, Comment, *3-D Printing & Products Liability Law: Are Individuals Printing Themselves into Strict Products Liability?*, 26 WIDENER L.J. 187, 210–11 (2017).

132. DuGan, *supra* note 131, at 188.

133. See *id.*

134. See Engstrom, *supra* note 79, at 37.

135. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 1 (AM. LAW INST. 1998). For more insight, comment c to section 1 states:

The rule stated in this Section applies only to manufacturers and other commercial sellers and distributors who are engaged in the business of selling or otherwise distributing the type of product that harmed the plaintiff. The rule does not apply to a noncommercial seller or distributor of such products. Thus, it does not apply to one who sells foodstuffs to a neighbor, nor does it apply to the private owner of an automobile who sells it to another.

Id. § 1 cmt. c. Section 20 defines "One Who Sells or Otherwise Distributes":

(a) One sells a product when, in a commercial context, one transfers ownership thereto either for use or consumption or for resale leading to ultimate use or consumption. Commercial product sellers include, but are not limited to, manufacturers, wholesalers, and retailers.

(b) One otherwise distributes a product when, in a commercial transaction other than a sale, one provides the product to another either for use or consumption or as a preliminary step leading to ultimate use or consumption

(c) One also sells or otherwise distributes a product when, in a commercial transaction, one provides a combination of products and services and either the

hobbyist in this instance would fall under the category of “occasional seller” and in turn, would not be subject to strict liability.¹³⁶ The other scenario involves the “digital designer,” the one who actually creates the CAD file that is used to construct the 3D-printed object.¹³⁷ This is what Defense Distributed is, as Cody Wilson has repeatedly stated how his company designed the CAD file for the Liberator.¹³⁸ Unlike the 3D hobbyist, Defense Distributed was a legitimate seller of a design file on a nationwide scale.¹³⁹

There are a variety of factors courts consider when determining whether someone is engaged in the business of selling. Most notably, these include “the relationship of the transaction to the type of business generally engaged in and the number of similar transactions, as well as evidence of other indicia of a commercial venture, such as advertising and the use of formal contractual documents.”¹⁴⁰

There is no quantifiable amount of advertising that establishes a defendant as engaged in the “business of selling.” However, evidence that a defendant has not advertised a product can support a finding that the defendant is not a commercial seller.¹⁴¹ Social media has become the pinnacle forum to market products.¹⁴² Like many other modern-day businesses, Defense Distributed advertises its products through its significant social media presence, including 15,600 Twitter followers¹⁴³ and 310,200 YouTube subscribers.¹⁴⁴ *Liberator—Dawn of the Wiki Weapons*, which was posted on the Defense Distributed YouTube

transaction taken as a whole, or the product component thereof, satisfies the criteria in Subsection (a) or (b).

Id. § 20.

136. Engstrom, *supra* note 79, at 37.

137. *See id.* at 37–38.

138. Greenberg, *supra* note 8.

139. *See* Farivar & Mattise, *supra* note 30.

140. Donald M. Zupanec, Annotation, *When is Person “Engaged in the Business” for Purposes of Doctrine of Strict Tort Liability*, 99 A.L.R.3d 671, art. 2 (1980).

141. *See* Galindo v. Precision Am. Corp., 754 F.2d 1212, 1222 (5th Cir. 1985); Sukljan v. Charles Ross & Son Co., 69 N.Y.2d 89, 95–97 (Ct. App. N.Y. 1986).

142. Kathleen Chaykowski, *Sheryl Sandberg: Facebook’s 4 Million Advertisers Are Proof of the Power of Mobile*, FORBES (Sept. 27, 2016, 1:34 PM), <https://www.forbes.com/sites/kathleenchaykowski/2016/09/27/sheryl-sandberg-facebook-4-million-advertisers-are-proof-of-the-power-of-mobile/#7b5d4a421f17> (over 4 million businesses now advertise on Facebook).

143. Defense Distributed (@DefDist), TWITTER, https://twitter.com/DefDist?ref_src=tw8fXVYdGxuGo6Q (last visited Mar. 5, 2020).

144. Defense Distributed, YOUTUBE, <https://www.youtube.com/channel/UCsKjEINP5r8fXVYdGxuGo6Q> (last visited Mar. 5, 2020) [hereinafter Defense Distributed, YouTube].

Channel, has been viewed more than 4 million times.¹⁴⁵ Furthermore, the banner of its YouTube page depicts the Liberator with the company's logo.¹⁴⁶ There is definitive evidence that Defense Distributed has advertised its products.

There is no denying that Defense Distributed is engaged in the business of selling the file for the Liberator firearm. On August 28, 2018, it was announced on the Defense Distributed Twitter page that “[f]iles are on sale now.”¹⁴⁷ Soon after this announcement, Cody Wilson stated, “I’m happy to become the iTunes of 3D guns if I can’t be Napster.”¹⁴⁸ Simply put, Defense Distributed is like any other online seller. It provides links to a purchase page, describes the product, and delivers the product.¹⁴⁹ Therefore, Defense Distributed is engaged in the business of selling.

It is plausible that Defense Distributed would argue it is a service provider. A service provider cannot be held liable under a theory of products liability.¹⁵⁰ The Third Restatement equates a service provider to a lawn mowing company.¹⁵¹ A consumer pays the service provider to perform some sort of service, as opposed to a consumer paying a commercial seller for a product.¹⁵² Nora Engstrom suggests that digital designers are comparable to architects, who have escaped liability under a theory that they are service providers.¹⁵³ In *City of Mounds View v. Walijarvi*, the court stated that architects offer a “professional” service, and are called upon by consumers to provide their service for them.¹⁵⁴ The court went on to say that architecture is an inexact science, and that there is an “inescapable possibility of error which inheres in these services.”¹⁵⁵ Immediately, one would argue that architecture is an exact

145. Defense Distributed, *Liberator—Dawn of the Wiki Weapons*, YOUTUBE (May 5, 2013), <https://www.youtube.com/watch?v=drPz6n6UXQY> (At 0:24 the Video states in bold letter “DOWNLOAD TODAY.”).

