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Contract and Commercial Law Challenges with AI Products and Services

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Abstract The development of AI promises to increase innovation and facilitate advancements in multiple fields. Yet, as companies rush products to market in a race for dominance in this highly competitive field, the potential for widespread social harm is foreseeable. In the absence of legislation, commercial law and tort law provide standards and remedies governing new products; however, companies may alter these default laws by contract. This chapter argues that, until there are industry specific regulations governing AI products and services, adhesive contracts that alter the default rules of tort and commercial law should not be enforceable.

INTRODUCTION

Policymakers and lawmakers are wrestling with how to allocate liability for harm caused by consumer products that rely upon artificial intelligence, such as autonomous driving cars. For example, who should be liable if the software or product fails to work as intended and injures someone?[1] This chapter focuses on some of the liability issues arising under product liability and commercial law.[2]

In the absence of specific legislation addressing AI in consumer products, the issue of liability will depend upon the characterization of these products under the law and the terms used to govern their use. If characterized as goods, they would be subject to Article 2 of the UCC and product liability laws.[3] If characterized as

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1 *E.g.*, Amy L. Stein, *Assuming the Risks of Artificial Intelligence*, 102 B.U. L. Rev. 979, 1035 (2022) (encouraging courts to take an objective approach to such injuries that evolves in tandem with technologies as they emerge).

2 An AI program typically learns through the copying of text and images created by others; thus, other significant legal issues involve copyright and privacy laws arising from the way an AI program is created. Michael M. Grynbaum & Ryan Mac, *The Times Sues OpenAI and Microsoft over A.I. Use of Copyrighted Work*, N.Y. Times, (Dec. 27, 2023), www.nytimes.com/2023/12/27/business/media/new-york-times-open-ai-microsoft-lawsuit.html [https://perma.cc/H4H8-J5Y8].

3 U.C.C. § 2–102 (Am. L. Inst. & Unif. L. Comm'n 2018).

a service, they would not be.[4] Instead, the provider's terms of service (TOS) would likely apply. Tied to the characterization issue is whether an AI product is licensed or sold. If the product is licensed, then the license agreement governs the transaction. If sold, the default rules of commercial law govern the transaction.

The characterization of AI offerings is likely to have profound societal and economic consequences. The UCC offers model legislation[5] drafted and approved by a group of legal experts representing a variety of interests.[6] All fifty states and the District of Columbia have adopted much of it.[7] The UCC is balanced, with consideration for both buyers and sellers in a range of situations. The UCC contains special provisions that consider the bargaining imbalance between businesses and consumers. By contrast, unilaterally drafted, nonnegotiated form contracts are typically one-sided in favor of the drafting business. These contracts often contain clauses that allocate risks to the consumer and rights to the business.

New business models and new technologies exist in a legal gray zone. When new technology and business models develop faster than lawmakers can regulate them, companies will often seek to mitigate the risks of running afoul of the law by laying what we refer to as "the contracts trap," which is the ensnaring of users in a thicket of unilaterally drafted terms, usually referred to as "Terms of Service" or "Terms of Use." For example, when it was unclear whether online data collection and tracking were permissible, companies such as Facebook and Google mitigated their risks by requiring users to agree to TOS as a condition of use. They were able to successfully fend off or delay lawsuits by pointing to their TOS and claiming that users consented to them.

Society is entering another new chapter in technology with the deployment of AI. Many argue that this deployment is premature as much of the technology is not yet ready to be released to the public, and its use is unregulated.[8] Companies, however, seeking to establish their position as leaders in AI, are pushing out products that are still in beta form so that consumers can help them refine their technologies.[9] Some of them may be exaggerating what their AI-powered products can do in order

4 Courts may still, however, look to the UCC for guidance. *E.g.*, J.L. Teel Co., Inc. v. Hous. United Sales, Inc., 491 So. 2d 851, 857 (1986).

5 *Uniform Commercial Code*, Am. L. Inst. & Unif. L. Comm'n, www.uniformlaws.org/acts/ucc (last visited Aug. 14, 2023) [https://perma.cc/8NSQ-NM8G].

6 *About Us*, Am. L. Inst. & Unif. L. Comm'n, www.uniformlaws.org/aboutulc/overview (last visited Aug. 14, 2023) [https://perma.cc/G8L5-EA86].

7 *Uniform Commercial Code*, https://guides.ll.georgetown.edu/commerciallaw/ucc (last visited Aug. 14, 2023) [https://perma.cc/9X2Z-AEXX]. Some states have declined to adopt certain provisions. *See id.*

8 *E.g.*, Christopher Mims, *For Chat-Based AI, We Are All Once Again Tech Companies' Guinea Pigs*, Wall St. J. (Feb. 25, 2023), www.wsj.com/articles/chat-gpt-open-ai-we-are-tech-guinea-pigs-647d827b?mod=wsjhp_columnists_pos1 [https://perma.cc/3NY8-97EN] (noting that some AI researchers believe that releasing AI to the public before it has been properly tested is "downright dangerous.").

9 *Id.*

to burnish their reputations as leaders in the field.[10] The situation is ripe for societal harm and for the use of contracts to limit the liability of those who should be responsible for it. The issue of liability impacts cost allocation for harms and who should pay for injuries, but it is also likely to impact the *likelihood* of such harms as it may affect the degree of care that companies use in creating and distributing their products.

In Section 14.1, we explain what we mean by the term "AI." In Sections 14.2 and 14.3, we provide an overview of liability issues that arise from the use of AI in consumer products. Central to this discussion is whether a given product would be characterized as a "good" and subject to the provisions of Article 2 of the UCC, or a "service." In Section 14.4, we illustrate the contracts trap and the way it undermines consumer protections by focusing on the TOS of ChatGPT, a popular text-generating tool. In Section 14.5, we recommend restrictions on companies' ability to limit liability for harm caused by AI products.

14.1 WHAT IS GENERATIVE AI?

Artificial intelligence refers broadly to computational techniques that either use human-style thinking or try to solve tasks that humans do well. The field of artificial intelligence started in the 1950s, shortly after the development of the first digital computers. Generative AI, as the name suggests, focuses on content creation, as opposed to classification such as recognizing spam or faces.

