

LAW, LANGUAGE, AND AUTHORITY: THE ALGORITHMIC TURN

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A DISSERTATION SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

GRADUATE PROGRAM IN LAW

YORK UNIVERSITY, TORONTO, ONTARIO

August 2024

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ABSTRACT

Law is formed by language and law utilizes language. Law is also like language in that it consists of social rules that aid in the structuring of society. From the time that we first put language into writing, we have been invested in the technologizing of language. There is a clear trajectory of our interest in having machines do things with language that we would otherwise do ourselves. This dissertation investigates how law's relationship with language changes with the use of algorithmically driven technologies, and correspondingly, the consequences for the changing nature of authority since the use of language in law is closely entwined with the use of language in exercising authority.

Drawing on J. L. Austin's speech-act theory as framework, which scrutinizes language as a form of action and effects rather than as a medium for transmitting information, this dissertation is divided into three pillars that grapple with how algorithms do things with words in the context of law. The first pillar offers an analysis of generative AI and the implications for authorship. The second pillar moves from algorithms and authored words to an examination of algorithms and drafted words, specifically through an analysis of the nature of the emerging "algorithmic contract," in which an algorithm fills in for human expertise in the contracting process. The third pillar of this dissertation investigates the consequences of executing algorithmic contracts, paying particular attention to the accelerating issue of technology-facilitated gender-based violence in the ride-hailing industry.

Taken together these three pillars have implications for understanding law's authority as we adopt increasingly sophisticated technologies in society. This final chapter on authority taps into cyberfeminism to help elucidate the changing nature of authority as we delegate authority, often unintentionally, to algorithms.

The findings drawn from this investigation offer solutions to some of the legal conundrums posed by algorithmically driven technologies that do things with language.

These findings also have import for the relationship between law and language and for better understanding the nature of law in the Algorithmic Turn.

DEDICATION

In memory of Dr. Ian R. Kerr (1965–2019), under whose supervision I began this
dissertation.

ACKNOWLEDGEMENTS

I would like to thank to my supervisor, Dr. Carys Craig, for her indispensable guidance and direction throughout this dissertation. I would also like to acknowledge my supervisory committee members—Dr. Peter Oliver, for his unwavering and thorough—yet kind—encouragement, and Dr. Kate Sutherland, whose poetry was an inspiration to the law and literature strands of this investigation.

To my family, especially Claire, John, and Alasdair, thank you from the bottom of my heart for your unconditional and unrelenting optimism. I would also like to express my gratitude to Don McRae for his steadfast support, and to Justice Nathalie Des Rosiers, Martha Jackman, Jamie Benidickson and other University of Ottawa colleagues who were “cheerleaders” throughout this endeavour.

Thank you to Osgoode Hall Law School, York University for providing support through the Harley D. Hallett Graduate Scholarship and the Honourable W. Z. Estey Teaching Fellow in Legal Research & Writing, and for giving me the opportunity to become a proud graduate. And finally, thank you to Dalhousie University for awarding me a Schulich Fellowship, which allowed me to participate in the intellectual life of the Schulich School of Law during my fourth year of doctoral studies.

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INTRODUCTION

*we travel across an empty field in my heart.
there is nothing in the dark, I think, but he.
I close my eyes and try to remember what I was.
he says it was an important and interesting day,
because I put in his hands one night
the box of light that had been a tree.*

AI Generated Poem¹

*Never trust the artist. Trust the tale. The proper function of a critic
is to save the tale from the artist who created it.*

D. H. Lawrence²

Who knows? Who decides? Who decides who decides?

Shoshana Zuboff³

I. Overview of the Algorithmic Turn

Law shapes the quotidian: it protects and prohibits; it permits and prosecutes; and it empowers and impedes. Law is everywhere. Law is dependent upon language—our “social treasury”⁴—which is comprised of grammatical rules and definitions, along with an entire cultural compendium produced through performances of language.

Technology is also central to law and its development. Writing, for instance, is a tool that developed 5000 years ago which we use to communicate our thoughts and ideas.⁵

Through written language, legal norms were instantiated, allowing for rule endurance;

¹ Government UK, “UK to launch user generated ‘Collective Message’ using AI technology at Expo 2020 Dubai” (21 March 2021), online: < www.events.great.gov.uk/website/3127/newscollectivemessage >.

² D H Lawrence, *Studies in Classic American Literature* (New York: Thomas Seltzer, 1923) ch 1.

³ Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: Public Affairs, 2019) at 237.

⁴ Umberto Eco, *Confessions of a Young Novelist* (Cambridge, MA: Harvard University Press, 2011) at 41.

⁵ See e.g. David Diringer, *The Alphabet: A Key to the History of Mankind*, 3rd ed (London: Hutchinson, 1968); see also Walter J Ong, *Orality and Literacy: The Technologizing of the Word* (New York: Routledge, 2002).

interpretation became a characteristic attribute of law; proto-states were assembled in the realignment of local law to a more translocal version of law; and those who drafted law became intermediaries between ruler and subjects, resulting in accessibility of interpretation.⁶ The law as we understand it today is an affordance of the technology of writing and its offshoots such as the printing press.⁷ We could say that law and technology have historically had a symbiotic relationship.