146. Defense Distributed, YouTube, *supra* note 144.

147. Defense Distributed (@DefDist), TWITTER (Aug. 28, 2018, 11:44 AM), <https://twitter.com/DefDist/status/1034512106228350977>.

148. Farivar & Mattise, *supra* note 30.

149. *See id.*

150. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 19 cmt. f (AM. LAW INST. 1998).

151. *Id.* (“[O]ne who agrees for a monetary fee to mow the lawn of another is the provider of a service even if the provider is a large firm engaged commercially in lawn care.”).

152. *See id.*

153. Engstrom, *supra* note 79, at 39–40.

154. *City of Mounds View v. Walijarvi*, 263 N.W.2d 420, 423 (Minn. 1978).

155. *Id.* at 424 (“Architects, doctors, engineers, attorneys, and others deal in somewhat inexact sciences and are continually called upon to exercise their skilled judgment in order to anticipate and provide for random factors which are incapable of precise measurement. The indeterminate nature of these factors makes it impossible for professional service

science, as architects use scientific principles to ensure the structural integrity of their designs.¹⁵⁶ Regardless, the court held that architects are a service provider and despite the occasional error, they are not subject to products liability.¹⁵⁷ The argument is valid, and like an architect, a digital designer creates the blueprint that is used to construct an object. Indeed, this theory may apply to certain digital designers. For example, a consumer who owns a 3D printer needs a design for a bed raiser. She contacts a digital designer and asks them to create a CAD file for her. After paying for the file, she prints the bed raiser and raises her bed. When she goes to sleep that night, the bed collapses and she suffers an injury. In this scenario, that digital designer looks like an architect, and in turn, a professional service provider. Therefore, an omnipresent specter of “error which inheres in these services” exists.¹⁵⁸ However, Defense Distributed is not contacted by consumers to design a firearm. This company designed a file and offered it for sale to the public.¹⁵⁹ They do not provide a professional service. Thus, in certain scenarios, Engstrom is correct in saying that digital designers are comparable to architects.¹⁶⁰ However, in the case of an online realtor of design files, this comparison falls short.

V. LIBERATOR FILES THAT WERE DOWNLOADED FOR FREE

A plaintiff will have to distinguish whether they purchased their Liberator CAD or downloaded it for free from a third-party website.¹⁶¹ Defense Distributed could argue that they are not liable to persons

people to gauge them with complete accuracy in every instance. Thus, doctors cannot promise that every operation will be successful; a lawyer can never be certain that a contract he drafts is without latent ambiguity; and an architect cannot be certain that a structural design will interact with natural forces as anticipated. Because of the inescapable possibility of error which inheres in these services, the law has traditionally required, not perfect results, but rather the exercise of that skill and judgment which can be reasonably expected from similarly situated professionals.”).

156. *Physics, Architects, and The Book*, PHYSICS FOR ARCHITECTS, <http://physicsforarchitects.com/about> (last visited Mar. 5, 2020).

157. *City of Mounds View*, 263 N.W.2d at 424–25.

158. *Id.* at 424.

159. Greenberg, *supra* note 8; see also Defense Distributed, *Liberator—Dawn of the Wiki Weapons*, *supra* note 145.

160. Engstrom, *supra* note 79, at 39.

161. As previously stated, the Liberator files did not go on sale until 2018. See *supra* Part IV. There was a five-year period where the files were free, and currently, the files are still available for sale on certain file sharing websites. Cyrus Farivar, *3D-Printed Gun Activists Set to Face Numerous US States in Court*, ARSTECHNICA (Aug. 21, 2018, 5:30 AM), <https://arstechnica.com/tech-policy/2018/08/3d-printed-gun-activists-set-to-face-numerous-us-states-in-court/>.

injured by a defective Liberator who downloaded the file for free. As Defense Distributor did not “sell” a product, it would seem logical that they would not be a “commercial seller.”¹⁶² However, the Third Restatement states, “Once something has been deemed to be a ‘product,’ it remains to be determined whether the product was ‘sold’ or ‘otherwise distributed’ by the defendant. Thus, a commercial entity is subject to strict liability for products it distributes free of charge, since title has passed to the consumer.”¹⁶³ In turn, defendants are liable for items given away for free when the product is a free sample,¹⁶⁴ complimentary,¹⁶⁵ or is used in an additional service.¹⁶⁶

For example, in *McKisson v. Sales Affiliates, Inc.*, the plaintiff, Mrs. McKisson, was the owner of a beauty shop who received a free sample of Zotos Lanolin Bath, Lanolized Waving Lotion Formula No.1.¹⁶⁷ At a later date, Mrs. McKisson had one of her employees apply the lotion to her hair.¹⁶⁸ Almost immediately, her hair began to fall out “about the time [they] got down to almost the base of [her] neck back here, well, the top part all started falling off, hair, rollers, and everything.”¹⁶⁹ Despite her employee’s best efforts to wash out the lotion, the damage was so extensive that “all the hair on the top, the crown of her head, was gone . . . by morning, her eyes were swollen shut and . . . she suffered severely from the burns and swelling on her face and scalp for about four days.”¹⁷⁰ Subsequently, Mrs. McKisson brought a products liability suit against Sales Affiliates, Inc., distributor of the Zotos preparation.¹⁷¹ Despite the

162. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 20 (AM. LAW INST. 1998).

163. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 20 reporters’ note b. (AM. LAW INST. 1998).