While the questions raised by generative AI were asked even in the early days of the field, only in the last decade have technologies developed that can generate images and text at a near human level. While a full technical description of how generative AI works is beyond the scope of this article, this section will give a high-level overview that will aid in understanding the relevant legal issues.

14.1.1 *Logic versus Data*

Most of the early work in artificial intelligence focused on using logical approaches to tackle human tasks, often called symbolic AI. However, over the last few decades, tremendous growth has taken place in machine learning – training computational models from data. Logical training has had its successes, such as the first chess program to beat the best human players,[11] but advances in computing power, machine learning models and a wealth of data collected through the internet, sensors and

[10] *See* Michael Atleson, *Keep Your AI Claims in Check*, Fed. Trade Comm'n, www.ftc.gov/business-guidance/blog/2023/02/keep-your-ai-claims-check [https://perma.cc/7UEE-5K5J].

[11] Samuel Gibbs, *AlphaZero AI Beats Champion Chess Program after Teaching Itself in Four Hours*, Guardian (Dec. 7, 2017), www.theguardian.com/technology/2017/dec/07/alphazero-google-deepmind-ai-beats-champion-program-teaching-itself-to-play-four-hours [https://perma.cc/L9K3-NFY6].

simulations, have vaulted machine learning ahead of logical approaches for nearly all AI applications. Symbolic AI, still used for simpler tasks, is now often referred to by its nickname GOFAI or good old-fashioned artificial intelligence.[12]

To understand the difference, consider these two approaches for a common AI tool: language translation.

Suppose you want to write a program that translates English into French. To use a logical approach, first, we can start with an English–French dictionary whose first versions go back more than four centuries.[13] Simply replacing English words with their French equivalents does not work well, as the languages have different grammar structures. You can use parse trees to understand the grammar and reorder the words to match the grammar. Unlike English, every French noun is either masculine or feminine, so you must adjust the articles and verbs. Even then words in English and French do not have an exact one-to-one correspondence and depend heavily on context. There are also various idioms of each language. Symbolic translators could, at best, give a Francophile an idea of the original English text, but it would not look anything close to a legitimate French sentence.

A machine learning approach takes a very different approach. Instead of building from dictionaries and grammar rules, the algorithm takes English text passages and professional and amateur French translations. For languages such as English and French, we have no shortage of such material. We then train a machine learning model from these passages and then use the trained model to translate future English text. These models are based on neural nets, basically, a model very loosely based on how human brains work.

Of course, it was not that simple. The initial machine learning models were not complex enough to learn language translation. Deep learning models, with several layers of neurons and millions of parameters, could get closer but the computing power could not handle those models until around 2010.[14] Even then, those models struggled with distinguishing the ordering of words, which is critical to how language is processed. Recurrent neural networks tied close words together, which made some passable translations, but the true breakthrough came with the development of the transformer model in 2017[15] that built word position into the learning process leading to translation at a near-human level. The best machine learning algorithms for language translation do not use any human developed dictionaries or grammar at all and learn solely from examples, and even generalize to translating between rarely used languages.[16]

[12] John Haugeland, Artificial Intelligence: The Very Idea (MIT Press 1985).

[13] Randle Cotgrave, A Dictionarie of the French and English Tongues (Adam Islip 1611).

[14] *See* Jürgen Schmidhuber, *Deep Learning in Neural Networks: An Overview*, 61 Neural Networks 85, 94 (2015).

[15] Ashish Vaswani et al., *Attention Is All You Need*, 31 Neural Info. Processing Sys. 2 (2017).

[16] Ankur Bapna, et al.Building Machine Translation Systems for the Next Thousand Languages 4 (2022), https://arxiv.org/pdf/2205.03983.pdf [https://perma.cc/S83T-PTCC].

14.1.2 *Generative AI*

With the development of transformers, one could go beyond simply translating or classifying words and generate text by training these transformer models on a very large corpus of text data. Programs such as ChatGPT not only generate text from prompts but can hold a conversation with a user. These programs are not designed with a specific task or industry in mind but are trained for general purposes. ChatGPT's newest model GPT-4[17] has over a trillion parameters to code for responses in all fields. Similar models can generate pictures, computer code, music, and video from simple text prompts.

These programs still have limitations. AI-generated art has problems with details like human hands, and GPT-4 does not currently reason or solve mathematical problems well and often makes up facts. Nevertheless, the scope and breadth of ChatGPT has led to the quickest adoption of any technology, with over 100 million users in the first few months after its public release in late November 2022.[18]

None of these tools work without initial data, and lots of it. Where that data comes from, who created it, and who owns it, can make it difficult to understand who owns the intellectual property of the output of a generative AI system. If a trained model outputs a picture in the style of a living artist, does that artist deserve royalty compensation?

Because human-generated data can have inaccuracies and biases, a generative model trained on that data could have similar biases and misinformation. Another challenge is alignment: Generative AI models create texts that look like real answers, but they may make up information to create those realistic-looking outputs. Companies and researchers are searching for ways to address these problems.

14.2 THE RISKS OF AI AND THE REGULATORY LANDSCAPE

The large advances in the area have forced society to grapple with the capabilities and the ethical and legal challenges of the new AI models. Every industry is discussing how AI will affect their products and their workforce. AI experts debate the consequences of this technology, including the ability of AI to create disinformation, eliminate jobs and, with some small probability, destroy human civilization.[19] Other experts debate

[17] OpenAI, GPT-4 Technical Report (2023), https://arxiv.org/pdf/2303.08774.pdf [https://perma.cc/9X7J-78M4].

[18] Krystal Hu, *ChatGPT Sets Record for Fastest-Growing User Base – Analyst Note*, Reuters (Feb. 2, 2023), www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/ [https://perma.cc/CX3D-DNKQ].