Law has sometimes been out of step with developing technology and has had to harmonize the older and newer technological advancements. For example, the framework of offer and acceptance developed through the “ticket cases”⁸ in the law of contracts had to be rethought when human beings began interacting with automated parking machines. There was a difference between a person providing a ticket whereby one could ostensibly read its terms, and a machine in a garage ready to accept money for parking.⁹ The technology had to be taken into account in order that law develop to deal with automatic machines, and not the inverse of technology adapting to law.

Machine Learning (ML) and Artificial Intelligence (AI), however, are providing new pathways to how we function in the global society. They are also impacting the legal profession. ROSS, for example, “the world’s first artificially intelligent attorney,” which operates on IBM’s Watson¹⁰ platform, was “hired” in May 2016 at a New York City law firm,

⁶ See Mireille Hildebrandt, *Smart Technologies and the End(s) of Law* (Northampton, MA: Elgar Publishing) 177-78; see also David J. Harvey, *The Law Empryted and Englysshed: The Printing Press as Agent of Change in Law and Legal Culture 1475-1642* (Portland: Hart Publishing, 2015) at 1.

⁷ The term “affordance” was coined by James J Gibson in 1979 as follows: “The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. The verb to afford is found in the dictionary, the noun affordance is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment.” See James J Gibson, *The Ecological Approach to Visual Perception* (London: Houghton Mifflin, 1979) at 127. See generally, Hildebrandt, *ibid*.

⁸ *Parker v The South Eastern Railway Company*, (1876) 1 CPD 618; *Chapelton v Barry UDC*, [1940] 1 KB 532, [1940] 1 All ER 356 [*Chapelton*]; *Olley v Marlborough Court Ltd*, [1949] 1 KB 532, [1949] 1 All ER 127 [*Marlborough Court*]; *Spurling (J) Ltd v Bradshaw*, [1956] 2 All ER 121, [1956] 1 WLR 461 [*Spurling*]; *McCutcheon v David MacBrayne Ltd*, [1964] 1 All ER 430, [1964] 1 WLR 125 [*McCutcheon*].

⁹ *Thornton v Shoe Lane Parking Ltd*, [1971] 2 QB 163 [*Shoe Lane*].

¹⁰ See IBM, “IBM Watson to watsonx” (2023), online: <www.ibm.com/watson>.

and tasked with handling the firm’s bankruptcy practice.¹¹ The AI application, DoNotPay—dubbed “the world’s first robot lawyer”—in its early days, helped overturn 160,000 parking tickets in less than two years in London, England and in New York City.¹² With a success rate of approximately 64%, these overturned tickets amounted to \$4 million in loss of revenue in London alone.¹³ Arguably, we have reached a point where describing AI technologies as “tools” is anachronism.

AI technologies are much more than just tools; they rely on algorithms to compute and interpret data, which may be seen as increasing efficiency in our lives. Algorithms provide us with information.¹⁴ They unlock our smartphones through biometrics—the measurement and analysis of our unique biological and behavioural characteristics.¹⁵ Algorithms “personalize” what we see on our social media feeds—indeed, they make us suggestions for friendships and send us targeted advertising.¹⁶ They help us write and send emails with predictive assistants.¹⁷ Algorithms serve as travel guides providing directions, monitoring traffic, weather conditions, and making hotel recommendations.¹⁸ They are deployed in our banking systems, aiding in the security of transactions and in detecting

¹¹ See Stacy Libertore, “ROSS becomes world’s first artificially intelligent lawyer” *The Daily Mail* (16 May 2016), online: <www.dailymail.co.uk/sciencetech/article-3589795>.

¹² See Samuel Gibbs, “Chatbot lawyer overturns 160,000 parking tickets in London and New York” (28 June 2016), online: *The Guardian* <www.theguardian.com/technology/2016/jun/28/chatbot-ai-lawyer-donotpay-parking-tickets-london-new-york>.

¹³ *Ibid.*

¹⁴ See especially “Google” (2024), online: <www.google.ca>.

¹⁵ See especially Apple, “About Face ID advanced technology” (22 August 2023), online: *Apple* <support.apple.com/en-ca/102381>.

¹⁶ See e.g. Roddy Lindsay, “I Designed Algorithms at Facebook. Here’s How to Regulate Them”, *New York Times* (6 October 2021), online: <www.nytimes.com/2021/10/06/opinion/facebook-whistleblower-section-230.html>; see also Will Oremus, “Lawmakers’ Latest Idea to Fix Facebook: Regulate the Algorithm”, *Washington Post* (12 October 2021), online: <www.washingtonpost.com/technology/2021/10/12/congress-regulate-facebook-algorithm/>; Paul Hitlin, Lee Rainine & Kenneth Olmstead, “Facebook Algorithms and Personal Data” (16 January 2019), online: *Pew Research Center* <www.pewresearch.org/internet/2019/01/16/facebook-algorithms-and-personal-data/>.

