

Tulsa Law Review

Volume 59 | Number 2

Spring 2024

The Automation Paradox

Mbilike M. Mwafulirwa

Follow this and additional works at: <https://digitalcommons.law.utulsa.edu/tlr>



Part of the [Law Commons](#)

Recommended Citation

Mbilike M. Mwafulirwa, *The Automation Paradox*, 59 Tulsa L. Rev. 361 (2024).

Available at: <https://digitalcommons.law.utulsa.edu/tlr/vol59/iss2/8>

This Article is brought to you for free and open access by TU Law Digital Commons. It has been accepted for inclusion in Tulsa Law Review by an authorized editor of TU Law Digital Commons. For more information, please contact megan-donald@utulsa.edu.

THE AUTOMATION PARADOX

Mbilike M. Mwafulirwa*

ABSTRACT

The age of automation has arrived. Our generation has outsourced—to varied degrees—many traditional human functions to smart machines. Generative Artificial Intelligence (“AI”)—with little or no human input—can generate text, images, and other content of its own. And the market already has several iterations of smart vehicles that self-drive on highways. At the core of both generative AI and self-driving car technology lies the concept of autonomy—the ability of both technological devices to perform their main functions—driving and generating—with minimal or no human input. But with this autonomy comes hard questions. The overwhelming arsenal of existing civil and criminal laws are human-fault-centered. Responsibility and fault are gauged based on a given person’s conduct. Should people be responsible for the adverse consequences of generative AI and self-driving cars? If yes, under what circumstances? This article seeks to provide a framework to answer those questions for both technologies based on longstanding principles.

But make the analysis even harder. In the generative AI context, for example, the government has recently refused copyrights and patents apparently generated entirely by generative AI. The Constitution’s Patent and Copyright Clause was ratified in the 1700s, when an author and inventor were undoubtedly human. That clause protects human outputs. Supreme Court precedent confirms as much. Consistent with the Constitution’s limitations, can a patent or copyright ever issue to an autonomous computer system? Suppose there is some human involvement in a generative AI output. The next question is simple but profound: How much of a human touch is necessary to trigger the Patent and Copyright Clause? And what of originalism in all of this? This article analyzes the Supreme Court cases and agency guidance to conclude that the threshold is minimal.

Beyond the intellectual property law context, there are other vexing constitutional questions raised by these two autonomous technologies. For one, there are First Amendment questions about generative AI outputs. Are those outputs covered by the First Amendment? This article concludes that those outputs should be covered. Existing First Amendment precedent appears indifferent about the nature of the speaker, whether human or inanimate. For another, generative AI and artificial intelligence tools have been known to hallucinate and make up stuff, as well as perpetuate biases. Yet the use of generative AI and artificial intelligence tools has been steadily increasing, including speech-generation and even in law enforcement. In the law enforcement and criminal justice context, how would the Fourth Amendment apply to the exercise of a police officer’s authority if a traffic stop or arrest was based on inaccurate data? This article looks to cases with inaccurate computer databases to discern governing principles. Also, for Fourth Amendment purposes, should a self-driving car be treated like a regular car? And what of all the user data—including the robust location data—that both the self-driving car and generative AI tools retain, which some say amount to the privacies of life? In *Carpenter v. United States*, the Supreme Court recently held that the warrant requirement applied to robust cellphone location data. This article briefly analyzes *Carpenter* in the context of self-driving cars and generative AI. Finally, that user data will likely also raise Fifth Amendment self-incrimination issues, which are also addressed.

I. INTRODUCTION..... 363

II. THE GENERATIVE AI PARADOX..... 366

 A. *The Generative AI Story—ChatGPT and the New Wave of Generative AI Tools* 366

 B. *The Intellectual Property and Related Constitutional Law Implications of Generative AI*..... 368

 C. *The First Amendment and General Civil Law Generative AI Conundrums*.
 372

 i. The First Amendment, Generative AI Outputs and the Responsibility Conundrum—Models that Require Prompts and Human Supervision. 372

 ii. The Vexing First Amendment Questions Posed by Autonomous Generative AI Models..... 373

 iii. Unraveling the Responsibility Conundrum for Generative AI Outputs.
 375

 a. Defamation Against a Content Generator. 376

 b. Negligence..... 378

 c. Breach of Fiduciary Duty and Constructive Fraud..... 380

 d. False Light..... 381

 e. Abusive Online Speech and Emotional Distress and Injuries. 382

 f. Harm to Pecuniary or Proprietary Interests/Appropriation of Likeness..... 384

 iv. Could Section 230 of the Communications Decency Act Apply to Generative AI Outputs? 384

 D. *Deepfakes, the Public Interest, and the Governing Constitutional Considerations*..... 385

 i. Criminalizing Deepfakes?..... 387

 ii. Legislating Deepfakes?..... 387

 E. *Other Generative AI Conundrums in the Criminal Context*..... 388

 i. Fourth Amendment and Equal Protection Clause Considerations. 388

 ii. Constitutional Considerations for Compelled Generative AI Data Disclosures..... 391

 a. Fourth Amendment Compelled Data Considerations. 391

 b. Fifth Amendment Considerations with Compelled Generative AI User Data. 392

 c. External Third-Party Data on Smart Assistants and Generative AI Tools..... 394

III. THE SELF-DRIVING CAR PARADOX..... 396

 A. *What is a self-driving car?* 396

 B. *The general overview of the new self-driving car laws in Arizona, Oklahoma, and Texas* 396

 C. *Detailed analysis of self-driving car statutes in Arizona, Oklahoma, and Texas*..... 397

 i. Self-driving Car Authorization. 397

 a. Fully Autonomous Vehicles. 397

 b. Partial Autonomous Vehicles. 398

 ii. Operational Requirements for Autonomous Vehicles. 400

 iii. Non-product liability framework for full and partial autonomous vehicles 402

 a. Civil Liability Framework for Cars that Require Human Input (partial autonomy). 402

 b. Traffic Violation Analysis for Cars with Autopilot/Self-Driving

Features.....	404
c. Criminal Law Analysis for Those Who Switch on the Autopilot Feature.....	404
d. Bringing the Tesla-Collision Criminal Case Closer to Home: How a Typical Manslaughter Framework like Oklahoma’s (or any other) Could Apply to Fact-Patterns that Involve Drivers that Turn on the Autopilot Feature.....	405
V. CIVIL AND CRIMINAL LIABILITY FRAMEWORKS FOR FULLY AUTONOMOUS CARS.....	407
VI.DETAILED LIABILITY FRAMEWORK FOR COMMON CARRIERS OF FULLY SELF-DRIVING CARS.....	409
A.CIVIL LIABILITY CONSIDERATIONS.....	409
B.CRIMINAL LIABILITY CONSIDERATIONS.....	412
VII.CONCLUSION.....	413

I. INTRODUCTION

If the week before was the industrial age, then yesterday was the internet age. By this measure of human progress, then, today is the automation age. This is the age that our society has outsourced many traditional human functions to smart machines. And by that same measure, it feels like yesterday that to drive a car meant being in a driver’s seat accelerating, braking, steering, and eventually parking at your destination. The car and its driver were inseparable to the driving enterprise. But not anymore. Cars can now self-drive. That fundamental re-envisioning of the driving enterprise promises to extend the driving franchise to many who were excluded before—for example, the aged and the disabled. Studies suggest that automated cars will likely reduce accidents caused by human error, increase efficiency, and reduce the costs of transportation.¹

Another by-product of the automation age deserves attention—generative artificial intelligence (“AI”). Generative AI is different from AI of old (also called traditional machine learning AI) that, until recently, powered much of the smart technology, including smart assistants.² That basic form of AI mimics humans and performs requested tasks.³ But generative AI—with little or no human input—can generate text, images, and other content of its own.⁴ One of the best known forms of this advanced generative AI is ChatGPT; a user can, for example, ask these generative AI tools to write a note explaining the most complex subjects.⁵ So what would perhaps have taken a human hours, weeks, or years to learn, explain, and do, generative AI tools do in a fraction of the time.⁶ The development of generative AI is expected to increase efficiency, reduce operating costs, and

* LL.B. (Hons.) University of Wales (U.K.); J.D., L.L.M., The University of Tulsa College of Law. The thoughts expressed in this article are my own. I would like to thank my wonderful little family for putting up with me night after night (for several months) while I researched and put this article and several lectures it is based on together. I would also like to thank the wonderful staff of the *Tulsa Law Review* for turning what was merely a promising project into something beyond my wildest dreams. I remain eternally grateful to all the *Tulsa Law Review* Staff.

1. See NAT’L SCIENCE & TECH. COUNCIL & U.S. DEP’T OF TRANSP., ENSURING AMERICAN LEADERSHIP IN AUTOMATED VEHICLE TECHNOLOGIES - AUTOMATED VEHICLES 4.0 2 (2020).

2. See e.g., Siri Team, *Hey Siri: An On-Device DNN-Powered Voice Trigger for Apple’s Personal Assistant*, APPLE MACHINE LEARNING RESEARCH (Oct. 2017), <http://tinyurl.com/2wuhm45d>.

3. *Id.*; see also NAT’L INST. OF STAND. & TECH., U.S. LEADERSHIP IN AI: A PLAN FOR FEDERAL ENGAGEMENT IN DEVELOPING TECHNICAL STANDARDS AND RELATED TOOLS 7–8 (2019).

4. See *What is Generative AI*, IBM (Apr. 20, 2023), <http://tinyurl.com/5fz9ba4n>.

5. See *How ChatGPT and Our Language Models Are Developed*, OPENAI, <http://tinyurl.com/2r33b4xm> (last visited Apr. 9, 2024).

6. See Erin Winick, *New Autonomous Farm Wants to Produce Food Without Human Workers*, MIT TECH. REV. (Oct. 3, 2018), <http://tinyurl.com/367ad3et>.

when properly used, will likely lead to increase in opportunities in education, healthcare, and other crucial areas.⁷ This, though, is no ordinary technological advancement, some say. Bill Gates, for one, believes that “the development of AI is as fundamental as the creation of the microprocessor, the personal computer, the internet, and the mobile phone.”⁸ If the internet was a game changer, then generative AI will likely be that (and perhaps more) today and in the future.⁹ How well a business or an organization manages generative AI, experts say, will likely be the difference between those who excel and fail.¹⁰

These two automation developments—self-driving cars and generative AI—are similar in important ways. To understand why, consider first the premises below. Both depend on artificial intelligence technology.¹¹ At the core of both self-driving cars and generative AI technology lies the concept of autonomy—the ability of both technological devices to perform their main functions—driving and generating—with little or no human input.¹² These systems introduce us to the concept of automated algorithm-based decision-making. Both systems depend on artificial intelligence—deep learning on existing datasets—to perform their functions.¹³ ChatGPT, for example, performs its functions based on the data it was trained on; the better the training datasets, the better the outputs.¹⁴ The same is true with self-driving cars. They have learning algorithms; the more they are exposed to actual driving conditions, the better they perform.¹⁵

The coming of generative AI and self-driving cars presents a legal paradox—the science-fiction technology of tomorrow is here, but only yesterday’s laws and legal precepts are available. To give some context, consider first the challenge posed by deepfakes, one of the by-products of generative AIs. Deepfakes are computer-generated fake video and audio that make any person seem like they said or did things they did not.¹⁶ The best generated deepfakes are hard for humans to detect.¹⁷ For that reason, deepfakes have been used by some to inflict serious reputational and societal harms.¹⁸ This new technology poses hard questions for free speech, democracy, privacy interests, and intellectual property law. And still there is no comprehensive slate of generative AI-focused laws to deal with these issues, let alone to regulate generative AIs. There is also generally a lack of robust regulatory laws on self-driving cars.

The autonomous nature of these technologies also poses difficult legal responsibility problems. As a general rule, the law works based on cause and effect.¹⁹ Those

7. See Exec. Order. No. 13,960, 85 Fed. Reg. 78939 (Dec. 3, 2020).

8. Bill Gates, *The Age of Generative AI Has Begun*, GATES NOTES BLOG (Mar. 21, 2023), <http://ti.nyurl.com/4ujbx3b2>.

9. *Id.*

10. *Id.*

11. See LAURIE A. HARRIS, *ARTIFICIAL INTELLIGENCE: BACKGROUND, SELECTED ISSUES, AND POLICY CONSIDERATIONS* 1–4 (2021).

12. See Feuerriegel, Stefan, et al., *Generative AI*, 66 BUS. & INFO. SYST. ENG. 111 (2024); U.S. DEP’T OF TRANSP., *FEDERAL AUTOMATED VEHICLES POLICY* 3, 5 (2016).

13. See *supra* note 5 and accompanying text; see also HARRIS, *supra* note 11, at 1–4.

14. See *supra* note 5 and accompanying text.

15. See Mrinal R. Bachute & Javed M. Subhedar, *Autonomous Driving Architectures: Insights of Machine Learning and Deep Learning Algorithms*, 6 MACH. LEARNING WITH APPLICATIONS, no. 100164, at 2 (2021).

16. See Robert Chesney & Danielle K. Citron, *Deep Fakes: A Looming Challenge for Privacy, Democracy, & National Security*, 107 CALIF. L. REV. 1753, 1757–58 (2019) (stating that “deep fakes” is a “shorthand for the full range of hyper-realistic” and difficult to uncover “digital falsification of images, video, and audio”); accord *In re S.K.*, 215 A.3d 300, 315 n.22 (Md. App. Ct. 2019) (collecting authorities).

17. See Chesney & Citron, *supra* note 16, at 1757–58.

18. See Mbilike M. Mwafurirwa, *Smoke and Mirrors: Constitutional Ideals When Fact and Fiction Can’t Be Separated*, 90 OKLA. B. J. 12, 13 (2020).

19. See *United States v. Oberhellmann*, 946 F.2d 50, 53 (7th Cir. 1991) (collecting authorities); see also generally H.L.A. HART & TONY HONORÉ, *CAUSATION IN THE LAW* 84 (2d ed. 1985) (“Causal questions . . . appear in every

responsible for harm are usually held legally accountable.²⁰ If a driver drives a car negligently, the law looks to that driver for the resulting legal infractions—be it civil, criminal, or traffic.²¹ Liability is driver-centered. But is that analytical framework still valid when the car itself—not a human—was doing the driving? So far, none of the statutes in existence answer this question, and yet, there are cases in multiple states awaiting resolution on this issue, with no clear law. That too is a paradox.

Consider the same issue within the generative AI context. Should people be responsible for the consequences of generative AI? Some contend that they should. Generative AI is a tool, goes the argument, so the one who uses the tool is responsible.²² But generative AI technology has not stood still. The intellectual property sphere presents an interesting case study because the government has refused copyrights and patents generated entirely by generative AI.²³ Those cases suggest that there are areas of complete separateness between man and machine. Should humans still be responsible for those generative AI outcomes? And what of the U.S. Constitution in all of this? The Patent and Copyright Clause, for example, was ratified in the 1700s, at a time when an author and inventor were human. So can a patent or copyright ever issue to an autonomous computer?

In the wake of these developments, this article's modest task is to try to provide a workable analytical framework for these automation developments. The article has three main parts. Part I analyzes generative AI technology. Then, the analysis will consider generative AI in practice, focusing on two by-products: deepfakes and patent and copyright generative AI-generated works. The legal and constitutional considerations implicated by generative AIs will then be considered. That will require an analysis and understanding of originalism and the First Amendment and the Patent and Copyright Clause. Finally, the analysis will address the constitutional issues implicated by generative AIs—Fourth Amendment issues; due process and equal protection considerations, focusing specifically on false evidence and bias risks from the use of generative AIs.

Part II shifts to self-driving cars. It begins with an analysis of what a self-driving car is. This section will also sample the newly enacted self-driving car laws in Oklahoma, Texas, and Arizona. The analysis will then suggest a civil liability framework for drivers who engage the self-drive feature. Then, the discussion will shift to the other side of the coin—the traffic and criminal implications for drivers who engage such automated features, with a special analysis of a recent California homicide prosecution involving a self-driving car. Finally, the analytical framework will shift to fully autonomous vehicles. This analysis will address both the civil and criminal laws.

Part III concludes that the existing laws might provide solutions to some of the issues raised by automation. But comprehensive legislative solutions would better mediate between the many competing policy considerations.

branch of the law and there is a variety of ways, even in a single branch, in which legal rules make causal connection an element in responsibility.”)

20. See *NOCO Co. v. OJ Com., L.L.C.*, 35 F.4th 475, 482 (6th Cir. 2022) (civil); *Flemming v. United States*, 224 A.3d 213, 222 (D.C. 2020) (criminal law).

21. See Mbilike M. Mwafurirwa, *The Common Law and the Self-Driving Car*, 56 U. S.F. L. Rev. 395, 395 (2022); see also generally Spencer C. Pittman & Mbilike M. Mwafurirwa, *Not So Hypothetical After All: Addressing the Remaining Unanswered Questions About Self-Driving Cars*, 90 OKLA. BAR J. 36 (2019).

22. See U.S. PATENT & TRADEMARK OFFICE, PUBLIC VIEWS ON ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY POLICY 21 (2020).

23. See *Thaler v. Perlmutter*, No. CV 22-1564 (BAH), 2023 WL 5333236, at *1 (D.D.C. Aug. 18, 2023) (Copyright office); *Thaler v. Vidal*, 43 F.4th 1207, 1209 (Fed. Cir. 2023) (Patent Office).

II. THE GENERATIVE AI PARADOX²⁴A. *The Generative AI Story—ChatGPT and the New Wave of Generative AI Tools*

A California tech start-up, Open AI, recently launched ChatGPT—an artificial intelligence chatbot whose invention some believe is “as fundamental as the creation of the microprocessor, the personal computer, the internet, and the mobile phone.”²⁵ ChatGPT is one of several recent computer programs called generative artificial intelligence (“GAI”).²⁶ The GPT part stands for “generative pre-trained transformer,” a subset of computer language programs.²⁷ These computer programs are, in turn, called generative AI because they can generate new text, images, and content, with little or no human input.²⁸ At its core, ChatGPT is a large language model (“LLM”) processing tool.²⁹ That means it interacts with users using language to generate data in response to requests. So ChatGPT can code, it can write stories and scripts for television, and even jokes for late-night shows.³⁰ Generative AI can even compose new music, generate photos, and all manner of creative endeavors.³¹ In short, most of what we do day-to-day, AIs can do. And in time, perhaps AIs will be able to do them better than we can.³²

Beyond the impressive range of things generative AIs can do, some have argued that their impact is more profound than we realize. For example, Yuval Noah Harari, a highly acclaimed historian, has written articles in *The Economist* and *The New York Times* that better explain what he perceives as the broader and greater impacts of generative AIs.³³ Harari argues that “[l]anguage is the stuff almost all human culture is made of.”³⁴ To better understand Harari’s point, consider too that the U.S. Constitution is a collection of special words that bind the Nation together.³⁵ Culture and societal values too are often recorded and expressed in language—in text, pictures, symbols, music, stories, plays, movies.³⁶ Democracy and even the laws we pass are the culmination of language and speech.³⁷ We the

24. Part I of the analysis is based on (and improves on) the author’s multiple lectures and previous shorter articles on deepfakes, generative AIs, and smart tech. So there is a risk of some overlap with these works. See M. Mwafurirwa, *The iPhone, the Speaker and Us - Constitutional Expectations in the Smart Age*, 90 OKLA. BAR J. 24 (2019); M. Mwafurirwa, *supra* note 18.

25. See Gates, *supra* note 8.

26. See *Oversight of A.I.: Rules for Artificial Intelligence: Hearing Before the S. Jud. Comm., Sub. Comm. on Priv., Tech., & the Law*, 118th Cong. 1–2 (2023) (statement of Sam Altman, OpenAI CEO) [hereinafter Statement of Sam Altman].

27. See Kristen E. Busch, *GENERATIVE ARTIFICIAL INTELLIGENCE AND DATA PRIVACY: A PRIMER* (2023).

28. See Statement of Sam Altman, *supra* note 26, at 1–2.

29. *Id.*

30. *Id.*; see also Chelsea Bailey, *With Writers on Strike, Can AI Chatbot Be As Funny As Stephen Colbert?*, BBC NEWS (May 2, 2023), <http://tinyurl.com/3mxdvcps>.

31. See Statement of Sam Altman, *supra* note 26, at 1–4.

32. *Id.*; see also Steve Lohr, *A.I. is Doing Legal Work. But It Won’t Replace Lawyers, Yet.*, N.Y. TIMES (Mar. 19, 2017), <http://tinyurl.com/bde63xd6>.

33. See Yuval Noah Harari, *Yuval Noah Harari Argues that AI has Hacked the Operating System of Human Civilization*, THE ECONOMIST (Apr. 28, 2023), <http://tinyurl.com/32hsy9hn>; Yuval Noah Harari, *You Can Have the Blue Pill, Or the Red Pill, and We’re Out of Blue Pills*, N.Y. TIMES (Mar. 24, 2023), <http://tinyurl.com/3nmmn9zz>.

34. See Yuval Noah Harari, *Yuval Noah Harari Argues that AI has Hacked the Operating System of Human Civilization*, *supra* note 33.

35. See Akhil Reed Amar, *THE WORDS THAT MADE US: AMERICA’S CONSTITUTIONAL CONVERSATION, 1760-1840* (2021); *Rop v. Fed. Hous. Fin. Agency*, 50 F.4th 562, 577 (6th Cir. 2022) (Thapar, J., concurring in part and dissenting in part) (“The words of the Constitution are not suggestions or mere formalities. The Founders consciously chose each one.”).

36. See Harari, *AI Has Hacked the Operating System of Human Civilization*, *supra* note 33.

37. See *Mahanoy Area Sch. Dist. v. B.L ex rel. Levy*, 141 S. Ct. 2038, 2046 (2021) (“Our representative democracy only works if we protect the marketplace of ideas. *This free exchange facilitates an informed public opinion, which, when transmitted to lawmakers, helps produce laws that reflect the People’s will.*”) (emphasis added).

People see, read, and hear campaign messages and viewpoints from competing sides, and depending on what impresses us most, we express our choices at the ballots.³⁸ The Supreme Court has also recognized that much of modern discourse happens on the internet.³⁹ Yet that is where generative AI technologies operate and flourish.⁴⁰

But others only see the best about AIs. They laud the benefits we will likely reap from AIs, highlighting the possibility of optimizing healthcare delivery and services.⁴¹ Imagine a cure for cancer, Alzheimer's disease, or the next Covid-19-like virus. Others laud the possibility of using generative AI to address global food and water security, climate change, and the like.⁴²

And yet still, others claim that the concern about generative AIs is hyperbole.⁴³ Through the tapestry of time, some people have reacted irrationally to things they did not understand because of irrational fears. In *Whitney v. California*,⁴⁴ for example, Justice Brandeis' separate opinion reminded us that "[m]en feared witches and burnt women."⁴⁵ So are the concerns about generative AI overblown? Before proceeding further, the reader should consider these four points.

First, Harari, the historian, argues that AIs are not traditional tools of convenience of years past. Those past technological tools, word processors, radios, televisions and the like, Harari argues, expressed and spread human ideas, but unlike generative AIs, "they never created new cultural ideas of their own."⁴⁶

Second, generative AIs present profound moral and legal questions. Begin with the moral questions. Consider the recent story of generative AI causing a fracas in the world's leading photography competition.⁴⁷ The winning photo submission was generated by generative AI.⁴⁸ The winner refused the prize because they refused to take credit for work they did not perform.⁴⁹ The winner hoped to spark a moral discussion.⁵⁰

Third, generative AIs also raise vexing legal questions about attribution for its content. The effect of generative AI-generated content has been heavily felt in the copyright and patent law systems—most recently by way of a viral AI-generated song by *The Weeknd* and *Drake*.⁵¹ In the patent world, there have been novel inventions by generative AIs.⁵² This development, as will be shown later, presents several legal issues, both foundational and functional, for intellectual property law and the Patent and Copyright Clause of the Constitution.

38. See Katie Stallard, *Democracy in the Era of Deepfakes*, THE NEW STATESMAN (Dec. 22, 2023), <http://tinyurl.com/sm8udvc>; see also Steve Lohr, *It's True: False News Spreads Faster and Wider. And Humans Are to Blame*, N.Y. TIMES (Mar. 8, 2018), <http://tinyurl.com/venz9z72>.

39. *Packingham v. North Carolina*, 582 U.S. 98, 99–100, 104 (2017); *Reno v. Am. Civil Lib. Union*, 521 U.S. 844, 849–50, 868, 879 (1997).

40. See *supra* notes 26 and 36–37 and accompanying text.

41. See, e.g., Ron Adner & James N. Weinstein, *GenAI Could Transform How Healthcare Works*, HARVARD BUS. REV. (Nov. 27, 2023), <http://tinyurl.com/34h9hk9u>.

42. See Gates, *supra* note 8.

43. See Chris-Stokel-Walker, *These 7 Experts Say Our Fears About AI are Overblown*, FAST CO. (Aug. 15, 2023), <http://tinyurl.com/33pms93s>.

44. 274 U.S. 357 (1927).

45. *Id.* at 374, 376 (Brandeis, J., concurring).

46. Harari, *AI Has Hacked the Operating System of Human Civilisation*, *supra* note 33.

47. See Allison Parshall, *How This AI Image Won a Major Photography Competition*, SCIENTIFIC AM. (Apr. 21, 2023), <http://tinyurl.com/bdm4b55z>.

48. *Id.*

49. *Id.*

50. *Id.*

51. See Joe Coscarelli, *An A.I. Hit of Fake 'Drake' and 'The Weeknd' Rattles the Music World*, N.Y. TIMES (Apr. 19, 2023), <http://tinyurl.com/muwec5tj>.

52. See *Thaler v. Vidal*, 43 F.4th 1207, 1209 (Fed. Cir. 2022).

Fourth, generative AIs also present profound questions for the legal system. Most everyone has heard about fake news. This article’s focus is one step removed from fake news—and focuses on deepfakes. Deepfakes are fake videos and audio that make any person appear to do or say something they did not.⁵³ Before, people made deepfakes. But now generative AIs have taken over—they make nearly perfect deepfakes.⁵⁴ And deepfakes are present in politics, entertainment, and now, they are making their way into the legal system—in the form of alleged fake audiovisual evidence.⁵⁵ For many, truth depends on believing and accepting what we see or hear.⁵⁶ So well-entrenched is that premise that the justice system depends on it.⁵⁷ The hard question for the legal system is: what do we do if we can no longer believe and trust what we see or hear?