[19] *E.g.*, TED, *The Urgent Risks of Runaway AI – and What to Do about Them | Gary Marcus | TED*, YouTube (May 12, 2023), www.youtube.com/watch?v=JL5OFXeXenA [https://perma.cc/LL2Y – GQ9D].

these points.[20] This active discussion will continue as the technologies quickly evolve and may lead to various regulations to control their reach. In a report to Congress, the Federal Trade Commission warned of the potential wide-ranging harms from AI, including the proliferation of scams, deep fakes, and the exploitation of individuals through manipulative websites or mobile interfaces.[21] This article focuses on U.S. law, but regulatory agencies in the EU,[22] China,[23] and other countries[24] also recognize the need for regulation. Politicians and lawmakers are not the only ones nervous about AI; technologists, too, are concerned about the potential for societal harm.[25] In an open letter, thousands of technologists, including Elon Musk, Steve Wozniak, and Yoshua Bengio, called on AI labs to immediately pause for six months the training of AI systems "more powerful than GPT-4" to allow governments and policymakers to implement a set of "shared safety protocols."[26] In response to the Biden administration's expressions of concern about AI, the largest technology companies have agreed to certain safeguards; however, their commitments are voluntary and without enforcement mechanisms.[27] In October 2023, President Biden issued an executive order outlining standards for AI that will entail deploying federal agencies to monitor the technology.[28] The effect of the executive order remains to be seen.

[20] Pedro Domingos, *No, the AI Sky Isn't Falling*, Medium (Apr.19,2023), https://pedromdd.medium.com/no-the-ai-sky-isnt-falling-cf35ca291369 [https://perma.cc/K6ZP-L9WK].

[21] Michael Atleson, Combatting Online Harms Through Innovation (2016), www.ftc.gov/system/files/ftc_gov/pdf/Combatting%20Online%20Harms%20Through%20Innovation%3B%20Federal%20Trade%20Commission%20Report%20to%20Congress.pdf [https://perma.cc/7MWY-G7VN].

[22] Spencer Feingold, *The European Union's Artificial Intelligence Act – Explained*, World Econ. F. (June 30, 2023), www.weforum.org/agenda/2023/06/european-union-ai-act-explained/ [https://perma.cc/U83E-6TJ9].

[23] Josh Ye, *China Proposes Measures to Manage Generative AI Services*, Reuters (Apr. 10, 2023), www.reuters.com/technology/china-releases-draft-measures-managing-generative-artificial-intelligence-2023-04-11/ [https://perma.cc/7RNV-V9Y2].

[24] Jack Clark & Ray Perrault, Artificial Intelligence Index Report 269 (2023), https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI_AI-Index-Report_2023.pdf [https://perma.cc/6EU7-BPTK] (finding that more countries passed AI-related legislation in 2022 than in previous years).

[25] Deepa Seetharaman, *Elon Musk, Other AI Experts Call for Pause in Technology's Development*, Wall St. J., (Mar. 29, 2023), www.wsj.com/articles/elon-musk-other-ai-bigwigs-call-for-pause-in-technologys-development-56327f [https://perma.cc/3DXN-6KRX] (noting that several tech executives and top artificial intelligence researchers are "calling for a pause in the breakneck development of powerful new AI tools"); *see also* Ezra Klein, *The Surprising Thing A.I. Engineers Will Tell You if You Let Them*, N.Y. Times (Apr. 16, 2023), www.nytimes.com/2023/04/16/opinion/this-is-too-important-to-leave-to-microsoft-google-and-facebook.html [https://perma.cc/8C7K-66QA] ("In a young industry flooded with hype and money, person after person tells me that they are desperate to be regulated, even if it slows them down.").

[26] Future of Life Inst., *Pause Giant AI Experiments: An Open Letter* (2023), https://futureoflife.org/wp-content/uploads/2023/05/FLI_Pause-Giant-AI-Experiments_An-Open-Letter.pdf [https://perma.cc/65N2-TNTE].

[27] Sabrina Siddiqui & Deepa Seetharaman, *White House Says Amazon, Google, Meta, Microsoft Agree to AI Safeguards*, Wall St. J. (July 21, 2023), www.wsj.com/articles/white-house-says-amazon-google-meta-microsoft-agree-to-ai-safeguards-eabe3680 [https://perma.cc/58PA-QKN3].

[28] Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, Exec. Order No. 14110, 88 Fed. Reg. 75191 (Oct. 30, 2023).

14.3 A BRIEF OVERVIEW OF PRODUCT LIABILITY AND OTHER COMMERCIAL LAW CLAIMS

AI technologies will enter the marketplace in a variety of ways. Liability for injuries caused by them will depend upon how they are used, how they are created, and how they are conceptualized under the law. There are three primary complications confronting commercial law and the treatment of AI technology in a tangible product ("AI product"). The first is whether the AI product is a product at all. The second is whether an AI product is a "good" or a "service." The third is whether the AI product is considered licensed or sold and, relatedly, whether it is governed by contractual terms.

14.3.1 *Product Liability*

Product liability laws protect consumers from defective products. There are three types of product defects: manufacturing defects, design defects, and information defects. Manufacturing defects are physical departures from the intended design of a product, even if the manufacturer exercised care in the preparation and marketing of the product.[29] Design defects are inherent defects in a product's design. Determining whether a design was defective involves considering several factors, including whether there were reasonable design alternatives, the risk of foreseeable harm, the potential and seriousness of harm, the cost of adopting alternative designs, and the likelihood that alternative designs would have reduced injury.[30] Information defects are inadequate warnings or instructions accompanying the product that render it not reasonably safe.[31]

There are several hurdles to using product liability law to protect consumers from defective AI products. A "product" is typically defined as "tangible personal property" and "sufficiently analogous items" and excludes services.[32] Where AI is bundled into a tangible good, such as a toy or a car, there is a strong case that it will be, and should be, considered a product for product liability purposes. With this type of product, AI is a feature or an ancillary component rather than the primary functionality. If the feature fails, the product is defective because one of its components did not work reasonably or as expected.

The argument for product categorization may be more challenging for AI embodied in software form or accessed online due to its intangibility. For example, recommendation algorithms and chat boxes are not (currently) offered as part of a tangible product but as part of a service offering (e.g., Netflix streaming and Bing search).

[29] Restatement (Third) Torts: Prod. Liability § 2(a) (Am. L. Inst. 1998).
[30] *Id.* § 2(b).
[31] *Id.* § 2(c).
[32] *Id.* §19.

