MARSHALL SHAPO'S SOCIOLOGICAL TORTS JURISPRUDENCE

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INTRODUCTION			292
I.	CONVENTIONAL TORT LAW AS PRIVATE WRONGS		292
	А.	Torts as Private Wrongs	293
		Merton's Structural Functionalism	
II.	PROFESSOR SHAPO'S VIEW OF TORT DECISIONS AS DATA		296
	А.	Torts Must Respond to Societal Change	296
	В.	The Latent Public Law Functions of Tort Law	296
III.	Torts of the Future		300
	А.	Products Liability for Autonomous Vehicles	301
	В.	Public Law Torts to Deter Viral Misinformation	303
CONCLUSION			305

INTRODUCTION

W. Page Keeton, long-time Dean of the University of Texas Law School where Professor Marshall Shapo began his teaching career, wrote in his famous tort law treatise that "[e]ven though tort law is now recognized as a proper subject, a really satisfactory definition of a tort is yet to be found."¹ Professor Shapo also acknowledged that "[t]he term tort is not susceptible of an easy, crisp definition."² Tort law eludes an accurate definition because it plays many unacknowledged public law functions.

Professor Shapo's work can best be understood through the lens of sociology where individual legal opinions are analyzed to produce insights about culture and conflict in United States society. Part I of this Essay examines the conventional view of torts scholarship as doctrine, focusing on the civil justice system as a legal forum for resolving private disputes. Part II argues that Professor Shapo, in contrast, employs sociological insights to study U.S. tort law using a methodology that closely parallels Professor Robert Merton's distinction between manifest and latent functions.³ Professor Shapo's work also draws upon the conflict theory of sociology in his studies of how torts reflect the misuse and abuse of power.⁴ His conflict perspective is evidenced by his view of tort law as a cultural mirror reflecting the ideological conflicts and cultural wars in U.S. society. Part III argues for the need to apply Professor Shapo's torts jurisprudence to torts of the future, such as injuries caused by connected devices and dangerous COVID-19 viral disinformation that threatens U.S. public health.

I. CONVENTIONAL TORT LAW AS PRIVATE WRONGS

Part I of this Essay explores the traditional approach to tort law which focuses on giving individuals redress for private wrongs. It then discusses Professor John Goldberg's theory of civil recourse, which illustrates recent thinking about tort law as individual justice. Finally, it examines Professor Shapo's view that tort law fulfills wider social functions beyond compensating the victim for private wrongs.

¹ W. PAGE KEETON, DAN B. DOBBS, ROBERT E. KEETON & DAVID G. OWEN, PROSSER AND KEETON ON TORTS § 1 (5th ed. 1984).

² MARSHALL S. SHAPO, TORT LAW AND CULTURE 5 (2003).

³ ROBERT K. MERTON, SOCIAL THEORY AND SOCIAL STRUCTURE 114–36 (enlarged ed. 1968). Professor Merton's concept will be discussed further in Section I.B.

⁴ "Conflict theory, first purported by Karl Marx, is a theory that society is in a state of perpetual conflict because of competition for limited resources. Conflict theory holds that social order is maintained by domination and power (rather than consensus and conformity)." Jim Chappelow, *Conflict Theory*, INVESTOPEDIA (May 1, 2020), https://www.investopedia.com/terms/c/conflict-theory.asp [https://per ma.cc/4A5H-99PX].

A. Torts as Private Wrongs

Tort law's manifest function is to give the victims of wrongful conduct civil recourse for harm caused by a defendant's wrongful acts. Tort law remedies generally take the form of financial remuneration as the price to pay for interfering with the plaintiff's "reputation, privacy, bodily integrity, emotional tranquility, contracts, property or some other legally protectable interest."⁵

Professor John Goldberg is a representative figure of the conventional private-wrongs approach, which suggests that torts are chiefly about compensating individual victims for harm. Professor Goldberg's private law model argues that tort law is not well suited to solving U.S. social problems.⁶ This civil recourse model of tort law is static with an acontextual interpretation of fixed principles returning us to the past rather than evolving to face the future.

Professor Goldberg clerked for Judge Jack Weinstein, who has a broader view of tort's social functions. Judge Weinstein argues that "[a]n adequate tort law remains crucial to providing 'for' the people. Tort law is our primary fall-back method of empowering ordinary people to remedy injustices to themselves through their courts."⁷ Professor Shapo, in contrast, contends that the law of torts needs to evolve to take into account social changes with a forward-facing vision:

Implicitly, urban society presents a dramatic change in living conditions which demands dramatic solutions. Society should redress injuries inflicted by its agents. And, above all, problems should be solved *pragmatically*, without regard for the sorcery of old labels and ancient concepts.⁸

B. Merton's Structural Functionalism

Sociology is the social science dedicated to "the study of the social lives of people, groups, and societies."⁹ The science of sociology is "the study of social aggregations, the entities through which humans move throughout

⁵ THOMAS H. KOENIG & MICHAEL L. RUSTAD, GLOBAL INFORMATION TECHNOLOGIES: ETHICS AND THE LAW 99 (2018).