164. *McKisson v. Sales Affiliates, Inc.*, 416 S.W.2d 787, 792 (Tex. 1967).

165. *Levondosky v. Marina Assocs.*, 731 F. Supp. 1210, 1214 (D.N.J. 1990) (holding a defendant liable under a theory of products liability when plaintiff was injured by broken glass in a complimentary drink).

Defendant purchased the glass. It was in a better position to determine whether the glass was of sufficient quality. It knew how old the glass was, approximately how many times it had been used, and how the glass had been washed and stored. Defendant’s employee poured the drink into the glass. She was in a better position to inspect the glass before the liquid might obscure the defect We therefore find that strict liability is appropriate in this case and defendant’s motion for summary judgment regarding plaintiffs’ claim as to strict liability shall be denied.

Id.

166. *Perfection Paint & Color Co. v. Konduris*, 258 N.E.2d 681, 688 (Ind. Ct. App. 1970) (holding a defendant liable under a theory of products liability when plaintiff was injured by a fire as a result of lacquer that was applied by defendant free of charge).

167. *McKisson*, 416 S.W.2d at 791.

168. *Id.*

169. *Id.*

170. *Id.*

171. *Id.* at 790.

fact that the lotion was given as a free sample, the court held, “One who delivers an advertising sample to another with the expectation of profiting therefrom through the future sales is in the same position as one who sells the product.”¹⁷²

Defense Distributed cannot only distinguish the free Liberator files from the free sample in *McKisson*,¹⁷³ but they were also not “complimentary,”¹⁷⁴ or an “additional service.”¹⁷⁵ Moreover, in both of these cases, each defendant shared a common goal: some expectation of a future commercial benefit from their free product.¹⁷⁶ When the Liberator was first released, Defense Distributed did not have a commercial motive.¹⁷⁷ As Cody Wilson stated, “This is about enabling individuals to create their own sovereign space It’s about creating the new order in the crumbling shell of the old order.”¹⁷⁸ These comments suggest some type of political revolution, not monetary gain. Nonetheless, the Third Restatement adds a “catch-all”:

When confronted with a nonsale situation to which the logic of strict products liability applied, historically courts tended to stretch the word “sell” to cover new situations. This Restatement, acknowledging that strict products liability applies to these nonsale methods of distribution, designates them with the phrase “otherwise distributes.” In these areas into which strict products liability is expanding, courts frequently consider public policy in making their decisions.¹⁷⁹

172. *Id.* at 792.

173. *Id.* at 791.

174. *Levondosky v. Marina Assocs.*, 731 F. Supp. 1210, 1212 (D.N.J. 1990).

175. *Perfection Paint & Color Co. v. Konduris*, 258 N.E.2d 681, 688 (Ind. Ct. App. 1970).

176. *McKisson*, 416 S.W.2d. at 792; *Levondosky*, 731 F. Supp. at 1212; Larry Alton, *Online Marketing Insights*, CIO (Apr. 18, 2016, 4:16 AM) (on file with *Rutgers University Law Review*).

177. *See* Greenberg, *supra* note 8.

178. *Id.*

179. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 20 reporters’ note a (AM. LAW INST. 1998). *But see* RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 20(b) (AM. LAW INST. 1998) (“One otherwise distributes a product when, in a *commercial transaction* other than a sale, one provides the product to another either for use or consumption or as a preliminary step leading to ultimate use or consumption. Commercial nonsale product distributors include, but are not limited to, lessors, bailors, and those who provide products to others as a means of promoting either the use or consumption of such products or some other commercial activity.”) (emphasis added). Section 20 specifically states that the nonsale needs to occur in a commercial transaction. *Id.* It would be difficult to argue that a free downloadable file is part of any commercial transaction. It appears that this codified rule is counterintuitive to the Reporter’s Notes, which does not suggest any commercial

Certainly, Defense Distributed has “distributed” this product over the internet. Furthermore, as previously suggested, courts could define the Liberator file as a product for public policy reasons. Barring a significant number of claims solely because the products were downloaded for free seems like it would be counterintuitive for public policy reasons. Thus, it is possible courts would consider Defense Distributed as a distributor in cases where plaintiffs downloaded Liberator files for free.

VI. MANUFACTURING DEFECT

Enforcing laws intended to prevent manufacturing defects embodies one of the main principles of products liability: to act as a deterrent.¹⁸⁰ This concept was first proposed in *Escola v. Coca Cola Bottling Co. of Fresno*, where a waitress was injured when a Coca Cola bottle “exploded” in her hand.¹⁸¹ The majority opinion found that the plaintiff was able to recover under a theory of *res ipsa loquitur*.¹⁸² However, Justice Traynor, in his concurring opinion, stated that the court should have held the defendant liable under a theory of products liability:

In these cases the source of the manufacturer’s liability was his negligence in the manufacturing process or in the inspection of component parts supplied by others. Even if there is *no negligence*, however, public policy demands that responsibility be fixed wherever it will most effectively reduce the hazards to life and health inherent in defective products that reach the market. It is evident that that the manufacturer can anticipate some hazards and guard against the recurrence of others, as the public cannot.¹⁸³

transaction. See RESTATEMENT (THIRD) OF TORTS: PRODUCT LIABILITY § 20 reporter’s note a. (AM. LAW INST. 1998).

180. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. a (AM. LAW INST. 1998) (“On the premise that tort law serves the instrumental function of creating safety incentives, imposing strict liability on manufacturers for harm caused by manufacturing defects encourages greater investment in product safety than does a regime of fault-based liability under which, as a practical matter, sellers may escape their appropriate share of responsibility.”).

181. *Escola v. Coca Cola Bottling Co. of Fresno*, 150 P.2d 436, 437 (Cal. 1944).

182. *Id.* at 440.