We believe, however, that tangibility should not be the litmus test for product categorization for the purposes of product liability. The tangibility requirement made sense in an era where consumer software and mass consumer products with software components were rare. It does not make sense today when software is sold to consumers in stores and online. Furthermore, consumer products routinely incorporate intangible components, such as software, or intangible features that require interaction with a website, such as for updates or to change product settings. It may be difficult to separate the AI functionality from the tangible good itself. For example, do consumers purchase autonomous cars because they want a car or because they want a car with AI functionality? Excluding intangible products from product liability laws would leave consumers vulnerable to the very harms that these laws were intended to address.

14.3.2 *UCC Applicability*

Article 2 of the UCC governs the sales of goods and sets forth certain special provisions for buyers. For example, it states that the seller creates express warranties when it makes factual statements or promises about a product, or when it sends out a sample or model, which becomes part of the basis of the bargain.[33] The buyer need not show any particular reliance on the seller's statements because the UCC treats the seller's factual affirmations as part of the description of the goods.[34] A company's public statements and advertisements may create an express warranty.[35] The UCC also imposes implied warranties. The implied warranty of merchantability applies where the seller is a merchant[36] and requires that the goods sold are of average quality, fit for the ordinary purposes for goods of that kind, and conform to the promise or affirmations of fact made on the container or label, if any.[37] The implied warranty of fitness for a particular purpose applies where the seller knows or should know that the buyer plans to use the product for a particular purpose and knows or should know that the buyer will rely upon the seller's skill and judgment.[38]

The UCC permits warranty disclaimers provided they meet certain requirements. The disclaimer must be conspicuous so that a "reasonable person" would

[33] U.C.C. § 2–313 (Am. L. Inst. & Unif. L. Comm'n 2018).

[34] *Id.* cmt. 3.

[35] Rosales v. FitFlop USA, LLC, 882 F. Supp. 2d 1168, 1178 (S.D. Cal. 2012) ("Product advertisements, brochures, or packaging can serve to create part of an express warranty."); Goldemberg v. Johnson & Johnson Consumer Cos., Inc., 8 F. Supp. 3d 467 (S.D.N.Y., 2014) (stating that an "express warranty may include specific representations made by a manufacturer in its sales brochures or advertisements regarding a product upon which a purchaser relies."(citing Randy Knitwear, Inc. v. Am. Cyanamid Co., 11 N.Y.2d 5, 14 (1962))).

[36] A merchant is one who deals "in goods of the kind." U.C.C. § 2–104 (Am. L. Inst. & Unif. L. Comm'n 2018).

[37] *Id.* § 2–314.

[38] *Id.* § 2–315.

have noticed it, considering the relative sophistication of the parties.[39] Factors relevant to conspicuousness include the appearance of the disclaimer, especially in relation to other wording, the location of the disclaimer within the document, such as whether it was on the same page or on the reverse of the document, and the disclaiming language itself, including the use of words such as "merchantability," "as is," or "with all faults."[40] A disclaimer of the implied warranty of fitness for a particular purpose must be in writing, conspicuous, and contain disclaiming language that indicate there are "no warranties which extend beyond the description on the face hereof," or that the product is provided "as is" or "with all faults" clause.[41]

Notably, sellers may not disclaim *express* warranties. The parol evidence rule may, however, bar admission of oral statements if the agreement contains a statement that no express warranties were made. Thus, a buyer may have a hard time proving the seller made an express oral statement. A merger clause and a "no-warranty" clause together may effectively work to exclude an express warranty.[42]

In addition to the UCC, a federal law, the Magnuson–Moss Warranty Act, restricts a supplier's ability to modify or disclaim warranties.[43] State law such as California's Song-Beverly Act[44] may also limit or prohibit warranty disclaimers beyond what the UCC requires.[45] Courts often strictly construe disclaimers or modifications of

[39] The Uniform Commercial Code states that conspicuous means, with reference to a term, "so written, displayed, or presented that a reasonable person against which it is to operate ought to have noticed it. Whether a term is "conspicuous" or not is a decision of the court. Conspicuous terms include the following: (A) a heading in capitals equal to or greater in size than the surrounding text, or in contrasting type, font, or color to the surrounding text of the same or lesser size; and (B) language in the body of a record or display in larger type than the surrounding text, or in contrasting type, font, or color to the surrounding text of the same size, or set off from surrounding text of the same size by symbols or other marks that call attention to the language." *Id.* § 1–201.

[40] *Implied Warranty*, Legal Info. Inst., www.law.cornell.edu/wex/implied_warranty (last visited Aug. 15, 2023) [https://perma.cc/TEN2-RC5J].

[41] U.C.C. §2–316(2)–(3) (Am. L. Inst. & Unif. L. Comm'n 2018).

[42] Carrigg v. General R.V. Ctr., Inc., 421 F. Supp. 3d 480, 491 (E.D. Mich. 2019) (finding that an integration clause in a written contract precluded suing seller under a theory of violation of express warranties not contained in the agreement); Hoffman v. Daimler Trucks N. Am., LLC, 940 F. Supp. 2d 347, 355 (W.D. VA 2013) (granting motion to dismiss claim for breach of express warranties "(b)ecause any oral representation…that could become the basis for an express warranty claim was disclaimed by the merger clause").

[43] 15 U.S.C. § 2300 et. seq. (2018).

[44] Cal. Civ. Code § 1790 et. seq. (West 2022).

[45] For instance, "(a) No sale of goods, governed by the provisions of this chapter, on an "as is" or "with all faults" basis, shall be effective to disclaim the implied warranty of merchantability or, where applicable, the implied warranty of fitness, unless a conspicuous writing is attached to the goods which clearly informs the buyer, prior to the sale, in simple and concise language of each of the following:

(1) The goods are being sold on an "as is" or "with all faults" basis.
(2) The entire risk as to the quality and performance of the goods is with the buyer.
(3) Should the goods prove defective following their purchase, the buyer and not the manufacturer, distributor, or retailer assumes the entire cost of all necessary servicing or repair.