¹⁷ See e.g. “Cortana” (2024), online: *Microsoft* <www.microsoft.com/en-us/cortana>; see also “Google Assistant” (2024), online: *Google* <assistant.google.com>.

¹⁸ See “Eightydays” (2024), online: <app.eightydays.me>.

fraud.¹⁹ They also offer us tailored recommendations for entertainment.²⁰ Put simply, algorithms have become powerful negotiators of everyday life.

At its most fundamental level, the term “algorithm” may be defined as “a very precisely specified series of instructions for performing some concrete task.”²¹ This includes very simple tasks such as the recipe for your favourite brownies. Or the infamous Pythagorean theorem. Algorithms may also be far more complex involving ML, like those used in designing drugs to destroy cancer cells and tumors.²²

From their fundamental design, algorithms involve concessions: for example, designing a basic sorting algorithm involves choosing from multiple types with differing strengths and weaknesses.²³ Some are faster than others, and some use less memory than others. Bubble sort, Heap sort, Quick sort, Insertion sort, and Bucket sort are amongst those considered to be common sorting algorithms.²⁴ These algorithms are usually coded by computer scientists and engineers, the same people who design them. In other words, each step is designed by a human being and then written down in programming language.²⁵ So from the very point of departure, algorithms involve compromises that are made by human beings. This is an important observation to keep in my mind since AI technologies are often thought to be “neutral.”

¹⁹ See e.g. Nagarjun Mallesh, “The Algorithmic Approach to Fraud Detection and prevention: Insights from Leading Financial Institutions” (10 May 2023), online: *The Medium* <medium.com/@nagarjunmallesh/the-algorithmic-approach-to-fraud-detection-and-prevention-insights-from-leading-financial-b32f2046248a>; see also G J Priya & S Saradha, “Fraud Detection and Prevention Using Machine Learning Algorithms: A Review,” in *7th International Conference on Electrical Energy Systems (ICEES)*, Chennai, India, 2021, 564-568, DOI: <10.1109/ICEES51510.2021.9383631>.

²⁰ See especially “Netflix” (2024), online: <www.netflix.com>.

²¹ Michael Kearns & Aaron Roth, *The Ethical Algorithm: The Science of Socially Aware Algorithm Design* (Oxford: Oxford University Press, 2020) at 4.

²² See e.g. Naïem Issa et al, “Machine and Deep Learning Approaches for Cancer Drug Repurposing” <www.ncbi.nlm.nih.gov/pmc/articles/PMC7723306/>.

²³ Kearns & Roth, *supra* note 21 at 5.

²⁴ See generally FreeCodeCamp, “Sorting Algorithms Explained with Examples in JavaScript, Python, Java, and C++”, (4 December 2019), online: <www.freecodecamp.org/news/sorting-algorithms-explained-with-examples-in-python-java-and-c/>.

²⁵ Kearns & Roth, *supra* note 21.

Further, more complex algorithms employ ML, which is a type of AI that refers to the ability to learn by experience and acquire skills without human intervention. These more complex algorithms are derived from data scraped from the Internet. It is a data-driven process. And algorithms employing ML involve decision-making without human intervention.

On top of all this, the rapid and recent rise of generative AI systems like language model technologies (LLMs), such as OpenAI's GPT-3 (and its subsequent iterations) are becoming foundation models for many other AI-based systems.²⁶ Generative AI is a broad term for AI systems that generate content, which may be, for example, text-based (LLMs), image-based, audio-based or code-generating. Foundation models refer to generative AI that is trained on a vast amount of unlabelled data that results in a general model that may be adapted to a wide variety of downstream tasks.²⁷ Thus, generative AI is beginning to replace task-specific models of AI and serving, instead, as the substructure for an array of applications.

In many ways, law is conducive to these new technologies; both law and ML, for instance, hinge on historical example to infer rules and implement them. However, algorithms that augment and displace human decision-making bring with them significant legal and ethical risk. And this changes the historical synergetic relationship between law and technology.

Algorithms may create harm through, for example, actions or decisions that result in discrimination on protected areas and grounds under human rights legislation. Algorithms, for

²⁶ See e.g. Ashley Pilipiszyn, "GPT-3 Powers the Next Generation of Apps" (25 March 2021), online (blog): *OpenAI* <openai.com/blog/gpt-3-apps>.

²⁷ See Nandu Anilal, "The Evolution of Infrastructure Markets—Foundation Models: AI Infrastructure in the Era of Foundation Models", *Notes & Upside* (6 December 2022), online: <nandu.substack.com/p/the-evolution-of-infrastructure-markets-f0f?utm_source=profile&utm_medium=reader2>.

instance, habitually leak our personal information.²⁸ They also create racial and gender bias.²⁹

While it is efficient to obtain information almost instantaneously in situations such as requesting credit card limit increases as opposed to waiting for a human being to process the request, is this type of efficiency sufficient when the stakes of the decision-making are higher? Does the efficiency created by ML algorithms measure up when the stakes are much higher such as in criminal sentencing decisions?

What is more is that algorithms are not ethically neutral. While we often view the outputs of large search engines as objective, we also know, for example, that they encode language in a gendered manner.³⁰ This “code-ification” of language both reflects the degree of existing gender inequality in society and further propagates it.