⁶ "As scholars too numerous to mention have long noted, tort law is not well-suited to solve the largescale social and political problems it is being asked to solve (if only by default)." John C. P. Goldberg, *Unloved: Tort in the Modern Legal Academy*, 55 VAND. L. REV. 1501, 1518 (2002).

⁷ Jack B. Weinstein, *The Role of Judges in a Government of, by, and for the People: Notes for the Fifty-Eighth Cardozo Lecture*, 30 CARDOZO L. REV. 1, 243 (2008).

⁸ Marshall S. Shapo, Note, *Municipal Liability for Police Torts: An Analysis of a Strand of American Legal History*, 17 U. MIAMI L. REV. 475, 496 (1963).

⁹ What Is Sociology?, AM. SOCIOLOGICAL ASS'N, https://www.asanet.org/about-asa/asa-story/what-sociology [https://perma.cc/U9JN-JJ4M].

their lives."¹⁰ Professor Karl Llewellyn and Justice Benjamin Cardozo employ sociological methods in their conception of the law.¹¹ Structural functionalism is a theory of sociology in which societal institutions perform distinct social functions and interrelate to allow society to function effectively.¹² Structural functionalists see "society as a self-regulating system of interconnected elements (structure–function) with structured social relationships and observed regularities."¹³ Functionalism is predicated upon the theory "that all aspects of a society—institutions, roles, norms, etc.—serve a purpose and that all are indispensable for the long-term survival of the society."¹⁴ Professor Liu has pointed out that "structural functionalism has been a major theoretical paradigm in many areas of sociology, including the sociology of law."¹⁵ A functionalist sociology of law asks questions such as: "What is the shape of a legal system? How do the structures of legal institutions emerge and transform over time? How are the social processes of law embedded in historically contingent events?"¹⁶

Professor Merton distinguishes between manifest and latent functions as a "middle theory" drawn from structural functionalism.¹⁷ Professor Merton explains functionalism as a methodology for understanding that there are alternative ways of organizing social institutions:

¹³ Jeffreyson Wahalng, *Robert K. Merton: A Paradigm for Functional Analysis in Sociology* (Jan. 29, 2016), https://www.researchgate.net/publication/292154937_ROBERTK_MERTON_A_PARA DIGM_FOR_FUNCTIONAL_ANALYSIS_IN_SOCIOLOGY [https://perma.cc/3WFB-977B].

¹⁵ Sida Liu, Law's Social Forms: A Powerless Approach to the Sociology of Law, 40 L. & SOC. INQUIRY 1, 8 (2015).

¹⁶ *Id.* at 21.

¹⁷ Describing Professor Merton's contribution to the field, Frank Elwell explains that:

Frank W. Elwell, *Merton on Structural Functionalism*, http://www.faculty.rsu.edu/users/f/felwell/www/ Theorists/Essays/Merton1.htm [https://perma.cc/GV39-NWUN].

¹⁰ Id.

¹¹ Henry F. Fradella, A Content Analysis of Federal Judicial Views of the Social Science "Researcher's Black Arts," 35 RUTGERS L.J. 103, 106 (2003).

¹² Philip M. Nichols, Forgotten Linkages—Historical Institutionalism and Sociological Institutionalism and Analysis of the World Trade Organization, 19 U. PA. J. INT'L ECON. L. 461, 476 n.65 (1998).

¹⁴ Functionalism, ENCYCLOPAEDIA BRITANNICA (Oct. 15, 2008), https://www.britannica.com/topic/functionalism-social-science [https://perma.cc/H3SC-93PG].

Robert K. Merton's signal contribution to functionalism lies in his clarification and codification of functional analysis. Specifically, Merton . . . strips functionalism bare of the unexamined and insupportable assumptions of many of its practitioners, . . . broadens the analysis to incorporate change as well as stability, . . . makes critical distinctions between functions and personal motives, . . . develops a descriptive protocol for functional analysis to guide the analyst in social observations, and . . . engages in the functional analysis of a variety of sociocultural phenomena to demonstrate the utility of the perspective. One assumption of traditional functionalism is that all widespread activities or items are functional for the entire system.