B. The Intellectual Property and Related Constitutional Law Implications of Generative AI.

Copyrights and patents have been around since the Founding.⁵⁸ The U.S. Constitution secures “for limited Times to Authors and Inventors the exclusive Rights to their respective Writings and Discoveries.”⁵⁹ Copyright law deals with original works of authorship.⁶⁰ Patent law deals with novel inventions.⁶¹ The Constitution became operational in 1791. At the time, authors and inventors were assuredly humans; there were no advanced computers and generative AIs.⁶² For two centuries, Congress, the courts, and the executive, have all operated under the belief that the copyright and patent laws only protect original human works or inventions.⁶³

53. In re S.K., 215 A.3d 300, 315 n.22 (Md. Ct. App. 2019).

54. See Mwafulirwa, *supra* note 18, at 13; see also *Hatteberg v. Cap. One Bank (USA), N.A.*, No. SA CV 19-1425-DOC-KES, 2019 WL 8888087, at *4 (C.D. Cal. Nov. 20, 2019) (noting “computer-generated, human voice (colloquially known as ‘deepfake’ audio, which uses artificial intelligence to simulate a person’s voice)”); Blake A. Klinkner, *What Attorneys Should Know About Deepfakes*, 46 WYO. LAW. 38, 39 (2023) (“Consequently, it will become necessary for attorneys to rely upon artificial intelligence to detect deepfakes; stated differently, we will need to rely upon artificial intelligence to detect the works of other artificial intelligence”).

55. See Mwafulirwa, *supra* note 18, at 13.

56. *Id.*

57. *Id.*

58. See U.S. CONST. art. 1, § 8, cl. 8.

59. *Id.*

60. 17 U.S.C. § 102(a); *Fourth Est. Pub. Ben. Corp. v. WallStreet.com, L.L.C.*, 139 S. Ct. 881, 887 (2019) (“[C]opyright protection attaches to original works of authorship—prominent among them, literary, musical, and dramatic works—fixed in any tangible medium of expression.”) (cleaned up).

61. 35 U.S.C. § 101; *Bilski v. Kappos*, 561 U.S. 593, 602 (2010).

62. See generally *Burrow-Giles Lithographic Co. v. Saroni*, 111 U.S. 53, 57–59 (1884); cf. *Riley v. California*, 573 U.S. 373, 385 (2014) (smart “phones are based on technology nearly inconceivable just a few decades ago”); cf. *United States v. Jones*, 565 U.S. 400, 420 (2012) (Alito, J., concurring) (finding it “almost impossible to think of late-18th century situations that are analogous to” modern day GPS tracking systems); see also *Biden v. Knight First Amend. Inst. at Colum. Univ.*, 141 S. Ct. 1220, 1221 (2021) (Thomas, J., concurring) (observing that “applying old doctrines to new digital platforms is rarely straightforward”); *Brown v. Ent. Merchs. Ass’n*, 564 U.S. 786, 806 (2011) (Alito, J., concurring) (“In considering the application of unchanging constitutional principles to new and rapidly evolving technology, this Court should proceed with caution. We should make every effort to understand the new technology. We should take into account the possibility that developing technology may have important societal implications that will become apparent only with time.”) (emphasis added).

63. See, e.g., 17 U.S.C. § 102(a)(1); Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. 16,190 (Mar. 16, 2023) (to be codified at 37 C.F.R. pt. 202); *Thaler v. Hirshfeld*, 558 F. Supp. 3d 238, 241–47 (E.D. Va. 2021).

But today there are generative AI tools that the Founders did not have (or even consider possible).⁶⁴ Generative AIs are now authoring, creating, and inventing things.⁶⁵ That development presents two important questions: (1) Are those resulting works or inventions covered by the Copyright and Patent Clause?; and (2) can Congress write a law to cover generative AI works and inventions? During the 2022 Term, the Court decided *New York Rifle & Pistol Association v. Bruen*,⁶⁶ a gun case that might inform the constitutional analysis. *Bruen* held that the Second Amendment, and much else of the Constitution, should be understood to mean what the people who adopted it understood it to mean.⁶⁷ That is the mode of analysis for constitutional questions that *Bruen* announced.⁶⁸ While ordinarily, lower federal courts are required to follow the Supreme Court's holdings, they are also bound by its mode of analysis.⁶⁹

Bruen and the Court's recent originalist precedents prompt new hard questions. To begin, in the 1790s, what did the word "author" or "inventor" mean? Did it encompass works or inventions made *entirely* by machines? It is a hard sell to say that author or inventor in the late 1700s meant autonomous computer machines; that technology did not exist. But simply because technology did not exist at the Founding does not mean the Constitution does not apply to it.⁷⁰ *Bruen* and other cases have laid down an originalist mode of analysis when "defining the character of the right," or "the outer limits of the right," or "assessing the constitutionality of a particular regulation."⁷¹ As part of this analysis, the Court looks to constitutional text, history, and tradition.⁷²

Bruen says to look to history and tradition and analogize existing contraptions (in that case modern guns) to what was available at the time of enactment.⁷³ The idea is not to find a perfect historical analogue, but one that shares essential features.⁷⁴ How similar should the features be? *Bruen* does not say.⁷⁵ In any event, the practices and beliefs of the

64. See generally *supra* notes 60–62; cf. *Jones*, 565 U.S. at 420 (Alito, J., concurring); cf. *Riley*, 573 U.S. at 385 (smart "phones are based on technology nearly inconceivable just a few decades ago").

65. Alec Radford et al., *Better Language Models and Their Implications*, OPENAI: BLOG (Feb. 14, 2019), <http://tinyurl.com/3jrt8xe5>; *Thaler*, 2023 WL 5333236, at *1 (copyrights); *Thaler v. Vidal*, 43 F.4th 1207, 1209 (Fed. Cir. 2023).

66. 597 U.S. 1 (2022).

67. *Id.* at 27–28.

68. *Id.*

69. *United States v. Fields*, 53 F.4th 1027, 1048 n.13 (6th Cir. 2022); *Troy v. Samson Mfg. Corp.*, 758 F.3d 1322, 1326 (Fed. Cir. 2014).

70. See *Bruen*, 597 U.S. at 28 ("Although [the Constitution's] meaning is fixed according to the understanding of those who ratified it, the Constitution can, and must, apply to circumstances beyond those the Founders specifically anticipated.").

71. *Id.* at 22.

72. *Id.* at 22, 27–29; accord *D.C. v. Heller*, 554 U.S. 570, 634–35 (2008); see also *Roper v. Simmons*, 543 U.S. 551, 560 (2005) (The Eighth Amendment, "like other expansive language in Constitution, must be interpreted according to its text, considering history, tradition, and precedent.") (emphasis added).

73. *Bruen*, 597 U.S. at 27–28.

74. *Id.* at 27–29.

75. *Id.*; see also Brannon P. Denning & Glenn Harlan Reynolds, *Retconning Heller: Five Takes on New York Rifle & Pistol Association, Inc. v. Bruen*, 65 WM. & MARY L. REV. 79, 107 (2023) (noting "the number of questions about the analogical process left open in *Bruen*") (emphasis added); see also Laura Kalman, *Border Patrol: Reflections on the Turn to History in Legal Scholarship*, 66 FORDHAM L. REV. 87, 121 (1997) ("Like precedent and Founders' intent, historical analogies can be indeterminate."); *Atkinson v. Garland*, 70 F.4th 1018, 1029 (7th Cir. 2023) (Wood, J., dissenting) (With *Bruen*, "[w]e are left with something not much better than the Goldilocks solution: history can't be viewed too specifically, and it can't be viewed too generally. It must be, like the bed, the chair, or the porridge, just right . . . And that perfect length, or height, or temperature will remain in the eye of the beholder, or perhaps the final court to consider the matter.") (cleaned up). The same concerns, some have argued, can also be raised about tradition. See Hon. Kevin C. Newsom, *Remarks at Harvard Law School*, HARV. J.L. & PUB. POL'Y (forthcoming 2024) (asking "what role 'tradition' is supposed to be playing in the [post-*Bruen*] interpretive analysis. Is it the same thing as history? Or is it somehow different? And if it's different, is it different in kind, degree, chronology? And how, in any event, does 'tradition' bear on the meaning of the adopted and

late 1700s suggest⁷⁶ that the people were familiar with machines (or contraptions) *that helped their users* (in varying degrees) to accomplish tasks: contraptions to capture images (early foundations for the camera); contraptions to help speed up large-scale writing (the printing press); hydraulics and locomotives were in use in wine presses, cotton and weaving factories.⁷⁷ During post-ratification, in the early 1800s, the people were introduced to the photographic camera.⁷⁸ So the idea of a contraption (with varying degrees of automation) *helping humans* accomplish tasks was not unusual at the Founding.⁷⁹

Against that historical background, it means that the Copyright & Patent Clause of the Constitution has a focused application. At a minimum, it applies to original works or inventions by humans.⁸⁰ But even considering the prevailing public meanings of the words “author” and “inventor” at the Founding, historical practices at the time from the examples given earlier suggest that: (a) the people were familiar with contraptions and machines (of varying autonomy) assisting them with specific tasks; and (b) when people used those contraptions to assist them with specific tasks, humans took credit for the work.

What historical practice suggests, Supreme Court precedent confirms. The Supreme Court has held that a picture taken with a camera can still be credited to a human for copyright purposes under the Copyright and Patent Clause.⁸¹ The preceding points lead us to a fork in the road. In one sense, *Bruen* (and other originalist precedents’) mode of constitutional analysis can arguably be read to mean that Congress cannot exercise its power inconsistent with the original public meaning (at the Founding) of the words “author” or “inventor” in the Copyright and Patent Clause. If this reading of those precedents is right, then it means Congress could not, for example, pass a law that granted copyrights or patents to works or inventions *entirely by machines*.⁸²

While Supreme Court precedent requires a human touch to trigger the protections of the Patent and Copyright Clause,⁸³ what remains unclear is how much involvement is sufficient. The photographic camera should serve as a useful case study because the Supreme Court had to answer that question involving it.⁸⁴ What we understand as pictures today were traditionally hand-drawn portraits.⁸⁵ But beginning in the 1800s, society

ratified constitutional text?”); *accord* *Samia v. United States*, 599 U.S. 635, 655–56 (2023) (Barrett, J., concurring) (raising similar concerns about the Court’s historical analysis).

76. *Bruen*’s author routinely looks to the Founders’ practices and beliefs in aid of original meaning. *See generally Bruen*, 597 U.S. 1; *see, e.g.*, *Brown v. Ent. Merchs. Ass’n*, 564 U.S. 786, 821–25 (2011) (Thomas, J., dissenting) (Looking at literature, stories, philosophical and historical works among others to determine “[t]he practices and beliefs of the founding generation” to discern the originalist meaning of the First Amendment as applied to video games); *see also* *McIntyre v. Ohio Elections Comm’n*, 514 U.S. 334, 360 (1995) (Thomas, J., dissenting) (applying similar analysis of Founding-era publishing norms as applied to anonymous speech under the First Amendment to argue that at the Founding, the press meant small independent publishers and paid pamphleteers).
77. *See* Dave Roos, *7 Ways the Printing Press Changed the World*, HISTORY (Mar. 27, 2023), <http://tinyurl.com/yrswmhxj>; *see also* *The Industrial Revolution (1750-1900)*, BRITANICA, <http://tinyurl.com/d8tw49ac> (last visited Apr. 10, 2024).

78. *See Important Events in Photography*, PBS, <http://tinyurl.com/ypntfxkd> (last visited Apr. 9, 2024).

79. *See supra* notes 72–78 and accompanying text. The Court generally interprets constitutional provisions “‘by reference to historical practices and understandings.’” *Kennedy v. Bremerton Sch. Dist.*, 597 U.S. 507, 535 (2022) (quoting *Town of Greece*, 572 U.S. 565, 576 (2014)).

80. *See* *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 57–59 (1884).

81. *See id.*

82. *Id.*; *see also* *Marbury v. Madison*, 5 U.S. 137, 167 (1803) (a law that exceeds Constitutional limitations is invalid).

83. *See* *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 59–60 (1884); *accord* *In re Trade-Mark Cases*, 100 U.S. 82, 93–94 (1879) (the Patent and Copyright Clause protects “original” works that “are founded in the creative powers of the mind. The writings which are to be protected are *the fruits of intellectual labor . . .*”) (emphasis in original).

84. *See Sarony*, 111 U.S. at 57–61.

85. *See Important Events in Photography, supra* note 78.

outsourced significant aspects of the picture making process to the photographic camera.⁸⁶ Over time, cameras have become even more sophisticated; they can take pictures automatically.⁸⁷ Yet pictures from cameras still receive coverage under the copyright laws.⁸⁸ But why are cameras favored? As this article shows below, the answer is that cameras are, essentially considered, helpers, not independent content generators.⁸⁹

Burrow-Giles Lithographic Co. v. Sarony,⁹⁰ proves the point. *Sarony* arose out of the unauthorized use of a photograph of the Irish playwright Oscar Wilde.⁹¹ The plaintiff had taken a photo of Wilde with his camera.⁹² The defendants reproduced the photo without the plaintiff's consent for commercial purposes.⁹³ The plaintiff sued for copyright infringement.⁹⁴ One of the defendant's arguments was that the plaintiff was not the copyright owner because the camera—a machine—had taken the picture.⁹⁵ So under the Copyright and Patent Clause, the defendant argued, the plaintiff was not the author.⁹⁶ The Supreme Court rejected those arguments and held that photographs were “representatives of original intellectual conceptions of an author.”⁹⁷ The Court defined an author under the Copyright Clause as “he to whom anything owes to its origin; originator; maker; *one who completes a work of science or literature.*”⁹⁸ But the Court made clear that if photography was “merely [a] mechanical process” that had “no place for novelty, invention or originality” by a human, then “in such a case a copyright is no protection.”⁹⁹

Since then, federal courts have held that both the copyright and patent laws are limited to works and inventions by humans. The Ninth Circuit, for example, refused to grant a copyright under the Copyright Act to an application “authored by non-human spiritual beings.”¹⁰⁰ The Ninth Circuit emphasized that there must be, at a minimum, “human selection and arrangement” of the works.¹⁰¹ The Federal Circuit has also refused to approve of patents generated entirely by generative AI and other artificial entities.¹⁰²

Both the U.S. Patent and Trademark Office (“USPTO”) and Copyright Offices have published guidance on generative AI and what is necessary for statutory coverage. Beginning with the Copyright Office, it has made clear that human authorship is a threshold requirement for statutory coverage and this is assessed case-by-case.¹⁰³ To meet that requirement, the Copyright Office emphasizes that, for existing generative AI technology, merely providing a prompt is insufficient.¹⁰⁴ That is because supplying prompts alone, the Copyright Office believes, is the functional equivalent of commissioning an artist to generate a work of art with general instructions and leaving it to them to determine how the

86. See generally *id.*

87. E.g., *EOS R50: A+: Fully Automatic Shooting (Scene Intelligent Auto)*, CANON (Aug. 31, 2023), <https://support.usa.canon.com/kb/index?page=content&id=ART182832>.

88. See U.S. COPYRIGHT OFFICE, COMPENDIUM OF THE U.S. COPYRIGHT OFFICE § 1117 (3d ed. 2021).

89. *Id.* § 313.2.

90. 111 U.S. 53, 55.

91. *Id.* at 54–55.

92. *Id.*

93. *Id.* at 55–57.

94. *Id.* at 54–55.

95. *Sarony*, 111 U.S. at 54–55.

96. *Id.*

97. *Id.* at 57–59.

98. *Id.*

99. *Id.* at 59–60; See *In re Trademark Cases*, 100 U.S. 82, 94 (1879) (copyright law protects “the fruits of intellectual labor” based on “the creative powers of the [human] mind.”).

100. *Urantia Found. v. Maaherra*, 114 F.3d 955, 957–59 (9th Cir. 1997), *superseded on other grounds by statute*, Pub. L. No. 110–403, 122 Stat. 4256.

101. *Id.*

102. See *Thaler v. Vidal*, 43 F.4th 1207, 1210 (Fed. Cir. 2022); see also U.S. COPYRIGHT OFFICE, *supra* note 88.

103. See U.S. COPYRIGHT OFFICE, *supra* note 88.

104. *Id.* at 16,192–93.

end-product is depicted.¹⁰⁵ Just as a person who commissions an end-product does not demonstrate sufficient authorship to receive a copyright, so too one who simply gives prompts to generative AI.¹⁰⁶ The Patent Office has also issued its own preliminary guidance on generative AI tools.¹⁰⁷ While the U.S. patent laws are human-invention-centered, the mere use of generative AI tools in an invention does not preclude patent coverage.¹⁰⁸ The person seeking patent coverage must show that they significantly contributed to the invention.¹⁰⁹ Unlike the Copyright Office's guidance that places low currency on prompts, the USPTO, in contrast, suggests that patent coverage might exist when the applicant at least shows that they had a significant hand in the "construct[] [of] the prompt in view of a specific problem to elicit a particular solution from the AI system."¹¹⁰

C. *The First Amendment and General Civil Law Generative AI Conundrums.*

Generative AIs can publish incorrect things.¹¹¹ *Mata v. Avianca, Inc.*,¹¹² served as a reminder of this. In *Mata*, a court sanctioned a lawyer for filing bogus cases in a brief.¹¹³ But *Mata* stands out for another reason separate from lawyer sanctions. *Mata* provides an ideal launching pad to consider the constitutional dimensions of false generative AI-generated outputs. In the generative AI context, to return to the debate Harari introduced: are generative AIs generating and producing *our ideas* or their *own*? Does the First Amendment apply to the outputs generated by current versions of generative AIs? One step removed, assume that there are autonomous generative AIs, as the intellectual property cases suggest.¹¹⁴ Will the First Amendment apply to their outputs?

i. The First Amendment, Generative AI Outputs and the Responsibility Conundrum—Models that Require Prompts and Human Supervision.

The assumption here is that you have a ChatGPT-like tool. The model being analyzed requires a user to provide language prompts—either written or spoken—and then to refine the outputs to achieve the desired outcomes. The generative AI model being analyzed also lacks autonomous features or consciousness. To start, the trigger for the First Amendment is speech—hence free speech.¹¹⁵ Federal courts have long held that computer code (video games), internet searches and outputs—things that make up the universe of generative AIs' functionality—are protected speech.¹¹⁶ To that, add that the Supreme Court has said that the First Amendment protects speech no matter the human or inanimate nature

105. *Id.*

106. *Id.*

107. See Inventorship Guidance for AI-Assisted Inventions, 89 Fed. Reg. 10,043 (Feb. 13, 2024).

108. *Id.* at 10,045–46.

109. *Id.* at 10,047.

110. *Id.* at 10,048.

111. *What are AI Hallucinations?*, IBM, <https://www.ibm.com/topics/ai-hallucinations> (last visited Apr. 9, 2024).

112. No. 22-CV-1461 (PKC), 2023 WL 4114965 (S.D.N.Y. June 22, 2023).

113. *Id.* at *17.

114. See *Thaler v. Perlmutter*, No. CV 22-1564 (BAH), 2023 WL 5333236, at *1 (D.D.C. Aug. 18, 2023) (copyrights); *Thaler v. Vidal*, 43 F.4th 1207, 1209 (Fed. Cir. 2022).

115. See *Texas v. Johnson*, 491 U.S. 397 (1989).

116. *Univ. City Studios v. Corley*, 273 F.3d 429, 449 (2d Cir. 2001); *Junger v. Daley*, 209 F.3d 481, 485 (6th Cir. 2000).

of the speaker.¹¹⁷ For those reasons, ChatGPT-like generative AI tools will likely have First Amendment protections.¹¹⁸

To see why, consider a constellation of legal principles from Supreme Court cases that support this argument. The first case is *Citizens United v. FEC*.¹¹⁹ In *Citizens United*, the Court held that speech restrictions based merely on a speaker's corporate (inanimate) form were unconstitutional.¹²⁰ The next case is *Burwell v. Hobby Lobby Stores, Inc.*¹²¹ While *Hobby Lobby* recognized that an artificial entity—a for-profit corporation—has religious rights,¹²² that case also reiterated the venerable rule that “[c]orporations separate and apart from the human beings who own, run, and are employed by them cannot do anything at all.”¹²³ *Hobby Lobby* establishes that a corporate entity is a conduit for projecting and communicating the speech of the humans behind it.¹²⁴ Thus, arguably, extending *Hobby Lobby*'s logic all the way suggests that corporate speech is human speech.¹²⁵

Applying that reasoning, what is good for one class of inanimate objects (corporations) should likely be good for another (generative AIs).¹²⁶ For starters, the existing popular generative AI models have no autonomy or consciousness.¹²⁷ This is especially true here because for the ChatGPT-like generative AI models under discussion, there is still a need for human prompts—human speech and ideas (whether oral or written).¹²⁸ Thus, for the outcomes of these generative AI models at issue, there is human involvement from start to finish, making those models tools.¹²⁹ And as is true in several other contexts, those who use a tool are responsible for its consequences.¹³⁰

ii. The Vexing First Amendment Questions Posed by Autonomous Generative AI Models.

The patent and copyright cases suggest that there might be generative AI models that function with no meaningful human participation in their final outputs.¹³¹ To that end, the analysis is similar to when a person orders and pays for a coffee from a vending machine. Generally, in that context, hardly no one claims to have made the coffee; the machine made it. The person just *owns* and *consumes* the coffee. This section then asks: will

117. See *First Nat'l. Bank of Boston v. Bellotti*, 435 U.S. 765, 777 (1978).

118. See text accompanying notes 116–17, but see Cass R. Sunstein, *Artificial Intelligence and the First Amendment* (Apr. 28, 2023), <https://ssrn.com/abstract=4431251>.

119. See *Citizens United v. Fed. Election Comm'n*, 558 U.S. 310 (2010).

120. *Id.*

121. See *Burwell v. Hobby Lobby Stores, Inc.*, 573 U.S. 682 (2014).

122. *Id.* at 688–691.

123. *Id.* at 707.

124. *Id.* at 707.

125. *Id.* at 707–08.

126. See *Heffernan v. City of Paterson*, 578 U.S. 266, 272 (2016) (what is good for the goose is good for the gander).

127. See *How ChatGPT and Our Language Models Are Developed*, *supra* note 5.

128. See *id.*

129. See *Oversight of A.I.: Rules for Artificial Intelligence: Hearing Before the S. Jud. Comm., Sub. Comm. on Priv., Tech., & the Law*, 118th Cong. 1–2 (2023) (statement of Christina Montgomery, Chief Privacy & Trust Officer, IBM) [hereinafter *Statement of Christina Montgomery*] (“AI is just a tool” so the rules that should govern it should be “based on use.”); see also generally THE RANDOM HOUSE DICTIONARY OF THE SECOND LANGUAGE 1995 (2d ed. 1987) (A tool is “[a]n instrument . . . used in doing a certain work or producing a certain result”).

130. See RESTATEMENT (THIRD) OF AGENCY §1.04 cmt. e (AM. LAW INST. 2006) (citing Joseph Sommer, *Against Cyberlaw*, 15 BERKELEY TECH. L. J. 1145, 1177–78 (2000)); see also generally M. Mwafulirwa, *supra* note 21, at 413.

131. See *Thaler v. Perlmutter*, No. CV 22-1564 (BAH), 2023 WL 5333236, at *1 (D.D.C. Aug. 18, 2023) (copyrights); *Thaler v. Vidal*, 43 F.4th 1207, 1209 (Fed. Cir. 2022) (patents).

outputs by autonomous AI models be covered by the First Amendment? What about their harmful outputs: who will be responsible and why?

The First Amendment will likely protect speech generated by autonomous generative AI tools. The Supreme Court has said that, in the First Amendment context, the “inherent worth of speech . . . *does not depend upon the identity of its source*, whether corporation, association, union, or individual.”¹³² Thus, based on this line of Supreme Court precedent, whether the source of the speech is inanimate or human makes no difference—as long as the speech has First Amendment value, it will likely be protected.¹³³ The Supreme Court’s recent decision about robocalls is illustrative.¹³⁴ Robocalls are generally “automatically” dialed by phone equipment to deliver “*an artificial or prerecorded voice message*” to a recipient.¹³⁵ The artificial and automatic nature of robocalls aligns them with the self-generated synthetic outputs that autonomous generative AIs are assumed to produce, whether those be deepfakes or other end-products. In any event, in the robocalls case, the Supreme Court found that regulations that targeted one class of robocalls for worse treatment than others were an unconstitutional restriction on speech.¹³⁶ The speech at issue was the contents of the robocalls.¹³⁷ The robocalls case shows that whether speech is generated by machines or humans is not controlling—that it is speech is what triggers the First Amendment.¹³⁸ And as shown, the First Amendment appears indifferent as to the source of speech—whether generated by a human or inanimate thing—and that principle is likely to resolve many free speech questions about autonomous generative AI outputs in future.

There is one last aspect of the responsibility calculus that deserves a passing mention: if the day ever comes when artificial intelligence attains a conscience. With the advent of powerful generative AI tools, the smartest people in technology, philosophy, neurology, and robotics have started to contemplate the question seriously.¹³⁹ Some rate the possibility as never, while some like David Chalmers Ph.D.—one of the preeminent experts on consciousness—estimates that in the next ten years, the chances of consciousness being achieved are “above one in five.”¹⁴⁰ The question is no longer abstract: recently a Canadian airline unsuccessfully tried to avoid liability for negligent advice by blaming its autonomous chatbot on its website.¹⁴¹ It is the classic *it’s not me, my robot did it* defense that a court rejected.¹⁴² That then invites this question: would the First Amendment still apply to speech generated by an autonomous, conscious computer? The Supreme Court’s robocalls case suggests an answer—that an autonomous machine generating the speech instead of a

132. See *First Nat’l. Bank of Boston v. Bellotti*, 435 U.S. 765, 777 (1978); cf. *Lovell v. City of Griffin*, 303 U.S. 444, 452 (1938) (media protections apply to any “vehicle of information or opinion”).