(b) In the event of sale of consumer goods by means of a mail order catalog, the catalog offering such goods shall contain the required writing as to each item so offered in lieu of the requirement of notification prior to the sale." *See id.* § 1792.4 (1971).

warranties against the seller, especially when they affect consumers.[46] Furthermore, disclaimers of implied warranties must be made available to a consumer prior to the sale of the product to bind the consumer.[47]

The protections provided to buyers under the UCC and other laws generally apply only to products or "goods." The UCC defines goods as "all things (including specially manufactured goods) which are movable at the time of identification to the contract for sale."[48] Under this definition, tangible AI products would qualify as goods, but intangible standalone AI software and systems would not; however, the line distinguishing the two is fuzzy and is bound to become increasingly more so. An autonomous vehicle or robot is clearly a tangible product meeting the definition of "good," but what about software that assists a doctor with a health diagnosis? Even with non-AI products, courts have struggled with "hybrid transactions" that involve the provision of both products and services. Does the installation of a carpet involve the sale of a good or a service?[49] What about a hairdresser using a permanent wave product on a client?[50]

Most courts employ the "predominant purpose" test in hybrid transactions, applying Article 2 if the predominant purpose of the transaction was for goods rather than for services.[51] The 2022 amendments to the UCC codify a test that applies Article 2 to hybrid transactions where sale-of-goods aspects predominate.[52] If the sale-of-goods aspects do not predominate, then only the provisions of Article 2 that "relate primarily to the sale-of-goods aspects of the transaction apply."[53]

A hybrid transaction involving AI is likely to be complex and it may be difficult to ascertain the predominant purpose or the predominant aspects of the transaction. Even where the service aspects of the transaction predominate or where the AI product is intangible, the UCC may still apply by analogy. Courts have often looked to the UCC to provide guidance in appropriate situations even where a sale of goods was not involved, such as with leases.[54] As one court stated: "We would default in

[46] Clark v. LG Elecs., U.S.A., No. 13–cv–485 JM (JMA), 2013 WL 5816410, at *12 (S.D. Cal. Oct. 29, 2013).

[47] *Id.*

[48] U.C.C. § 2–105(1) (Am. L. Inst. & Unif. L. Comm'n 2018).

[49] Pittsley v. Houser, 125 Idaho 820 (1994) (applying predominant factor test in a case involving installation of carpet).

[50] *See* Newmark v. Gimbel's Inc., 258 A.2d 697 (N.J. 1969) (finding that implied warranty of fitness of products existed to transaction where hairdresser used product in giving a permanent wave).

[51] *See* Vermillion Bank v. Tennis Sanitation, LLC, 969 N.W. 2d 610 (Minn. 2022) (finding that hybrid contracts involving goods and non-goods should be interpreted based on the predominant purpose of the contract).

[52] U.C.C. §2–102 (2) (Am. L. Inst. & Unif. L. Comm'n 2022).

[53] *Id.*

[54] *E.g.*, J. L. Teel Co., Inc., 491 So. 2d 851, 857 (1986) ("We regard it our responsibility that Article 2 of the UCC…furnish the rules of decision in all cases functionally analogous to cases within the clear coverage of Article 2"); Judy Woods, Indiana Practice Series: Uniform Commercial Code § 26-1-2-102 (2017) ("The application of the UCC is limited to those transactions covered by the statute, but Indiana Courts regularly apply the UCC by analogy in a number of contexts."); *see*

our duty if we succumbed to the tyranny of labels and held the rules of the Sales Article may have no force in contracts not employing the magic labels – "sale," "buyer," "vendor," "purchaser" and the like."[55] A requirement of tangibility would create a loophole in the law essentially shielding AI products and their creators and distributors from liability. But as the rest of this chapter explains, because most of the UCC's provisions may be altered by agreement of the parties,[56] the biggest loophole of all is created by contracts.

14.3.3 *License v. Sale and Other Contracting Dilemmas*

Another challenge that AI poses to commercial law involves how it is released into the stream of commerce. Increasingly, software incorporated into products or the products themselves are characterized by the manufacturer as licensed, not sold, to purchasers. Similarly, tangible products incorporating AI functionality are likely to be structured so the AI component and/or the product itself is licensed and not sold.[57]

The characterization of an AI product as licensed or sold has several important ramifications. A product that is licensed, not sold, is not subject to copyright's first sale doctrine[58] or patent exhaustion.[59] Accordingly, the purchaser's ability to transfer it could be restricted. Furthermore, the UCC governs the "sale" of goods, not licenses, although a court nevertheless could apply the UCC by analogy as discussed in Section 14.3.2.

If AI products are deemed to be licensed, and not sold, the terms of the agreement creating that license will dictate the rights and responsibilities of the parties. Both the UCC and intellectual property laws allow private parties to craft their own agreement and change the default rules that would otherwise apply. This deference to contract law is alarming because most of these contracts are unilaterally drafted,

also Raymond T. Nimmer, *Through the Looking Glass: What Courts and UCITA Say about the Scope of Contract Law in the Information Age*, 38 Duq. L. Rev. 255, 264 (2000) (noting the pervasive influence of Article 2 and how it "affects transactions where courts treat the transaction as if it were a transaction in goods when it is not, where courts apply the law of sales by analogy to a transaction admittedly not a transaction in goods, and by shaping views of what is appropriate common law for transactions other than transactions in goods.").

55 J.L. Teel Co., Inc., 491 So.2d at 857–58.

56 U.C.C. §1–302(a) (Am. L. Inst. & Unif. L. Comm'n 2018) (stating that unless otherwise provided, the effect of the provisions of the UCC "may be varied by agreement.").

57 *See* Joshua A.T. Fairfield, Owned: Property: Property, Privacy and the New Digital Serfdom (Cambridge Univ. Press 2017); Aaron Perzanowski & Jason Schultz, The End of Ownership: Personal Property In the Digital Economy (MIT Press 2016); Stacy-Ann Elvy, *The Hybrid Transactions and the INTERNET of Things: Goods, Services, or Software?*, 74 Wash. & Lee L. Rev. 77 (2017); Nancy S. Kim, *Revisiting the License v. Sale Conundrum*, 54 Loy. L.A. L. Rev. 99 (2020).

58 17 U.S.C. §109 (a) (2018).