To adopt a functional outlook is to provide not an apologia for the political machine but a more solid basis for modifying or eliminating the machine, *providing* specific structural arrangements are introduced either for eliminating these effective demands of the business community or, if that is the objective, of satisfying these demands through alternative means.¹⁸

Professor Merton conceptualizes the difference between manifest and latent functions, which was a middle range functionalist theory.¹⁹ "Manifest functions are those that are intended and have recognizable consequences for the social system, as compared to latent functions that are beneath the surface and neither intended nor recognized by participants."²⁰ He argues for sociological research comparing conscious motivations for "social behavior and its *objective consequences*"²¹ with those unrecognized and unintended consequences.²²

Tort law consists of deliberately instituted practices to redress individual cases (manifest function), but it also embodies public law functions (latent functions): "While the manifest function of tort law is civil recourse or compensation, its latent function is vindicating public wrongs."²³ A legal scholar adopting Professor Merton's theory would compare the private law purposes with a macro approach that highlights the public law functions of U.S. tort law.²⁴ By seeking tort remedies, "private litigants serve the public good when they 'expose and financially punish entities that commit torts causing "group injuries[]" that are not rectified on the criminal side of the docket."²⁵ Professor Shapo's torts jurisprudence recognizes that legal opinions "semiconsciously capture[] [a] society's ideas about justice in legal issues framed by specific disputes."²⁶

¹⁸ MERTON, *supra* note 3, at 130.

¹⁹ Paul Helm, *Manifest and Latent Functions*, 21 PHIL. Q. 51, 51 (1971) (describing Merton's middle-range theory of functionalism).

²⁰ Michael L. Rustad, *Happy No More: Federalism Derailed by the Court That Would Be King of Punitive Damages*, 64 MD. L. REV. 461, 518–19 (2005) (applying Merton's distinction between manifest and latent functions to the tort remedy of punitive damages).

²¹ MERTON, *supra* note 3, at 114.

²² See generally id. (explaining Merton's middle-range theory of functionalism).

²³ Michael L. Rustad, Torts as Public Wrongs, 38 PEPP. L. REV. 433, 440 (2011).

 $^{^{24}}$ See id. at 525–26 (arguing that one of the latent functions of tort law is to enable private law enforcement supplementing criminal law).

²⁵ *Id.* (quoting Thomas H. Koenig, *Crimtorts: A Cure for Hardening of the Categories*, 17 WIDENER L.J. 733, 736–37 (2008)). "Crimtorts describes this middle ground as emblematic of the synergistic combination of public and private law purposes. The concept of crimtorts bridges the gap between the sociological and legal approaches to tort law." *Id.* at 525.

²⁶ Marshall S. Shapo, In the Looking Glass: What Torts Scholarship Can Teach Us About the American Experience, 89 NW. U. L. REV. 1567, 1569 (1995).

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II. PROFESSOR SHAPO'S VIEW OF TORT DECISIONS AS DATA

Professor Shapo views tort law as a social institution that reflects a "rough consensus of the way the legal system should respond to personal injuries which one person attributes to another."²⁷ However, he has a broader thesis "that tort law is a rather accurate—often wonderfully accurate—representation of local, even national, culture."²⁸ Professor Shapo does not claim to be a sociologist, nor has he done any empirical studies, but he professes a sociological insight that tort disputes reflect cultural wars.²⁹ This Part documents how Professor Shapo incorporates a theory of social change into his tort law jurisprudence.

A. Torts Must Respond to Societal Change

Professor Shapo received his LLB degree in 1964 from the University of Miami School of Law, where he served as Executive Editor of the *University of Miami Law Review*.³⁰ In his student note, he wrote: "History is not a deep freeze for the law. Legal concepts . . . [are] a live society which demands intelligent engineering."³¹ He cites sociological research that called for courts and legislatures to recognize municipal liability for police misconduct.³² Professor Shapo argued that a "sociological jurist seeks to explain the behavior of society and its institutions, and for him form is subordinated in importance to substance."³³ Inspired by his professor, Leon Green, he argued that tort law is public law and viewed legal opinions as a rich data set that reflects "who we are as a people."³⁴

B. The Latent Public Law Functions of Tort Law

Professor Shapo conceptualizes torts' public law functions as experiments to solve social problems, to check abuses of power, and as a cultural mirror. This Part examines his public tort law jurisprudence.

²⁷ MARSHALL S. SHAPO, THE DUTY TO ACT: TORT LAW, POWER, & PUBLIC POLICY, at xi (1977).

²⁸ SHAPO, *supra* note 2, at 5.

²⁹ C. Wright Mills's "development of the sociological imagination addressed the duty that sociologists had in making the links between personal problems and social issues." Mary Romero, *Revisiting Outcrits with a Sociological Imagination*, 50 VILL. L. REV. 925, 925 (2005).

³⁰ Marshall S. Shapo, NORTHWESTERN PRITZKER SCHOOL OF LAW, https://www.law.northwest ern.edu/faculty/profiles/MarshallShapo/ [https://perma.cc/A7BG-TYVW].

³¹ Shapo, *supra* note 8, at 495.

³² *Id.* at 518.

³³ Id. at 495 (quoting Edwin M. Borchard, Governmental Responsibility in Tort, VI, 36 YALE L.J. 1039, 1040 (1927)).