133. See *supra* notes 117–126 and accompanying text.

134. *Barr v. Am. Ass’n of Pol. Consultants*, 140 S. Ct. 2335 (2020) (plurality opinion).

135. *Id.* at 2344 (emphasis added).

136. *Id.* at 2347 (plurality opinion); *id.* at 2357 (Sotomayor, J., concurring); *id.* at 2363 (Gorsuch, J., concurring in part and dissenting in part).

137. *Id.* at 2367 n.12 (plurality opinion) (“[N]o one should be penalized or held liable for making robocalls”).

138. See *id.*

139. See The University of Cambridge, Claire College, *Will AI Ever Be Conscious?*, [WWW.STORIES.CLARE.CAM.AC.UK](http://www.stories.clare.cam.ac.uk), <http://tinyurl.com/3p879ksp> (last accessed Feb. 28, 2024) (asking “whether humans might create artificial intelligence with consciousness” and exploring “why this thorny question needs our attention”); see also Grace Huckins, *Minds of Machines: The Great AI Conscious Conundrum*, MIT TECH. REV., (Oct. 16, 2023), <http://tinyurl.com/5n7pbzsy>.

140. See Huckins, *supra* note 139.

141. See Leyland Cecco, *Air Canada Ordered to Pay Customer Who Was Misled by Airline’s Chatbot*, THE GUARDIAN, <https://www.theguardian.com/world/2024/feb/16/air-canada-chatbot-lawsuit> (last visited Apr. 10, 2024).

142. *Id.*

human did not rob the resulting communication of its First Amendment protection.¹⁴³ In any event, the Court's cases have historically focused on the speech, not its source.¹⁴⁴

But that does make the responsibility attribution question harder to ignore: in essence, why should A be responsible for B's autonomous and conscious actions? That, in turn, brings to the fore the question U.S. Supreme Court Justice William O. Douglas asked in the 1970s: if the law accords legal personality to several animate things like ships and corporeal existence, then why not others, including trees?¹⁴⁵ Taking cue from Justice Douglas, this author has argued that if the law grants personality to conscious-less ships—allowing them to sue and be sued—then there is an even more compelling argument for doing the same for another form of conveyance, the artificial intelligence-powered autonomous car.¹⁴⁶ In turn, this article has argued that the generative AI technology and self-driving cars should be seen as two sides of the same coin—the automation coin.¹⁴⁷ Thus, what is true for one must therefore perhaps also be true for a similarly situated other.¹⁴⁸ And if the law ever develops to give legal personality to conscious inanimate generative AI machines, then at that time, it will perhaps follow, as a logical consequence, that responsibility could be attributed to those machines for their own mistakes.¹⁴⁹ After all, mistakes are themselves predicate (if not) proof of actionable negligence.¹⁵⁰ But until then—just as the Canadian airline found out the hard way—pointing the finger at an autonomous artificial intelligence tool will probably not excuse its owner from the harm that its tool inflicts on others.¹⁵¹

iii. Unraveling the Responsibility Conundrum for Generative AI Outputs.

Now that the First Amendment coverage questions have been resolved, consider next how to resolve the responsibility questions for harmful outputs by generative AI models under existing common legal theories. When possible, the analysis distinguishes between existing user-prompted generative AI models and the autonomous kind. For the user-prompted models, those are tools; the one who uses (or misuses) them is generally responsible for their consequences.¹⁵² As previously noted, that is why when a person uses a radio or a computer to generate defamatory speech, the tool is simply projecting the user's words to the world, not the object's.¹⁵³ Thus, as shown below, the generative AI

143. See *Barr*, 140 S. Ct. 2335.

144. See *Lovell v. City of Griffin*, 303 U. S. 444, 452 (1938) (First Amendment protections apply to any “vehicle of information or opinion”); *Bellotti*, 435 U.S. at 777 (“The inherent worth of the speech in terms of its capacity for informing the public does not depend upon the identity of its source, whether corporation, association, union, or individual.”).

145. See *Sierra Club v. Morton*, 405 U.S. 727, 741–43 (1972) (Douglas, J., dissenting).

146. See *Mwafulirwa*, *supra* note 21, at 418–21.

147. *Supra* text accompanying notes 11–24.

148. See *Heffernan v. City of Paterson*, 578 U.S. 266, 272 (“[I]n the law, what is sauce for the goose is normally sauce for the gander.”).

149. See generally *M. Mwafulirwa*, *supra* note 21, at 418–21 (collecting authorities and making argument about autonomous cars).

150. *Id.*; see also *W. PAGE KEETON ET AL., PROSSER & KEETON ON TORTS*, § 31, at 169 (5th ed. 1984) (“An honest blunder or a mistaken belief that no damage will result may absolve the actor from moral blame, but the harm to others is still as great and the actor's individual standards must give way in this area of the law to those of the public.”).

151. See *Cecco*, *supra* note 141.

152. See *M. Mwafulirwa*, *supra* note 21, at 418–21; see also *RESTATEMENT (THIRD) OF AGENCY* § 1.04 cmt. E (AM. LAW INST. 2006).

153. See *Statement of Christina Montgomery*, *supra* note 129, at 4. In the same vein, the assumption here is that if a user intentionally defamed or invaded someone's privacy interests, then traditional tort theories would likely apply to that defendant. See generally *WILLIAM L. PROSSER, HANDBOOK OF THE LAW OF TORTS* §§ 111, 117, at 737–44, 802–15 (4th ed. 1971) (outlining traditional defamation and privacy tort theories).

tools at issue will likely be subject to those same rules.¹⁵⁴ The autonomous tools, however, present a tougher analysis. The answer to the responsibility questions, as the analysis below shows, depends on the theories pursued.

Suppose a deepfake of a person goes viral. The deepfake depicts that person in an unsavory way, harming that person's reputation. Also assume two alternative scenarios: (a) the deepfake was made using generative AI tools by someone; or (b) like the robocalls previously discussed, an autonomous generative AI tool made the deepfake. What then?¹⁵⁵

a. Defamation Against a Content Generator.

A person's reputation is valuable and there are consequences for harming that important interest.¹⁵⁶ The law of defamation recognizes two tort theories—libel and slander.¹⁵⁷ Libel deals with written false statements,¹⁵⁸ while slander deals with the spoken word.¹⁵⁹ Libel exists in two forms: libel per se and libel per quod.¹⁶⁰ Statements that qualify as libel per se are “actionable *in and of themselves without proof of malice, falsity or damage*.”¹⁶¹ For those statements, the law presumes that the plaintiff has suffered harm and that the defendant wanted to hurt the other person simply by the nature of the words used.¹⁶² When applicable, defamation *per se* theories are a form of no-fault liability.¹⁶³

But the Supreme Court has imposed judicial glosses to the First Amendment to bolster free speech and curtail reputational torts. In *New York Times Co. v. Sullivan*, the Supreme Court announced for the first time “standards that satisfy the First Amendment.”¹⁶⁴ Those standards provide that if a defamation matter involves a matter of public concern and the plaintiff is a public official, then the injured party must prove actual malice, on top of the requirement that the statement was false.¹⁶⁵ The Supreme Court has extended the actual malice standard to public figures—those who have attained notoriety and those who voluntarily inject themselves into a particular controversy.¹⁶⁶ *Sullivan* teaches that speech does not lose its First Amendment protections simply because it is false.¹⁶⁷

154. See generally Statement of Christina Montgomery, *supra* note 129, at 4; see also *Project Veritas v. Schmidt*, 72 F.4th 1043, 1062 n.15 (9th Cir. 2023) (“[V]ictims of . . . fabrications” caused by “deepfakes” can “vindicate their rights through tort actions.”); accord *Animal Legal Def. Fund v. Wasden*, 878 F.3d 1184, 1205 (9th Cir. 2018).

155. The analysis here could also apply to a claim that a ChatGPT-like tool published false information about someone. This analysis only highlights commonly asserted common law theories. Statutory theories are not addressed.

156. See *Dusabek v. Martz*, 249 P. 145, 147 (Okla. 1926); *Rosenblatt v. Baer*, 383 U.S. 75, 92 (1966) (Stewart, J., concurring).

157. See RESTATEMENT (FIRST) OF TORTS § 568 ((AM. L. INST. 1938).

158. *Id.*

159. *Id.*

160. *Id.* § 569.

161. *Bierman v. Weier*, 826 N.W.2d 436, 444 (Iowa 2013) (emphasis added). But some jurisdictions have eliminated defamation *per se* on First Amendment grounds. *E.g.*, *Gobin v. Globe Pub. Co.*, 649 P.2d 1239, 1242 (Kan. 1982).

162. See, e.g., *Fountain v. First Reliance Bank*, 730 S.E.2d 305, 309 (S.C. 2012) (for defamation *per se* theories, a defendant “is presumed to have acted with common law malice and the plaintiff is presumed to have suffered general damages”); accord *Larson v. SYSCO Corp.*, 767 P.2d 557, 560 (Utah 1989).

163. See *Snead v. Redland Aggregates Ltd.*, 998 F.2d 1325, 1334 (5th Cir. 1993) (noting that, under a *per se* theory, “damages are available in cases of libel per se without any showing of fault on the part of the defendant.”) (emphasis added); *Hoblyn v. Johnson*, 55 P.3d 1219, 1233 (Wyo. 2002) (same).

164. See *N.Y. Times Co. v. Sullivan*, 376 U.S. 254, 269 (1964).

165. *Id.* at 269–274.

166. See *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 351 (1974).

167. *Milkovich v. Loraine J. Co.*, 497 U.S. 1, 14 (1990).

That false speech enjoys *some* First Amendment protection warrants deeper inspection because falsity is the essence of generative AI-generated deepfakes.¹⁶⁸ *United States v. Alvarez*¹⁶⁹ is critical because it distinguished between false statements that can be penalized and those that cannot be penalized consistent with the First Amendment.¹⁷⁰ In *Alvarez*, the defendant falsely claimed that he had received military honors.¹⁷¹ For his lies—which the government had failed to prove had caused anyone harm—Alvarez was convicted.¹⁷² But the Supreme Court reversed, holding that parts of the Stolen Valor Act were unconstitutional.¹⁷³ False speech that injures no one cannot be penalized.¹⁷⁴ Statements that cause injury to someone’s reputation, business, or harm the public, the law can penalize consistent with the First Amendment.¹⁷⁵ But the First Amendment also protects some lies: “[s]aints may always tell the truth, but for mortals, living means lying.”¹⁷⁶ Indeed, some lie to protect their privacy, to comfort children and so on.¹⁷⁷ In fact, falsifying speech for artistic effect is part of American culture.¹⁷⁸ Because of make-believe, America has a rich entertainment industry encompassing movies, TV shows, comedy, satire, and parody.¹⁷⁹

Deepfakes, however, present unique First Amendment challenges. The first traces of deepfakes superimposed celebrities faces on pornographic actors.¹⁸⁰ Since then, deepfakes have spread and now exist in politics, civil discourse, and even elections speech.¹⁸¹ The most well done deepfakes are hard to detect with the naked eye.¹⁸²

When it comes to a content generator using generative AI tools to harm someone’s reputation, the defamation laws provide recourse.¹⁸³ Yet as *New York Times Co. v. Sullivan* and cases after it show, if the plaintiff is a public figure or public official and the issue is on a matter of public concern, they must plead and prove actual malice.¹⁸⁴ The plaintiff must allege and prove that the publisher published deliberate falsehoods or with reckless disregard as to their falsity.¹⁸⁵ Outside of that context, the Supreme Court has refused to impose the actual malice standard on private party defamations, even on matters of public concern.¹⁸⁶ But there must be a showing by a plaintiff of some fault on the content-publisher’s part.¹⁸⁷ The same restrictions do not apply, though, to private defamation on private matters.¹⁸⁸

As applied to the reputational hypothetical, defamation would likely be a viable theory. Recall that user-prompted generative AI models need human prompts in the form

168. See *In re S.K.*, 215 A.3d 300, 315 n.22 (Md. App. Ct. 2019).

169. 567 U.S. 709 (2012).

170. *Id.* at 713–14.

171. *Id.* at 713–15.

172. *Id.*

173. *Id.* at 719–23 (plurality opinion).

174. *Alvarez*, 567 U.S. 709 at 719–23 (plurality opinion).

175. *Id.* at 722–30 (plurality opinion.); *id.* at 731–735 (Breyer, J., concurring).

176. *United States v. Alvarez*, 638 F.3d 666, 673–675 (9th Cir. 2011) (Kozinski, C.J., concurring in denial of rehearing en banc).

177. *Id.*

178. See M. Mwafulirwa, *supra* note 18, at 13–14.

179. *Id.*

180. *Id.*

181. *Id.*

182. *Id.*

183. See *Animal Legal Def. Fund v. Wasden*, 878 F.3d 1184, 1205 (9th Cir. 2018).

184. See *N.Y. Times Co. v. Sullivan*, 376 U.S. 254, 279–80, 285 (1964).

185. *Id.*

186. See *Gertz v. Welch*, 418 U.S. 323, 345–48 (1974).

187. *Dun & Bradstreet, Inc. v. Greenmoss Builders, Inc.*, 472 U.S. 749, 756–57 (1985) (plurality opinion).

188. *Id.* at 763 (plurality opinion).

of speech and ideas.¹⁸⁹ In those models, there is human involvement from start to finish, making those models tools.¹⁹⁰ The user of any such tool is responsible for its harm.¹⁹¹ If a defamation claim is brought by a private plaintiff on a matter of public or private concern, and the content generator knew (or should have known) of the falsity, that may be enough to establish liability.¹⁹² But if the plaintiff is a public official (or figure) suing on a matter of public concern, there must be allegations (or proof of) deliberate falsehoods or that the publisher published the statements with recklessness as to their falsity.¹⁹³

Does the fact that an autonomous AI tool generated the output defeat a defamation-like theory against the owner of that device? The answer is probably no. For one, if an injured private plaintiff sued under a defamation per se theory, the law in most places would likely presume harm.¹⁹⁴ Important still, when applicable, defamation per se is a no-fault theory in most jurisdictions.¹⁹⁵ For another, the civil law is concerned with policing foreseeable unreasonable and unjustifiable risks of harm to others.¹⁹⁶ If there is an appreciable risk of harm to others from a known use, then there is a duty to guard against that risk.¹⁹⁷ But if the risk of harm to others is unjustifiably high and the actor disregards that risk and still presses forward undeterred, then the law treats such conduct as reckless and more culpable than just ordinary negligence.¹⁹⁸ In the generative AI context, as elsewhere, once the owner (or user) of an automated generative AI tool becomes aware that they are publishing falsities or they have plausible reason to believe that the source data for their publication (technology) is unreliable, unmitigated continued use of the generative AI tool in the wake of such appreciable risk could establish actual malice to support defamation.¹⁹⁹

b. Negligence.

Under longstanding common law rules, property cannot exist in a vacuum; someone must be responsible for it.²⁰⁰ To that, add the longstanding rule of law that the existence of a foreseeable risk of harm to others triggers a duty to abate that danger.²⁰¹ The failure to mitigate a foreseeable risk of harm to others can thus generally serve as the basis for

189. See *How ChatGPT and Our Language Models Are Developed*, *supra* note 5.

190. See Statement of Christina Montgomery, *supra* note 129, at 4.

191. See *generally id.*

192. See *generally Gertz*, 418 U.S. at 347.

193. See *Sullivan*, 376 U.S. at 279–80, 285.

194. See *Bierman v. Weier*, 826 N.W.2d 436, 455–56 (2013) (collecting cases).

195. See *Snead v. Redland Aggregates Ltd.*, 998 F.2d 1325, 1334 (5th Cir. 1993); *Hoblyn v. Johnson*, 55 P.3d 1219, 1233 (Wyo. 2002) (same).

196. *E.g.*, *MacPherson v. Buick Motor Co.*, 111 N.E. 1050, 1053 (N.Y. 1916) (“[T]he presence of a known danger, attendant upon a known use, makes vigilance a duty.”); see also *Farmer v. Brennan*, 511 U.S. 825, 835–36 (1994).

197. See *MacPherson*, 111 N.E. at 1053.

198. See *Counterman v. Colorado*, 600 U.S. 66, 79 (2023) (“A person acts recklessly, in the most common formulation, when he consciously disregard[s] a substantial [and unjustifiable] risk that the conduct will cause harm to another.”) (cleaned up); see also *Sunward Corp. v. Dun & Bradstreet, Inc.*, 811 F.2d 511, 529 (10th Cir. 1987) (“[R]eckless disregard is generally placed at the far end of the continuum of care, short of intentional acts”); RESTATEMENT (SECOND) OF TORTS § 500 (AM. L. INST. 1965).

199. *Masson v. New Yorker Mag., Inc.*, 501 U.S. 496, 517 (1991) (“Deliberate or reckless falsification” comprises “actual malice”); *accord id.* at 526 (White, J., concurring); see *generally Counterman*, 600 U.S. at 79 (the disregard of an unjustified substantial risk of harm to others establishes recklessness); *Harte-Hanks Commc’ns, Inc. v. Connaughton*, 491 U.S. 657, 688, 690 (1989) (“[R]ecklessness may be found where there are obvious reasons to doubt the veracity of the informant or the accuracy of his reports.”).

200. See *generally Parsons v. Stand. Oil Co.*, 74 A.2d 565, 572–73 (N.J. 1950); *In re Menschefrend’s Est.*, 283 A.D. 463, 468 (N.Y. App. Div. 1954).

201. See *MacPherson*, 111 N.E. at 1053 (“[T]he presence of a known danger, attendant upon a known use, makes vigilance a duty.”); see also W. PAGE KEETON ET AL., *supra* note 150, § 31, at 169 (“Negligence is a matter of risk—that is to say, of recognizable danger of injury.”).

negligence liability.²⁰² Likewise, a person acts negligently “if” they are “not but should be aware of” a substantial risk of harm to others.²⁰³ Some risks of using generative AI technology tools are that they can publish harmful content that advises or encourages self-harm.²⁰⁴ Generative AI technology has also been known to publish false, confidential, and private information.²⁰⁵ The preceding negligence-induced harms (that generally result in either reputational harms or disclosure of sensitive personal information or publication of misleading guidance or advice) generally result in economic losses to the injured party.²⁰⁶ This, then, raises difficult conceptional liability questions because generally, the pure economic loss doctrine is said to bar recovery in tort for freestanding pecuniary losses.²⁰⁷ On closer inspection, however, the pure economic loss doctrine has well-known tort exceptions in most jurisdictions: It is generally inapplicable to fraud or fraud in the inducement;²⁰⁸ negligent misrepresentation;²⁰⁹ defamation;²¹⁰ varied forms of professional malpractice and losses stemming from special relationships, like that of a fiduciary;²¹¹ and tortious interference with contract or prospective economic relations.²¹² Thus, while most jurisdictions apply the economic loss doctrine, they tend to limit it to negligence and product-liability claims.²¹³ But a minority of jurisdictions have rejected the economic loss

202. See *MacPherson*, 111 N.E. at 1053.

203. *Borden v. United States*, 593 U.S. 420, 427 (2021) (plurality opinion).

204. See Statement of Sam Altman, *supra* note 26, at 1–6.

205. *Id.*

206. See PROSSER, *supra* note 153, §128, at 915 (“Pecuniary loss inflicted by interference with the plaintiff’s personal reputation already has been encountered in defamation.”); see also *infra* text accompanying notes 214 and 216.

207. *E.g.*, *Apollo Grp. v. Avnet, Inc.*, 58 F.3d 477, 479 (9th Cir. 1995) (“Generally, under the economic loss rule, a plaintiff who suffers only pecuniary injury as a result of the conduct of another cannot recover those losses in tort”); *In re Chi. Food Litig.*, 680 N.E. 2d 265, 274 (Ill. Ct. App. 1997) (“At common law, solely economic losses are generally not recoverable in tort actions.”); *Corporex Dev. & Constr. Mgmt., Inc. v. Shook, Inc.*, 835 N.E. 2d 701, 704 (Ohio Ct. App. 2005) (“The economic-loss rule generally prevents recovery in tort of damages for purely economic loss.”); *Indem. Ins. Co. v. Am. Aviation, Inc.*, 891 So. 2d 532, 544 (Fla. 2004) (Cantero, J., concurring) (“[T]he [pure economic loss] rule has been stated with ease but applied with great difficulty.”) (emphasis added); see also *W. PAGE KEETON ET AL.*, *supra* note 150 § 92, at 657 (“Generally speaking, there is no general duty to exercise reasonable care to avoid intangible losses to others that do not arise from tangible physical harm to persons or tangible things.”).

208. *Grynberg v. Questar Pipeline Co.*, 70 P.3d 1, 11–13 (Utah 2003) (fraud and conversion exempted); *EED Holdings v. Palmer Johnson Acquisition Corp.*, 387 F. Supp. 2d 265, 278–79 (S.D.N.Y. 2004) (fraud and fraud in the inducement exempted from economic loss rule); *but see Cerabio LLC v. Wright Med. Tech., Inc.*, 410 F.3d 981, 990 (7th Cir. 2005) (barring fraud claims because contract remedies were sufficient); *accord Hoseline, Inc. v. U.S.A. Diversified Prods., Inc.*, 40 F.3d 1198, 1200 (11th Cir. 1994).

209. See *John Martin Co. v. Morse/Diesel, Inc.*, 819 S.W. 2d 428, 435 (Tenn. 1991) (negligent misrepresentation not subject to pure economic loss doctrine); *accord* RESTATEMENT (SECOND) OF TORTS § 552 (AM. L. INST. 1965).

210. See *Tommy L. Griffin Plumb. & Heating Co. v. Jordan, Jones & Goulding, Inc.*, 463 S.E.2d 85, 88 n.2 (1995) (defamation and libel); see also *Dittman v. UPMC*, 196 A.3d 1036, 1052 (Pa. 2018) (“[L]ibel and defamation, accountant malpractice, legal malpractice, and architect liability among the examples of tort actions for which purely economic loss is recoverable”).

211. See *Tommy L. Griffin Plumb.*, 463 S.E.2d at 88 n.2; *but see Fleischer v. Hellmuth, Obata & Kassabaum, Inc.*, 870 S.W.2d 832, 837 (Mo. Ct. App. 1993) (rejecting general contractor’s negligence claim against architect under economic loss rule for fear of indeterminate liability to an indeterminate class of plaintiffs); *accord Rissler & McMurry Co. v. Sheridan Area Water Supply Joint Powers Bd.*, 929 P.2d 1228, 1235 (Wyo. 1996).

212. See *Huron Tool & Eng’g Co. v. Precision Consulting Servs., Inc.*, 532 N.W. 2d 541, 544 (Mich. Ct. App. 1995) (tortious interference with contract and prospective economic relations); see also *Am. Towers Owners Ass’n v. CCI Mech., Inc.*, 930 P.2d 1182, 1190 n.11 (Utah 1996), *overruled on other grounds by Davencourt at Pilgrims Landing Homeowners Ass’n v. Davencourt at Pilgrims Landing, LC*, 221 P.3d 234 (Utah 2009).

213. See *Giles v. Gen. Motors Acceptance Corp.*, 494 F.3d 865, 875 (9th Cir. 2007) (“Many courts have explicitly refused to extend the economic loss doctrine beyond the product liability context . . . negligence and strict liability.”); *In re Chi. Flood Litig.*, 680 N.E. 2d 179, 274–75 (Ill. 1997) (economic loss doctrine only applies to “tort theories of strict liability, negligence, and innocent misrepresentation”); *W. PAGE KEETON, ET AL.*, *supra* note

doctrine in negligence and product-liability claims.²¹⁴ In those permissive jurisdictions, the failure of a product-maker (or user) to guard against foreseeable dangers (or unreasonable risk of harm) to others' confidential information from the use (or employment) of generative AI tools, which then results in harm to others, could be the basis for liability.²¹⁵ Similar claims have been successfully asserted against companies that use automated online payment systems and those that serve the public because they failed to take reasonable measures (like using encryption) to safeguard their customers' data.²¹⁶ Courts have held, for example, that when there are colorable claims that a data breach has caused immediate and concrete harms—like identity theft or property loss—then a negligence claim is viable against the user or owner of the tool.²¹⁷ That same theory could perhaps work in this context on a generative AI owner (or those who use such tools to offer services to the public).

In fact, a similar theory has been asserted against product-manufacturers of automated products that create a risk of harm to others based on a negligent-design product-liability theory.²¹⁸ That theory was successfully asserted against SnapChat for allegedly creating a speech-platform filter that induced youngsters to engage in reckless driving.²¹⁹ The Ninth Circuit held that Section 230 of the Communications Decent Act did not immunize this kind of negligent product-design defect.²²⁰ The same analysis could work in a generative AI-context against product manufacturers whose product resulted in significant losses like identity theft or property loss.

c. Breach of Fiduciary Duty and Constructive Fraud.

For those who owe special duties to others because of their relationship of trust and confidence—like doctors, lawyers, and similar other professionals—a breach of fiduciary theory against those actors might be viable for disclosure of sensitive facts from using generative AI tools.²²¹ Lawyers and doctors, for example, both have relationships of

150, § 92, at 657 (economic loss rule applies to negligence actions); *Millenkamp v. Davisco Foods Int'l, Inc.*, 391 F. Supp. 2d 872, 878 (D. Idaho 2005) (“The economic loss rule prohibits recovery of purely economic losses in a negligence action, unless an exception applies.”) (cleaned up).