59 Quanta Comput., Inc. v. LG Elec., 553 U.S. 617, 625 (2008) (recognizing the "longstanding doctrine of patent exhaustion provides that the initial authorized sale of a patented item terminates all patent rights to that item.").

standard adhesive forms, meaning that they are offered to the purchaser on a take it or leave it basis. This dissonance between what commercial law assumes is a contract and what modern contracts actually are strips the purchaser of rights that would otherwise be available under commercial law as illustrated in Section 14.4.

14.4 ILLUSTRATING THE CONTRACTS TRAP

One-sided terms drafted by companies, imposed upon users of their products and services, and presented in contractual form ("adhesive terms") have erased the protections provided by commercial and product liability laws. In this Section 14.4, we explain how companies have essentially laid a contracts trap that ensnares users into relinquishing their rights under existing laws, including their right to challenge the contract itself in a court of law.

14.4.1 *OpenAI*

Open AI is a company that builds artificial intelligence systems and tools that enable others to build such systems; the company's mission is to "ensure that artificial general intelligence benefits all of humanity."[60] By "artificial general intelligence," or AGI, it means "highly autonomous systems that outperform humans at most economically valuable work."[61] The company's charter is noble and its stated "primary fiduciary duty is to humanity."[62] Its principles include commitment to research to make AGI safe and to cooperate with other institutions to address the challenges posed by AGI.[63]

In stark contrast, the adhesive terms in its TOS are less high-minded. Open AI's TOS include a disclaimer of warranty clause that states that its services are provided "as is" and, in bold letters, that "EXCEPT TO THE EXTENT PROHIBITED BY LAW, WE AND OUR AFFILIATES AND LICENSORS MAKE NO WARRANTIES (EXPRESS, IMPLIED, STATUTORY OR OTHERWISE)."[64] A customer may have a difficult time arguing breach of an express warranty given this express disclaimer, especially when combined with the integration clause which states that the TOS is the "entire agreement" between the customer and OpenAI.[65] Its TOS also disclaims the UCC implied warranties.[66]

[60] *About*, OpenAI, https://openai.com/about (last visited Aug. 17, 2023) [https://perma.cc/C82Z-ZFRL].

[61] *OpenAI Charter*, OpenAI, https://openai.com/charter (last visited Aug. 17, 2023) [https://perma.cc/9HXT-X7AB].

[62] *Id.*

[63] *Id.*

[64] *Terms of Use*, OpenAI, https://openai.com/policies/terms-of-use (last visited Aug. 17, 2023) [https://perma.cc/C82Z-ZFRL].

[65] *See id; see also* Debra Pogrund Stark & Jessica M. Choplin, *A License to Deceive: Enforcing Contractual Myths despite Consumer Psychological Realities*, 5 N.Y.U. J.L. & Bus. 617, 707 (2009) ("Some courts have ruled that a plaintiff is barred from bringing a common law action for fraud when she has signed a contract containing a disclaimer clause because she should have read the contract").

[66] *Terms of Use*, OpenAI, *supra* note 64.

The TOS also contains a limitation of liability clause that states that the company's aggregate liability "SHALL NOT EXCEED THE GREATER OF THE AMOUNT YOU PAID FOR THE SERVICE THAT GAVE RISE TO THE CLAIM DURING THE 12 MONTHS BEFORE THE LIABILITY AROSE OR ONE HUNDRED DOLLARS ($100)."[67]

The TOS also contains a mandatory arbitration clause with a class action waiver if the user does not fill out a form within thirty days.[68] Fortunately, the form is simple and electronic and does not require the user to print out a form, find a stamp, and mail it in. Unfortunately, few consumers are likely to read the TOS to know of this provision.[69] Even if they did read the terms, they would not understand that the mandatory arbitration clause[70] takes away their right to sue the company in a court of law. Furthermore, all claims with few exceptions must be brought "exclusively" in San Francisco, California.[71]

The pricing for their products and services, although advertised as "simple and flexible," is complex and hard to understand.[72] Prices listed are per 1,000 "tokens," which are tantamount to "pieces of words," but the ratio is not 1–1 but 1–0.75, where "1,000 tokens is about 750 words."[73] The price changes depending on which model the user selects.[74] The Ada model for single-turn instructions, for example, costs fifty times less than the most powerful model, the Davinci.[75] The cost also depends upon factors such as the type of function or task.[76]

Perhaps it is unsurprising that artificial intelligence models have complex pricing. From a policy standpoint, however, complex and opaque pricing coupled with unread adhesive terms should be impermissible. The "as is" clause is common in beta product license agreements or in TOS where services are provided at no monetary cost, such as social media sites. An "as-is" clause in an agreement for *paid* products is much less common.

The TOS also contains a clause that permits Open AI to amend the terms by posting a revised version to its website or by emailing the user "or

[67] *Id.*
[68] *Id.*
[69] *See* Uri Benoliel & Shmuel I. Becher, *The Duty to Read the Unreadable*, 60 B.C. L. Rev. 2256, 2257 (2019); Michael Simkovic & Meirav Furth-Matzkin, *Proportional Contracts*, 107 Iowa L. Rev. 229, 237 (2021); Stark & Choplin, *supra* note 65, at 627.
[70] Jeff Sovern, Elayne E. Greenberg, Paul F. Kirgis & Yuxiang Liu, *"Whimsy Little Contracts" with Unexpected Consequences: An Empirical Analysis of Consumer Understanding of Arbitration Agreements*, 75 Md. L. Rev. 1 (2015).
[71] *Terms of Use*, OpenAI, *supra* note 64.
[72] *See Pricing*, OpenAI, https://openai.com/pricing (last visited Aug. 17, 2023) [https://openai.com/pricing].
[73] *Id.*
[74] *See id.*
[75] *Id.*
[76] *Id.*

providing an in-product notification."[77] The user is not required to affirmatively indicate consent to these changes because "continued use" means agreement under the TOS.[78]

14.4.2 *Alexa*

Alexa is a virtual assistant built into Amazon's enabled or "smart" products, such as Echo, a speaker.[79] Someone with an Echo speaker can ask Alexa to perform simple tasks, such as play music or place an online order.[80] Arguably, customers buy the Echo speaker *because* they want the Alexa functionality and not merely because they want to listen to music or other content through a speaker.