³⁴ SHAPO, *supra* note 2, at 4.

1. Torts as Experiments to Redress Social Problems

In his 2009 book, *Experimenting with the Consumer*, Professor Shapo characterizes how consumers serve as experimental subjects for new products and processes, often without their consent or knowledge.³⁵ He argues that American consumers are "subjects of market experimentation, an ongoing process during which sellers constantly try out innovations on us"³⁶

In another book, Professor Shapo writes "[w]e are all experimenters and we are all subjects of experiments, some conducted by us on ourselves and some conducted by others,"³⁷ and notes that Justice Holmes often stated that "all life is an experiment."³⁸

His 1979 book, *A Nation of Guinea Pigs*, further explores the topic of experimentation. In this book, Professor Shapo describes how manufacturers experiment on millions of U.S. consumers when they release inadequately tested hazardous products into the marketplace,³⁹ writing that the "widespread distribution [of products] in fact involves a continuous process of experimentation."⁴⁰ U.S. consumers and workers are unwittingly chosen by manufacturers as research samples to collect product risk data.⁴¹ Products liability cases are, in effect, a cultural mirror reflecting the complexities and conflicts of law in U.S. society. As Professor Shapo argues, "[i]t is therefore natural that this branch of the law should be an especially faithful mirror of the tensions that arise from our search for the good through goods."⁴²

These principles can be updated to apply to powerful social media platforms like Facebook, Twitter, and YouTube, all of which have the unofficial motto: "If something's free, that means you're the product."⁴³

2. Tort Law to Check Abuses of Power

A second interrelated sociological theme in Professor Shapo's work is that tort law redresses the misuse and abuse of power.⁴⁴ He argues that tort law is largely "an effort on the part of judges and legislators to check the use,

³⁵ MARSHALL S. SHAPO, EXPERIMENTING WITH THE CONSUMER: THE MASS TESTING OF RISKY PRODUCTS ON THE AMERICAN PUBLIC 6 (2009).

³⁶ *Id.* at 5.

³⁷ MARSHALL S. SHAPO, THE EXPERIMENTAL SOCIETY, at ix (2017).

³⁸ *Id.* at xiii (quoting Ralph Waldo Emerson without attribution).

³⁹ MARSHALL S. SHAPO, A NATION OF GUINEA PIGS 30 (1979).

⁴⁰ Id.

⁴¹ "Tort law thus emerges as an immense, complex data set. . . ." SHAPO, *supra* note 2, at 8.

⁴² Shapo, *supra* note 26, at 1577.

⁴³ Will Oremus, *Are You Really the Product?*, SLATE (Apr. 27, 2018, 5:55 AM), https://slate.com/ technology/2018/04/are-you-really-facebooks-product-the-history-of-a-dangerous-idea.html [https://per ma.cc/KLR4-ZDVD] (quoting Brian Stelter).

⁴⁴ SHAPO, *supra* note 27, at 3.

including misuse and abuse, of power.⁴⁵ In 1970, only his fourth year as a law school professor, Professor Shapo described "The New Torts" as addressing the abuse of power—political, economic, intellectual, and physical⁴⁶—highlighting how powerful common carriers, such as railroads, convinced legislatures to place legislative limits on tort damages.⁴⁷ Unfortunately, since 1970, powerful corporate interests have lobbied legislatures to cap noneconomic (i.e., pain and suffering) damages in twenty-five states.⁴⁸

Professor Shapo's work "demonstrates how injury law reflects our most important cultural values in curbing corporate, governmental, and individual bullies, or reckless companies that play roulette by trading safety for profits."⁴⁹ How does tort reform, such as caps on noneconomic damages or pain and suffering, demonstrate family values in Professor Shapo's cultural mirror?⁵⁰ Subsequent experience has shown that states capping noneconomic damages leave the victims of nursing homes vulnerable to neglect, abuse, and mistreatment with a theoretical right to sue, but no meaningful remedy.⁵¹

Professor Shapo also highlighted the role of tort law in addressing abuse by the insurance industry to vulnerable policyholders in his 1970 article. He explained how a court "condemned an insurance company's attempt to intimidate a plaintiff's witness in a malpractice case by cancelling his insurance policy."⁵² He also highlighted how product makers abuse power, such as carmakers who endanger consumers with their defective design choices.⁵³ Similarly, he wrote that "economic power wielded by manufacturers, particularly in advertising, [is] focused sharply by the

⁵⁰ Id. at 1360–61.

Rustad, supra note 48, at 335.

⁴⁵ MARSHALL S. SHAPO, AN INJURY LAW CONSTITUTION 25 (2012).

⁴⁶ Marshall S. Shapo, *Changing Frontiers in Torts: Vistas for the 70's*, 22 STAN. L. REV. 330, 333 (1970).

⁴⁷ Id. (citing Lisi v. Alitalia-Linee Aeree Italiane, 370 F.2d 508 (2d Cir. 1966)).