214. *E.g.*, *Mainline Tractor & Equip. Co. v. Nutrite Corp.*, 937 F.Supp. 1095, 1104 (D. Vt. 1996) (the law permits product defect claims for pure economic losses); *Spring Motors Dist., Inc. v. Ford Motor Co.*, 489 A.2d 660, (N.J. 1985) (pure economic loss recovery permitted in product defect cases for individual consumers but not commercial consumers); *Hügel v. Gen. Motors Corp.*, 544 P.2d 983, 989 (Colo. 1975) (finding that the “wiser view” is that strict liability product defect theories permit recovery for pure economic losses); *Thompson v. Neb. Mobile Homes*, 647 P.2d 334, 337 (Mont. 1982) (“[W]e extend the doctrine of strict liability in tort” to pure economic losses); *In re Rutter’s Inc. Data Sec. Breach Litig.*, 511 F. Supp. 3d 514, 529 (M.D. Pa. 2021) (permitting pure economic loss negligence claims involving a product); *accord In re Brinker Data Incident Litig.*, No. 3:18-cv-686-J-32MCR, 2020 WL 691848, at **6–7 (M.D. Fla. Jan. 27, 2020).

215. *See generally MacPherson*, 111 N.E. at 1053; *see also generally Borden*, 593 U.S. at 427.

216. *In re Rutter’s Inc. Data Sec. Breach Litig.*, 511 F. Supp. 3d at 5; *In re Brinker Data Incident Litig.*, 2020 WL 691848, at **6–7; *but see Bray v. Gamestop Corp.*, No. 1-17-cv-1365, 2018 WL 11226516, at **3–4 (D. Del. Mar. 16, 2018) (rejecting negligence claims based on an alleged customer data breach because the economic loss rule prevents negligence recovery for pure financial losses).

217. *See supra* notes 190–91 and 204 and accompanying text.

218. As noted, the law in a majority of jurisdictions only permits product defect claims when there is resulting personal injuries; a minority of courts, however, permit recovery of pure economic losses. *See W. PAGE KEETON, ET AL., supra* note 150, § 101, at 708. Thus, depending on the jurisdiction, manufacturer-liability theories could be applicable, but a full-fledged analysis of those issues is beyond the scope of this paper.

219. *See Lemon v. Snap, Inc.*, 995 F.3d 1085 (9th Cir. 2021).

220. *Id.* at 1094. An important side note: *Lemon* was in fact a personal injury case.

221. In some jurisdictions, “a breach of fiduciary duty constitutes fraud.” *King v. Bryant*, 795 S.E.2d 340, 351 n.5 (N.C. 2017) (cleaned up); *accord Deluxe Barber Sch., L.L.C. v. Nwakor*, 609 S.W.3d 282, 291 n.5 (Tex. Ct. App. 2020). In other jurisdictions, however, a breach of fiduciary is simply negligence. *See Margaret Blair Tr. v.*

confidence, trust, and reliance with their clients; their clients rely on their expertise for treatment and legal services.²²² And doctors, just like lawyers, have professional obligations to keep client data confidential.²²³ Courts have held that when these professionals fail to safeguard confidential client information with reasonable precautionary measures causing harm, liability is proper.²²⁴ In those jurisdictions where a breach of fiduciary duty is negligence by another name,²²⁵ and given the foreseeable confidentiality risks that generative AI tools pose, and as is true in other legal contexts, a failure to guard against such risk could justify liability against the owner or user.²²⁶

Likewise, in jurisdictions that a breach of fiduciary has fraud undertones, the defendant's breach of a legal duty can also be a basis for constructive fraud liability.²²⁷ Constructive fraud can rest on a breach of a legal or equitable duty that results in harm to someone else's interests.²²⁸ Constructive fraud—unlike actual fraud—need not involve moral or intentional wrongdoing.²²⁹ Important still, constructive fraud has no scienter requirement.²³⁰ The breach itself is the tort.²³¹ This makes this theory particularly favorable for autonomous generative AI tools, where fault might be harder to establish against the human owners (or users) of the technology.

d. False Light.

This tort targets a false impression relayed to the public by the publisher.²³² If someone depicts a person falsely to the public, then false light could apply.²³³ Generally, false light depends on publications of major false representations of someone's character, history, activities, or beliefs.²³⁴ Additionally, in some jurisdictions, a plaintiff must show that the publication was made with knowledge of (or with) reckless disregard of its falsity (the *New York Times v. Sullivan* actual malice standard).²³⁵ But some jurisdictions differentiate between false light claims brought by private individuals and those by a public

Blair, 378 P.3d 65, 72 (Okla. Civ. App. 2016) (“[B]reach of fiduciary duty is essentially a claim of negligence in performing a duty, other than a heightened duty of care”).

222. See Bryson v. Tillinghast, 749 P.2d 110, 112 (Okla. 1988) (doctors); accord Brandt v. Med. Def. Assocs., 856 S.W. 2d 667, 667–71 (Mo. 1993); Perez v. Kirk & Carrigan, 822 S.W.2d 261, 266 (Tex. Civ. App. 1992) (attorneys); accord Orthman v. Premiere Pediatrics, LLC, 545 P.3d 124, 133, 137 (Okla. Civ. App. 2024).

223. See *supra* note 222 and accompanying text.

224. Brandt, 856 S.W.2d at 667–671 (“[T]he civil action is for damages in tort is the sanction that puts teeth into the physician’s duty of confidentiality”); see also Perez v. Kirk & Carrigan, 822 S.W.2d 261, 266 (1991) (attorneys).

225. E.g., Blair, 378 P.3d at 72.

226. See generally MacPherson v. Buick Motor Co., 111 N.E. 1050, 1053 (N.Y. 1916).

227. King, 795 S.E.2d at 351 n.5; accord *Deluxe Barber Sch.*, 609 S.W.3d at 291 n.5.

228. Croslin v. Enerlex, Inc., 308 P.3d 1041, 1045 (Okla. 2013); 37 AM.JUR.2D *Fraud and Deceit* § 33 (2024).

229. See 37 C.J.S. *Fraud* § 5 (2024); see Croslin, 308 P.3d at 1046.

230. Macon-Bibb Cnty. Hosp. Auth. v. Ga. Kaolin Co., 646 F. Supp. 90, 93 (M.D. Ga. 1986) (“Constructive fraud . . . does not require knowledge or scienter.”); Dawson v. Withycombe, 163 P.3d 1034, 1057 (Ariz. Ct. App. 2007).

231. See Dawson, 163 P.3d at 1057 (constructive fraud is a “breach of legal or equitable duty” that the law “declares fraudulent because the breach tends to deceive others, violates public or private confidences, or injures public interests.”); accord Grubb v. DXP Enters., Inc., 85 F.4th 959, 971 (10th Cir. 2023) (“[C]onstructive fraud, unlike actual fraud, does not require an intent to deceive . . . It is any breach of duty which, without an actually fraudulent intent, gains an advantage to the person in fault, . . . by misleading another to his prejudice.”) (cleaned up); see also 37 AM. JUR. 2D *Fraud and Deceit* § 9 (2024) (“Constructive fraud arises from a breach of a duty owed ordinarily because of a fiduciary or confidential relationship between the parties.”).

232. McCormack v. Okla. Publ’g Co., 613 P.2d 737, 740 (Okla. 1980); Time, Inc. v. Hill, 385 U.S. 374, 380 (1967).

233. See RESTATEMENT (SECOND) OF TORTS § 652E (AM. L. INST. 1965).

234. *Id.* § 652E, cmt. c.

235. See Colbert v. World Publ’g Co., 747 P.2d 286, 290–292 (Okla. 1987).

official or figure.²³⁶ In those jurisdictions, private plaintiffs suing about a matter of private concern need only show that the publisher was negligent.²³⁷ But for public officials and figures or those private plaintiffs that sue on matters of public concern, the actual malice standard applies in those jurisdictions.²³⁸ Much of what applies to defamation also does to false light.²³⁹ So the same analysis on the disregard of (an unjustifiably high) risk of harm to others by falsehoods would likely also apply to false light.²⁴⁰

e. Abusive Online Speech and Emotional Distress and Injuries.

The Supreme Court has said that “personal abuse is not in any proper sense communication of information or opinion safeguarded by the Constitution.”²⁴¹ Based on that rationale, those who intentionally inflict emotional distress harm on others could be liable.²⁴² But while still on the subject of abusive speech that causes emotional harm, the analysis moves on to *Snyder v. Phelps*²⁴³—a case whose full implications in the internet age are unclear. In *Snyder*, a church was picketing funerals of dead soldiers to protest gay rights.²⁴⁴ The church picketed the funeral of Matthew Phelps.²⁴⁵ Phelps’ father was emotionally injured by the protests.²⁴⁶ The father sued alleging intentional infliction of emotional distress from offensive speech, and a jury awarded him millions of dollars.²⁴⁷ The Fourth Circuit reversed; the Supreme Court affirmed.²⁴⁸ The Supreme Court held that the First Amendment protected the church and its members.²⁴⁹

Snyder presents a jurisprudential puzzle. Recall, the Court has said that abusive speech does not receive First Amendment protection,²⁵⁰ and yet, *Snyder* held that just because the church’s speech on a matter of public concern was highly offensive to the father did not mean it lost its First Amendment protection.²⁵¹ *Snyder* represents a conundrum for online speech because, on those platforms, offensive speech is common.²⁵² *Snyder*’s holding rested on three factors. *First*, the Court found that defendant’s speech addressed a matter of public concern—that is, a contentious and newsworthy issue.²⁵³ *Second*, the speech, while offensive to the father, was not aimed personally at his son.²⁵⁴ The record, the Court noted, did not show that the church personally knew the son, the father, or his family.²⁵⁵

236. See *West v. Media Gen. Convergence, Inc.*, 53 S.W.3d 640, 647–48 (Tenn. 2001).

237. *Id.*

238. *Id.*

239. *Id.* at 645.

240. *E.g.*, *Talley v. Time, Inc.*, 923 F.3d 878, 895, 907 n.16 (10th Cir. 2019).

241. *Cantwell v. Connecticut*, 310 U.S. 296, 310 (1940). But as will be later shown, the Supreme Court appears to have tempered this rule when it is a public figure or official that sues for injury to their feelings on a matter of public concern. That public figure/official must now satisfy the *New York Times v. Sullivan* actual malice standard. See *Hustler Mag. Inc. v. Falwell*, 485 U.S. 46, 52–53 (1988).

242. See RESTATEMENT (SECOND) OF TORTS § 46 (AM. L. INST. 1965) (emotional distress tort elements).

243. 562 U.S. 443 (2011).

244. *Id.* at 448–49.

245. *Id.*

246. *Id.* at 449–50.

247. *Id.* at 450.

248. *Id.* at 450–451, 461.

249. *Snyder*, 562 U.S. at 461.

250. See *Cantwell v. Connecticut*, 310 U.S. 296, 310 (1940).

251. See *Snyder*, 562 U.S. at 454–58.

252. See generally *Barisha v. Lawson*, 141 S. Ct. 2424, 2427 (2021) (Gorsuch, J., dissenting from denial of certiorari).

253. See *Snyder*, 562 U.S. at 454–458.

254. *Id.*

255. *Id.* at 453–456.

Third, the Court found that the church communicated its speech on a matter of a public concern in a public place—an adjoining public street.²⁵⁶

Snyder's rationale might impact online speech. The Court in *Packingham v. North Carolina* recognized that the internet is a public place for exchange of speech.²⁵⁷ Expanding on this idea, some courts have held that social media platforms are like common carriers or that they are subject to public accommodation rules so that they are constrained from discriminating against certain speech.²⁵⁸ Other courts have found that when public officials use their private social media platforms to disseminate government speech, then they are public forums for First Amendment purposes.²⁵⁹ But when does a public official speak in their private capacity, separate from their public position on social media? The Supreme Court recently answered that question in *Lindke v. Freed*.²⁶⁰ In *Lindke*, the plaintiff brought a First Amendment lawsuit against a city manager who blocked the plaintiff from commenting on their social media account.²⁶¹ The defendant-city manager used the social media account to post both personal and government business.²⁶² The Court acknowledged that determining whether a state official spoke in a government or private capacity can be “difficult.”²⁶³ But, ultimately, the distinction “turns on substance, not labels.”²⁶⁴ For a public official’s social media posts to trigger state action, the official must have both (1) had “actual authority” to speak on the government’s behalf on the matter at issue; and (2) the official must in fact have sought “to exercise that authority when . . . [they] spoke on social media.”²⁶⁵ When both elements are present, then there is state action that is subject to the usual constitutional constraints and guardrails.²⁶⁶ Assume then, based on *Lindke's* holding and principles, that there are categories of government-official social media accounts that could qualify as platforms for public (or government) speech. That, then, presents the hard question of whether abusive online speech about a matter of public concern in such a public place (e.g., an online platform that is disseminating government speech, as noted above) is protected under *Snyder's* rationale.²⁶⁷ Finally, if the target of the abuse is a public figure or official, *New York Times v. Sullivan* has already superimposed additional First Amendment constraints.²⁶⁸

256. *Id.* at 454–460.

257. *See Packingham v. North Carolina*, 137 S. Ct. 1730, 1735 (2017). Facebook and other social media platforms, however, are not subject to the First Amendment. *See Manhattan Cmty. Access Corp. v. Halleck*, 587 U.S. 802, 812 (2019).

258. *E.g.*, *NetChoice, L.L.C. v. Paxton*, 49 F.4th 439, 469–473 (5th Cir. 2022); *NetChoice, L.L.C. v. Paxton*, No. 22-555, 2023 WL 6319650 (U.S. Sept. 29, 2023) (granting *certiorari*); *accord Biden v. Knight First Amdt. Inst. at Columbia U.*, 141 S. Ct. 1220, 1222–24 (2021) (Thomas, J., concurring); *cf. NetChoice, L.L.C., v. Att’y Gen., Fla.*, 34 F.4th 1196, 1222 (11th Cir. 2022). The Supreme Court is expected to weigh-in on this issue.

259. *See Knight First Amdt. Inst. at Columbia U. v. Trump*, 928 F.3d 226, 238 (2019); *Biden v. Knight First Amendment Inst. at Colum. U.*, 141 S. Ct. 1220, 1220 (2021) (vacated as moot); *accord Davison v. Randall*, 912 F.3d 666, 688 (4th Cir. 2019); *cf. Lindke v. Freed*, 37 F.4th 1199, 1206–07 (6th Cir. 2022) (holding public official’s private social media page was not a public forum), *vacated and remanded*, 601 U.S. 187 (2024).

260. 601 U.S. 187 (2024).

261. *Id.* at 763–64.

262. *Id.*

263. *Id.* at 196.

264. *Id.* at 197.

265. *Id.* at 198.

266. *Id.*

267. The United States Supreme Court is expected to rule this Term on the First Amendment implications of public officials’ social media accounts and the common carrier and public accommodation theories. *See NetChoice, L.L.C.*, 2023 WL 6319650; *Moody v. NetChoice, L.L.C.*, No. 22-277, 2023 WL 6319654 (U.S. Sept. 29, 2023). *Id.* at 198.

268. *See Hustler Mag. v. Falwell*, 485 U.S. 46, 52–53 (1988).

f. Harm to Pecuniary or Proprietary Interests/Appropriation of Likeness.

For most people, the law still affords them the right to be let alone, as a remedy against unwarranted intrusion in the private sphere of life.²⁶⁹ The right of publicity protected by the common law only extends to the “name or likeness” of an injured party.²⁷⁰ The protection is triggered by acts of appropriation by another—be it commercial or non-commercial uses that benefit the appropriator.²⁷¹ The most common cases, though, deal with commercial appropriation.²⁷² But the tort does not extend to commentary, news reporting, works of fiction, or entertainment.²⁷³ This, then, presents hard questions on how to reconcile First Amendment speech generated by deepfakes and the interests furthered by state privacy laws, especially when public figures and officials are at issue.

Deepfakes would likely receive less constitutional protection and pose the greatest legal risks if they caused freestanding commercial harms. The Supreme Court has held that the actual malice standard established in *New York Times v. Sullivan* is inapplicable when a public figure sues for injury to their property and commercial interests; but the actual malice standard still applies when public figures sue for claimed harms to their feelings or reputation.²⁷⁴ Indeed, the Supreme Court reiterated that point in *Hustler Mag., Inc. v. Falwell*,²⁷⁵ a case that refused relief to a public figure pastor who sued for alleged harm to his feelings or reputation. *Falwell* held that the pastor and other similarly situated public figures had to show actual malice to prevail.²⁷⁶ *Zacchini v. Scripps-Howard Broad. Co.*,²⁷⁷ however, dispensed with the actual malice standard when a public-figure plaintiff sued for harms stemming from a misappropriation of his creative stunt method, not for injuries to his feelings or reputation.²⁷⁸ So if a deepfake injured a public-figure plaintiff’s commercial interests, *Zacchini* makes liability possible with no need to satisfy actual malice.

iv. Could Section 230 of the Communications Decency Act Apply to Generative AI Outputs?

Suppose a deepfake about a plaintiff is published on a social media platform. Can a plaintiff sue the platform simply because the deepfake is published there? Without more, maybe not. Now suppose that a person uses a generative AI tool, and it produces defamatory outputs about the person using it. Could federal law immunize such internet-dependent outputs? Maybe. It would likely depend on the functionality of the tool at issue.

Congress passed the Communications Decency Act in 1996 to provide “internet companies with immunity from certain claims” in order “to promote the continued development of the Internet and other interactive computer services.”²⁷⁹ In §230(c)(1), Congress commanded that “[n]o provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.”²⁸⁰ And in §230(e)(3), Congress preempted any inconsistent state law,

269. See WILLIAM L. PROSSER, *supra* note 153, § 117, at 802–15.

270. See RESTATEMENT (SECOND) TORTS § 652C (AM. L. INST. 1965).

271. *Id.* § 652C, cmt. b.

272. See *Cardtoons, L.C. v. Major League Baseball Players Ass’n*, 95 F.3d 959, 967 (10th Cir. 1996).

273. 62A AM. JUR.2D *Privacy* § 65 (2024).

274. *Hustler Mag. v. Falwell*, 485 U.S. 46, 49 (1988).

275. *Id.* at 56–57.

276. *Id.* at 52–53.

277. See generally *Zacchini v. Scripps-Howard Broad. Co.*, 433 U.S. 562 (1977).

278. *Id.* at 574–75.

279. *HomeAway.com, Inc. v. City of Santa Monica*, 918 F.3d 676, 681 (9th Cir. 2019).

280. 47 U.S.C. § 230(e)(1).

giving broad immunity to internet companies.²⁸¹ So far, the law gives immunity to internet and social media companies for information that they publish on their platforms from third-parties.²⁸² Under §230(c), “publication” generally “involve[s] reviewing, editing, and deciding whether to publish or to withdraw from publication third-party content.”²⁸³ Internet-based companies are immune for their editorial choices on content.²⁸⁴

As applied to generative AI technology, the issues are fact-dependent. Most of the existing generative AI tools are interactive, since they connect to the internet to function and are open to several users.²⁸⁵ If a generative AI-generated deepfake is posted on a social media platform *by others*—and that platform (whether supported or operated by generative AI technology in whole or in part) *merely hosts it or exercises editorial judgment to remove it*—just as with the Facebook cases, that platform likely has immunity.²⁸⁶ Likewise, if the generative AI tool functions like a Google-like search engine, then the search engine cases suggest that those platforms are also immune.²⁸⁷ But suppose the generative AI tool at issue simply generates new content of its own; it does not host or curate third-party content or function like a search engine, then maybe there might not be section 230 immunity.²⁸⁸ After all, under longstanding section 230 jurisprudence, platforms that develop (in whole or in part) the content they publish have no section 230 immunity.²⁸⁹ Thus, for example, courts have held that a platform is not a passive transmitter of content when it requires users to express their preferences for services; thus, developing some of the final outputs.²⁹⁰ In the same way, depending on the generative AI tool at issue, purely user-prompted generative AI content or outputs might not receive section 230 immunity.

D. Deepfakes, the Public Interest, and the Governing Constitutional Considerations.

The criminal law vindicates the public interest.²⁹¹ The same is true of the civil justice system.²⁹² Both civil and criminal cases are governed by the same evidentiary and authentication rules.²⁹³ So, as shown below, those rules will likely apply to deepfakes.

Deepfakes will likely pose difficult litigation questions. In criminal cases, the prosecution has a duty to ensure that a criminal trial is fair.²⁹⁴ To that end, *Brady v. Maryland*²⁹⁵ requires prosecutors to disclose exculpatory evidence to a defendant.²⁹⁶ The Supreme Court has also held that the prosecution’s knowing use of false evidence to secure

281. 47 U.S.C. § 230(e)(3).

282. 47 U.S.C. § 230(c)(1).

283. *HomeAway.com*, 918 F.3d at 681.

284. *Twitter v. Taamneh*, 598 U.S. 471, 482, 505–06 (2023); *Force v. Facebook, Inc.*, 934 F.3d 53, 81 (2d Cir. 2019) (granting 47 U.S.C. § 230 immunity to Facebook in lawsuit alleging that it recommended content by terrorists).

285. *Univ. Commc’ns Sys., Inc. v. Lycos, Inc.*, 478 F.3d 413, 419 (1st Cir. 2007); *Batzel v. Smith*, 333 F.3d 1018, 1030 (9th Cir. 2003).

286. *E.g.*, *Force*, 934 F.3d at 65; *Zeran v. Am. Online, Inc.*, 129 F.3d 327, 330–31 (4th Cir. 1997).

287. *See Jones v. Dirty World Ent. Recordings L.L.C.*, 755 F.3d 398, 410 (6th Cir. 2014); *Kimzey v. Yelp!, Inc.*, 836 F.3d 1263, 1269, 127 n.4 (9th Cir. 2016).

288. *See* 47 U.S.C. § 230(f)(3).

289. *Id.*; *see also F.T.C. v. Accusearch Inc.*, 570 F.3d 1187, 1199–1200 (10th Cir. 2009).

290. *E.g.*, *Fair Hous. Council of San Fernando Valley v. Roommates.com, L.L.C.*, 521 F.3d 1157, 1167–68 (9th Cir. 2008) (en banc).

291. *See Standefer v. United States*, 447 U.S. 10, 25 (1980); *Robertson v. U.S. ex rel. Watson*, 560 U.S. 272, 273 (2010) (Roberts, C.J., dissenting).

292. *See* CHIEF JUSTICE JOHN ROBERTS, 2015 YEAR-END REPORT ON THE FEDERAL JUDICIARY 3 (“Our Nation’s courts are today’s guarantors of justice.”).

293. *See* Fed. R. Evid. 101(a); *see generally* Fed. R. Evid. 901.

294. *See Moore v. Illinois*, 408 U.S. 786, 810 (1972) (Marshall, J., dissenting).

295. *See generally Brady v. Maryland*, 373 U.S. 83 (1963).

296. *Id.* at 87.

a conviction violates due process.²⁹⁷ Due process also invalidates convictions that a prosecutor secures as a result of their failure to correct trial testimony that they know is false.²⁹⁸ If a prosecutor in a criminal trial knows that material, audiovisual evidence is false, then use of it to secure a conviction violates due process.²⁹⁹ Deepfakes pose difficult questions because when they are well done, they can be *nearly* impossible to detect. Given that background, could due process violation still arise from a well-done deepfake? *Nearly* impossible to detect does not mean it is impossible. As is true in several other contexts involving false evidence in criminal trials, whether a due process violation occurs depends on if the prosecutor knew or should have known of (and guarded against the risk of) the falsehood.³⁰⁰ But if the prosecutor did not know that they were offering false evidence, and even after the exercise of diligence, they could not have known of the inherent falsehood, courts have generally refused to find a constitutional violation.³⁰¹ In the civil arena, the deliberate use of false evidence to secure a judgment generally results in a new trial.³⁰² There is no principled basis to doubt that the same rules will likely apply to deepfakes, which are just another form of fake material.

Deepfakes will also likely raise difficult authentication questions. Under longstanding evidentiary rules,³⁰³ the proponent of audiovisual evidence must establish that evidence is what the party claims it is.³⁰⁴ Courts are now aware that audiovisual evidence can be manipulated.³⁰⁵ While courts are aware of the risk of that possibility, they have declined to jettison longstanding evidentiary rules.³⁰⁶ It is only when “a plausible claim of falsification” is presented that a trial court must hold an evidentiary hearing to resolve whether there is a reliable evidentiary foundation for a fact-finder to determine that the evidence is what it is claimed to be.³⁰⁷ What courts have not said, though, is how a movant can meet this burden. For something as specialized and complex as deepfakes, perhaps nothing less than expert testimony will suffice for authentication purposes.³⁰⁸

But suppose that a party meets its initial burden. How should a court solve this riddle, with so much constitutional process and rights at stake? Perhaps a judge should decide the issues, as they do in countless other contexts, only based on what the record supports.³⁰⁹ Applying longstanding evidentiary rules from other contexts would require the prosecution (or sponsor) to establish “the competency of the operator, the fidelity of the recording equipment, the absence of material deletions, additions, or alterations in the relevant portions of the recording, and the identification of the relevant speakers.”³¹⁰

297. *Mooney v. Holohan*, 294 U.S. 103, 112 (1935).

298. *See Napue v. Illinois*, 360 U.S. 264, 269 (1959).

299. *Id.*

300. *See, e.g., United States v. Agurs*, 427 U.S. 97, 103 (1976) (noting the use of perjured testimony which the prosecutor “*knew, or should have known*”) (emphasis added); *cf. Giglio v. United States*, 405 U.S. 150, 153-155 (1972) (violation found when witness testified falsely and prosecutor was in position to have been aware).

301. *See generally, e.g., United States v. Wall*, 389 F.3d 457, 473 (5th Cir. 2004).

302. *See Robinson v. Audi Aktiengesellschaft*, 56 F.3d 1259, 1267 (10th Cir. 1995); *but see Demjanjuk v. Petrovsky*, 10 F.3d 338, 353 (6th Cir. 1993) (reckless disregard for the truth sufficient to vacate judgment).

303. *See generally, e.g., Fed. R. Evid.* 901.

304. *Id.*; *see also United States v. Lamm*, 5 F.4d 942, 946-47 (8th Cir. 2021).

305. *See generally People v. Gonzalez*, 474 P.3d 124, 130 (Colo. Ct. App. 2019).