Additionally, the paradigm shift to foundation model-based infrastructure has the potential to further this algorithmization of social ordering that is the focus of escalating concern.³¹ Foundation model-based infrastructure is potentially beneficial, for instance, for

²⁸ See e.g. Perna Singh, “Data Leakage in Machine Learning: How it can be Detected and Minimize the Risk” (9 January 2022), online: *The Medium* <towardsdatascience.com/data-leakage-in-machine-learning-how-it-can-be-detected-and-minimize-the-risk-8ef4e3a97562>; see also Ryan Naraine, “Microsoft AI Researchers Expose 38TB of Data, Including Keys, Passwords and Internal Messages” (18 September 2023), online: Security Week <www.securityweek.com/microsoft-ai-researchers-expose-38tb-of-data-including-keys-passwords-and-internal-messages/>; Aleksander Nikolov & Nicolas Papernot, “To Guarantee Privacy, Focus on the Algorithms, Not the Data” (14 Jan 2021), online (blog): <www.cleverhans.io/2021/01/14/privacy-focus-algorithms.html>.

²⁹ See e.g. Will Knight, “The Apple Card Didn’t ‘See’ Gender—and That’s the Problem: The Way its Algorithm Determines Credit Lines Makes the Risk of Bias More Acute” (19 November 2019), online: *Wired* <www.wired.com/story/the-apple-card-didnt-see-genderand-thats-the-problem/>; see also “Gender and AI: Addressing Bias in Artificial Intelligence” (2024), online: International Women’s Day <www.internationalwomensday.com/Missions/14458/Gender-and-AI-Addressing-bias-in-artificial-intelligence>; Ziad Obermeyer et al, “Dissecting Racial Bias in an Algorithm Used to Manage the Health of Populations” (25 October 2019) 366:6464 *Science* 447, DOI: <10.1126/science.aax2342>; Will Douglas Heaven, “Predictive Policing Algorithms are Racist. They Need to be Dismantled” (17 July 2020), online: *MIT Technology Review* <www.technologyreview.com/2020/07/17/1005396/predictive-policing-algorithms-racist-dismantled-machine-learning-bias-criminal-justice/>.

³⁰ See e.g. B Larson, “Gender as a Variable in Natural-Language Processing: Ethical Considerations” (2017) *Proceedings of the First ACL Workshop on Ethics in Natural-Language Processing*, 1-11 (Valencia, Spain: Association for Computational Linguistics); see also Morcelo O R Prates, Pedro H Avelar & Luís C Lamb, “Assessing Gender Bias in Machine Translation: A Case Study with Google Translate (2020) 32:10 *Neural Computing & Applications* 6363.

³¹ See e.g. Christian Katzenbach & Lena Ulbricht, “Algorithmic Governance” (2019) 8:4 *Internet Policy Review* 1; Leighton Andrews et al, “Algorithmic Regulation” (2017) 85 *CARR*, London School of Economics and Political Science Discussion Paper; Karen Yeung, “Algorithmic Regulation: A Critical Interrogation” (2017) 12:4 *Regulation & Governance* 505; Karen Yeung & Martin Lodge, *Algorithmic Regulation* (Oxford: Oxford University Press, 2019); Mireille Hildebrandt, “Algorithmic Regulation and the Rule of Law” (2018).

start-up businesses since in using it, they do not have to build models from scratch. This allows these start-ups to concentrate instead on the final phases of AI development. However, any shortcomings in the foundation model may be inherited and adapted by subsequent applications and spread widely in society.

Algorithms are also being used to interpret the language of legal processes into code, posing a challenge to how we have traditionally understood the nature of law. Some legal futurists predict a model of “legal singularity” in which legal analytics overcome the problem of legal uncertainty.³² While clarity and precision are often described to be essential for legal language, so too is interpretation, which is not a predictable science.³³ Others suggest that existing legal forms will become completely obsolete as algorithms allow law to become “self-driving” resulting in a new linguistic form—the micro-directive.³⁴ Underpinning these suggestions is that law and its language are logically observable. And that the two are universal rather than relational.³⁵

Flowing from these observations about the use of algorithmic “tools” and legal language is the idea that algorithms are becoming sources of authority. Generally speaking, “authority” refers to legitimate (*de jure*) authority and *de facto* authority.³⁶ Legitimate authority may be further subdivided into practical and theoretical forms. Legitimate practical authority occurs when the instructions or pronouncements are given by a person or an institution with practical authority and give rise to reasons for action.³⁷ A manager in a work

Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, DOI: <10.1098/rsta.2017.0355>.

³² See Benjamin Alarie, “The Path of the Law: Towards Legal Singularity” (2016) 66 U Toronto LJ 443.

³³ See e.g. Ronald Dworkin, *Law’s Empire* (Cambridge: Harvard University Press, 1986).

³⁴ See Anthony Casey & Anthony Niblett, “Self-Driving Laws” (2106) 66 U Toronto LJ 429; Anthony J Casey & Anthony Niblett, “The Death of Rules and Standards” (2017) 92 Indiana LJ 1401.