183. *Id.* at 440–41 (Traynor, J., concurring) (emphasis added).

In sum, the manufacturer is in the best position to prevent the potential harm that results from the use of its products, and therefore is responsible for any injury that occurs as a result of a defect.¹⁸⁴

Pursuant to the Third Restatement, a product contains a manufacturing defect “when the product departs from its intended design even though all possible care was exercised in the preparation and marketing of the product.”¹⁸⁵ This “departure-from-design” has become the standard definition of a manufacturing defect.¹⁸⁶ There are two methods for a plaintiff to establish this deviation: “comparing the accident-product unit to the manufacturer’s formal design specifications or to the dimensions and other parameters of some otherwise identical product.”¹⁸⁷ On their face, these two analyses will cause significant trouble for any plaintiff pleading a manufacturing defect against Defense Distributed. In case one, the plaintiff would have to establish that the design on the file they received deviates from the master plans for the Liberator.¹⁸⁸ It appears that the case would end here. There doesn’t seem to be much room for error when Defense Distributed “manufactures” and ships the file. It is as simple as copy and paste. In case two, the plaintiff would have to establish that their Liberator file deviated from an otherwise identical Liberator file.¹⁸⁹ Again, although possible, it is unlikely that Defense Distributed would ship a file that differs from the master Liberator file.

The issue here lies with the product itself. This product is not something that comes off a manufacturing line, i.e., a Coca-Cola bottle.¹⁹⁰ In essence, the plaintiff’s argument would be that the design they have received has deviated from the design of the design. Therefore, it would be an improbable scenario that Defense Distributed could be held liable for a manufacturing defect.

184. *Id.* at 441 (“If such products nevertheless find their way into the market it is to the public interest to place the responsibility for whatever injury they may cause upon the manufacturer, who, even if he is not negligent in the manufacture of the product, is responsible for its reaching the market.”).

185. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (AM. LAW INST. 1998).

186. OWEN, *supra* note 51, at 461.

187. *Id.* at 463.

188. *See* McKenzie v. S K Hand Tool Corp., 650 N.E.2d 612, 615 (Ill. App. Ct. 1995) (holding that evidence showing that the product deviated from the original blueprints is sufficient to establish a manufacturing defect).

189. *See* Barker v. Lull Eng’g, 573 P.2d 443, 454 (Cal. 1978) (“In general, a manufacturing or production defect is readily identifiable because a defective product is one that differs from . . . other ostensibly identical units of the same product line.”).

190. *See generally* Escola v. Coca Cola Bottling Co. of Fresno, 150 P.2d 436 (Cal. 1944).

VII. DESIGN DEFECT

The Third Restatement states that the design of a product is defective

when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller or other distributor, or a predecessor in the commercial chain of distribution, and the omission of the alternative design renders the product not reasonably safe.¹⁹¹

This definition adopts the hallmarked “risk-utility test” (cost-benefit analysis) also known as reasonable alternative design.¹⁹² This type of analysis is the quintessential test of tort law.¹⁹³

The Hand Formula is the highlight of every first-year law student’s torts class.¹⁹⁴ In *United States v. Carroll Towing Co.*, the Pennsylvania Railroad Company chartered a barge called the “Anna C” and had stored flour onboard.¹⁹⁵ A tugboat, the “Carroll,” was chartered to “drill out” (move) one of the barges located at the end of the “Public Pier.”¹⁹⁶ In order to do so, the deckhands aboard the Carroll had to remove the lines from Pier 52, where the Anna C was located, and the Public Pier.¹⁹⁷ After the lines were removed, the deckhands were instructed to make sure that the tier on Pier 52 was safely secured.¹⁹⁸ This safety procedure would ensure that the barges docked at Pier 52 would not break free.¹⁹⁹ Soon after, the tier broke, the Anna C drifted away, and the Anna C hit the propeller of a tanker and began to take on water.²⁰⁰ The Carroll had “syphon pumps on board,” but unfortunately the deckhands had no notice as to how bad the damage to the Anna C was.²⁰¹ The bargee, who was supposed to be on board the Anna C, had left the prior evening and did not return.²⁰² If the bargee had been onboard, he would have been able to alert the Carroll

191. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2(b) (AM. LAW INST. 1998).

192. See OWEN, *supra* note 51, at 508–09.

193. See *id.* at 510.

194. It would be a disservice to my legal education to not mention the Hand Formula in a note discussing tort liability.

195. 159 F.2d 169, 170 (2d Cir. 1947).

196. *Id.*

197. *Id.*

198. *Id.* at 171.

199. See *id.*

200. *Id.*

201. *Id.*

202. *Id.*

as to how bad the damage was.²⁰³ As a result of this incident, the Anna C sank and all the flour onboard was lost.²⁰⁴

Judge Learned Hand looked at prior case law regarding accidents that occurred when a bargee was not located on their respective barge.²⁰⁵ He determined that there was “no general rule” that could be applied to these scenarios.²⁰⁶ In turn, he looked at three variables to take into account and devised a formula in order to determine a bargee’s duty if their barge breaks away:

(1) The probability that she will break away; (2) the gravity of the resulting injury, if she does; (3) the burden of adequate precautions. Possibly it serves to bring this notion into relief to state it in algebraic terms: if the probability be called P; the injury, L; and the burden B; liability depends upon whether B is less than L multiplied by P: i.e., whether B [is] less than PL.²⁰⁷

The court then remanded the case in order to apply what has been coined the Hand Formula.²⁰⁸

The Hand Formula was originally used in negligence causes of action.²⁰⁹ However, as Professor David Owen states, the formula has transferred over to design defects, albeit in broader terms, under the reasonable alternative design test.²¹⁰ This cost-benefit analysis examines whether the omission of the reasonable alternative design renders the product unreasonably safe.²¹¹ Consequently, there are several factors

203. *Id.*

204. *Id.*

205. *Id.* at 172–73.