306. *Id.*

307. *Id.*

308. *See Project Veritas v. Schmidt*, 72 F.4th 1043, 1083 n.16 (Christen, J., dissenting); *State v. Rangel*, 747 N.E. 2d 291, 294 (Oh. Ct. App. 2000) (expert testimony might be required when the authentication issues do “not fall within the common knowledge of a lay person”); *People v. Beckley*, 185 Cal. App. 4th 509, 515 (2010) (“[E]xpert testimony is even more critical today to prevent the admission of manipulated or images”).

309. *Vernonia Sch. Dist. 47J v. Acton*, 515 U.S. 646, 686 (1995) (O’Connor, J., dissenting); *see also generally Hamdan v. Rumsfeld*, 548 U.S. 557, 637 (2010) (Kennedy, J., concurring) (“The Constitution is best preserved by reliance on standards tested over time insulated from the pressures of the moment.”).

310. *E.g., Gonzalez v. People*, 471 P.3d 1059, 1064 (Colo. 2020).

i. Criminalizing Deepfakes?

The Supreme Court has upheld criminal laws that penalize speech directed at a person or group that would likely lead to an imminent breach of the peace or public disorders.³¹¹ But in line with its policy of giving the First Amendment sufficient breathing room, the Court has extended its *New York Times v. Sullivan* actual malice judicial gloss to criminal libel statutes.³¹² Recently, the Court reaffirmed these principles in *Counterman v. Colorado*,³¹³ a case in which it had to again confront the criminalization of speech. In *Counterman*, the defendant was convicted of criminal stalking and harassment.³¹⁴ After discussing historical examples of traditionally constitutionally unprotected speech,³¹⁵ the Court reiterated that, in order to give important First Amendment freedoms breathing room and to avoid unwarranted self-censorship, it was necessary to impose a mens rea requirement.³¹⁶ The mens rea chosen was recklessness, “the same standard for criminal libel.”³¹⁷ That standard, as noted, generally requires a defendant to disregard an unreasonable and unjustifiable risk of harm to others stemming from their conduct.³¹⁸

Some have recognized the risk that deepfakes might falsely depict a public catastrophe.³¹⁹ Yet the Supreme Court has made clear that “[t]he most stringent protection of free speech would not protect a man in falsely shouting fire in a theatre and causing a panic.”³²⁰ In fact, Justice Breyer’s controlling opinion in *Alvarez* reiterated the same point when it noted existing laws that penalize false statements about public catastrophes.³²¹ Based on Justice Holmes’ shouting-fire rationale, courts have upheld convictions under the federal Anti-Hoax Statute,³²² and found that such speech does not receive First Amendment protection.³²³ If a deepfake were to make similar statements about a public catastrophe, those anti-hoax criminal laws would likely apply.

ii. Legislating Deepfakes?

When the government targets speech for its content, the presumption of unconstitutionality arises.³²⁴ If *Sullivan* and *Snyder* are anything to go by, the First Amendment limits tort liability in private lawsuits. *Sullivan*, for example, abolished defamation torts by public officials against media defendants unless they allege (and eventually prove) actual malice. Arguably, social media companies are like traditional media because they also publish information (and speech) of interest to the public generated by third-parties.³²⁵

311. *Brandenburg v. Ohio*, 395 U.S. 444, 448–49 (1969); *Chaplinsky v. New Hampshire*, 315 U.S. 568, 573–74 (1942).

312. *Garrison v. Louisiana*, 379 U.S. 64, 67–78 (1964).

313. 600 U.S. 66 (2023).

314. *Id.* at 70–71.

315. *Id.* 72–74.

316. *Id.* at 75–76.

317. *Id.* (cleaned up) (citing *Garrison*, 379 U.S. at 74).

318. *Counterman*, 600 U.S. at 79.

319. See Chesney & Citron, *supra* note 16, at 1755–58; see also *Schenck v. United States*, 249 U.S. 47, 52 (1919) (false claims of public catastrophes are not anything new – giving example of a crowded theater).

320. *Schenck*, 249 U.S. at 52 (emphasis added).

321. See *United States v. Alvarez*, 567 U.S. 709, 735 (2012) (Breyer, J., concurring).

322. See generally 18 U.S.C. § 1038.

323. See *United States v. Brahm*, 520 F. Supp. 2d 619, 628 (D.N.J. 2007); *United States v. Keyser*, 704 F.3d 631, 638 (9th Cir. 2012).

324. *Reed v. Town of Gilbert*, 576 U.S. 155, 163 (2015).

325. See *Lovell v. City of Griffin*, 303 U.S. 444, 452 (1938) (media protections apply to any “vehicle of information or opinion”).

Since the First Amendment applies to social media platforms, a law (or lawsuit) that seeks to punish a platform's curative and editorial choices about third-party speech poses grave constitutional questions. In *Brown v. Entertainment Merchants Ass'n*,³²⁶ for example, a case about California's attempts to regulate the sale of violent video games, the Supreme Court expressed its "doubts [about] [the government's power] to punish . . . third parties for conveying protected speech."³²⁷ Indeed, the Court held that Florida lacked the power to exercise editorial judgment over the Miami Herald Newspaper, the third-party, on how it should curate its content or what message it should carry.³²⁸ Part of the First Amendment protections is that besides choosing to speak, that law also empowers a speaker to choose not to utter certain speech.³²⁹ Thus, if the government wanted to regulate speech on social media platforms because of its content, that effort would likely be presumptively unconstitutional, unless it had a compelling interest for regulating and the means chosen were narrowly tailored to achieve those ends.³³⁰ It is in "rare cases . . . [that] a speech restriction withstands strict scrutiny."³³¹

E. Other Generative AI Conundrums in the Criminal Context.

From the several smart device cases over the years (questions that will likely recur with generative AI devices), the following constitutional issues will probably arise:

- Can the government compel disclosure of the user's data in those smart devices?
- If so, under what circumstances?³³²
 - i. Fourth Amendment and Equal Protection Clause Considerations.

The Fourth Amendment protects the People against unreasonable search and seizures.³³³ The "basic purpose" of the Fourth Amendment is "to safeguard privacy and security of individuals against *arbitrary invasions by government officials*."³³⁴ And this promise, much like the rest of the provisions of the constitution, should apply equally to all.³³⁵ Increasingly, though, there is a trend of deploying technology in the detection and

326. 564 U.S. 786, 802 (2011).

327. *Id.*

328. *See* Miami Herald Publ'g Co. v. Tomillo, 418 U.S. 241, 257–58 (1974).

329. *See* Hurley v. Irish-Am. Gay, Lesbian & Bisexual Grp., 515 U.S. 557, 573 (1995).

330. *See* Reed v. Town of Gilbert, 576 U.S. 155, 163 (2015).

331. *See* Williams-Yulee v. Fla. Bar, 575 U.S. 433, 444 (2015).

332. *See* Mwafurirwa, *supra* note 24, at 25–26. The Fourth Amendment will likely also apply to self-driving cars, the subject of Part II of this article. *See infra* Part II. But unlike computer tools, most vehicles—likely also true with self-driving cars—are subject to the automobile warrant exception to the Fourth Amendment. *See* Pennsylvania v. Labron, 518 U.S. 938 (1996). The automobile exception generally applies to cars because their "ready mobility" creates an exigent circumstance and the operator has reduced expectations of privacy due to cars' "pervasive regulation." *Id.* at 940. But what if the car is autonomous? And what of Carpenter v. United States, 585 U.S. 296 (2018)? That case made clear that when the government seeks information from a device that tracks all movements or reveals very sensitive user information, a warrant might be needed. *Id.* at 309–16. For a comprehensive discussion of these issues see Ronald J. Hedges & Gail Gettehrer, *The Intersection of the Fourth Amendment and Level 5 Vehicle Autonomy*, ABA J. ONLINE (Nov. 20, 2019), https://www.americanbar.org/groups/tort_trial_insurance_practice/publications/tortsource/2019/fall/the-intersection-the-fourth-amendment-and-level-5-vehicle-autonomy/.

333. *See* U.S. Const. amend. IV.

334. Carpenter v. United States, 585 U.S. 296, 302–04 (2018) (emphasis added).

335. *See* Missouri v. Lewis, 101 U.S. 22, 31 (1879).

prosecution of crime.³³⁶ Police forces across the country use computer databases to police vehicle registration and insurance requirements.³³⁷ Similarly, several jurisdictions also use predictive policing models to predict crime hotspots in their communities and to deploy law enforcement resources preemptively in those areas to address the concerns before they are realized.³³⁸ Some see this predictive model of policing as a future effective law enforcement and crime-management tool.³³⁹ Of course, the efficacy of any such predictive models depends largely on the quality of the data fed to them. The concern with ChatGPT, for example, and many other generative AI tools is that they can perpetuate existing biases and discrimination.³⁴⁰ Again, as then-Judge Gorsuch noted, with computer-based technologies, the rule is straightforward: “Garbage in, garbage out.”³⁴¹

The risk of unreliable outputs with generative AI technologies might pose significant Fourth Amendment problems. Because of their superior analytical capabilities and speed, all manner of American businesses and institutions are now using generative AI technology in their decision-making frameworks.³⁴² Those institutions are engaging so-called generative AI co-pilots that help them assess situational data in real time and assist with appropriate responses.³⁴³ Law enforcement has also gotten in on the act. In fact, some law enforcement agencies are using generative AI technology for training purposes—dealing with issues like implicit bias, de-escalation techniques and so on.³⁴⁴ Indeed, it is likely that generative AI technology will be deployed in future as part of the arsenal of law enforcement and crime prevention tools. To be sure, the Federal Trade Commission recently agreed a consent order with Rite Aid, a pharmacy chain, precluding it from using its artificial intelligence surveillance technology in a way that harms innocent members of the public.³⁴⁵ According to the complaint, Rite Aid failed to guard against its technology’s erroneous flagging of innocent people as shoplifters and troublemakers.³⁴⁶ The Justice Department is already using artificial intelligence in criminal law enforcement.³⁴⁷ The F.B.I. (together with its law enforcement partners) is exploring this artificial intelligence recognition technology for its own use, including for vehicle license plate detection.³⁴⁸

Courts have held that a Fourth Amendment violation might be found when law enforcement uses unreliable computer-assisted programs in the exercise of their powers. This is likely the same issue that generative AI assistants will present, as they also have

336. See *United States v. Esquivel-Rios*, 725 F.3d 1231, 1234 (10th Cir. 2013) (Gorsuch, J.).

337. *Id.* at 1235–36.

338. See Andrew Guthrie Ferguson, *Predictive Policing and Reasonable Suspicion*, 62 EMORY L.J. 259, 265 (2012) (“In simple terms, predictive policing involves computer models that predict areas of future crime locations from past crime statistics and other data.”).

339. *Id.* at 321.

340. See Statement of Sam Altman, *supra* note 26, at 1–4.

341. *United States v. Esquivel-Rios*, 725 F.3d 1231, 1234 (10th Cir. 2013).

342. See Mark Purdy and A. Mark Williams, *How AI Can Help Leaders Make Better Decisions Under Pressure*, HARV. BUS. REV. (Oct. 26, 2023), <https://hbr.org/2023/10/how-ai-can-help-leaders-make-better-decisions-under-pressure>.

343. *Id.*

344. *Id.*

345. *E.g.*, Decision and Order, 9–36, ECF No. 2–2, *FTC v. Rite Aid Corp.*, No. 2:23-cv-5023 (E.D. Pa. Dec. 19, 2021).

346. See Compl. ¶¶ 18–34, ECF No. 1, *FTC v. Rite Aid Corp.*, No. 2:23-cv-5023 (E.D. Pa. Dec. 19, 2023).

347. See Lisa O. Monaco, Deputy Att’y Gen., Remarks at the Univ. of Oxford on the Promise and Peril of AI (Feb. 14, 2024).

348. See Dep’t of Justice, *Design and Implementation of Forensic Facial Identification Experts Test*, NAT’L INST. OF JUST. (Sept. 21, 2015), <https://nij.ojp.gov/funding/awards/2015-ij-cx-k014>; see also Dep’t of Justice, *De-Grade It*, NAT’L INST. OF JUST. (July 19, 2016), <https://nij.ojp.gov/funding/awards/2016-r2-cx-0012> (license plate detection program using artificial intelligence).

well-documented reliability risks.³⁴⁹ Rather than write on this issue from a clean slate, then-Judge Gorsuch's opinion in the Tenth Circuit addressed this issue in the context of law enforcement reliance on unreliable computer generated data in *United States v. Esquivel-Rios*.³⁵⁰ In *Esquivel-Rios*, a Kansas police officer observed a minivan with Colorado temporary tags on the highway.³⁵¹ The temporary tags alone prompted the officer to ask a dispatcher to look up the car.³⁵² The tag was not found in the computer system.³⁵³ Typically, when a tag cannot be located in the national police system, it is because it is fake.³⁵⁴ But that is not the only reason. As the dispatcher explained to the trooper, some Colorado temporary tags simply do not appear in the computer system.³⁵⁵ In other words, when a search in the computer system fails to return a registration record for a tag it does not, without more, suggest criminal conduct.³⁵⁶ Still, without more, the trooper detained the motorist.³⁵⁷

Esquivel-Rios is illustrative of how similar database unreliability questions could play out in cases involving generative AI technology. The Tenth Circuit remanded *Esquivel-Rios* for an evidentiary hearing because the appeals court found that an unreliable computer-generated database was the sole support for the exercise of law enforcement powers which posed serious Fourth Amendment questions.³⁵⁸ The court homed in on the fact that the computer database was known to be unreliable, especially with Colorado tags.³⁵⁹ Of course, the quantitative question always seems to remain: how much unreliability in a data base is too much?³⁶⁰ Some courts have suggested that showing that the data base is unreliable in a large number of cases suffices to support suppression.³⁶¹ Other cases, though, seem to suggest that simply making a credible showing that a law enforcement data base is unreliable can support suppression of evidence.³⁶² Depending on the jurisdiction at issue, an unreliable generative AI data base could raise Fourth Amendment issues.

Generative AI tools might also raise difficult equal protection questions. Most artificial intelligence platforms—including the current versions of ChatGPT—have predictive functions.³⁶³ At their most basic, machine-learning artificial intelligence models are generally trained on data to help them make predictions in response to prompts.³⁶⁴ So, for example, machine learning artificial intelligence can be trained on several cancerous x-ray images so that it can, in future, predict whether a given x-ray has similar cancerous tumor features.³⁶⁵ And many of the existing generative AI tools, to some degree, also have

349. See Statement Sam Altman, *supra* note 26, at 1–4; see also *Arizona v. Evans*, 514 U.S. 1, 26–27 (1995) (Ginsburg, J., dissenting) (“[C]omputerization greatly amplifies an error’s effect, and correspondingly intensifies the need for prompt correction; for inaccurate data can infect not only one agency, but the many agencies that share access to the database.”).

350. 725 F.3d 1231, 1234 (10th Cir. 2013).

351. *Id.*

352. *Id.*

353. *Id.*

354. *Id.* at 1235.

355. *Esquivel*, 725 F.3d at 1235.

356. *Id.*

357. *Id.*

358. *Id.* at 1237–38.

359. *Id.* at 1235–38.

360. *Esquivel*, 725 F.3d at 1235–38.

361. See *United States v. Mounts*, 35 F.3d 1208, 1213 n.4 (7th Cir. 1994) (if it “was common knowledge” that “a large percentage” of outputs from a database were unreliable, then this might support a viable suppression motion).

362. *E.g.*, *United States v. Cortez-Galaviz*, 495 F.3d 1203, 1209 (10th Cir. 2007) (showing that law enforcement “database is unreliable might well form a persuasive basis for a suppression motion.”).

363. See Statement of Sam Altman, *supra* note 26, at 2 (describing “the current generation of AI models [as] large-scale statistical prediction machines”).

364. *Id.* at 2–4.

365. See Adam Zewe, *Explained: Generative AI*, MIT NEWS (Nov. 9, 2023), <http://tinyurl.com/ymv96jjy>.

this predictive function; they are trained on large amounts of data and then they “generate *statistically probable outputs* when prompted.”³⁶⁶ In fact, some have criticized those law enforcement agencies that use predictive policing tools because, those critics say, they perpetuate racial stereotypes, in part, because the so-called crime hotspots have historically been communities occupied by people of color or poor people.³⁶⁷ Thus, the analysis from critics of predictive policing tools proceeds like this: without individualized and verifiable supporting bases, reasonable suspicion, for example, could not validly exist based on that predictive policing data.³⁶⁸ But like most hot button issues in America, others take a different view, lauding the benefits of predictive policing tools and (perhaps) finding that the criticisms have not been outweighed by the benefits of such police tactics.³⁶⁹ Those in this latter camp tend to analogize the use of predictive policing tools—with their generalized assumptions of wrongdoing, especially in exigent circumstances—to the constitutionally permissible use of random roadblock searches or police checks for drunken drivers.³⁷⁰ Either way, this will likely be a lively issue in litigation if predictive computer tools become ubiquitous policing tools (or evidentiary materials) in American society and courtrooms.

ii. Constitutional Considerations for Compelled Generative AI Data Disclosures.

The analysis considers the question of compelled disclosures from the perspective of both the user and the service provider. When it comes to the user, the Fourth and Fifth Amendments take center stage when compelled data is at issue. In contrast, the Fourth, and to a lesser degree, the First Amendment take center stage when it comes to compelled data from service providers.

a. Fourth Amendment Compelled Data Considerations.

The Supreme Court held in *Riley v. California*³⁷¹ that the government needs a warrant to access a user’s internal data on cell phones.³⁷² Because of their widespread use and broad computer-based functionality, smart phones often contain the core sensitivities and “privacies of life” so the Court said that a warrant requirement was reasonable in order to safe guard people’s privacy.³⁷³ To be sure, crucial to *Riley*’s holding was that cellphones “are in fact minicomputers” that have the capacity to support several critical aspects of modern life.³⁷⁴ That same analysis will likely apply to generative AIs, which are also computer and internet-based tools that contain sensitive user data and are used in many of the same ways as (or to support) smart computers and phones.³⁷⁵ Moreover, smart assistants—including generative AI tools—are also located in the home on computers, laptops, tablets,

366. See *What is Artificial Intelligence*, IBM, <https://www.ibm.com/topics/artificial-intelligence> (last visited Apr. 10, 2024) (emphasis added).

367. See *United States v. Curry*, 965 F.3d 313, 331–34 (4th Cir. 2020) (Gregory, C.J., concurring); see also *id.* at 335–39 (Wynn, J., concurring); *id.* at 344–46 (Thacker, J., concurring); see also Katherine Kwong, *The Algorithm Says You Did It: The Use of Black Box Algorithms to Analyze Complex DNA Evidence*, 31 HARV. J.L. & TECH. 275, 291–92 (2017).

368. See *Curry*, 965 F.3d 313 at 323–26 (en banc).

369. See *id.* at 346–50 (Wilkinson, J., dissenting).

370. *Id.* at 355–57 (Richardson, J., dissenting).

371. 573 U.S. 373 (2014).

372. *Id.* at 386.

373. *Id.* at 403.

374. *Id.* at 393.

375. See Krystal Hu, *ChatGPT Sets Record for Fastest-Growing User Base – Analyst Note*, REUTERS (Feb. 2, 2023), <http://tinyurl.com/46n4uppr>; see also Daniel Howley, *The generative AI smart phone age is here*, YAHOO! FINANCE (Jan. 26, 2024), <https://tinyurl.com/yfxkn8h4>.

cellphones and the like.³⁷⁶ That matters because in the Fourth Amendment context, “the home is first among equals.”³⁷⁷ The home is unique because the people ought to be free from unreasonable government intrusions on their papers, property, person, and effects.³⁷⁸ As for the home, “privacy expectations are most heightened.”³⁷⁹ That means to comply with the Fourth Amendment, a search warrant for the home is needed.³⁸⁰ To be sure, popular smart assistants like Alexa, for example, are computers that rely on a user’s voice commands, connect to the internet, and then fulfill a user’s request.³⁸¹ In the same way, the most common iterations of generative AIs are also smart computer/internet-supported assistants, just more sophisticated.³⁸² Users use smart assistants, like other devices of similar import (including generative AI tools), for professional and personal uses.³⁸³ Viewed in that light, those generative AI tools, just like cellphones and other forms of personal computers, encompass what *Riley* said were the “privacies of life.”³⁸⁴ Thus, since the user data for most of those tools can be accessed from within the home, longstanding Fourth Amendment jurisprudence requires the government to secure a warrant that specifies the specific electronic data and gadgets earmarked for a search in relation to clearly articulated crimes.³⁸⁵

b. Fifth Amendment Considerations with Compelled Generative AI User Data.

The Fifth Amendment to the U.S. Constitution codified the longstanding common law right for one not to incriminate themselves.³⁸⁶ While the amendment does not apply to every form of private and confidential or incriminating information,³⁸⁷ it does apply to testimonial communications that are incriminating.³⁸⁸ To qualify as testimonial for Fifth Amendment purposes, a “communication . . . must . . . [either] explicitly or implicitly, relate a factual assertion or disclose information.”³⁸⁹ The production of evidence compelled by the government may trigger the Fifth Amendment.³⁹⁰ Put another way, if the government compels the disclosure of the contents of a person’s mind in order to learn some fact or statement it did not otherwise know, or to confirm the existence of some fact or statement unknown to it, then the Fifth Amendment comes into play.³⁹¹ But there is an important exception—the foregone conclusion rule.³⁹² That rule says the Fifth Amendment is no barrier if the government already knows the information that the defendant shares (or

376. See generally *How ChatGPT and Our Language Models Are Developed*, *supra* note 5.

377. See *Florida v. Jardines*, 569 U.S. 1, 6 (2013).

378. *Id.* at 5–6.

379. *Id.* at 7.

380. *Mincey v. Arizona*, 437 U.S. 385, 393–94 (1978).

381. See generally *Siri Team*, *supra* note 2.

382. See generally *Radford et al.*, *supra* note 65.

383. E.g., *How Workers Are Using Generative AI Tools to Increase Productivity*, WALL ST. J. (June 7, 2023), <http://tinyurl.com/mpjxuyxt>.

384. *Riley v. California*, 573 U.S. 373, 402–03 (2014).

385. See, e.g., *United States v. Otero*, 563 F.3d 1127, 1132–33 (10th Cir. 2009).

386. See U.S. CONST. amend. V (“No person . . . shall be compelled in any criminal case to be a witness against himself.”); *United States v. Hubbell*, 530 U.S. 27, 52 (2000) (Thomas, J., concurring) (the Fifth Amendment encompasses its English “common-law backdrop”); see also R.H. Helmholz, *Origins of the Privilege Against Self-Incrimination: The Role of the European Ius Commune*, 65 N.Y.U. L. Rev. 962, 989–90 (1990).

387. *Fisher v. United States*, 425 U.S. 391, 401, 408 (1976).

388. *Id.* at 408.

389. *Doe v. United States*, 487 U.S. 201, 210 (1988) (cleaned up).

390. *Fisher*, 425 U.S. at 410.

391. See *Hubbell*, 530 U.S. at 36 n.19, 43; *Fisher*, 425 U.S. at 410; *Pennsylvania v. Muniz*, 496 U.S. 582, 595 n.9 (1990) (The Fifth Amendment protects a suspect from “having to share his thoughts and beliefs with the government.”).

392. See *Fisher*, 425 U.S. at 411.

is likely to share), then in such a scenario, “the [individual] adds little or nothing to the sum total of the [g]overnment’s information.”³⁹³

When it comes user data on devices like computers, laptops, cellphones, courts are divided on whether compelling passwords and access to historical digital user data violates the Fifth Amendment.³⁹⁴ On one side of the ledger are cases that have held that compelling access to encrypted digital data implicates the Fifth Amendment.³⁹⁵ According to the courts on that side of the ledger, if the government does not know—gauged against a standard of reasonable particularity—that the information exists or its location, then the foregone conclusion rule is inapplicable and the Fifth Amendment precludes compelling production of that data.³⁹⁶ But on the other side of the ledger are cases that suggest that the foregone conclusion excepts Fifth Amendment considerations. As those cases suggest, as long as the government knows the gist of the contents of the files under encryption, then the foregone conclusion doctrine should apply.³⁹⁷ A slightly different application of the foregone conclusion doctrine suggests that it sweeps away Fifth Amendment protections when there is a showing by the government that the defendant knows the access or decryption code to the encrypted data.³⁹⁸

Most of the generative AI tools in existence now will likely implicate this encryption analysis. ChatGPT, for example, generally requires a username and password to gain access to it on its website.³⁹⁹ Historical user data in these generative AI applications is saved on the platforms.⁴⁰⁰ And for some of the generative AI tools that are applications on smart phones, the user can log in each time before use or to leave the AI tool accessible every time, so that the data is protected only by the user’s smartphone access code or password.⁴⁰¹ That, in turn, means whether the government can compel a suspect to disclose their generative AI data will depend on whether the law in that jurisdiction applies the foregone conclusion exception to the Fifth Amendment and whatever the requirements for satisfying the doctrine are.⁴⁰² In those jurisdictions like Indiana or Pennsylvania, for example, the foregone conclusion seldom applies to password or encryption cases, meaning

393. *Id.* (cleaned up).

394. *E.g.*, Laurent Sacharoff, *Unlocking the Fifth Amendment: Passwords and Encrypted Devices*, 87 *FORDHAM L. REV.* 203, 207 (2018) (compelled access to digital data presents a “fundamental question bedeviling courts and scholars”); Orin S. Kerr, *Decryption Originalism: The Lessons of Burr*, 134 *HARV. L. REV.* 905, 907 (2021).

395. *See, e.g.*, *Commonwealth v. Gelfgatt*, 11 N.E.3d 605, 614 (Mass. 2014); *United States v. Apple MacPro Computer*, 851 F.3d 238, 247 (3d Cir. 2017); *In re Grand Jury Subpoena Duces Tecum Dated March 25, 2011*, 670 F.3d 1335, 1341 (11th Cir. 2012);

396. *See In re Grand Jury Subpoena*, 670 F.3d at 1345–46; *see also* *SEC v. Huang*, No. 15-629, 2015 WL 5611644 at *3 (E.D. Pa. Sept. 23, 2015). There is, however, a subset of cases that reject the foregone conclusion doctrine in encryption cases. *E.g.*, *Commonwealth v. Davis*, 220 A.3d 534, 550 (Pa. 2019); *see also* *Seo v. State*, 148 N.E.3d 952, 958 (Ind. 2020).