³⁵ See Jennifer Nedelsky, *Law’s Relations: A Relational Theory of Self, Autonomy, and Law* (Oxford: Oxford University Press, 2012).

³⁶ Joseph Raz, “Authority, Law and Morality” (1985) 68:3 The Monist 295 at 296.

³⁷ *Ibid.*

environment, for example, has legitimate practical authority to instruct employees on how to handle workflows.

Contrarily, legitimate theoretical authority derives from advice that may culminate in a reason for belief for those who view that person or institution as having authority.³⁸ Medical doctors, for example, may be viewed as theoretical authorities since they can advise how one ought to behave on the basis of a medical condition, but they cannot compel one to behave in the manner that, for instance, a military commander could.³⁹ Further, in some situations legitimate authority may be both practical and theoretical.⁴⁰

De facto authority may claim to be legitimate or be believed to be legitimate and draws its efficacy on the basis that its claim to legitimacy is recognized.⁴¹ A *de facto* leader, for instance, is one who holds authority over a state but whose legitimacy is largely rejected. *De facto* authority may also exist in situations where no legitimate authority exists; for instance, English is the *de facto* official language of the United States since it is a country without a specific official language.

Humans are delegating their authority to algorithms, thus putting them in the position of responsibility.⁴² This is a form of *de facto* authority—more specifically, algorithmic *de facto* authority. This delegation of authority may further contribute to algorithmic racism, sexism, and other bias.⁴³ Algorithmic bias “encodes” individuals, further marginalizing the

³⁸ *Ibid.*

³⁹ Joseph Raz, *The Morality of Freedom* (Oxford: Clarendon Press, 1986) at 64.

⁴⁰ Raz, *supra* note 36.

⁴¹ *Ibid.*

⁴² See Hannah Fry, *Hello World: Being Human in the Age of Algorithms* (London: WW Norton & Co, 2018).

⁴³ See e.g. Timnit Gebru, “Race and Gender” in Markus D Dubber, Frank Pasquale, Sunit Das eds, *The Oxford Handbook of Ethics of AI* (Oxford: Oxford University Press, 2020) 253; see also Joy Buolamwini, “The Algorithmic Justice League” (14 December 2016), online: MIT Media Lab <medium-com/mit-media-lab/the-algorithmic-justice-league-3cc4131c5148>.

already historically marginalized.⁴⁴ Of course, law itself, may be seen as creating inequality.⁴⁵

Algorithmic *de facto* authority in the context of law may therefore result in a kind of *super*-marginalization.

To deal with emerging concerns with algorithms there are growing bodies of literature on algorithmic fairness,⁴⁶ algorithmic transparency,⁴⁷ algorithmic accountability,⁴⁸ algorithmic legitimacy,⁴⁹ algorithmic responsibility,⁵⁰ ethical algorithms,⁵¹ and the law of algorithms.⁵² We are also developing and implementing legislation to tackle the problems

⁴⁴ See Molly Wood, “Bias in Facial Recognition Isn’t Hard to Discover, but It’s Hard to Get Rid Of”, Marketplace Tech (22 March 2021), online (interview): <www.marketplace.org/shows/marketplace-tech/bias-in-facial-recognition-isnt-hard-to-discover-but-its-hard-to-get-rid-of/>.

⁴⁵ See Katharina Pistor, *The Code of Capital: How the Law Creates Wealth and Inequality* (Princeton: Princeton University Press, 2019).

⁴⁶ See e.g. Kearns & Roth, *supra* note 21; see also Jella Pfeiffer et al, “Algorithmic Fairness in AI: An Interdisciplinary View” (6 February 2023) 65 Business and Information Systems Engineering 209, DOI: <10.1007/s12599-023-00787-x>; Ashesh Rambachan et al, “An Economic Perspective on Algorithmic Fairness” (May 2020) 110 American Economic Association Papers and Proceedings 91, DOI: <10.1257/pandp.20201036>.

⁴⁷ See e.g. Nicholas Diakopoulos, “Transparency” in Markus D Dubber, Frank Pasquale, Sunit Das eds, *The Oxford Handbook of Ethics of AI* (Oxford: Oxford University Press, 2020) 197; see also Cary Coglianese & David Lehr, “Transparency and Algorithmic Governance” 71:1 Administrative Law Review 1; Mike Ananny & Kate Crawford, “Seeing Without Knowing: Limitations of the Transparency Ideal and its Application to Algorithmic Accountability” (March 2018) 20:3 New Media & Society 973, DOI: <10.1177/1461444816676645>.

⁴⁸ See e.g. Joshua A Kroll, “Accountability in Computer Systems” in Markus D Dubber, Frank Pasquale, Sunit Das eds, *The Oxford Handbook of Ethics of AI* (Oxford: Oxford University Press, 2020) 180; see also Margot E Kaminski, “Understanding Transparency in Algorithmic Accountability” in Woodrow Barfield, ed, *The Cambridge Handbook of The Law of Algorithms* (Cambridge: Cambridge University Press, 2020) 121; Hetan Shah, “Algorithmic Accountability” (6 August 2018), online: *Royal Society* <royalsocietypublishing.org/doi/full/10.1098/rsta.2017.0362>.