⁴⁸ Michael L. Rustad, Neglecting the Neglected: The Impact of Noneconomic Damage Caps on Meritorious Nursing Home Lawsuits, 14 ELDER L.J. 331, 334 (2006).

⁴⁹ Michael L. Rustad, *The Myth of a Value-free Injury Law: Constitutive Injury Law as a Cultural Battleground*, 107 Nw. U. L. REV. 1359, 1361 (2013) (reviewing SHAPO, *supra* note 45).

⁵¹ I have explained this phenomenon in a previous work:

Although the tort reformer's focus on capping noneconomic damages appears reasonable because nursing home residents are still permitted to receive full economic damages, the typical nursing home claimant has no meaningful economic damages. Capping noneconomic damages is in effect a death penalty for many elder abuse and mistreatment claims because the victims are unable to find attorneys to represent them when noneconomic damages are downsized.

 $^{^{52}}$ SHAPO, supra note 46, at 333 (citing L'Orange v. Med. Protective Co., 394 F.2d 57 (6th Cir. 1968)).

⁵³ Id.

[tobacco industry and] cigarette-lung-cancer cases.³⁵⁴ The tobacco and dangerously defective car cases illustrate the callous decision to release these unsafe products into the marketplace knowing of their potential danger and with knowledge that consumers are heedless to the risks they are assuming.

Professor Shapo's argument that the commodification of consumers by multinational corporations is an example of abuse of power is still relevant today. For instance, in 2014, "Facebook revealed that it had manipulated the news feeds of over half a million randomly selected users to change the number of positive and negative posts they saw. It was part of a psychological study to examine how emotions can be spread on social media."⁵⁵ A former Facebook data scientist acknowledges that "every Facebook user[] has been part of [an experiment] at some point. Yes, we can all wear t-shirts saying, 'I, too, am a Facebook lab rat."⁵⁶ Facebook's terms of service require users to give the social media giant access to their personal data for "data analysis, testing, [and] research."⁵⁷

3. Tort Law as a Cultural Mirror

In his book *Tort Law and Culture*, Professor Shapo quotes Alexis de Tocqueville whose notable idea was that all "important political issues in America have a tendency to wind up in court."⁵⁸ Professor Shapo argues that:

Most generally, the way in which a nation responds to the social and individual problems created by injuries provides significant indicators about the texture of its civilization. That response will change with technology and with changes in the social awareness that defines the concept of legal right.⁵⁹

In a similar vein, Ruggero John Aldisert, a Third Circuit judge, wrote in a 1980 concurrence that private law subjects such as torts are increasingly

⁵⁴ Id.

⁵⁵ Vindu Goel, *Facebook Tinkers with Users' Emotions in News Feed Experiment, Stirring Outcry*, N.Y. TIMES (June 29, 2014), https://www.nytimes.com/2014/06/30/technology/facebook-tinkers-withusers-emotions-in-news-feed-experiment-stirring-outcry.html [https://perma.cc/CWL5-PDH6].

⁵⁶ Kashmir Hill, *10 Other Facebook Experiments on Users, Rated on a Highly-Scientific WTF Scale*, FORBES (July 10, 2014, 12:34 PM), https://www.forbes.com/sites/kashmirhill/2014/07/10/facebook-experiments-on-users/#22fb2ebc1c3d [https://perma.cc/H6PY-JBL2].

⁵⁷ Robinson Meyer, *Everything We Know About Facebook's Secret Mood Manipulation Experiment*, ATLANTIC (June 28, 2014), https://www.theatlantic.com/technology/archive/2014/06/everything-weknow-about-facebooks-secret-mood-manipulation-experiment/373648/ [https://perma.cc/G7HH-66UJ] (quoting Facebook's terms of service from 2014).

⁵⁸ SHAPO, *supra* note 2, at 6 (citing ALEXIS DE TOCQUEVILLE, DEMOCRACY IN AMERICA 248 (J. P. Meyer & Max Lerner eds.1966)).

⁵⁹ Id. at 11.

"intertwined with considerations of public law and public interest" reflecting "values of society at given periods of time" as opposed to eternal truths.⁶⁰

Professor Shapo agreed with these approaches, writing that the law of torts serves "as a social symbol, a cultural mirror that reflects the moral views of society."⁶¹ His torts jurisprudence acknowledges that the civil justice system is continually evolving to meet social problems that arise with new technologies. He argues that tort law "is a cultural mirror that reflects the continual societal struggle over the proper balance between public safety, economic efficiency and the freedom to act autonomously."⁶² To Professor Shapo, personal injury law is "a reflection of our society, filtered through the complex mechanism of the legal process."⁶³

III. TORTS OF THE FUTURE

Marshall Shapo's torts jurisprudence provides a roadmap for understanding torts of the future. His argument that manufacturers of new products often make consumers unwilling and unconsenting experimental subjects is an insight that extends to autonomous cars. Consumers, for example, are exposed to the risk that cybercriminals can hack into cars because of inadequate software security. Professor Shapo reminds us that products manufacturers have too often placed products on the market with known risks, trading profits for safety.