206. *Id.* at 173.

207. *Id.*

208. *Id.* at 174.

209. OWEN, *supra* note 51, at 510.

210. *Id.* at 554 (“The risk-utility balance prescribed in § 2(b) for design defect determinations ordinarily resolves into a negligence-style evaluation of the foreseeable costs and benefits of the manufacturer’s decision to forego an alternative design”); RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. d (AM. LAW INST. 1998) (“Subsection (b) adopts a reasonableness (‘risk-utility balancing’) test as the standard for judging the defectiveness of product designs. More specifically, the test is whether a reasonable alternative design would, at reasonable cost, have reduced the foreseeable risks of harm posed by the product and, if so, whether the omission of the alternative design by the seller or a predecessor in the distributive chain rendered the product not reasonably safe.”).

211. OWEN, *supra* note 51, at 553.

used to determine this reasonableness.²¹² Most importantly, the relevance of the factors will vary on a case-by-case basis.²¹³

Foremost, the Protection of Lawful Commerce in Arms Act (PLCA) explicitly states that firearm manufacturers are subject to strict products liability claims.²¹⁴ Moreover, courts have upheld numerous decisions holding manufacturers liable for a multitude of firearm design defects.

One type of defect for which courts have held firearm manufacturers strictly liable pertained to the weapon's hammer. In *Sturm, Ruger & Co., Inc. v. Day*, the plaintiff had purchased a .41 magnum single-action revolver from the defendant manufacturer.²¹⁵ When the plaintiff was sitting in his pickup truck, he attempted to unload the revolver and dropped it.²¹⁶ As he grabbed the gun it fired, causing serious injuries.²¹⁷ The magnum came with an instruction manual that contained the following warning: "WARNING: This revolver can be fired by excessive pull on the trigger from either the safety notch position . . . or the loading notch position . . ."²¹⁸ In the subsequent complaint, the plaintiff stated that the hammer was in the loading notch position when it discharged.²¹⁹ Despite the warning label, the court held, "Where the most stringent warning does not protect the public, the defect itself must be eliminated

212. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. f (AM. LAW INST. 1998) ("A broad range of factors may be considered in determining whether an alternative design is reasonable and whether its omission renders a product not reasonably safe. The factors include, among others, the magnitude and probability of the foreseeable risks of harm, the instructions and warnings accompanying the product, and the nature and strength of consumer expectations regarding the product, including expectations arising from product portrayal and marketing. . . . The relative advantages and disadvantages . . . may also be considered. Thus, the likely effects of the alternative design on production costs; the effects of the alternative design on product longevity, maintenance, repair, and esthetics; and the range of consumer choice among products are factors that may be taken into account. A plaintiff is not necessarily required to introduce proof on all of these factors; their relevance, and the relevance of other factors, will vary from case to case.").

213. *Id.*

214. 15 U.S.C.A. § 7903(5)(A)(v) (West 2019) ("An action for death, physical injuries or property damage resulting directly from a defect in design or manufacture of the product, when used as intended or in a reasonably foreseeable manner, except that where the discharge of the product was caused by a volitional act that constituted a criminal offense, then such act shall be considered the sole proximate cause of any resulting death, personal injuries or property damage.").

215. *Sturm, Ruger & Co. v. Day*, 594 P.2d 38, 40 (Alaska 1979).

216. *Id.* at 40–41.

217. *Id.* at 41.

218. *Id.*

219. *Id.*

if the manufacturer is to avoid liability.”²²⁰ In sum, the hammer was defectively designed.²²¹

Courts have also held firearm manufacturers liable for design defects of the weapon’s firing pin. In *Fortier v. Olin Corp.*, the plaintiff was carrying a Winchester Model 94.30 caliber rifle when he stumbled and fell to the ground.²²² As the rifle hit the ground, it discharged, shooting the plaintiff in the right foot and his cousin in the left foot.²²³ The expert witness established that the discharge was not the result of trigger pull: “The rifle . . . hit the ground because the bolt was driven forward and the free floating firing pin struck the primer of the cartridge in the chamber.”²²⁴ Moreover, evidence was introduced that proved an alternative design for the rifle was not only considered by the manufacturer but would have been an insignificant cost: “We have roughly estimated the cost of adding an additional safety to the M/94 and are estimating this cost to be between \$1.75 and \$2.50 per rifle for manufacturing”²²⁵ In turn, the court held defendant liable for a design defect in the firearm’s firing pin.²²⁶

Courts have held firearm manufacturers liable for design defects of the weapon’s chamber. In *Endresen v. Scheels Hardware & Sports Shop, Inc.*, the defendant appealed the ruling of a bench trial that found it liable for a design defect.²²⁷ The plaintiff, when driving home from work, stopped to get out of his truck in order to shoot a rabbit he had spotted with his Beretta Model 92F pistol.²²⁸ At the time the pistol contained reloaded ammunition.²²⁹ Luckily for the rabbit, the plaintiff missed.²³⁰ He then decided that he could benefit from some target practice, and took his aggression out by shooting at a nearby fence post.²³¹ On the tenth shot, an overpressured cartridge burst and metal was lodged in the plaintiff’s eye, rendering him legally blind.²³² The expert witness for the

220. *Id.* at 44.

221. *See id.*

222. *Fortier v. Olin Corp.*, 840 F.2d 98, 98 (1st Cir. 1988).

223. *Id.*

224. *Id.* at 102.

225. *Id.* at 104.

226. *Id.* at 105.

227. *Endresen v. Scheels Hardware & Sports Shop, Inc.*, 560 N.W.2d 225, 227 (N.D. 1997).