⁴⁹ See e.g. Ari Ezra Waldman, “Algorithmic Legitimacy” in Woodrow Barfield, ed, *The Cambridge Handbook of The Law of Algorithms* (Cambridge: Cambridge University Press, 2020) 107; see also Sune Holm, “Algorithmic Legitimacy in Clinical Decision-Making” (2 July 2023) 25:35 Ethics and Information Technology 34, DOI: <10.1007/s10676-023009709-7>; Stephan Grimmelikhuijsen & Albert Meijer, “Legitimacy of Algorithmic-Decision Making: Six Threats and the Need for a Calibrated Institutional Response” (September 2022) 5:3 Perspectives on Public Management and Governance 232, DOI: <10.1092/ppmgov/gvac008>.

⁵⁰ See e.g. Virginia Dignum, “Responsibility and Artificial Intelligence” in Markus D Dubber, Frank Pasquale, Sunit Das eds, *The Oxford Handbook of Ethics of AI* (Oxford: Oxford University Press, 2020) 214; see also Anna Beckers & Gunther Teubner, “Responsibility for Algorithmic Misconduct: Unity or Fragmentation of Liability Regimes?” (2023) 25 Yale J L & Tech Special Issue 76, online (pdf): <yjolt.org/sites/default/files/beckers_teubner_-_reponsibility_for_algorithmic_misconduct.76.pdf>; Christopher F Breidbach, “Responsible Algorithmic Decision-Making” (2024) Organizational Dynamics, DOI: <10.1016/j.orgdyn.2024.101031>.

⁵¹ See e.g. Kearns & Roth, *supra* note 21; Thomas M Powers & Jean-Gabriel Ganascia, “The Ethics of the Ethics of AI” in Markus D Dubber, Frank Pasquale, Sunit Das eds, *The Oxford Handbook of Ethics of AI* (Oxford: Oxford University Press, 2020) 26; see also Andreas Tsamados et al, “The Ethics of Algorithms: Key Problems and Solutions” (20 February 2021) 37 AI & Society 215, DOI: <10.1007/s00146-021-01154-8>.

⁵² See e.g. Woodrow Barfield & Jessica Barfield, “An Introduction to Law and Algorithms” in Woodrow Barfield, ed, *The Cambridge Handbook of The Law of Algorithms* (Cambridge: Cambridge University Press, 2020) 1; see also Ernest W K Lim, “Law by Algorithm” (31 May 2023) 43:3 Oxford J Legal Studies 650, DOI:

posed by AI, which is by-and-large focused on risk. The *European AI Act* (2021),⁵³ which has recently been approved by the European Parliament, for instance, takes a risk-based approach to regulating AI, where systems are divided into categories of risk: low or minimal risk, limited risk, high-risk, or unacceptable risk.⁵⁴ Canada,⁵⁵ the United States,⁵⁶ and the United Kingdom⁵⁷ have also introduced approaches to regulating high-impact AI, each in their own manner.

More recently, governments around the world have begun contemplating how to deal with the potential harms of generative AI. China, for instance, has developed draft rules to deal with the development of generative AI products.⁵⁸ The European Commission has issued a tender opportunity for “Natural Language Understanding and Interaction in Advanced Language Technologies.”⁵⁹ Italy’s Data Protection Authority temporarily banned ChatGPT and launched a probe of OpenAI in March 2023 for failing to check the age of its users.⁶⁰

And in Canada, the Office of the Privacy Commissioner of Canada has initiated an

<10/1093/ojils/gqad009>; Michael Meyer-Resende & Marlene Straub, “The Rule of Law versus the Rule of Algorithm (28 March 2022), online (blog): *Verfassungsblog* <verfassungsblog.de/rule-of-the-algorithm/>.

⁵³ EC, Proposal for a *Regulation of the European Parliament and of the Council laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts* COM [2021] 206 final [EU AI Act].

⁵⁴ *Ibid.*

⁵⁵ Bill C-27, *An Act to enact the Consumer Privacy Protection Act, the Personal Information and Data Protection Tribunal Act and the Artificial Intelligence and Data Act and to make consequential and related amendments to other Acts*, 1st Sess, 44th Parl, 2021 (second reading 24 April 2023).

⁵⁶ The Whitehouse, “Blueprint for an AI Bill of Rights” (2022), online: *The White House* <www.whitehouse.gov/ostp/ai-bill-of-rights/>.

⁵⁷ United Kingdom, Department for Science, Innovation & Technology, “Pro-Innovation Approach to AI Regulation” (29 March 2023), online (white paper, pdf): <assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1146542/a_pro-innovation_approach_to_AI_regulation.pdf>.

⁵⁸ See especially Seaton Huang et al, “Translation: Measures for the Management of Generative Artificial Intelligence Services (Draft for Comment) (12 April 2023), online: *DigiChina Stanford University* <digichina.stanford.edu/work/translation-measures-for-the-management-of-generative-artificial-intelligence-services-draft-for-comment-april-2023/>.