The future of tort law depends upon ordinary Americans having a means to check abuses of power by websites in the new information-based economy. Professor Shapo highlights the importance of tort law in checking abuses of power in his torts jurisprudence. Section 230 of the Communications Decency Act (CDA), which states that websites have no duty to remove false public health information, illustrates that immunity breeds irresponsibility.⁶⁴ CDA Section 230 shields powerful social networks like Facebook from having a duty to remove or disable humiliating images, online harassment, false public health information that poses a threat to the public, or other damaging third party postings.

⁶⁰ Romeo v. Youngberg, 644 F.2d 147, 183 (3d Cir. 1980) (Aldisert, J., concurring), vacated, 457 U.S. 307 (1982).

⁶¹ Marshall S. Shapo, *Millennial Torts*, 33 GA. L. REV. 1021, 1045 (1999).

⁶² Michael L. Rustad, Introduction of Marshall S. Shapo, Prosser Award Recipient at AALS Torts & Compensation Section, https://www.aals.org/wp-content/uploads/2017/12/18AMRustadFridaySpeech TortsHistory.pdf [https://perma.cc/BDN6-JR57].

⁶³ SHAPO, *supra* note 2, at 5.

⁶⁴ 47 U.S.C. § 230(c)(1).

A. Products Liability for Autonomous Vehicles

The dangerously designed products of the future will be softwaredriven autonomous vehicles and other connected things and devices. An "[a]utomated driving system' means the hardware and software... are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether the automated driving system is limited to a specific operational design domain."⁶⁵ The Society of Automobile Engineers developed a taxonomy to describe the "six levels of *driving automation* in the context of *motor vehicles*... and their *operation* on roadways" ranging from "*no driving automation* (level 0) to *full driving automation* (level 5)."⁶⁶

An autonomous vehicle could crash because a third-party hacks into the operating system and executes commands that cause a collision. A cybercriminal could, for example, override the vehicle's settings to speed it up or shift it into reverse, thus remotely endangering the car's occupants or unwary pedestrians. Inadequate cybersecurity in connected cars will enable cybercriminals to exploit software vulnerabilities.⁶⁷

"Unless an autonomous vehicle is secure from cyberattack, a third party could gain unauthorized control by hacking into the operating system. The hacker could then subject the owner to a 'ransom' demand to make the vehicle fully operational once again."⁶⁸ Ransomware extortionists may use malware to disable cars' safety devices or lock passengers into vehicles that have been immobilized in isolated settings. Existing laws do not address the question of liability in these cases.

Another unsettled question is what liability rules should apply when autonomous vehicles fail due to a design defect in the sensors, lidar,⁶⁹ or radar, such as failure to detect road hazards, or when the software operating the vehicle fails or malfunctions. For example, the failure of the sensing system led to the first fatality of a self-driving car. On March 18, 2018, fortynine-year-old Elaine Herzberg was killed when a self-driving Uber

⁶⁵ CONN. GEN. STAT. § 13a-260(a)(2) (2019) (pilot program to test fully autonomous vehicles).

⁶⁶ SOC'Y OF AUTO. ENG'RS, SURFACE VEHICLE RECOMMENDED PRACTICE, J3016 SEP2016 (2016).

⁶⁷ Mark A. Geistfeld, A Roadmap for Autonomous Vehicles: State Tort Liability, Automobile Insurance, and Federal Safety Regulation, 105 CALIF. L. REV. 1611, 1623 (2017).

⁶⁸ *Id.* at 1660.

⁶⁹ "[Lidar] is a detection system that works on the principle of radar, but uses light from a laser." Mass. Mun. Police Training Comm., *Speed Measurement – LIDAR and RADAR*, MASS.GOV, https://www.mass.gov/how-to/speed-measurement-lidar-and-radar [https://perma.cc/7QEF-9MTD]; *see also* U.S. Dep't of Commerce, Nat'l Ocean Serv.: Nat'l Oceanic & Atmospheric Admin., *What is LIDAR*, https://oceanservice.noaa.gov/facts/lidar.html [https://perma.cc/QL7M-ULYG] ("Lidar, which stands for *Light Detection and Ranging*, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth.").