397. *See Apple MacPro Computer*, 851 F.3d at 248 n.7 (“[A] very sound argument can be made that the foregone conclusion doctrine properly focuses on whether the [g]overnment already knows the testimony that is implicit in the act of production.”); *see also* *State v. Andrews*, 197 A.3d 200, 208 (N.J. Super. Ct. 2018).

398. *Commonwealth v. Jones*, 117 N.E.3d 702, 711 (Mass. 2019) (foregone conclusion doctrine applies when government shows that defendant “knows the password to decrypt an electronic device”); *accord* *United States v. Spencer*, No. 17-cr-00259-CRB-1, 2018 WL 1964588 at *3 (N.D. Cal. Apr. 26, 2018).

399. *See, e.g.*, ChatGPT, <https://chat.openai.com/auth/login?source=csdn&article61> (last visited Apr. 11, 2024).

400. *See How ChatGPT and Our Language Models Are Developed*, *supra* note 5.

401. *See generally* *supra* notes 363–66, 375–76 and accompanying text.

402. *See supra* notes 389–98 and accompanying text.

users have greater Fifth Amendment protections.⁴⁰³ The converse will, of course, likely be true in jurisdictions that apply a generous version of the foregone conclusion.⁴⁰⁴

c. External Third-Party Data on Smart Assistants and Generative AI Tools.⁴⁰⁵

The effect of the Supreme Court's decision in *Carpenter v. United States* will likely be most acute in the area of external user data possessed by third-parties. Smart phones generally transmit data through air waves and the internet.⁴⁰⁶ Similarly, generative AIs are also connected to the internet (where they draw from, plus their data is saved on most provider's servers).⁴⁰⁷ But not long ago, *United States v. Miller*⁴⁰⁸ and *Smith v. Maryland*⁴⁰⁹ would have eliminated any expectation of privacy in such data because the law assumed that a user had voluntarily shared it with the third-party service providers.⁴¹⁰

But *Carpenter* limited *Miller* and *Smith* in three important ways. *First*, *Carpenter* made clear that *Miller* and *Smith* do not eliminate a user's entire expectation of privacy in third-party disclosure cases. *Second*, in the wake of *Carpenter*, the expectation of privacy calculus now factors in the nature of the data; the more personal the data is, the more likely that a user's expectation of privacy remains.⁴¹¹ If *Carpenter* is anything to go by, it is likely that the information at issue on these smart devices would likely encompass a user's personal (and perhaps intimate) data—the very privacies of life.⁴¹² *Third*, for this type of personal information, the user is compelled to “share” the information with the service providers as a condition precedent to use their services.⁴¹³ *Carpenter* refused to find arrangements of that kind voluntary, which is what *Miller and Smith* require to trigger the third-party doctrine exception.⁴¹⁴ *Carpenter* was also clear that when a warrant is ordinarily required, a subpoena will not do to bypass that requirement.⁴¹⁵

But in a recent case,⁴¹⁶ the so-called iPhone-break-in case, a federal court was presented with a different twist to the compelled disclosure analysis: the government wanted to compel creation of new software to break into a smartphone device.⁴¹⁷ Before the federal courts could resolve the question, however, the case became moot.⁴¹⁸ With the advent of generative AI, that question needs to be asked and answered: what role does the Constitution have in compelled software cases?

403. See *Commonwealth v. Davis*, 220 A.3d 534, 550 (Pa. 2019); see also *Seo v. State*, 148 N.E.3d 952, 958 (Ind. 2020).

404. See *supra* notes 389–98 and accompanying text.

405. Besides connecting to the internet and telecommunications networks, self-driving cars also generally transmit their operating data to third-party services providers, sometimes including manufacturers. In this way, the self-driving cars are like cellphones. See *Hedges & Gettehrer*, *supra* note 332. Thus, the analysis in *Carpenter v. United States* might be applicable to those cars. *Carpenter v. United States*, 585 U.S. 296 (2018).

406. See *Carpenter*, 585 U.S. at 301; see also generally *Riley v. California*, 573 U.S. 373, 388–90 (2014)

407. See OpenAI, *New Ways to Manage your Data in ChatGPT* OPENAI BLOG (Apr. 25, 2023), <http://tinyurl.com/yvrjy7m7>.

408. 425 U.S. 435 (1976).

409. 442 U.S. 735 (1979).

410. See *Carpenter*, 585 U.S. at 308.

411. *Id.* at 308–10.

412. *Id.* at 313–15.

413. *Id.* at 315.

414. *Id.*

415. *Carpenter*, 585 U.S. at 319.

416. In re Search of an Apple iPhone, No. ED-15-0451M, 2016 WL 618401 (C.D. Cal. Feb. 16, 2016), *vacated as moot grounds sub nom.*, In re Search of an Apple iPhone, No. CM-16-10 (SP), 2016 WL 11916080 (C.D. Cal. Mar. 29, 2016).

417. *Id.* at *1.

418. In re Search of an Apple iPhone, No. CM-16-10 (SP), 2016 WL 11916080, at *1 (C.D. Cal. Mar. 29, 2016)

Software is a form of speech.⁴¹⁹ Thus, arguably compelling a service provider to accept speech it finds objectionable violates the First Amendment. In the past, for example, there were efforts by states to force newspapers to publish competing political views. In *Miami Herald Pub. Co. v. Tornillo*,⁴²⁰ a law required newspapers to give space to political candidates to respond to editorials or endorsements for their opponents.⁴²¹ The Supreme Court struck down the statute because the compelled speech would have taken “up space that could be[e][n] devoted to other material the [publisher] may have preferred to” publish and would have deprived newspapers of editorial judgment.⁴²² What is more, ordinarily, when as here, the government does not act as an economic regulator, the commercial speech doctrine that generally condones compelled speech is likely inapplicable.⁴²³

But beyond the commercial speech context, the Supreme Court has generally refused to allow the government to compel a party to incorporate speech it objects to because to do so alters that party’s intended message.⁴²⁴ Most service providers and manufacturers give assurances to their customers that the user’s data is protected from unauthorized third-party access.⁴²⁵ For that reason, compelling those providers to generate other speech (software) that creates a backdoor entry to their (or the user’s) devices for others arguably goes against the assurances and speech they gave their customers.⁴²⁶ And to be sure, arguably, the backdoor entry software consumes the space that the software company could have devoted to its desired speech (or software).⁴²⁷

But the contrary argument is also compelling. Historically, the legal system has compelled witnesses by subpoena to testify before grand juries, at trials, and depositions.⁴²⁸ Why is that permissible? This article offers two thoughts. *First*, the Supreme Court has long said that “[w]hen faced with a dispute about the Constitution’s meaning or application, long settled and established practice is a consideration of great weight.”⁴²⁹ To that end, a court’s power to compel witnesses to testify—a process that is essential to the judicial power’s proper function—predates the First Amendment and the Constitution itself.⁴³⁰ Nothing, as yet, suggests that the First Amendment eliminated this established practice.

Second, there is a difference between compelling speech/testimony from a witness and other forms of compelled speech generally. To begin, courts generally only compel witness to testify about *preexisting* facts within that person’s personal knowledge, but compelling a company to create new software for its devices arguably results in *new*

419. *Univ. City Studios, Inc. v. Corley*, 273 F.3d 429, 448 (2d Cir. 2001); *Junger v. Daley*, 209 F.3d 481, 485 (6th Cir. 2000); *Green v. U.S. Dep’t of Just.*, 54 F.4th 738, 745 (D.C. Cir. 2022).

420. 418 U.S. 241, 256 (1974).

421. *Id.* at 247.

422. *Id.* at 256–57.

423. *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 579 (2011).

424. *See Hurlley v. Irish-Am. Gay, Lesbian & Bisexual Grp. of Boston*, 515 U.S. 557, 573–74 (1995); *see also Rumsfeld v. F. for Acad. & Institutional Rts., Inc.*, 547 U.S. 47, 63 (2006) (First Amendment is violated when “the complaining speaker’s own message was affected by the speech it was forced to accommodate.”).

425. *See M. Mwafurirwa, supra* note 24, at 25–26.

426. *Id.* at 28.

427. *Id.*; *see also Tornillo*, 418 U.S. at 256–57.

428. *See Branzburg v. Hayes*, 408 U.S. 665, 682, 691 (1972).

429. *Houston Cmty. Coll. Sys. v. Wilson*, 595 U.S. 468, 474 (2022) (cleaned up).







430. *See Murphy v. Waterfront Comm’n of N.Y. Harb.*, 378 U.S. 52, 93–94 (1964) (White, J., concurring) (Sixth Amendment states that defendants have the right “to have compulsory process for obtaining witnesses in his favor” and that the First Congress passed a law compelling attendance of witnesses in court); *Carpenter v. United States*, 585 U.S. 296, 361–68 (2018) (Alito, J., dissenting).

speech.⁴³¹ For now, there are no uniform answers for these issues and they might require definitive resolution by the Supreme Court.

III. THE SELF-DRIVING CAR PARADOX⁴³²

A. What is a self-driving car?

The National Highway Traffic Safety Administration (NHTSA) recognizes five levels of automation in cars. The table below shows those levels of automation:

SAE AUTOMATION LEVELS ¹					
					
0 No Automation The full-time performance by the human driver of all aspects of the dynamic driving task, even when enhanced by warning or intervention systems.	1 Driver Assistance The driving mode-specific execution by a driver assistance system of either steering or acceleration/ deceleration using information about the driving environment and with the expectation that the human driver perform all remaining aspects of the dynamic driving task.	2 Partial Automation The driving mode-specific execution by one or more driver assistance systems of both steering or acceleration/ deceleration using information about the driving environment and with the expectation that the human driver perform all remaining aspects of the dynamic driving task.	3 Conditional Automation The driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task with the expectation that the human driver will respond appropriately to a request to intervene.	4 High Automation The driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task, even if a human driver does not respond appropriately to a request to intervene.	5 Full Automation The full-time performance by an automated driving system of all aspects of the dynamic driving task under all roadway and environmental conditions that can be managed by a human driver.
<small>1 SAE International, J3016, 201806: Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles (Warrendale: SAE International, 15 June 2018), https://www.sae.org/standards/content/j3016_201806/</small>					

This article will focus on Levels 3 through 5 cars—those cars with advanced automation features. So far, there are no Level 5 automation vehicles on the roads.⁴³³

B. The general overview of the new self-driving car laws in Arizona, Oklahoma, and Texas

The new laws in Oklahoma, Texas, and Arizona share four elements:

431. See *United States v. New York Tel. Co.*, 434 U.S. 159, 175 n.24 (1977) (When compelled by judicial process, witnesses must testify as to what they know); *Branzburg*, 408 U.S. at 681–82 (applying rule to reporter in grand jury proceedings).

432. Part II of the analysis is based on (and improves) on multiple lectures and previous shorter articles on self-driving cars that the author has given. So there is a risk of some unintended overlap with these works. See M. Mwafurirwa, *supra* note 21; Mbilike M. Mwafurirwa, Guest Speaker, Tulsa Cnty. Bar Ass'n, Look Ma, No Hands: Oklahoma's New Self-Driving Car Law (Nov. 7, 2022); M. Mwafurirwa, Guest Speaker, U. of Tulsa Coll. of L., A Question of Our Time: A Driverless Future? (Apr. 26, 2019).

433. See *Automated Vehicles for Safety*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., <https://www.nhtsa.gov/vehicle-safety/automated-vehicles-safety#:~:text=Level%205%20Full%20Automation,not%20need%20to%20be%20engaged> (last visited Apr. 11, 2024).

- *First.* Each statute authorizes various kinds of self-driving cars.⁴³⁴
- *Second.* The statutes define in detail what they mean by a self-driving car, its operating system, and they amend what it means to be a driver.⁴³⁵
- *Third.* The statutes introduce financial responsibility and titling requirements.⁴³⁶
- *Fourth.* The three states have enacted rules on what should happen when a self-driving car is involved in accident.⁴³⁷

But all three state frameworks share one common glaring omission—they all lack specific civil and criminal liability rules for self-driving cars.⁴³⁸

C. Detailed analysis of self-driving car statutes in Arizona, Oklahoma, and Texas.

i. Self-driving Car Authorization.

The laws in all three states generally authorize cars with autonomous capabilities. The laws authorize and regulate two main kinds of automated cars: (a) fully autonomous cars, without a human driver,⁴³⁹ and (b) vehicles operated by humans but with autonomous capabilities.⁴⁴⁰

a. Fully Autonomous Vehicles.

To start, the titles of the three statutes state that they apply to cars with autonomous capabilities.⁴⁴¹ In fact, the Oklahoma and Texas statutes make it explicit that they cover fully autonomous vehicles—that is, cars that do not require a human to operate them. The Oklahoma self-driving car statute, like its Texas counterpart, makes provision for a “fully autonomous vehicle,” which Oklahoma law defines as a “motor vehicle equipped with an automated driving system designed to function without a human driver as a level 4 or 5 system under SAE J3016B.”⁴⁴² An automated driving system is, in turn, “hardware and software that . . . are collectively capable of performing . . . the *entire dynamic [] task* . . . on a sustained basis,” regardless of whether it is limited to a specific operational design domain.⁴⁴³ But what is a dynamic task? A dynamic driving task “means all of the real-time operational and tactical functions required to operate a vehicle in on-road traffic” (steering,

434. See OKLA. STAT. tit. 47, §§ 1701–1710 (Oklahoma); TEX. TRANSP. CODE §§ 545.451–456 (Texas); ARIZ. REV. STAT. §§ 28–9701–9702 (Arizona).

435. See tit. 47 § 1701; TRANSP. § 545.451; § 28-9701.

436. See OKLA. STAT. tit. 47, §§ 1704, 1707; accord TEX. TRANSP. CODE §§ 545.455; *id.* § 545.454(b)(3)–(4).

437. See OKLA. STAT. tit. 47, § 1705; TEX. TRANSP. CODE §§ 545.455; ARIZ. REV. STAT. §§ 28-9702(B), 28-9702(C)(1)–(2).

438. See OKLA. STAT. tit. 47, §§ 1701-1710; TEX. TRANSP. CODE §§ 545.451-456; ARIZ. REV. STAT. §§ 28-9701, 9702.

439. OKLA. STAT. tit. 47, §§ 1703, 1708; ARIZ. REV. STAT. § 28-9702(B)–(C); TEX. TRANSP. CODE § 545.454(a).

440. See *supra* notes 434–38 and accompanying text.

441. *E.g.*, ARIZ. REV. STAT. § 28-9702 (“Operation of autonomous vehicles”); accord OKLA. STAT. tit. 47, § 1703; TEX. TRANSP. CODE § 545.454 (same).

442. OKLA. STAT. tit. 47, §§ 1703, 1701(D); see also generally TEX. TRANSP. CODE § 545.454(a).

443. TEX. TRANSP. CODE § 545.451(1), (3); see *e.g.*, OKLA. STAT. tit. 47, § 1708.

accelerating and so on), excluding the strategic functions such as trip scheduling and selection of destinations and waypoints, among others.⁴⁴⁴

With some slight wording differences, Arizona law largely mirrors the other two statutes. While the law in Arizona also speaks to “autonomous vehicle[s]”⁴⁴⁵ and the “automated driving system,”⁴⁴⁶ the Legislature amended the code to add statutory definitions.⁴⁴⁷ Autonomous vehicle means any “motor vehicle that is equipped with an automated driving system.”⁴⁴⁸ Consider next “automated driving system.” That phrase is defined as “the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether it is limited to a specific operational design domain.”⁴⁴⁹ The Arizona statutes distinguish between this general autonomous vehicle—which is a car with self-driving capabilities—with a full autonomous vehicle.⁴⁵⁰ The full autonomous vehicle is allowed to operate on Arizona roads even if it is controlled “[s]olely by use of the automated driving system.”⁴⁵¹

But even within the class of fully autonomous vehicles there are generally two other subclasses. The first subclass contains cars that will function as part of an on-demand autonomous vehicle network, similar to taxis or common carriers.⁴⁵² Recently, Elon Musk announced that Tesla intends to create an on-demand network that will allow Tesla owners to have their cars serve like Ubers-of-sorts, without the owners operating the vehicle.⁴⁵³ The new state laws generally cater to such innovations.⁴⁵⁴ The second subclass of fully automated vehicles encompasses commercial vehicles.⁴⁵⁵ The three statutes also authorize fully autonomous trucks, semis, and like vehicles.⁴⁵⁶ For fully autonomous cars, all three laws dispense with the need for a human operator.⁴⁵⁷

b. Partial Autonomous Vehicles.

These are vehicles with self-driving capabilities but that still need human supervision.⁴⁵⁸ All three laws begin with a permissive tone: a “person may operate a motor vehicle equipped with an automated driving system capable of performing the entire dynamic driving task”⁴⁵⁹ But again, Oklahoma, just like Arizona, imposes two conditions: *first*, the driving system should be able to issue “a request to intervene” to the person who turned it on if it is unable to fully perform its functions.⁴⁶⁰ *Second*, the driving system should be able to comply with the rules of the road in Oklahoma.⁴⁶¹ Other than for the “request to intervene” requirement, Texas law largely mirrors the requirements in the other two

444. OKLA. STAT. tit. 47, § 1701(B); TRANSP. § 545.451(3).

445. ARIZ. REV. STAT. § 28-9702.

446. *Id.*

447. *See* ARIZ. REV. STAT. § 28-101(6) & (8).

448. *Id.* § 28-101(8).

449. *Id.* § 28-101(6).

450. *Compare* § 28-101(8) with § 28-101(36).

451. § 28-101(36); ARIZ. REV. STAT. § 28-9702(C).

452. *See* OKLA. STAT. tit. 47, § 1706; *accord* ARIZ. REV. STAT. §§ 28-9701, 9704.

453. *See* Christian Nguyen, *Elon Musk Explained How Tesla Owners Can Make Money with Robotaxi App*, BUS. INSIDER (Apr. 23, 2019), <https://www.businessinsider.com/elon-musk-tesla-robotaxi-app-make-money-repurposing-cars-autonomous-2019-4>.

454. *See* tit. 47, § 1706; §§ 28-9701, 9704.

455. OKLA. STAT. tit. 47, § 1709; ARIZ. REV. STAT. § 28-9705

456. *See* OKLA. STAT. tit. 47, §§ 1701-1710; TEX. TRANSP. CODE §§ 545.451-456; ARIZ. REV. STAT. §§ 28-9701-9704.

457. *Supra* text accompanying notes 434-38.

458. *See, e.g.*, OKLA. STAT. tit. 47, § 1708.

459. *Id.* § 1708(A); ARIZ. REV. STAT. § 28-9702(A) & (B); TEX. TRANSP. CODE § 545.454(a).

460. tit. 47, § 1708(A)(1); § 28-9702(A) & (B).

461. tit. 47, § 1708(A)(2).

states.⁴⁶² Finally, nothing in either law prohibits a human from operating a car with full or partial self-driving capabilities.⁴⁶³ Read together, these provisions make clear that the law applies to both full and partial autonomous cars. The title of the Oklahoma law also provides a helpful interpretive clue.⁴⁶⁴ That law is titled “*Operate with an Automated Driving System*.”⁴⁶⁵ This title phrase—unlike other title phrases in the Oklahoma law—has no similar exclusionary language for human operators.⁴⁶⁶ So this provision does not exclude human drivers like the way the fully autonomous vehicle provision does.⁴⁶⁷ After all, a matter not expressly covered “is to be treated as not covered.”⁴⁶⁸

Turning to the partial automation provisions’ broader context in all three laws, they show that a human operator must still supervise the autonomous vehicle referenced in those provisions. Indeed, all three laws allow a human driver to control all (or part) of the dynamic driving task.⁴⁶⁹ So it seems natural to look to that person. But there is a slight wrinkle that merits detailed analysis. The Arizona and Oklahoma laws authorize a person—generally defined as a human or various forms of artificial entities⁴⁷⁰—to operate a vehicle with self-driving capabilities unless the car’s driving system issues a request to intervene or similar warning when it is malfunctioning.⁴⁷¹ Here, there is a fork in the road: Arizona law merely requires the human driver to safely take over.⁴⁷² But Oklahoma is different. When the car issues such a warning, Oklahoma law requires the person supervising the driving experience to “*respond appropriately* to such a request.”⁴⁷³ This phrase invites two important follow-on questions: (1) what is appropriate? and (2) what does a request to intervene mean under these circumstances?

Begin with the word appropriate. The statute does not define the word. But the dictionary⁴⁷⁴ says that appropriate means something *especially suitable* or fitting or *proper*.⁴⁷⁵ Given that definition, whether a driver responds appropriately is a fact-intensive assessment.⁴⁷⁶ According to *Black’s Law Dictionary*, the word “reasonable” also means “fair, proper, or moderate under the circumstances.”⁴⁷⁷ The two words are related because they both mean proper and require a fact-intensive assessment of the reasonableness of a

462. See TRANSP. § 545.454(b).

463. OKLA. STAT. tit. 47, §1708(B); §28-9702(G); TEX. TRANSP. CODE §545.453 (a)–(b).

464. State ex rel. Romley v. Hauser, 105 P.3d 1158, 1161–62 (Ariz. 2005) (noting titles are useful tools in statutory interpretation); accord Atkinson v. Halliburton Co., 905 P.2d 772, 775 (Okla. 1995); *In re Great Plains Mgmt. Corp.*, 665 S.W.3d 717, 725 (Tex. Ct. Civ. App. 2022).

465. E.g., OKLA. STAT. tit. 47, §1708.

466. *Id.* compare with *id.* § 1703.

467. *Id.* §1703.

468. See ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* 93 (2012).

469. OKLA. STAT. tit. 47, § 1708; ARIZ. REV. STAT. § 28-9702; TEX. TRANSP. CODE §§ 545.453(b), 545.454(a).

470. OKLA. STAT. tit. 47, § 1701(I); *id.* §1701(J); *id.* § 1708(A)(1); see also ARIZ. REV. STAT. § 28-9702(B).

471. OKLA. STAT. tit. 47, § 1708; § 28-9702(B). Texas law no longer has this requirement. See TRANSP. § 545.453.

472. See § 28-9702(B).

473. tit. 47, § 1708(A)(1) (emphasis added).

474. When a statutory term is undefined, unless the context shows that a specialized meaning was intended, Oklahoma law requires courts to apply the ordinary meaning of the words. See OKLA. STAT. tit. 25, § 1.

475. See *Appropriate*, OXFORD ENGLISH DICTIONARY ONLINE, <https://tinyurl.com/y7wrammt> (last accessed Apr. 16, 2024); see also *Appropriate*, MERRIAM-WEBSTER DICTIONARY, <https://www.merriam-webster.com/dictionary/appropriate> (last visited Apr. 11, 2024).

476. *Id.*

477. See *Reasonable*, BLACK’S LAW DICTIONARY (9th ed. 2009).

given response.⁴⁷⁸ Since one word incorporates an objective standard (reasonable),⁴⁷⁹ the other similar-meaning word (appropriate) also does.⁴⁸⁰

Consider next the phrase “a request to intervene.”⁴⁸¹ The state laws generally define a “[r]equest to intervene” to mean a “notification by an automated driving system to a human driver that the human driver should promptly begin or resume performance of part or all of the dynamic driving task.”⁴⁸² Put simply, if the supervising driver is a human, that person must respond if the automated driving system fails.⁴⁸³ That human intervention obligation exists even if the person who owns the vehicle is an artificial entity; neither law exempts artificial entities from having a supervising human to respond to a system failure.⁴⁸⁴ To that, add the longstanding principle that artificial entities cannot operate separate and apart from humans.⁴⁸⁵ The settled rule is that “[c]orporations separate and apart from the human beings who own, run, and are employed by them cannot do anything at all.”⁴⁸⁶ Legislatures are presumed to legislate against the background of longstanding common law principles.⁴⁸⁷ So, however you dice it, human intervention is required in partial self-driving cars in all three states.

ii. Operational Requirements for Autonomous Vehicles.

Generally, a person may operate a fully autonomous vehicle on public roads without a human driver provided that the automated driving system is engaged and the vehicle meets these three statutory operational conditions:⁴⁸⁸

a. The fully autonomous car, once engaged, must generally be able to achieve a minimal risk condition in most states. That means if there is a failure of the automated driving system that renders it unable to perform the entire dynamic driving task as was intended, the fully autonomous car should be able to achieve a minimal risk condition.⁴⁸⁹ A dynamic driving task or (DDT) means all of the real-time operational and tactical functions required to operate a vehicle in on-road traffic (steering, accelerating), excluding the strategic functions such as trip scheduling and selection of destinations and way-points.⁴⁹⁰ A “minimal risk condition” means when a human driver or an automated driving system brings a vehicle to a safe situation to reduce the risk of an accident when it is clear a trip cannot be safely completed.⁴⁹¹ And finally, an “operational design domain” (or ODD) means the operating conditions that an automated driving system is designed to function including, but not limited to, environmental, geographical, and time-of-day restrictions, and the requisite presence or absence of certain traffic or roadway characteristics.⁴⁹²

478. *See supra* notes 475–77 and accompanying text.

479. *Id.*

480. *See generally* Heffernan v. City of Paterson, 578 U.S. 266, 272 (2016) (in law, what is good for one similarly situated actor is good for another).

481. OKLA. STAT. tit. 47, § 1708(A)(1).

482. *Id.* § 1701(J).

483. *Id.* § 1708(A)(1); ARIZ. REV. STAT. § 28-9702(B).

484. *See* tit. 47, § 1708.

485. *Burwell v. Hobby Lobby Stores*, 573 U.S. 682, 707 (2014).

486. *Id.*

487. *See* *Marino v. Lenoir*, 526 S.W.3d 403, 409 (Tex. 2017); *Samantar v. Yousuf*, 560 U.S. 305, 320 n.13 (2010).

488. OKLA. STAT. tit. 47, § 1703; ARIZ. REV. STAT. § 28-9702.

489. *See* tit. 47, § 1703(A)(1); § 28-9702(C)(2)(b).