228. *Id.*

229. *Id.* (“Reloaded ammunition is ammunition that is produced in lower volumes using a hand operated single or multi stage consumer or hobbyist machinery.”); *Remanufactured vs. Reloaded*, GREAT LAKES AMMO, <http://greatlakesammo.com/page16.html> (last visited Mar. 5, 2020) (defining reloaded ammunition).

230. *Endresen*, 560 N.W.2d at 227.

231. *Id.*

232. *Id.*

plaintiff testified that the chamber of the pistol was defectively designed: “Berg testified the design flaw was an insufficiently supported chamber at the bottom of the cartridge in the chamber. According to Berg, other brands of pistols can be, and are, sufficiently supported in that area.”²³³ Using this information, the trial court performed its own risk utility test:

The design of a loading ramp part way into the bullet chamber likely has contributed to the pistol’s reliable functioning. It appears that in designing the loading ramp into the bullet chamber, Berretta may have compromised the safety of persons using remanufactured and reloaded ammunition in order to increase operational reliability. Although there was some dispute about the extent to which a loading ramp has been designed into some of the products of other manufacturers, it can be reasonably concluded that alternative designs are feasible which better support the shell casing. The availability of an alternative design is of significance to the safety of persons using remanufactured ammunition.²³⁴

The court determined “that the benefit of the design of the Model 92F to persons who purchase handguns for self-protection does not outweigh the risk of danger inherent in the design to persons who . . . use the handgun with reloaded ammunition”²³⁵ In turn, the court upheld that trial court’s determination that the Model 92F contained a design defect.²³⁶

These prior cases were decided under the Second Restatement; however, each relied on factors that are relevant in findings of a design defect in the Third Restatement.²³⁷ In *Sturm, Ruger & Co., Inc.*, the court concluded that, regardless of the warning, the inherent defect was sufficient to establish liability.²³⁸ In *Fortier*, the court determined that the costs that would have been required to fix the design defect were trivial and therefore imposed liability.²³⁹ Finally, in *Endresen*, the trial court’s risk-utility analysis examined “the advantages and disadvantages

233. *Id.* at 231.

234. *Id.* at 234–35.

235. *Id.*

236. *Id.*

237. *Fortier v. Olin Corp.*, 840 F.2d 98, 104 (1st Cir. 1988); *Sturm, Ruger & Co., v. Day*, 594 P.2d 38, 44 (Alaska 1979); *Endresen*, 560 N.W.2d at 234–35; RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. f (AM. LAW INST. 1998).

238. *Sturm, Ruger, & Co.*, 594 P.2d at 44.

239. *See Fortier*, 840 F.2d at 104.

of the product as designed,”²⁴⁰ and “the magnitude and probability of the foreseeable risks of harm.”²⁴¹ In turn, defects in the chamber, firing pin, and hammer of the firearm can result in liability.²⁴² This issue leaves potential plaintiffs with at least three options to investigate prior to bringing a suit against Defense Distributed. The question will be which components of the Liberator malfunction and cause injury.

VIII. LACK OF WARNING OR INSTRUCTION

Manufacturers and other sellers must provide warnings²⁴³ and instructions²⁴⁴ regarding the possible dangers associated with their product. In turn, a defendant will be held liable for failure to warn or instruct when

the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions or warnings by the seller or other distributor, or a predecessor in the commercial chain of distribution, and the omission of the instructions or warnings renders the product not reasonably safe.²⁴⁵

There are several incentives for manufacturers to apply adequate warnings and instructions to their products.²⁴⁶ First, companies can avoid liability for design defects by including a warning about the defect.²⁴⁷ This option is significantly more cost-efficient than actually repairing the underlying issue.²⁴⁸ Furthermore, warnings and instructions can shift the cost of decision, and so “[a] consumer who is fully informed of a product’s dangers and how to avoid them may choose to use the product in a particular, safer manner.”²⁴⁹ Regardless of these

240. See *Endresen*, 560 N.W.2d at 234–35; RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. f (AM. LAW INST. 1998).

241. See *Endresen*, 560 N.W.2d at 234–35; RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. f (AM. LAW INST. 1998).

242. See *Fortier*, 840 F.2d at 104; *Sturm, Ruger & Co.*, 594 P.2d at 44; *Endresen*, 560 N.W.2d at 234–35.

243. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. i (AM. LAW INST. 1998) (“Warnings alert users and consumers to the existence and nature of product risks so that they can prevent harm either by appropriate conduct during use or consumption or by choosing not to use or consume.”).

244. *Id.* (“Instructions inform persons how to use and consume products safely.”).

245. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2(c) (AM. LAW INST. 1998).

246. See OWEN, *supra* note 51, at 584–85.

247. *Id.*

248. *Id.* at 584.

249. *Id.* at 585.

incentives, manufacturers continue to be held strictly liable for a lack of warning or instruction defect.

The adequacy of the warning or instruction will determine whether it is reasonable.²⁵⁰ The Third Restatement offers a non-exhaustive list of factors to determine adequacy, including the “content and comprehensibility, intensity of expression, and the characteristics of expected user groups.”²⁵¹ Moreover, adequacy may not require a complete list describing every possible danger or every bit of relevant information.²⁵² Indeed, the quantity of information required operates on a sliding scale depending on the particular group of consumers.²⁵³ Furthermore, the duty to warn and the duty to instruct are independent of each other, and including a warning does not mean that a manufacturer can exclude instructions.²⁵⁴

At a minimum, a plaintiff must provide evidence that an injury was foreseeable in order to prevail in a lack of warning cause of action against Defense Distributed.²⁵⁵ In *Krummel v. Bombardier Corp.*, the plaintiff purchased two Bombardier Sea-Doo GTX watercrafts.²⁵⁶ Before the plaintiff operated the Jet Ski, he read all the instructions manuals and watched a video, none of which “warned him of the potential for his leg to become trapped when the vehicle tipped over.”²⁵⁷ Unfortunately, as the plaintiff was operating the watercraft it began to tip.²⁵⁸ Subsequently, he

250. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. i (AM. LAW INST. 1998) (“Subsection (c) adopts a reasonableness test for judging the adequacy of product instructions and warnings. It thus parallels Subsection (b), which adopts a similar standard for judging the safety of product designs. Although the liability standard is formulated in essentially identical terms in Subsections (b) and (c), the defectiveness concept is more difficult to apply in the warnings context. In evaluating the *adequacy* of product warnings and instructions, courts must be sensitive to many factors.”) (emphasis added).