Technologies test vehicle ran into her as she pushed a bicycle across a fourlane highway in Tempe, Arizona.⁷⁰ "The Uber car, a Volvo XC90 sport utility vehicle outfitted with the company's sensing system, was in autonomous mode with a human safety driver at the wheel but carrying no passengers when it struck Elaine Herzberg, a 49-year-old woman, on Sunday around 10 p.m."⁷¹

"An initial investigation by Tempe[, Arizona] police indicated that the pedestrian might have been at fault. According to that report, Herzberg appears to have come 'from the shadows,' stepping off the median into the roadway, and ending up in the path of the car while jaywalking across the street."⁷² Though "[t]he car's sensors detected the pedestrian, who was crossing the street with a bicycle, . . . Uber's software decided it didn't need to react right away. That's a result of how the software was tuned."⁷³ "The human backup driver [of the] Uber autonomous SUV was streaming the television show 'The Voice' on her phone and looking downward just before fatally striking" Herzberg and could have avoided the pedestrian had she been paying attention.⁷⁴

A BMW engineer blamed the accident on the failure of radar and lidar of the Volvo XC90 SUV to detect the pedestrian.⁷⁵ An accident reconstruction revealed the following cause of the accident:

Regarding the Uber self-driving car, it was found that the emergency braking maneuvers were disabled whilst the car was being controlled by a computer as stated by the National Transportation Safety Board. The sensors on the Volvo

⁷⁰ Sam Levin & Julia Carrie Wong, *Self-Driving Uber Kills Arizona Woman in First Fatal Crash Involving Pedestrian*, GUARDIAN (Mar. 19, 2018), https://www.theguardian.com/technology/2018/mar/19/uber-self-driving-car-kills-woman-arizona-tempe [https://perma.cc/H8LD-QHE6].

⁷¹ Daisuke Wakabayashi, *Self-Driving Uber Car Kills Pedestrian in Arizona, Where Robots Roam*, N.Y. TIMES (Mar. 19, 2018), https://www.nytimes.com/2018/03/19/technology/uber-driverless-fatality.html [https://perma.cc/Y96R-DG4T].

⁷² Ian Bogost, *Can You Sue a Robocar*?, ATLANTIC (Mar. 20, 2018), https://www.theatlantic.com/technology/archive/2018/03/can-you-sue-a-robocar/556007/ [https://perma.cc/75RE-DGGS].

⁷³ Brad Templeton, *Uber Reported to Have Made an Error Tuning Perception System*, BRAD IDEAS (May 17, 2018 5:51 PM), https://ideas.4brad.com/uber-reported-have-made-error-tuning-perception-system [https://perma.cc/3LXQ-DHLN] (quoting Amir Efrati, *Uber Finds Deadly Accident Likely Caused by Software Set to Ignore Objects on Road*, INFORMATION (May 7, 2018 9:48 AM), https://www.theinformation.com/articles/uber-finds-deadly-accident-likely-caused-by-software-set-to-ignore-objects-on-road [https://perma.cc/86KQ-WUBW]).

⁷⁴ Tom Krisher & Jacques Billeaud, *Police: Backup Driver in Fatal Uber Crash Was Distracted,* ASSOCIATED PRESS (June 22, 2018), https://apnews.com/44ab48ed026f46f99a16eb9fd9165736 [https://perma.cc/3977-3TJ5].

⁷⁵ Helen A. S. Popkin, *Operator in Uber Self-Driving Crash Is a Felon. That's Not Why Elaine Herzberg Is Dead*, FORBES (Mar. 23, 2018 9:43 AM), https://www.forbes.com/sites/helenpopkin /2018/03/23/operator-in-arizona-uber-self-driving-car-crash-is-a-felon-thats-not-why-elaine-herzberg-is-dead/#7cd624c8669b [https://perma.cc/TY4Y-RLFP].

XC-90 SUV spotted the woman but because of the disabled emergency braking features the car did not apply the brakes and the human backup driver in the car was not warned, hence, did not intervene in time. It was found that the car was traveling at 43 mph and needed to break 1.3 seconds before impact.⁷⁶

Additionally, "[t]hree motorists have died while operating Tesla vehicles in self-driving mode, which Tesla calls Autopilot. Tesla improved its system after a vehicle crashed into a semi-truck crossing a highway in 2016."⁷⁷ To date, there are no legal opinions addressing any of the potential product liability-related harms caused by defective software in autonomous vehicles. As driverless cars cause injuries in the future, torts will forge a new consensus as to "the way the legal system should respond to personal injuries."⁷⁸ Future torts litigation will likely focus on inadequate security and the loss of privacy created by connected things.

B. Public Law Torts to Deter Viral Misinformation

The World Health Organization (WHO) has deemed the ongoing, massive, and rapid spread of the novel coronavirus (COVID-19) misinformation an "infodemic."⁷⁹ Check Point, a leading provider of cybersecurity services,⁸⁰ documented "more than 4,000 coronavirus-related websites that include words like 'corona' or 'covid'" in 2020,⁸¹ and determined 8% (more than 300) of the sites contained "malicious" or "suspicious" information.⁸²

WHO has designed a website refuting some of these COVID-19 myths, such as (1) mosquitos can transmit COVID-19; (2) the virus cannot survive or spread in hot climates; (3) cold weather and hand dryers can kill COVID-19; and (4) taking a hot bath, receiving a pneumonia vaccine, rinsing your nostrils with saline, or eating garlic can prevent or inoculate against the

⁷⁶ Meriame Berboucha, *Uber Self-Driving Car Crash: What Really Happened*, FORBES (May 28, 2018, 10:08 AM), https://www.forbes.com/sites/meriameberboucha/2018/05/28/uber-self-driving-car-crash-what-really-happened/#1b6632a24dc4 [https://perma.cc/7J8R-6YSG].