⁵⁹ European Commission, “Natural Language Understanding and Interaction in Advanced Language Technology (AI Data and Robotics Partnership)” (8 December 2022), online: *Funding & Tender Opportunities* <ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl4-2023-human-01-03>.

⁶⁰ Supantha Mukherjee & Giselda Vagnoni, “Italy Restores ChatGPT after OpenAI Responds to Regulator”, Reuters (28 April 2023), online: <www.reuters.com/technology/chatgpt-is-available-again-users-italy-spokesperson-says-2023-04-28/>; Oreste Pollicino & Giovanni De Gregorio, “ChatGPT: Lessons Learned From Italy’s Temporary Ban of the AI Chatbot”, *The Conversation* (20 April 2023), online: <theconversation.com/chatgpt-lessons-learned-from-italys-temporary-ban-of-the-ai-chatbot-203206>.

investigation into OpenAI jointly with provincial privacy authorities as a result of a complaint in respect of OpenAI's collection, use, and disclosure of personal information without consent.⁶¹ What is clear is that a disjoint has become apparent in the previously symbiotic relationship between law and technology.

Algorithmically driven technologies effect a radical re-conception of law and its methods. We stand at a turn in how we understand the nature of law, language, and authority. It is an algorithmic turn. This dissertation will investigate the code-ification of legal language and how this impacts our understanding of authority as we increasingly adopt technologies that harness algorithms to perform tasks that humans would have previously done.

II. Chapter Roadmap

This dissertation is divided into five chapters, with an introduction and a conclusion that together are structured to accomplish two goals: first, to examine how law's relationship with language changes with the use of algorithmically driven technologies; and secondly, to investigate the consequences for the changing nature of authority since the use of language in law is closely entwined with the use of language in exercising authority. In accomplishing these two goals, I anticipate that this dissertation will contribute to theoretical and policy debates about the relationship between law and technology, but also, and more broadly, to philosophy about the nature of law.

Chapter one provides context for the research. First, I deal with the changing nature of the relationship of language and law as we adopt algorithmically driven technologies in society. To examine this relationship, I provide a brief history on the "technologizing of the

⁶¹ Office of the Privacy Commissioner of Canada, "OPC to Investigate ChatGPT Jointly with Provincial Privacy Authorities" (25 May 2023), online: *OPC Announcement* <www.priv.gc.ca/en/opc-news/news-and-announcements/2023/an_230525-2/>; Howard Soloman, "Federal Privacy Commissioner's Investigation into OpenAI Expands", *IT World Canada* (25 May 2023), online: <www.itworldcanada.com/article/breaking-news-federal-privacy-commissioners-investigation-into-openai-expands/539555>.

word”⁶²—from cuneiform script and manuscript culture through the print environment—or “bookspace”—and our pivot to the online environment. This is important since modern law, as we understand it today, is an affordance of that “bookspace” environment.⁶³ Then, in applying the findings from this analysis of the relationship of law and language, I move to discuss legal philosophy that employs the philosophy of language, specifically H. L. A. Hart and *The Concept of Law*.⁶⁴ It is important to have an understanding of how language has been used previously to better understand the nature of law and where it draws its authority in the Algorithmic Turn.

This context is followed by an explanation of speech-act theory that helps to explain the manner in which law uses language. It was first conceived of by J. L. Austin in the posthumously published work, *How to Do Things with Words*.⁶⁵ Ordinary language philosophers, like Austin, saw that many traditional philosophical problems were only illusions brought on by misunderstandings about language. They sought to dissolve these problems by bringing words back to their everyday use. Austin’s theory was central to Hart’s *Concept of Law*.⁶⁶ More recently, Austin’s theory has been investigated in a variety of ways within law and outside of law, which will be discussed further in Chapter 1. Austin’s theory provides a strong, suitable framework for reclaiming words and their importance as we contemplate the development of law, language, and authority in the Algorithmic Turn.

The historical context and the framework serve as a background for the three pillars of my investigation: first, an examination of generative AI and authorship in the Algorithmic Turn; second, the nature of the emerging “algorithmic contract,”⁶⁷ in which an algorithm fills in for human expertise in the contracting process; and third, the issue of algorithmic harm,

⁶² Ong, *supra* note 5.

⁶³ Hildebrandt, *supra* note 6.

⁶⁴ H L A Hart, *The Concept of Law* (Oxford: Oxford University Press, 1961).

⁶⁵ J L Austin, *How to Do Things with Words*, 2nd ed (Cambridge: Harvard University Press, 1975).

⁶⁶ Hart, *supra* note 64 at vii (quoting J L Austin).

⁶⁷ Lauren Henry Scholz, “Algorithmic Contracts” (2017) 20 Stanford Tech L R 128.

which may result from delegating authority to algorithms. More specifically, the first pillar of this dissertation focuses on the speech generated by ChatGPT and from the locutionary aspect—the intrinsic meaning of words—and the resulting implications for authorship. The second pillar deals with algorithms involved in the drafting of contracts from the illocutionary perspective, which is the intention involved in a performance of language. And the third pillar tackles the novel consequences—the perlocutionary effect—of executing an algorithmic contract.