Alexa's terms are even less friendly than Open AI's. First, the consumer must contend with, understand, and reconcile several different sets of terms, including Amazon's Conditions of Use, Amazon's Device Terms of Use, and the Alexa Terms of Use.[81]

The Amazon Conditions of Use states that its services are provided "as is" and that Amazon makes no representations or warranties of any kind and disclaims all warranties "EXPRESS OR IMPLIED."[82] It also states that "TO THE FULL EXTENT PERMISSIBLE BY LAW, AMAZON WILL NOT BE LIABLE FOR ANY DAMAGES OF ANY KIND ARISING FROM THE USE OF ANY AMAZON SERVICE."[83] It also contains a jury trial waiver and requires that all claims be exclusively adjudicated in King County, Washington.[84]

Amazon's Device Terms of Use[85] impose the same warranty disclaimers, limitations of liability, and other terms but state that:

> Without limiting the Disclaimer of Warranties and Limitation of Liability terms in the Amazon.com Conditions of Use, (1) unless otherwise provided by Amazon, your Amazon Device may be subject to a limited warranty, and (2) unless otherwise

[77] *Terms of Use*, OpenAI, *supra* note 64.
[78] *Id.*
[79] *Alexa Features*, Amazon, www.amazon.com/b?ie=UTF8&node=21576558011 (last visited Aug. 17, 2023) [https://perma.cc/8GHV-EWS3].
[80] *Id.*
[81] *Alexa Terms of Use*, Amazon, www.amazon.com/gp/help/customer/display.html?nodeId=201809740 (last updated Dec. 10, 2021) [https://perma.cc/82W2-JUSG].
[82] *Conditions of Use*, Amazon, www.amazon.com/hz/cs/help?nodeId=GLSBYFE9MGKKQXXM (last updated Sept. 14, 2022) [https://perma.cc/5ZF3-HAMX].
[83] *Id.* www.amazon.com/gp/help/customer/display.html?nodeId=508088.
[84] *Id.* ("Any dispute or claim relating in any way to your use of any Amazon Service will be adjudicated in the state or Federal courts in King County, Washington, and you consent to exclusive jurisdiction and venue in these courts. We each waive any right to a jury trial.").
[85] *Device Terms of Use*, Amazon, www.amazon.com/gp/help/customer/display.html?nodeId=202002080 (last updated May 22, 2023) [https://perma.cc/7WK9-Z6J9]. Alexa's terms also provide almost identical language in this regard. *See Alexa Terms of Use*, *supra* note 81.

> required by applicable law, in no event will our or our licensors' aggregate liability for any claim arising from or relating to this Agreement or use of your Amazon Device with respect to any claim exceed the greater of fifty dollars ($50.00) and the amount you actually paid for your Amazon Device.

Alexa's Terms of Use also state that information about the user will be provided to Amazon pursuant to its privacy policy.[86] The privacy policy reveals that Amazon collects a wide variety of personal information for a range of purposes, including to improve Amazon's services.[87] Alexa records the user and sends the user's requests to Amazon's cloud.[88] Amazon uses the requests to train Alexa and improve its ability to understand and process language.[89] Amazon attempts to assuage the user's fears by stating that the user can delete voice recordings.[90] However, given its broad limitations of liability, warranty disclaimers, and the other adhesive terms that it imposes upon users, the consumer's rights and remedies would be restricted even if Amazon did not adequately safeguard users' privacy expectations (although there may be some limited recourse under state privacy statutes).[91]

Notably, these contractual limitations are much more generous to the drafting company and much less protective to the consumer than limitations proposed by the most prominent experts in this field. For instance, the Future of Life Institute published a set of policy recommendations that included "the urgent adoption of a framework for liability for AI-derived harms."[92] They noted that a "coherent liability framework" would provide better incentives for developers and that imposing a financial cost for failing to exercise diligence shifts the "profit incentives away from reckless empowerment of poorly-understood systems toward emphasizing the safety and wellbeing of individuals, communities, and society as a whole."[93] They advocate for strict liability in certain circumstances and joint and several liability for developers and "downstream deployers."[94]

However, even the most thoughtful policy recommendations may be undone by thoughtless legal characterizations of AI products and the adhesive terms that purport to govern their use and the liability of their developers.

[86] *Id.*

[87] *Amazon.com Privacy Notice*, Amazon, www.amazon.com/gp/help/customer/display.html?nodeId=GX7NJQ4ZB8MHFRNJ (last updated Aug. 11, 2023) [https://perma.cc/HKL6-FHBG].

[88] *Alexa, Echo Devices, and Your Privacy*, Amazon, www.amazon.com/gp/help/customer/display.html?nodeId=GVP69FUJ48X9DK8V (last visited Aug. 17, 2023) [https://perma.cc/Q9NB-UWH4].

[89] *Id.*

[90] *Id.*

[91] *See* Wilcosky v. Amazon.com, Inc., 2019 WL 2724009 (class action lawsuit for violation under the Illinois Biometric Information Privacy Act).

[92] Future of Life, Policymaking in the Pause 10 (2023), https://futureoflife.org/wp-content/uploads/2023/04/FLI_Policymaking_In_The_Pause.pdf [https://perma.cc/T8QY-TCHF].

[93] *Id.*

[94] *Id.*

14.4.3 *Google Sheets*

AI models stand in contrast with a more traditional software-as-a-service. For instance, Google Sheets is an online spreadsheet similar to Microsoft Excel with some additional capabilities, such as the ability for multiple people to edit the sheets at the same time. The information and calculations occur completely in the cloud. Users typically use Google Sheets via a web browser or through an app on a phone or a tablet. Meanwhile, its site mentions no devices dedicated to Google Sheets or their broader document suite.

Google's mission is "to organize the world's information and make it universally accessible and useful."[95] While the mission started with Google's flagship search product, Google Sheets certainly organizes information and makes it useful and, if desired, accessible.

The Google Sheets warranty falls under a general Google TOS, not unlike that of Open AI and Amazon.