251. *Id.*

252. *Id.* (“Product warnings and instructions can rarely communicate all potentially relevant information, and the ability of a plaintiff to imagine a hypothetical better warning in the aftermath of an accident does not establish that the warning actually accompanying the product was inadequate.”).

253. *Id.* (“In some contexts, products intended for special categories of users, such as children, may require more vivid and unambiguous warnings. In some cases, excessive detail may detract from the ability of typical users and consumers to focus on the important aspects of the warnings, whereas in others reasonably full disclosure will be necessary to enable informed, efficient choices by product users.”).

254. *Shuras v. Integrated Project Servs., Inc.*, 190 F. Supp. 2d 194, 201 (D. Mass. 2002) (“Instructions on the use of a product do not discharge a manufacturer’s duty to warn.”); OWEN, *supra* note 51, at 597.

255. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2(c) (AM. LAW INST. 1998).

256. *Krummel v. Bombardier Corp.*, 206 F.3d 548, 550 (5th Cir. 2000).

257. *Id.*

258. *Id.*

“buried his left foot into the [left] footwell . . . to brace himself”²⁵⁹ At the same time, the plaintiff’s wife, who was riding on the same watercraft, “wrapped” her arms around him and continued to hold him as she fell off.²⁶⁰ As she fell, the plaintiff moved with her as his left foot remained in the footwell.²⁶¹ This movement caused a significant break in the plaintiff’s tibia and fibula.²⁶² The trial court held that “the watercraft was unreasonably dangerous because Bombardier provided no warnings regarding the risk of foot entrapment.”²⁶³ However, the court of appeals reversed, holding that the plaintiff did not provide any evidence supporting the foreseeability of “entrapment.”²⁶⁴ Specifically, the court, citing the Third Restatement, stated that the plaintiff “must present evidence, via statistics or other means, to illustrate that there is a possibility the product may cause injury.”²⁶⁵

There is ample evidence that the Liberator explodes when fired.²⁶⁶ There is no doubt that it is reasonably foreseeable that an injury can result from such an explosion. Therefore, unless Defense Distributed offers any warning that this outcome could occur, it is possible that they could be held strictly liable to the plaintiff.

In addition, Defense Distributed may be required to provide warnings to consumers regarding proper assembly of the Liberator. In *Wilson v. Thompson/Center Arms Co.*, the plaintiff was using a Black Diamond muzzleloader rifle manufactured by the defendant company.²⁶⁷ The rifle backfired and discharged, and “several metal projectiles, which struck Wilson’s eye area, caus[ed] severe injuries.”²⁶⁸ Prior to the accident, the plaintiff had placed a scope on the rifle, disassembled the rifle to clean it, and reassembled it using a boxend wrench that was

259. *Id.*

260. *Id.*

261. *Id.*

262. *Id.*

263. *Id.* at 551.

264. *Id.* at 552.

265. *Id.*

266. Australia Videos, *NSW Police Test The Liberator 3D Printed Gun*, YOUTUBE (June 3, 2013), <https://www.youtube.com/watch?v=7xj1qMw8FYE>; Destructive Engineer, *3D Printed Liberator Test Fire | .25ACP | Legal 3D Printed Firearm*, YOUTUBE (Aug. 4, 2018), <https://www.youtube.com/watch?v=PDkYYtauq08>; Irasdeadman, *Liberator 3D Printed Gun Exploding Test Fire*, YOUTUBE (Aug. 19, 2018), <https://www.youtube.com/watch?v=jnQfxy64ujo>; Legybit, *Liberator Shooting Test*, YOUTUBE (Apr. 11, 2017), <https://www.youtube.com/watch?v=zrB5OKIBd9Q>; Tri-Boro Technology Initiative, *Tri-Boro Technology Initiative—3D Printed Gun Test*, YOUTUBE (May 15, 2014), <https://www.youtube.com/watch?v=YuJVbpqnH7Q>.

267. *Wilson v. Thompson/Center Arms Co.*, No. 05-6493, 2007 WL 2809991, at *1 (E.D. La. Sept. 25, 2007).

268. *Id.*

provided with the rifle.²⁶⁹ The plaintiff alleged that the use of the boxend wrench made it more difficult for him “to achieve proper alignment of the breech plug threads with the barrel breech end threads, a condition referred to as cross-threading.”²⁷⁰ As a result of cross threading, the plaintiff believed that the breech plug was properly inserted, although it was not.²⁷¹ The owner’s manual specifically stated, “T/C’s boxend wrench can only be used if your rifle has not been scoped If you have scoped your rifle, it will be necessary to remove the strike and use the Deluxe In-Line Breech Plug wrench which is sold as an accessory.”²⁷² In turn, the court held that this language was “not ‘properly worded to signify the intensity of the inherent danger’ associated with the use of the boxend wrench on a scope rifle, nor does it any way ‘convey to the consumer that injury or damage can result’ from using the boxend wrench on a scope rifle.”²⁷³ As a result, the court rejected the defendant’s motion for summary judgment and issued a trial on the merits.²⁷⁴

Defense Distributed provides an instruction manual for the assembly of the Liberator.²⁷⁵ As previously stated, there are many variables in the 3D printing process.²⁷⁶ The question is: Has Defense Distributed considered all these variables? Have they provided warnings that state using certain plastics, temperatures, and printing speeds can result in catastrophic failures?²⁷⁷ If not, then based on the facts of *Wilson v. Thompson/Center Arms Co.*, Defense Distributed may be held strictly liable.