490. *See* OKLA. STAT. tit. 47, § 1701(B); ARIZ. REV. STAT. § 28-101(27).

491. *See* tit. 47, § 1701(F); § 28-101(45).

492. *See* OKLA. STAT. tit. 47, § 1701(H); ARIZ. REV. STAT. § 28-101(57).

b. Generally, the fully autonomous car must be able to operate in compliance with the applicable traffic and motor vehicle safety laws and regulations of state law unless an exemption has been granted by appropriate federal or state regulatory agencies.⁴⁹³

c. When required by federal law, the vehicle must bear the required manufacturer’s certification signifying that it complies with all applicable Federal Motor Vehicle Safety Standards.⁴⁹⁴ The certification should include a reference or disclosure of any exemption granted by the National Highway Traffic Safety Administration for that version of vehicle.⁴⁹⁵

But even if a fully autonomous vehicle meets all those statutory operational conditions, all three states still impose additional critical reporting requirements that must be satisfied before taking to the road.⁴⁹⁶ For starters, the laws generally require that the person placing a fully autonomous vehicle submit to the Department of Public Safety (or equivalent) a “Law Enforcement Interaction Plan”⁴⁹⁷ that provides the following information to law enforcement:

- How to communicate with a fleet support specialist who is available during the times the vehicle is in operation;⁴⁹⁸
- How to safely remove the fully autonomous vehicle from the roadway;⁴⁹⁹
- How to recognize whether the fully autonomous vehicle is in autonomous mode and steps to safely tow the vehicle;⁵⁰⁰ and
- Any additional information the manufacturer or owner deems necessary regarding the hazardous conditions or public safety risks associated with the operation of the fully autonomous vehicle.⁵⁰¹

If an accident occurs involving a fully autonomous car, the laws in the three states impose two duties. *First*, the fully autonomous vehicle should remain at the accident scene when there has been an injury or death to someone.⁵⁰² Arizona has a slight caveat for fully autonomous vehicles when there is no human operator within the car; the car’s owner (or their agent) should provide the car owner’s name and address and car registration information to the person struck or the occupants (or attendants) of the vehicle struck by the self-driving car.⁵⁰³ *Second*, the owner of the fully autonomous vehicle, or a person acting on behalf of the vehicle owner, must report any accidents or collisions.⁵⁰⁴ But all three statutes say nothing about other limited autonomous cars or how to resolve any liability questions generally involving cars with self-driving capabilities.

493. OKLA. STAT. tit. 47, § 1703(A)(2); ARIZ. REV. STAT. § 28-9702(A) & (C); *see also* TEX. TRANSP. CODE § 545.454(b).

494. *See* tit. 47, § 1703(A)(3); § 28-9702(A) & (C); *see also generally* TRANSP. § 545.454(b)(3).

495. *See* OKLA. tit. 47, § 1703(A)(3); § 28-9702(A) & (C); *see also generally* TRANSP. § 545.454(b)(3).

496. tit. 47, § 1703(B); § 28-9702; TRANSP. § 545.454(b).

497. tit. 47, § 1703(B); § 28-9702(A) & (C). Texas law has no similar requirements.

498. OKLA. STAT. tit. 47, § 1703(B); ARIZ. REV. STAT. § 28-9702(A) & (C).

499. tit. 47, § 1703(B); § 28-9702(A) & (C).

500. tit. 47, § 1703(B); § 28-9702(A) & (C).

501. 47, § 1703(B); § 28-9702(A) & (C).

502. *See* OKLA. STAT. tit. 47, § 1705(1); ARIZ. REV. STAT. § 28-664.

503. *See* ARIZ. REV. STAT. § 28-663(B).

504. OKLA. STAT. tit. 47, § 1705(2); ARIZ. REV. STAT. § 28-664.

iii. Non-product liability framework for full and partial autonomous vehicles⁵⁰⁵

This section outlines the liability framework for full and partial self-driving cars. One class of cars requires active human input, while the other does not.

a. Civil Liability Framework for Cars that Require Human Input (partial autonomy).

The self-driving car laws in all three states say nothing about liability, especially based fault-based civil litigation rules. In the event of a liability question, the courts would likely look to longstanding common law principles to supplement the statutory frameworks.⁵⁰⁶ Oklahoma, for example, has an express gap-filling statute states that the “common law . . . shall remain in force in aid of the general statutes of Oklahoma.”⁵⁰⁷ The law generally imposes an affirmative duty on every person not to injure another person or their property.⁵⁰⁸ Specific to cars, the common law holds that “drivers have a duty to operate [their] vehicle with due care.”⁵⁰⁹ The law imposes this duty when a person’s conduct creates an “unreasonably high risk that harm would occur to the injured party.”⁵¹⁰ So if a car operator is negligent in the operation of a vehicle (*e.g.*, texting, running a stop sign, and so on) leading to a collision, the driver will likely be liable.⁵¹¹

Now to the question presented: can the driver of a partial autonomous vehicle—who has engaged the self-driving function to drive in their place—be liable for negligence following an accident? Yes. When drivers assume control of vehicles, by placing themselves in the driver’s seat or engaging their functionality, the law imposes a duty on them to take care.⁵¹² If a driver starts to drive a car and fails to manage it correctly, injuring others, the law imposes liability.⁵¹³ The essence of negligence liability is the defendant’s knowledge of a foreseeable risk of harm and the failure to take reasonable precautions to abate that risk.⁵¹⁴ To that end, for cars with self-driving supporting features, manufacturers, like Tesla for example, warn their drivers that they must *still actively supervise* their cars.⁵¹⁵ Besides requiring active human supervision, Tesla engineers have testified in court that it treats its autopilot mode as the functional-equivalent of advanced cruise control.⁵¹⁶

Against this background, who should be liable when a partial autonomous vehicle is involved in accident? Absent a product defect, the human operator should be liable for

505. For a comprehensive analysis of the product-liability framework for self-driving cars, see M. Mwafurirwa, *supra* note 21, at 403–07.

506. *E.g.*, OKLA. STAT. tit. 12, § 2 (common law to aid statutes); ARIZ. REV. STAT. § 1-201; Taylor v. Tolbert, 644 S.W.3d 637, 650 (Tex. 2022) (Texas “follows an opt-out approach that incorporates common law principles absent the Legislature’s clear repudiation.”) (cleaned up).

507. tit. 12, § 2.

508. *See, e.g.*, OKLA. STAT. tit. 76, § 1; Lowery v. Echostar Satellite Corp., 160 P.3d 959, 964, 967 n.3 (Okla. 2007) (“A duty of care is an obligation owed by one person to act so as not to cause harm to another.”); *see also generally* Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 102 (N.Y. 1928) (Andrews, J., dissenting) (“Due care is a duty imposed on each one of us to protect society from unnecessary danger, not to protect A, B, or C alone.”).

509. *See* Fargo v. Hays-Kuehn, 352 P.3d 1223, 1227 (Okla. 2015).

510. *Id.*

511. *See generally id.*

512. *See generally* Fargo, 352 P.3d at 1227.

513. *Id.*

514. *Id.*

515. *See Autopilot and Full Self-Driving Capability*, Tesla, <https://www.tesla.com/support/autopilot> (last visited Apr. 11, 2024).

516. *See* Hillel Aron, *Judge Orders Trial in Tesla Autopilot Manslaughter Case*, COURTHOUSE NEWS (May 19, 2022), <http://tinyurl.com/5n7css8f>.

two reasons. To understand why, imagine this hypothetical: an improperly parked car on a slope rolls downhill causing harm. When the car was rolling away, it was unmanned. At a minimum, the law holds the driver who improperly parked that car responsible for the consequences of the rolled-away car.⁵¹⁷ If the law looks to the absent driver for the consequences of their unmanned (and improperly parked) and rolled-away car, then logically, it should also do the same to drivers of partial autonomous car—those who allow their cars drive themselves on the road.⁵¹⁸ In fact, the rolled away car hypothetical proves that subtracting the driver from the driving enterprise does not relieve those drivers of their responsibility to safely manage and supervise a car they put on the road.⁵¹⁹

What logic and the analogy to rolled away vehicles suggest, the law's treatment of cruise control confirms the correctness of this article's position. When cars started having cruise control in 1970s, many drivers tried to creatively escape their speeding tickets by blaming their cars (and their cruise control systems) for having committed the traffic infractions.⁵²⁰ But courts nearly universally refused to blame the cruise control systems. "A motorist who entrusts his car to the control of an automatic device is driving the vehicle and is no less responsible for its operation if the device fails to perform a function under which the law [they are] required to perform."⁵²¹ Those same principles apply to autopilot systems in airplanes.⁵²² That same analysis, this article contends, will likely apply to partial automated cars, which Tesla suggests are just a form of cruise control.⁵²³

Determining the cause of an accident involving a car with self-driving capabilities can be complicated. But even then, longstanding tort principles—specifically *res ipsa loquitur*—help make it easier to establish liability in unexplained and complex accidents. Courts use *res ipsa loquitur* to "infer negligence" when an injury would likely not have happened but for someone's negligence in controlling an instrumentality.⁵²⁴ A *res ipsa loquitur* theory generally requires a party to show three things: (1) an injury; (2) that does not ordinarily occur absent negligence by a defendant; and (3) the defendant's exclusive control of the instrumentality.⁵²⁵

Thus, if a driver turns on the self-driving function and the car then injures another person, that injured party can rely on *res ipsa loquitur* to help prove a negligence claim against the operator. In most cases it will likely be easy to show that the operator was in charge of the car because they can start or end the self-driving enterprise.⁵²⁶ For another, the next element—that the accident does not ordinarily occur absent negligence—would also likely be straightforward because, ordinarily, cars do not just injure other road users unless negligence was at issue.⁵²⁷ Finally, an injury to the plaintiff would be a given, especially if the collision were serious.

517. See, e.g., *McCall v. Dixie Cartage & Warehousing, Inc.*, 158 S.E.2d 72, 75 (N.C. 1967) ("[F]ailure to set the emergency brakes on a motor vehicle parked on an incline, where its unattended movement may involve danger to persons or property, is or may be evidence of negligence" and can also be negligence per se); *accord Wilke v. Woodhouse Ford, Inc.*, 774 N.W.2d 370, 382–83 (Neb. 2009).

518. "After all, in the law, what is sauce for the goose is normally sauce for the gander." *Heffernan v. City of Paterson*, 578 U.S. 266, 272 (2016).

519. See *supra* note 517 and accompanying text.

520. See *State v. Packin*, 257 A.2d 120, 121 (N.J. Super. Ct. App. Div. 1969); *State v. Baker*, 571 P.2d 65, 69 (Kan. Ct. App. 1977).

521. *Packin*, 257 A.2d at 121 (emphasis added).

522. See James E. Cooling & Paul V. Herbers, *Considerations in Autopilot Litigation*, 48 J. AIR L. & COM. 693, 716 (1983).

523. See *Autopilot and Full Self-Driving Capability*, TESLA, <https://www.tesla.com/support/autopilot> (last visited Apr. 11, 2024).

524. See *Avard v. Leming*, 889 P.2d 262, 264–66 (Okla. 1995).

525. See *id.*; see also *Qualls v. U.S. Elevator Corp.*, 863 P.2d 457, 461–62 (Okla. 1993).

526. *Qualls*, 863 P.2d at 462.

527. See PROSSER, *supra* note 153, § 39.

b. Traffic Violation Analysis for Cars with Autopilot/Self-Driving Features.

Manufacturers like Tesla treat the autopilot features on their vehicles the same as cruise control.⁵²⁸ So just as with cruise control, drivers who engage an automatic device to aid them are still “driving” the car and are responsible for its safe operation.⁵²⁹ In effect, the self-driving operating system, much like cruise control, performs some core driving functions that the law ordinarily expects of a human driver.⁵³⁰ And when that self-driving operating system, much like cruise control, fails to operate the car safely causing harm or violating a traffic rule, for example, the law places legal responsibility on the driver.⁵³¹ If the law’s response to one automated driver assistance device is to place blame on the driver, nothing in principle compels different treatment for another automated driving assistance system, the self-driving car systems.⁵³²

The case for driver liability in partial automated cars is even stronger in DUI cases. The law and the car user manuals both require that the driver in partial autonomous cars to actively supervise the driving enterprise.⁵³³ And yet, just sitting in a driver’s wheel intoxicated on a public road, even when the car is not moving, is enough to establish a DUI in most states.⁵³⁴ Indeed, another liability-imposing formulation states that any act of “*directing influence, domination or regulation*” of a car, while intoxicated, is sufficient actual physical control to establish responsibility for DUIs.⁵³⁵ Under these standards, regulating or supervising a partially automated car while intoxicated could support a DUI conviction under most states’ laws.⁵³⁶

c. Criminal Law Analysis for Those Who Switch on the Autopilot Feature.

For most quintessential traffic offenses, they are no-fault regulatory offenses.⁵³⁷ So that no-fault liability framework might not extrapolate well into the criminal law realm—a chiefly fault-based liability framework.⁵³⁸ A case study best shows how the criminal law could interact with partial automated cars.⁵³⁹ The recent criminal prosecution in California serves as a template for this analysis.⁵⁴⁰ In brief, California prosecutors charged

528. See Aron, *supra* note 516.

529. *State v. Packin*, 257 A.2d 120, 121 (N.J. Sup. Ct. App. 1969); *State v. Baker*, 571 P.2d 65, 69 (Kan. Ct. App. 1977).

530. *E.g.*, ARIZ. REV. STAT. ANN. § 28-9702(E) (Once the self-driving features are engaged on a vehicle, Arizona law considers the car’s operating system the master of the driving enterprise, not a human driver. See *id.*

531. See *Packin*, 257 A.2d at 121; accord *Baker*, 571 P.2d at 69.

532. See *Heffernan v. City of Paterson*, 578 U.S. 266, 272 (2016) (“[I]n the law, what is sauce for the goose is normally sauce for the gander.”).

533. See *supra* notes 511–16 and accompanying text.

534. *Wofford v. State*, 739 P.2d 543, 543–44 (Okla. Crim. App. 1987).

535. See *Bearden v. State*, 430 P.2d 844, 847 (Okla. Crim. App. 1967).

536. See generally *id.*

537. *E.g.*, *United States v. Foster*, 832 F. App’x 401, 407 (6th Cir. 2020 (“[M]ost traffic offenses are strict liability crimes.”); accord *State v. Bauer*, 776 N.W. 2d 462, 478 n.3 (Mn. Ct. App. 2009) (“A ‘strict-liability crime’ is defined as ‘[a] crime that does not require a mens rea element, such as traffic offenses’”).

538. See *Staples v. United States*, 511 U.S. 600, 606 (1994) (courts should generally presume proof-of fault for more serious criminal offenses unless there is clear congressional intent to create a no-fault crime); *United States v. X-Citement Video, Inc.*, 513 U.S. 64, 72–73, 87 n.3 (1994).

539. See Nathaniel Percy, *Driver of Tesla on Autopilot Gets Probation For Crash That Killed 2 in Gardena*, DAILY BREEZE (June 30, 2023, 4:57 PM), <http://tinyurl.com/345mszjz>.

540. *Id.*

a driver with two manslaughter charges when their autopilot system on their Tesla allegedly failed to stop the car at a red light.⁵⁴¹ The prosecution alleged that the driver's Tesla hit another car behind, killing its two passengers.⁵⁴² The defendant initially pled not guilty.⁵⁴³

At the preliminary hearing, Tesla engineer Eloy Rubio-Blanco “testified that [the Defendant] had engaged the car’s ‘Autopilot’ function about 20 minutes before the crash.⁵⁴⁴ The feature is akin to a sophisticated version of cruise control.”⁵⁴⁵ As the engineer explained, generally when a car is in Autopilot mode, it maintains a certain speed set by the driver “unless it detects a car in front of it; when it does, it slows down to match the speed of that car, following at a distance set by the Tesla’s driver.”⁵⁴⁶ In fact, the drivers are required to keep their hands on the steering wheel when using Autopilot.⁵⁴⁷ When drivers take their hands off the steering wheel, the car gives them “a series of warnings.”⁵⁴⁸ The prosecution alleged that the defendant failed to supervise his vehicle.⁵⁴⁹ In the end, the defendant pled no contest and received probation and no prison time.⁵⁵⁰

- d. Bringing the Tesla-Collision Criminal Case Closer to Home: How a Typical Manslaughter Framework like Oklahoma’s (or any other) Could Apply to Fact-Patterns that Involve Drivers that Turn on the Autopilot Feature.

In most jurisdictions, a negligent homicide conviction requires the prosecution to prove five elements: (i) the death of a human; (ii) caused by the defendant’s driving a vehicle upon a highway; (iii) in reckless disregard of the safety of others; (iv) the death occurred within a year of the infliction of the injury; (v) and the defendant was at least sixteen years old at the time of the conduct at issue.⁵⁵¹ As applied to the California Tesla-collision case, the defendant in that case was over the age of sixteen at the time, the deaths of the two victims happened right away with the collision, and one could argue that the defendant’s car caused the collision.⁵⁵²

The hardest question would likely be about the defendant’s mental state. Would his conduct amount to a reckless disregard of the safety of others? In the law, generally, recklessness requires that a person consciously disregard an unjustifiable risk of harm to others stemming from their conduct.⁵⁵³ In essence, in most jurisdictions, there must be “a gross deviation from accepted standards” in order for criminal reckless liability to attach.⁵⁵⁴ Although the line between ordinary negligence and reckless conduct is difficult to

541. *Id.*

542. *Id.*

543. *Id.*

544. Percy, *supra* note 539.

545. See Aron, *supra* note 516.

546. *Id.*

547. *Id.*

548. *Id.*

549. *Id.*

550. See Aron, *supra* note 516.

551. See Okla. Uniform Jury Instr. Crim. 2d No. 4-105 Negligent Homicide—Elements.

552. See Aron, *supra* note 516.

553. See *Borden v. United States*, 593 U.S. 420, 427 (2021); see also MODEL PENAL CODE § 2.02(2)(c) (AM. L. INST. 1962).

554. See *Borden*, 593 U.S. at 427 (plurality opinion); Okla. Uniform Jury Instr. Crim. 2d No. 4-107 Negligent Homicide – Reckless Disregard Defined (disregard of the safety of others means the “omission to do something which a reasonably careful person would do, or the lack of the usual and ordinary care and caution in the performance of an act usually and ordinarily exercised by a person under similar circumstances and conditions.”).

draw,⁵⁵⁵ it is generally the case that the reckless disregard of the safety of others standard is the functional-equivalent of “culpable negligence.”⁵⁵⁶ The Supreme Court has recently clarified that generally, criminal recklessness involves a “deliberate decision to endanger another.”⁵⁵⁷ But in a practical sense, what would this look like? The renowned criminal law scholar Prof. Wayne LaFave suggests that the distinction is generally shown by looking for evidence that the defendant subjectively internalized the risk of harm to others and still did the act anyway or by demanding a higher level of culpability than just ordinary negligence.⁵⁵⁸ On this understanding, driving a car through a crowd of people, for example, is straightforward criminal recklessness.⁵⁵⁹ And specific to reckless driving of cars, courts have generally upheld convictions when, for example, it was clear that “the defendant drove at an excessive speed, was inattentive and lacked control over a vehicle” while on the road.⁵⁶⁰ That criminal liability framework seems like a shoo-in for the California Tesla-collision: the driver allegedly ignored the car’s warnings to supervise the vehicle while it sped down the highway, allegedly was inattentive and failed to brake, such that the vehicle allegedly lacked control when it careened into its unsuspecting victims’ car.⁵⁶¹

But other jurisdictions—like Oklahoma—have adopted ordinary negligence principles, so in those places, “it is unnecessary to attempt to categorize this definition as ordinary negligence, gross negligence, or as any other degree of negligence.”⁵⁶² As a result, applying this negligent homicide framework—basically a negligence standard based on what a reasonable careful driver in the defendant’s shoes would have done—perhaps the Tesla defendant (or any future defendant’s) alleged failure to place their hands on the steering wheel and to monitor and supervise the driving enterprise for prolonged periods—when reasonable prudent drivers in similar circumstances would have done after turning on the autopilot feature—could serve as a plausible basis for culpable criminal negligence prosecutions now and in future.⁵⁶³ After all, when it comes to negligence involving cars

555. *Pitts v. State*, 473 So. 2d 1370, 1372 (Fla. Dist. Ct. App. 1985) (“The dividing line between the lack of care required for proof of vehicular homicide by reckless operation of a motor vehicle . . . and careless driving . . . is obviously hard to draw . . . [W]e hold that the assessment of the defendant’s actions was properly left to the jury.”); *McIver v. State*, 875 S.E.2d 810, 824 (Ga. 2022) (“[W]e conclude that the term ‘unlawful manner,’ in the involuntary manslaughter statute, requires a mens rea that is more culpable than ordinary or civil negligence, but less culpable than the mens rea required for the crime of ‘reckless conduct’”); *Aledda v. State*, 337 So. 3d 846, 850 (Fla. Dist. Ct. App. 2022) (“There is no uniform schedule of specific acts that constitute culpable negligence”).

556. See Advisory Committee Notes to Okla. Uniform Jury Instr. Crim. 2d No. 4-107 Negligent Homicide (citing *Lester v. State*, 562 P.2d 1163 (Okla. Crim. App. 1977); *Thompson v. State*, 554 P.2d 105, 108 (Okla. Crim. App. 1976)).

557. See *Counterman v. Colorado*, 600 U.S. 66, 79 (2023).

558. See 1 W. LAFAVE, *SUBSTANTIVE CRIMINAL LAW* § 5.4 (6th ed. 2017); see generally *Counterman*, 600 U.S. at 79; see also *Pagotto v. State*, 732 A.2d 920, 925, 969 (Md. Ct. Spec. App. 1999) (“In a case charging involuntary manslaughter of the gross negligence variety, as we graduate upward, the State will not be permitted to take its case to the jury simply by proving a prima facie case of ordinary negligence.”); *People v. Rodriguez*, 186 Cal. App. 2d 433 (Cal. Ct. App. 1960) (evidence legally insufficient to support manslaughter conviction when “[t]here was no evidence from which it can be inferred that defendant realized her conduct would in all probability produce death”).

559. See *Borden v. United States*, 593 U.S. 420, 427 (2021).

560. *State v. Miller*, 471 N.W.2d 380, 384 (Minn. Ct. App. 1991) (citing *State v. Tinklenberg*, 194 N.W.2d 590, 591 (Minn. 1972)); see also 1 W. LAFAVE, *supra* note 558, at 5.4(f) (criminal recklessness established when skier was skiing “straight down a steep bump slope” in a way that was “out of control”) (citing *People v. Hall*, 999 P.2d 207 (Colo. 2000)).

561. See Aron, *supra* note 516.

562. *Thompson v. State*, 554 P.2d 105, 108 (Okla. Crim. App. 1976); accord *Njecick v. State*, 189 N.W. 147, 148 (Wis. 1922).

563. See *supra* notes 511–16, 539–48 and accompanying text.

on public roads, the lodestar is making sure to operate the vehicle in a way that does not injure or endanger other road users.⁵⁶⁴

V. CIVIL AND CRIMINAL LIABILITY FRAMEWORKS FOR FULLY AUTONOMOUS CARS

This analysis will analyze first self-driving cars that will serve the public as common carriers relative to their passengers and third-parties who are injured in a collision. Then, the article will consider liability rules that might apply to fully autonomous vehicles.

In most common carrier cases, liability is usually based on one or more of these general broad theories:

- The poor condition or safety issues of the vehicle (*e.g.*, the tires were worn or there is some foreseeable defect with the car etc.);⁵⁶⁵
- That the owner entrusted a poor substitute to carry out the driving functions (the negligent entrustment kind of claim);⁵⁶⁶ or
- That the owner did nothing wrong, but because of vicarious liability principles and public policy reasons, an agent's wrongdoing is imputed to his principal.⁵⁶⁷

But, as this article shows, it is unlikely that all three theories will translate in the fully autonomous context, especially in fault-based scenarios. Begin with vicarious liability based on the error of an agent driver. A fully autonomous vehicle has no human agent, just a machine.⁵⁶⁸ And while some autonomous vehicle statutes consider the “automated driving system” or its equivalent “the driver or operator . . . *for the purpose of assessing compliance with applicable traffic or motor vehicle laws*,”⁵⁶⁹ that does not mean the state (or an injured party) should prosecute (or sue) the car for any resulting harm caused. To be sure, legislatures—in Texas, Oklahoma, Arizona, and elsewhere—are presumed to legislate against the background of longstanding common law principles.⁵⁷⁰ The common law, in turn, does not currently accept that computers or computer systems can be agents or have legal personhood necessary for them to sue or be sued.⁵⁷¹ And it seems unlikely that

564. *Fargo v. Hays-Kuehn*, 352 P.3d 1223, 1226–27 (Okla. 2015).

565. *MacIntosh v. August Ambulette Serv., Inc.*, 271 A.D.2d 661, 661 (N.Y. App. Div. 2000) (liability imposed when “vehicle did [not] have good tires to support the braking of the brakes”).

566. *E.g.*, *Werner Enterprises, Inc. v. Blake*, 672 S.W.3d 554, 604 (Tex. App. 2023) (finding sufficient evidence to hold common carrier liable based on negligence in entrusting vehicle to inexperienced and untrained driver).

567. *E.g.*, *Doe v. Lyft, Inc.*, 176 N.E. 3d 863, 871 (Ill. App. Ct. 2020).

568. *See, e.g.*, OKLA. STAT. tit. 47 § 1703.

569. *E.g.*, OKLA. STAT. tit. 47 § 6-102(E)(1) (“The automated driving system is considered the driver or operator, for the purpose of assessing compliance with applicable traffic or motor vehicle laws, and shall be deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle”) (emphasis added); accord ARIZ. REV. STAT. § 28-9702(E); *see also* MISS. STAT. ANN. § 63-35-9.