> TO THE EXTENT ALLOWED BY APPLICABLE LAW, WE PROVIDE OUR SERVICES "AS IS" WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. FOR EXAMPLE, WE DON'T MAKE ANY WARRANTIES ABOUT THE CONTENT OR FEATURES OF THE SERVICES, INCLUDING THEIR ACCURACY, RELIABILITY, AVAILABILITY, OR ABILITY TO MEET YOUR NEEDS.[96]

Google goes on to say it is not liable for "loss of profits, revenues, business opportunities, goodwill, or anticipated savings" and limits liability to the greater of $200 and fees paid.[97]

This means that for someone using Sheets, Google disclaims all liability for producing incorrect calculations and losing data, even though such operations could cause considerable damage to businesses and consumers.

Google Sheets could be used for harm even when the sheets work correctly. For example, they could be used to help plan and coordinate a terrorist attack. Google would not be liable given it was not aware of the documents and the Sheets are not intended to be used for this purpose. There are myriad lawful and productive uses of Google Sheets and Google should not be held liable for every misuse of their product.

[95] *Our Approach to Search*, Google, www.google.com/search/howsearchworks/our-approach/ (last visited Aug. 17, 2023) [https://perma.cc/GJ9Y-R4J3].

[96] *Google Terms of Service*, Google, https://policies.google.com/terms#toc-problems (last visited Aug. 17, 2023) [https://perma.cc/2GH2-Y6L9].

[97] *Id.*

One might make the same argument for limiting the liability of generative AI products, such as Chat GPT; however, there are distinctive features of generative AI that may require different liability. Consider ChatGPT as an example.

1. ChatGPT generates its own content on models developed by OpenAI. Google Sheets does not generate its own content.
2. While Google Sheets is used "as is" in its TOS, in practice, the program rarely gives bad calculations or loses data if the user has a working internet connection. ChatGPT creates significant inaccuracies in its outputs and acknowledges that it does so in its TOS.[98]
3. ChatGPT could create content that would motivate or help a person do illegal activities, or harm themselves or others. On Google Sheets, such material could only be done if initiated and intended by the user.
4. ChatGPT can create plagiarized content without the user's knowledge. Google Sheets does not generate its own content and would not contain plagiarized material without the user explicitly entering that material into the documents.

In sum, products such as Google Sheets serve as primarily passive tools that execute commands while products such as ChatGPT can work as both tools and originators of content. This difference means that AI products themselves may cause harm without input from the user. Accordingly, and as the earlier comparison between ChatGPT and Google Sheets illustrates, the liability issues arising from generative AI require a different approach from that adopted for non-generative technology tools.

14.5 PROPOSAL

In this section, we make three recommendations. The first is that the law governing product liability should apply to all AI systems, regardless of their categorization as "products" or "services." Tangibility should not be a bar to the applicability of laws intended to protect consumers. Intangible AI systems can wreak more havoc and cause more societal harm than tangible products. Accordingly, developers should exercise *more* care, not less, before releasing their products to the public. The second is that the UCC should apply to all AI products used as "products" and, by analogy, to services where appropriate. Third, TOS and other adhesive terms for AI products should not be recognized or enforced as contracts.

This last recommendation is particularly important given the realities of online contracting and the unreasonable expectations placed on consumers to read and understand multiple complex terms. Much research exists speaking to the complexity

[98] *Terms of Use*, OpenAI, *supra* note 64.

and length of adhesive terms,[99] the consumer no-reading problem,[100] the lack of bargaining power, and the one-sidedness of terms.[101] Furthermore, unlike standard-form paper contracts, digital terms are much harder to read. A warranty disclaimer in bold font on a one-page contract handed to a consumer is perceived differently from the same provision on a digital contract that requires clicking on a link. Any provision that requires clicking or scrolling to view is likely to go unread. In short, TOS and TOU should not be considered contracts at all; rather, they should be viewed as one-sided company policies imposed upon users of services. Accordingly, only the license and use provisions should be enforced. For example, Alexa's Terms of Use[102] states the following:

> 1.2 Use of the Software. You may use the Software only on or through an Alexa Enabled Product or Auxiliary Product, and you may only make personal and non-commercial use of Alexa. For additional terms that apply to the Software, see the software terms contained in the Amazon.com Conditions of Use and the terms contained in the Legal & Compliance section in the Help menu of your Alexa App.

The first full sentence governs the use of the software and should be enforceable. The second sentence, however, is too broad and covers other terms, and should not bind the consumer.

CONCLUSION

The speed at which AI products are developing is exciting and promises to bring about advancements that will benefit society. However, their misuse is anticipated, and developers should work diligently to prevent foreseeable harm. Commercial law and tort law, including product liability and consumer protection laws, have evolved to respond to harm from new products by imposing standards upon manufacturers and distributors. Social media platforms and software companies have managed to escape much of the liability for harm caused by their products through special protections, such as Section 230 of the Communications Decency Act, and fine print terms. As companies race to establish themselves as the leaders of AI technology, they should be made to do so carefully, thoughtfully, and responsibly.

[99] Benoliel & I. Becher, *supra* note 69, at 2258 (viewing consumer standard form contracts as "unreasonably lengthy and complicated"); Tim Samples, Kathy Ireland & Caroline Kraczon, *TL;DR; The Law and Linguistics of Social Platform Terms-of-Use*, 39 Berkeley Tech. L. J. (Apr. 2024).

[100] Stark & Choplin, *supra* note 65, at 627 (conducting a study and finding that over 95 percent of participants failed to read contract).

[101] Friedrich Kessler, *Contracts of Adhesion—Some Thoughts about Freedom of Contract*, 43 Colum. L. Rev. 629 (1943); Cheryl B. Preston, *"Please Note: You Have Waived Everything": Can Notice Redeem Online Contracts?*, 64 Am. U. L. Rev. 535 (2015); *see also* Margaret Jane Radin, Boilerplate: The Fine Print, Vanishing Rights, and the Rule of Law (Princeton University Press 2013).

[102] *Alexa Terms of Use*, *supra* note 81.

This concern is particularly relevant because the social media platforms on which AI mischief is most likely to occur remain shielded by Section 230 and thus far, these companies have failed to eliminate the misinformation and other harmful content on their sites. Until policies and laws are implemented, companies that profit from AI will operate in an unregulated gray zone. During this time, they should not be allowed to escape liability for the harms created by their products and services; rather, they should have *strict liability* for their products and services when they malfunction, just like the manufacturers and distributors of other potentially harmful consumer goods.