IX. MALFUNCTION DOCTRINE

In certain instances, plaintiffs can infer negligence without direct evidence pursuant to the doctrine of *res ipsa loquitor*.²⁷⁸ Correspondingly,

269. *Id.*

270. *Id.*

271. *Id.*

272. *Id.* at *6.

273. *Id.*

274. *Id.* at *8.

275. Although I do not have the complete instruction manual, I have found a website that at least confirms its existence, and provides a brief abstract. See John Biggs, *What You Need To Know About the Liberator 3D-Printed Pistol*, TECHCRUNCH (May 6, 2013, 11:12 AM), <https://techcrunch.com/2013/05/06/what-you-need-to-know-about-the-liberator-3d-printed-pistol/>.

276. 3D Insider, *supra* note 34.

277. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 cmt. i (AM. LAW INST. 1998).

278. RESTATEMENT (SECOND) OF TORTS § 328D (AM. LAW INST. 1965) (“(1) It may be inferred that harm suffered by the plaintiff is caused by negligence of the defendant when; (a) the event is of a kind which ordinarily does not occur in the absence of negligence; (b) other responsible causes, including the conduct of the plaintiff and third persons, are

courts have applied a similar theory, the malfunction doctrine, in products liability suits:

It may be inferred that the harm sustained by the plaintiff was caused by a product defect existing at the time of sale or distribution, without proof of a specific defect, when the incident that harmed the plaintiff: (a) was of a kind that ordinarily occurs as a result of product defect; and (b) was not, in the particular case, solely the result of causes other than product defect existing at the time of sale or distribution.²⁷⁹

Typically, this doctrine is used to infer a manufacturing defect.²⁸⁰ As previously stated, in order for Defense Distributed to be held liable for a manufacturing defect, the design itself must have deviated from the master design.²⁸¹ Consequently, it appears that this scenario is still too improbable for a jury to infer it.

The malfunction doctrine also allows design defects to be inferred.²⁸² In *Rudd v. General Motors Corp.*, the plaintiff suffered serious injuries when the fan blade of his GM truck struck his head, neck, and left arm while he was “advancing the truck’s timing.”²⁸³ The plaintiff’s expert witness could not offer any direct evidence of a defect in the fan.²⁸⁴ Instead, the expert offered several possibilities of what could have caused the defect including consideration that it was caused by GM’s decision to design the fan with a low grade metal alloy.²⁸⁵ The court agreed and held that a reasonable jury could infer from the expert witness’s testimony that GM’s fan was defective.²⁸⁶

sufficiently eliminated by the evidence; and (c) the indicated negligence is within the scope of the defendant’s duty to the plaintiff. (2) It is the function of the court to determine whether the inference may reasonably be drawn by the jury, or whether it must necessarily be drawn. (3) It is the function of the jury to determine whether the inference is to be drawn in any case where different conclusions may reasonably be reached.”)

279. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 3 (AM. LAW INST. 1998); OWEN, *supra* note 51, at 465–67.

280. OWEN, *supra* note 51, at 464.

281. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (AM. LAW INST. 1998).

282. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 3 cmt. b (AM. LAW INST. 1998) (“Although the rules in this Section, for the reasons just stated, most often apply to manufacturing defects, occasionally a product design causes the product to malfunction in a manner identical to that which would ordinarily be caused by a manufacturing defect.”).

283. *Rudd v. Gen. Motors Corp.*, 127 F. Supp. 2d 1330, 1332 (M.D. Ala. 2001).

284. *See id.* at 1340–42.

285. *Id.* at 1340 (“Edmondson then rehearsed a list of the reasons a metal-fatigue fracture might occur . . . the nature of the material itself, if the metal were composed of high-strength alloys, as is not the case with the accident fan . . .”).

286. *Id.* at 1346.

There is one glaring issue that defeats a plaintiff's attempt to use the malfunction doctrine to infer a design defect in a products liability suit against Defense Distributed. Specifically, there is far too much doubt to infer that the harm was solely the result of a product defect at the time of sale or distribution.²⁸⁷ The Liberator is manufactured by the consumer and there are too many variables in the printing process to solely attribute the harm to a design defect without direct evidence. The consumer could have used improperly stored thermoplastic,²⁸⁸ assembled the firearm incorrectly, or the printer itself may have had a defect that caused the Liberator to fail. Therefore, a plaintiff would not be able to succeed in a products liability suit against Defense Distributed under a malfunction doctrine theory.

X. CONCLUSION

A new era of weapons manufacturing has dawned. Technology has advanced to the point where a consumer can point, click, and print their own firearm.²⁸⁹ Regardless of the constitutional concerns, the Liberator is here, and consumers are downloading files. The litigation will be complex, but the purpose is legitimate: If Defense Distributed can continue its production, it should be held to the same standards as every firearm manufacturer.²⁹⁰ Either design a safe, usable, and effective firearm, or be held strictly liable in products liability suits.²⁹¹

287. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 3 (AM. LAW INST. 1998).

288. 3D Insider, *supra* note 34 (“Thermoplastics such as ABS and PLA work best if, before being used . . . , they are sealed to prevent them from absorbing moisture from the air . . . [E]xtended exposure to the atmosphere can have detrimental effects on the quality of the material as well as the end product.”).

289. See Greenberg, *supra* note 8.

290. See 15 U.S.C.A. § 7903(5)(A)(v) (West 2015).

291. See *id.*