 ⁷⁷ Jim Sams, *InsurTechs Push for Front Row Seat in New World of Autonomous Technology*, CLAIMS
J. (Aug. 19, 2019), https://www.claimsjournal.com/news/national/2019/08/19/292603.htm
[https://perma.cc/8JHF-TX78].

⁷⁸ SHAPO, *supra* note 27, at xi.

⁷⁹ Sheera Frenkel, Davey Alba & Raymond Zhong, Surge of Virus Misinformation Stumps Facebook and Twitter, N.Y. TIMES (Mar. 8, 2020), https://www.nytimes.com/2020/03/08/technology/coronavirusmisinformation-social-media.html [https://perma.cc/JP8Z-W3UZ].

⁸⁰ Check Point Company Overview, CHECK POINT, https://www.checkpoint.com/about-us/company-overview/ [https://perma.cc/UYX7-QP9J].

⁸¹ Frenkel, Alba & Zhong, *supra* note 79.

⁸² Id.

virus.⁸³ Yet, WHO cannot counter every instance of misinformation, meaning false claims about the virus are still floating around the Internet. For example, some claim the virus is a "byproduct of bat soup, an escaped bioweapon, and a disease treatable by Lysol, oregano oil, or, worse yet, gargling with bleach."⁸⁴ Still other websites contain malicious claims that Bill Gates created COVID-19 or that countries were underreporting virus deaths.⁸⁵ A Facebook group with "over 100,000 members" pushes the theory that COVID-19 "was an invention of the pharmaceutical industry, intended to sell the public on more expensive drugs and more vaccines."⁸⁶

A twenty-six-word obscure clause in a 1996 law, CDA Section 230 has, through judicial expansion, created a "liability-free" zone that prevents future torts from evolving to protect consumers. Section 230 prevents a provider or user "of an interactive computer service [from being] treated as the publisher or speaker of any information provided by another information content provider."⁸⁷ "By its plain language, [Section] 230 creates a federal immunity to any cause of action that would make service providers liable for information originating with a third-party user of the service."⁸⁸ The court's overly broad interpretation of Section 230 means that platforms have no liability-based duty to take down false COVID-19 viral misinformation.⁸⁹ In contrast, Professor Shapo's sociologically informed jurisprudence calls for a flexible tort law that evolves to meet new societal risks—such as autonomous cars and viral misinformation—rather than simply a mechanism to compensate individual victims.

⁸³ Coronavirus Disease (COVID-19) Advice for the Public: Myth Busters, WORLD HEALTH ORG., https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters [https://perma.cc/6EE7-X4LT].

⁸⁴ Emma Grey Ellis, *Coronavirus Conspiracy Theories Are a Public Health Hazard*, WIRED (Mar. 27, 2020 11:02 AM), https://www.wired.com/story/coronavirus-covid-19-misinformation-campaigns/ [https://perma.cc/6DBU-MBUM].

⁸⁵ Frenkel, Alba & Zhong, *supra* note 79.

⁸⁶ Id.

⁸⁷ 47 U.S.C. § 230(c)(1).

⁸⁸ Zeran v. Am. Online, Inc., 129 F.3d 327, 330 (4th Cir. 1997) (stretching Section 230 to include distributors as well as publishers); *see also* Pennie v. Twitter, Inc., 281 F. Supp. 3d 874, 876, 892 (N.D. Cal. 2017) (holding that website had no duty to remove pro-ISIS postings on its social media platform).

⁸⁹ See generally Bobby Chesney & Danielle Citron, *Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security*, 107 CALIF. L. REV. 1753, 1798 (2019) (explaining the "remarkable array of scenarios" into which courts have extended Section 230's immunity provision and remarking that "Section 230 has evolved into a super-immunity" in which "platforms have no liability-based reason to take down" material posted by a third party).

CONCLUSION

Tort law's response to injuries created by autonomous agents and viral misinformation will reflect "who we are as a people."⁹⁰ Under Professor Shapo's torts jurisprudence, the way the civil justice system responds to torts of the future will be a significant data set revealing much about our cultural conflicts, norms, and the state of our civilization. Fortunately, Marshall Shapo's work will be an able guide in the legal response to the issues that will inevitably arise in this new day.

⁹⁰ SHAPO, *supra* note 2, at 4.