570. *See* *Marino v. Lenoir*, 526 S.W.3d 403, 409 (Tex. 2017) (“[W]e construe statutory language against the backdrop of common law, assuming the Legislature is familiar with common-law traditions and principles.”); *Hayes v. Cont'l Ins. Co.*, 872 P.2d 668, 677 (Ariz. 1994) (“[A]bsent manifest legislative intent to the contrary, statutes are to be construed as consistent with the common law”); accord *Samantar v. Yousuf*, 560 U.S. 305, 320 n.13 (2010); *see also* *Sur. Bail Bondsmen of Okla., Inc. v. Ins. Comm'r*, 243 P.3d 1177, 1184–85 (Okla. 2010) (“The common law remains in force in aid of general statutes.”) (quoting OKLA. STAT. tit. 12 § 2).

571. *See* RESTATEMENT (THIRD) OF AGENCY § 1.04 cmt. E. (AM. LAW INST. 2006); *see also* Dalton Powell, *Autonomous Systems as Legal Agents: Directly by the Recognition of Personhood or Indirectly by the Alchemy of Algorithmic Entities*, 18 DUKE L. & TECH. REV. 306, 309–11 (2020); *see also* M. Mwafurirwa, *supra* note 21, at 413.

the legislatures in those states intended to implicitly abolish this longstanding common-law rule simply because they made automated driving systems permissible drivers under their laws. After all, courts presume that legislatures does not implicitly abrogate longstanding common law rules; only clear words to that effect will do.⁵⁷² None of the statutes clearly give personhood to automated driving systems. Given that the self-driving car itself cannot yet be sued or held directly liable, then the next best actor will have to do: that is, the person who employs the autonomous vehicle (the tool) to serve their purposes.⁵⁷³ Important still, since the autonomous car lacks personhood to serve as an agent,⁵⁷⁴ vicarious liability is likely inapplicable because if there is no wrongdoing by an agent to penalize, there generally can be no such liability.⁵⁷⁵ The law must look to another theory to gauge liability against the owner (or user) of the self-driving car for this unique situation.

It is a hard sell to seek to establish the owner's liability by claiming that they employed an incompetent substitute to carry out the driving. Logically, the premise of any such theory would have to rest on a claim that the automated driving system is a poor substitute for a traditional human driver. But as Chief Judge Cardozo said when explaining the limitation of the negligent entrustment theory in *Grant v. Knepper*,⁵⁷⁶ “if the substitute is competent, perhaps more competent than the [original driver] and there is no failure thereafter of fitting supervision,” and there should be no negligence.⁵⁷⁷ Research also suggests that self-driving cars might be better and safer drivers than humans.⁵⁷⁸ Against this background, Chief Judge Cardozo's principle in *Grant v. Knepper* should matter even more to any liability analysis of fully autonomous cars for two reasons.

First, the new self-driving car laws in the several states consider qualifying fully automated driving systems competent substitutes for a human driver.⁵⁷⁹ So it is hard to win the argument that something that the law treats as competent is somehow incompetent.⁵⁸⁰ *Second*, as noted, studies suggest that automated driving systems will be better drivers than humans.⁵⁸¹ Together, those two points make it unlikely that a fault-based claim alleging that the automated driving system is a poor substitute alone would be enough to establish liability against an owner of a statutorily-compliant, fully autonomous vehicle. And if the

572. See *Wright v. Grove Sun Newspaper Co.*, 873 P.2d 983, 987 (Okla. 1994); *United States v. Texas*, 507 U.S. 529, 534 (1993) (“In order to abrogate a common-law principle, the statute must ‘speak directly’ to the question addressed by the common law.”); *Wyatt v. Wehmuller*, 806 P.2d 870, 873 (Ariz. 1991) (same); 15A C.J.S. *Common Law* § 17 (“[T]he common law is not repealed by statute unless the legislative intent to do so is plainly or clearly manifested”) (emphasis added).

573. *Supra* text accompanying note 572.

574. See M. Mwafulirwa, *supra* note 21, at 413; see also generally RESTATEMENT (THIRD) OF AGENCY § 1.04 cmt. e (AM. LAW INST. 2006).

575. *Cf. Cook v. Nationwide Ins.*, 962 F. Supp. 2d 807, 817 (D. Md. 2013) (because vicarious liability is derivative, there can be no such liability without antecedent wrongdoing by an agent); see also generally PROSSER, *supra* note 153, § 69.

576. 156 N.E. 650, 651 (N.Y. 1927).

577. *Id.* (emphasis added).

578. See Sai Sneha Channamallu et al., *Impact of Autonomous Vehicles on Traffic Crashes in Comparison with Conventional Vehicles* (Jan. 2023), <http://tinyurl.com/2bw7ycdp>.

579. See, e.g., OKLA. STAT. tit. 47, § 1703; *id.* § 6-102(E)(1) (“The automated driving system is considered the driver or operator, for the purpose of assessing compliance with applicable traffic or motor vehicle laws, and shall be deemed to satisfy electronically all physical acts required by a driver or operator of the vehicle”) (emphasis added); TEX. TRANSP. CODE §§ 545.453, 545.454.

580. See *Kramer v. Cath. Charities of Diocese of Fort Wayne-S. Bend*, 32 N.E.3d 227, 231–32 (Ind. 2015) (“[C]ompliance with statutory requirements is sufficient to award summary judgment on a negligence claim, in the absence of competent evidence . . . which would demonstrate either non-compliance or the existence of a higher duty.”); accord W. PAGE KEETON ET AL., *supra* note 150, § 36.

581. See Channamallu et al., *supra* note 578.

lowest level of fault (negligence)⁵⁸² is questionable, it is unlikely the higher (and more demanding) levels of fault (like intent) can be established based on an owner's mere operation of a fully autonomous car that later causes harm.⁵⁸³

That then leaves one realistic pathway for a fault-based liability theory against the owner (or user) of a fully autonomous vehicle. That framework will depend on the unreasonable risk of harm posed to others because of the poor safety condition of the vehicle or lack of maintenance. After all, in the criminal law, generally, recklessness requires that a person consciously disregard an unjustifiable risk of harm to others stemming from their conduct.⁵⁸⁴ This is the same liability framework that the law uses for other automated conveyances like elevators.⁵⁸⁵ Generally, longstanding common law principles treat an unmanned elevator as a common carrier.⁵⁸⁶ This matters here because an unmanned elevator is simply another form of conveyance no more different from a fully autonomous car.⁵⁸⁷ In fact, this elevator maintenance analogy should also open our eyes to other potential classes of defendants—*e.g.*, the maintenance contractors or even the manufacturers (especially if a defect existed when the product left the manufacturer).⁵⁸⁸

VI. DETAILED LIABILITY FRAMEWORK FOR COMMON CARRIERS OF FULLY SELF-DRIVING CARS

A. *Civil Liability Considerations.*

Under longstanding principles, common carriers provide transportation to the public.⁵⁸⁹ In most jurisdictions, the law imposes safety duties on common carriers.⁵⁹⁰ When an accident happens, if the injured parties can show that the vehicle had unaddressed maintenance issues or it was overcrowded or there was notice of safety issues, then an inference of negligence against the operator arises; unless the operator overcomes that inference with an explanation free of negligence on its part, liability sticks.⁵⁹¹ In the law's view, the owner of the car always has the power to abate foreseeable risks.⁵⁹² Thus, the law reasons, the owner's failure to do so is a source of liability.⁵⁹³

That the autonomous car is self-driving when it is involved in an accident does not do away an owner's liability.⁵⁹⁴ Unmanned elevators illustrate the point.⁵⁹⁵ The law, as noted, treats the owners or operators of those unmanned (driverless) elevators as common

582. See *Parret v. Unicco Serv. Co.*, 127 P.3d 572, 576 (Okla. 2005) (analyzing a “continuum of tort liability” or fault that ranged from negligence, willful and wanton conduct, and intentional conduct.”), *superseded by statute on other grounds as recognized by* *Martinez v. Angel Expl., L.L.C.*, 798 F.3d 968, 982 (10th Cir. 2015).

583. See generally *Parret*, 127 P.3d at 576.

584. See *Borden v. United States*, 593 U.S. 420, 427 (2021); see also MODEL PENAL CODE § 2.02(2)(c) (AM. L. INST. 1962).

585. See 13 C.J.S. CARRIERS *Res Ipsa Loquitur – Elevators, Escalators, and the Like* § 577 (2023).

586. See generally *id.*

587. *Id.*

588. *Id.*

589. See, *e.g.*, OKLA. STAT. tit. 13, § 4; see also OKLA. STAT. tit. 13, §§ 31–34 (standards of care, skill, and safety requirements).

590. See *Denco Bus Co. v. Keller*, 212 P.2d 469, 472 (Okla. 1949).

591. *Id.*

592. *Id.*

593. *Id.*

594. See *Mbilike M. Mwafulirwa*, *supra* note 24, at 414–18.

595. *Id.*

carriers.⁵⁹⁶ The takeaway from the elevator analogy is this: the absence of a human operator within a conveyance does not negate an owner's responsibility.⁵⁹⁷

This is a fitting place to say that since we have established that the responsibility for a common carrier falls on the owner/operator, then straightforward no-fault traffic citations, like for example, that a fully autonomous car failed to pay a toll or to yield or to properly park (and so on), would fall on the owner/operator.⁵⁹⁸ After all, the essence of being a common carrier is that one "assumes responsibility for the fitness of an instrumentality for its intended use."⁵⁹⁹ Just as an owner/operator of an elevator would be responsible, for example, for a citation because its elevator failed to meet a typical code requirement establishing its fitness for its intended use,⁶⁰⁰ the same should be true with an owner/common carrier of a fully autonomous vehicle.

But what is the analysis when a fully self-driving common carrier injures a third-party? This article contends that *res ipsa loquitur* would likely apply to aid the injured party. Ordinarily, *res ipsa loquitur* applies to common carrier cases.⁶⁰¹ Just as in other *res ipsa loquitur* cases, the law requires plaintiffs to show that their injuries stemmed from an unexplained occurrence, while the defendant had exclusive control of the car.⁶⁰² Several courts have found that the exclusive control requirement in *res ipsa loquitur* is flexible.⁶⁰³ In fact, exclusive control falls on one "*who assumes responsibility for the fitness of an*

596. *Id.*; see also *Dehmel v. Smith*, 227 N.W. 274, 275 (Wis. 1929) ("The elevator is a common carrier of passengers, and the degree of care . . . [is] the highest"); *Container Corp. of Am. v. Crosby*, 535 So. 2d 154, 156 (Ala. 1988) ("[A]n elevator, whether passenger or freight, is a common carrier and, as such, is to be operated and maintained with the highest degree of care."); *Seay v. Gen. Elevator Co.*, 522 P.2d 1022, 1028 (Okla. 1974) ("[T]he owner of an elevator owes the same duty to the public as a common carrier."). *But see, e.g., Summers v. Montgomery Elevator Co.*, 757 P.2d 1255, 1261–62 (Kan. 1988) ("[T]he elevator . . . is not a common carrier and . . . the duty to the public with regard to it is that of ordinary care."); *Smith v. Otis Elevator Co.*, 217 F. Supp. 2d 105, 108 (D. Me. 2002) (holding that "the owner or operator of an elevator in a lodging establishment" does not have the common carrier's duty to use the highest degree of care).

597. See 13 C.J.S. *Carriers* § 577; see also *supra* text accompanying notes 504–08.

598. See ARIZ. REV. STAT. § 28-9702(C)(2)(c) ("[T]he person who submits the written statement [the state required certification] for the fully autonomous vehicle *may be issued a traffic citation or other applicable penalty if the vehicle fails to comply with traffic or motor vehicle laws.*") (emphasis added); see also TEX. TRANSP. CODE § 545.453(a)(1) ("[T]he owner of the automated driving system is considered the operator of the automated motor vehicle solely for the purpose of assessing compliance with applicable traffic or motor vehicle laws, regardless of whether the person is physically present in the vehicle while the vehicle is operating.") (emphasis added); see also N.C. GEN. STAT. § 20-401(e) ("The person in whose name the fully autonomous vehicle is registered is responsible for a violation of this Chapter that is considered a moving violation, if the violation involves a fully autonomous vehicle."); see also generally *Risley v. Universal Navigation Inc.*, No. 22 Civ. 2780 (KPF), 2023 WL 5609200, at *14 (S.D.N.Y. Aug. 29, 2023) (rejecting that it would be proper "to hold a developer of self-driving cars liable for a third party's use of the car to commit a traffic violation" because responsibility would fall on "the individual who committed the wrong," the one employing its use).

599. *Qualls v. U.S. Elevator Corp.*, 863 P.2d 457, 462 (Okla. 1993).

600. *E.g., Wagner v. Grinnell Hous. Dev. Fund Corp.*, 260 A.D.2d 265, 266 (N.Y. App. Div. 1999).

601. See *Hardin v. San Jose City Lines, Inc.*, 260 P.2d 63, 65 (Cal. 1953) (It is "well settled . . . that an inference of negligence based on *res ipsa loquitur* arises in cases where a passenger on a common carrier is injured as the result of the operation of the vehicle . . ."); *Widmyer v. Se. Skyways, Inc.*, 584 P.2d 1, 3 (Alaska 1978) ("We have concluded that the [trial] court erred in failing to give the instruction on the duty of a common carrier and on *res ipsa loquitur* . . .") (emphasis added); *Cobb v. Marshall Field & Co.*, 159 N.E.2d 520, 524 (Ill. App. Ct. 1959) ("[I]f a passenger is injured while being transported by a common carrier the happening of such an accident is sufficient to justify a verdict for the passenger and . . . the burden then shifts to the defendant.").

602. See *Harder v. F.C. Clinton, Inc.*, 948 P.2d 298, 306 (Okla. 1997). *But see* RESTATEMENT (SECOND) OF TORTS § 328D cmt. g (Am. L. Inst. 1965) ("Exclusive control is merely one fact which establishes the responsibility of the defendant; and if it can be established otherwise, exclusive control is not essential to a *res ipsa loquitur* case.").

603. See, e.g., *Qualls*, 863 P.2d at 462.

instrumentality” for its intended use.⁶⁰⁴ And some courts have also held that parallel liability by an owner or operator is permissible.⁶⁰⁵

In accidents involving fully autonomous cars, this article expects *res ipsa loquitur* to apply.⁶⁰⁶ This theory will likely present an important proof-bridging mechanism for injured third parties that want to press claims against common carriers or an owner of a fully autonomous vehicle used only for personal use.⁶⁰⁷ *First*, the injury element of *res ipsa loquitur* will likely be satisfied when the plaintiffs claim injuries from accidents involving self-driving cars that they had no hand in operating.⁶⁰⁸ *Second*, because the plaintiffs often use *res ipsa loquitur* in personal injury cases involving buses, trains, and unmanned elevators, the unexplained event element should also not prove controversial in cases involving another form of conveyance—the self-driving car.⁶⁰⁹ Plaintiffs have put *res ipsa loquitur* to good use against airline carriers.⁶¹⁰ The airline autopilot cases teach that the law presumes that common-carriers are better placed to explain the cause of an accident.⁶¹¹ This article has no reason to doubt that those same *res ipsa loquitur* principles will apply to auto-driving systems in self-driving cars.⁶¹² That makes sense because the law generally presumes that cars only get into accidents if operator negligence was a factor.⁶¹³

Third, the final *res ipsa loquitur* element—exclusive control of the instrumentality—would not be in question.⁶¹⁴ After all, it is the common carrier who has exclusive control of the car.⁶¹⁵ Usually, the common carrier owns the car at issue and the injured party, without fail, usually alleges that their injuries stemmed from the way the car was operated, something that a typical passenger has no control over.⁶¹⁶ Important still, the common carrier usually has both the power and the right to control the use of their transportation device.⁶¹⁷ Finally, recall, it is the common carrier—not the self-driving car’s computer system—that the law treats as having directly assumed “a duty to its passengers to take reasonable action” to ensure their safety.⁶¹⁸ That legal duty is a taxing one,⁶¹⁹ and it is also nondelegable.⁶²⁰ Put differently, the law treats the common carrier as having professed to the public (and assumed responsibility for) the fitness of their conveyance for its intended use.⁶²¹ So exclusive control would be met.⁶²²

604. *Id.*

605. *Id.* at 462 n.20.

606. *Id.* at 460–61.

607. *Id.*

608. See Mbilike M. Mwafulirwa, *supra* note 24, at 417.

609. See PROSSER, *supra* note 153, § 39, at 214–15.

610. See James E. Cooling & Paul V. Herbers, *Considerations in Autopilot Litigation*, 48 J. Air. L. & Com. 693, 709 (1983).

611. See *id.*; see also *Middleton v. Cal. St. Cable Ry. Co.*, 167 P.2d 239, 241 (Cal. Ct. App. 1946) (common carrier “is in a better position to explain the cause” of the accident than the passenger).

612. See generally *Heffernan v. City of Paterson*, 578 U.S. 266, 272 (2016) (in law, what is good for one similarly situated actor is good for another).

613. See PROSSER, *supra* note 153.

614. See Mbilike M. Mwafulirwa, *supra* note 24, at 418.

615. *Id.*

616. *Id.*

617. See W. PAGE KEETON ET AL., *supra* note 150, § 73.

618. RESTATEMENT (SECOND) OF TORTS § 314A (Am. L. Inst. 1965).

619. See *Denco Bus Co. v. Keller*, 212 P.2d 469, 472 (Okla. 1949).

620. *Doe v. Sanchez*, 52 N.E.3d 618, 630 (Ill. App. Ct. 2016) (holding that a “common carrier’s high duty of care is a nondelegable duty”).

621. See *Qualls v. U.S. Elevators Corp.*, 863 P.2d 457, 462 (Okla. 1993).

622. *Id.*

But *res ipsa loquitur* has limits.⁶²³ When invoked, it raises the presumption of negligence, which the common carrier can try to rebut.⁶²⁴ Suppose, though, that the common carrier shows that it delegated full driving functions to a highly competent fully autonomous vehicle driving system, as state law authorizes. Does that then mean the operator/common carrier is off the hook?

This article contends, not entirely.⁶²⁵ There could still be room for owner liability.⁶²⁶ That is true if a plaintiff's theory of recovery alternatively rests on the car common carrier's creation of an unreasonable risk of harm to others because of its unsafe condition.⁶²⁷ After all, "the presence of a known danger, attendant upon a known use, makes vigilance a duty."⁶²⁸ And the failure to discharge that duty of vigilance, in the wake of a foreseeable or appreciable risk, supports negligence.⁶²⁹ This is particularly true of common carriers and car owners.⁶³⁰ Courts have held that the "owner" of a car should ensure that "it is not in such condition as to become dangerous for use upon public highways," so a common carrier's failure to apply that level of care and allowing a car in such condition on the road "is negligence."⁶³¹ So if the common carrier knows (or should know) that its car is unfit for road use—because the brakes or tires are worn, or the automated driving system is displaying an error (or some other notable defect) and it is ignored or if the required maintenance on the vehicle (or its automated driving system) has not been performed—then the risk of harm to others is foreseeable.⁶³² Under longstanding principles, negligence liability is probably a given on those facts.⁶³³

B. Criminal Liability Considerations.

The same disregard of a foreseeable or objectively appreciable risk about a vehicle's poor condition (or safety) outlined above could also support criminal liability against the owner of a fully self-driving car.⁶³⁴ Recall, for example, Oklahoma's existing definition of negligent homicide;⁶³⁵ that law penalizes conduct that evidences a reckless disregard of the safety of others.⁶³⁶ And in turn, a reckless disregard for the safety of others in Oklahoma means "the omission to do something which a reasonably careful person would do, or the lack of the usual and ordinary care and caution in the performance of an act usually and ordinarily exercised by a person under similar circumstances and conditions."⁶³⁷ To this, add the common law's view that substandard repairs or maintenance by car owners is negligence.⁶³⁸ And when you put these principles together, it is plausible that should a fully

623. See *Gilbert v. Corvette's, Inc.*, 299 A.2d 356, 359 (Pa. Super. Ct. 1973).

624. *Id.*

625. See *MacPherson v. Buick Motor Co.*, 111 N.E. 1050, 1053 (N.Y. 1916).

626. *Id.*

627. *Id.*

628. *Id.*

629. *Id.*; *Palsgraf v. Long Island R. Co.*, 162 N.E. 99, 100 (N.Y. 1928).

630. See *Gowins v. Merrell*, 541 P.2d 857, 860 (Okla. 1975).

631. *Id.*; *Sherman v. Frank*, 146 P.2d 704, 707 (Cal. Ct. App. 1944); *Robinson v. Am. Home Assurance Co.*, 183 So. 2d 77, 78–79 (La. Ct. App. 1966).

632. See generally *id.*; cf. *Werner Enters., Inc. v. Blake*, 672 S.W.3d 554, 593 (Tex. Ct. App. 2023) (common carrier's creation of unreasonable risk of harm to other road users was a basis for liability).

633. See *infra* notes 635, 638 and accompanying text.

634. See generally Instruction No. 4-105, OUI-CR (2d).

635. *Id.*; but see *State v. Miller*, 471 N.W.2d 380, 383–84 (Minn. Ct. App. 1991) (applying criminal gross negligence standards and holding that simply operating a vehicle with defective brakes was not enough for conviction).

636. See Instruction No. 4-105, OUI-CR.

637. Instruction No. 4-107, OUI-CR 4-107 (2d) (emphasis added).

638. See *Gowins v. Merrell*, 541 P.2d 857, 860 (Okla. 1975).

autonomous vehicle ever cause the death of another because there were colorable questions about the quality of its safe condition or maintenance, then a negligent homicide charge is possible.⁶³⁹ This article has found no principled reason why that rationale could not also apply to a negligent owner of a fully self-driving car.⁶⁴⁰ But make the analysis harder. Suppose that after a collision, the owner of the car can show that they had reasonably maintained their vehicle, did all the required service and maintenance, but this was an unexpected occurrence. What then? Look again at the precedents.⁶⁴¹ In addressing an issue about brake maintenance, for example, courts have said that if an “owner properly maintains brakes, he will not be liable for damages resulting from unexpected brake failure if he acts as a prudent person after failure occurs.”⁶⁴² Thus, if the owner has done proper maintenance, there is no negligence liability.⁶⁴³ For the same reasons, a negligent or reckless homicide criminal charge would not work, nor would any other more serious criminal charge requiring a purposeful or intentional mental state (especially if the owner did not desire to bring about an such outcome).⁶⁴⁴

But if not the owner or operator then who? Recall that this article analogized fully autonomous cars to unmanned elevators.⁶⁴⁵ In a typical case, if the owner of an elevator can show that they were diligent in their required maintenance and repairs and did not ignore noticeable safety concerns, then we have to look elsewhere for fault: the maintenance contractors or even the manufacturers (if the defect existed when the product left the manufacturer).⁶⁴⁶ So on the civil front, if repairs were negligent, this article can almost surely picture litigation against the repair person.⁶⁴⁷ But if the defect existed when the product left the manufacturer, then that is probably the domain for product liability law.⁶⁴⁸

VII. CONCLUSION

Autonomous technology presents a paradox for the law. Rarely has technology presented so much promise, yet so much worry. As this article shows, the promise of autonomous technology is that it will increase efficiency, productivity, and opportunity. But hard questions about responsibility remain unanswered. This article demonstrates that

639. *E.g.*, *People v. Contreras*, 26 Cal. App. 4th 944, 956–57 (1994) (affirming conviction against vehicle owner who knowingly drove with defective brakes); *State v. Reynolds*, 505 P.2d 1050, 1052 (1973) (“If, as here, the defendant violated a regulation as to brakes and such violation was the proximate cause of the homicide, he is guilty and extenuating circumstances are to be considered solely in mitigation of punishment.”).

640. *Id.*

641. *Gowins*, 541 P.2d at 860.

642. *Id.* (emphasis added); 13 C.J.S. *Carriers* § 577 (2024) (same rule applies to elevator and building owners).

643. *See Gowins*, 541 P.2d at 860.

644. *See generally id.*

645. *See* Mbilike M. Mwafulirwa, *supra* note 24, at 416.

646. *See* 13 C.J.S. *Carriers* § 577. But there are some jurisdictions that recognize a manufacturer’s post-sale duty to abate or warn users of a dangerous condition of a product. *See, e.g.*, *Braniff Airways, Inc. v. Curtiss-Wright Corp.*, 411 F.2d 451, 453 (2d Cir. 1969) (when manufacturer learns of dangerous design defects after product is sold, it “has a duty either to remedy these or, if complete remedy is not feasible, at least to give users adequate warnings and instructions concerning methods for minimizing the danger”); *Hernandez v. Badger Const. Equip. Co.*, 28 Cal. App. 4th 1791, 1827 (4th Dist. 1994) (“failure to conduct an adequate retrofit campaign may constitute negligence apart from the issue of defective design”); *but see, e.g.*, *Wicker v. Ford Motor Co.*, 393 F. Supp. 2d 1229, 1236 (W.D. Okla. 2005) (“Oklahoma does not recognize a post-sale duty to warn or retrofit a product.”) *contrast with* *Smith v. FMC Corp.*, 754 F.2d 873, 877 (10th Cir. 1985) (applying Oklahoma law) (In Oklahoma, “a manufacturer has a responsibility to warn of a defective product at any time after it is manufactured and sold if the manufacturer becomes aware of the defect.”) (emphasis added).

647. *See* 13 C.J.S. *Carriers* § 577.

648. *See Product Liability*, CORNELL L. SCH. LEGAL INFO. INST. (last updated Aug. 2020),

https://www.law.cornell.edu/wex/product_liability. Corporate criminal liability issues are beyond the scope of this article.

while existing laws do not fully address the many issues raised by self-driving cars and generative AI technology, they do provide a useful starting point for analysis, based on longstanding precedent. But there is room for (indeed, a need for) legislative solutions to the many issues raised in this article.⁶⁴⁹

649. *E.g.*, *Eldred v. Ashcroft*, 537 U.S. 186, 207 n.15 (2003) (*quoting* *Sony Corp. of Am. v. Universal Studios, Inc.*, 464 U.S. 417 (1984) (“[F]ashion[ing] . . . new rules [in light of] new technology’ . . . is a task primarily for Congress, not the courts.”)).