The first chapter also describes the qualitative approach I use in order to achieve my aim of unravelling the conundrums of emergent creativity. Specifically, I employ both doctrinal and non-doctrinal methodologies for this investigation of the Algorithmic Turn. This section segues into a description of the methods—or tools—that I enlist to conduct my research. The next portion of this chapter provides a definition of terms in order to ensure an understanding of key concepts as well as terminology related to AI, which can be particularly ambiguous. I then explain the limitations of the qualitative methodologies I have chosen to conduct the research.

And in the final section of chapter one, I discuss how my research will contribute to our understanding of law and authority as we increasingly adopt technologies that harness algorithms to perform as decision-makers in society. At a more granular level, this research will contribute to the continuing conversations surrounding AI and authorship, the nascent algorithmic contract, and the development of legal mechanisms to deal with algorithmic harm.

The second chapter is framed by a chain story entitled, “Go with Me.” This form of story is collaborative in nature in that each section of the story is written by a different author who picks up where the previous author left off. In this case, the first part of “Go with Me” is

written by a human author (myself) and secondly, continued by ChatGPT.⁶⁸ The chain story acts as a framing device—a narrative technique whereby a story is embedded or framed by a secondary story, effectively creating a story within a story, with the inner story forming the bulk of the work.⁶⁹ The inner story forms the first pillar of my investigation: an investigation of generative AI from the locutionary perspective and the implications for authorship. The use of the framing story serves as a concrete example of what my research on generative AI and authorship is intended to demonstrate.

Following the chain story in chapter two, I provide a locutionary analysis of the implications of “authoring” a story with ChatGPT. This analysis begins with a brief examination of the predictive nature of human speech and of text generated by LLMs, before moving on to discuss the broader role of imitation in the production of meaning, and whether presumptive locutionary imitation can result in locutionary competence. These observations have implications for how we understand “originality” in copyright law. This leads into a discussion surrounding locutionary imitation and what this means for ostensible AI “authorship.”

In chapter three, the focus shifts from algorithms and authored words to algorithms and drafted words. We have grown accustomed to the incredibly effortless “click to agree” mechanism as part of the quotidian in our digital lives. We have become reliant on contract law in regulating the digital environment, routinely agreeing to terms and conditions to visit websites, or consenting to the “fine print” that we rarely read in online transactions because we assume those terms and conditions, had we the time to read them, are not unexpected. However, when an algorithm becomes an actor in this process, selecting the standard terms to

⁶⁸ Open AI, “ChatGPT” (March 3, 2023), <chat.openai.com/chat>.

⁶⁹ Shelley’s *Frankenstein* is an example of a framed narrative structure. There are three frames in the novel: first, the story of Robert Walton and his expedition to the Arctic; second, the story of Victor Frankenstein; and third, the story that the monster recounts to Frankenstein of his life after he was created. See Mary Shelley, *Frankenstein: Or, The Modern Prometheus* (Oxford: Oxford University Press, 2008).

which we are habitually agreeing, it gives us pause for thought: what are the implications of an algorithm filling in for human expertise in the contracting process?

To help answer what these implications are, I draw on the work of Lauren Henry Scholz, who coined the term “algorithmic contract” in 2017. These contracts feature “terms that were determined by an algorithm rather than a person.”⁷⁰ These types of contracts are typical of gig economy apps, particularly on-demand apps, where the app establishes the price of the service in advance and allows for a customer’s acceptance or rejection of the offer.

In this section, I offer a re-reading of *Uber Technologies v. Heller* (2020), which is considered to be a landmark decision in that it clarified the threshold for the equitable doctrine of unconscionability in Canada.⁷¹ After tracing its development in Canada, and also comparing how unconscionability has been used in other jurisdictions, I find that the test for unconscionability in *Uber* is problematic. How can you determine intention of an algorithm which has no agency?

To conclude chapter three, I advance one avenue for which there is an existing footprint that contract law could deal with algorithmic decision-making in the business-to-consumer context—one that involves developing existing contract law doctrine and principles to deal with the changing form of contract.

The fourth chapter centres on harm that arises as a result of contracting with algorithms. I investigate the outcome of deploying algorithmic contracts in the context of safety—specifically with ride-hailing and sexual violence. These harms created in the “Algorithmic Turn” give us pause to consider whether new legal subjectivities are needed. It

⁷⁰ Scholz, *supra* note 67.

⁷¹ John D McCamus, *The Law of Contracts*, 3rd ed, (Toronto: Irwin Law, 2020).

is also an area in which we need to develop new regulation to deal with harm that is unique to the online environment.

This pillar of my research contributes to the developing issue of technology-facilitated gender-based violence, wherein technology functions as a means of perpetuating and amplifying existing forms of gender-based violence. This form of violence is a metamorphosis of the offline intersecting systems of oppression in society, including sexism, racism, colonialism, ableism, transphobia, and homophobia.⁷² In other words, technology may function as a means of perpetuating and amplifying existing forms of gender-based violence.

Chapter five takes the findings of the locutionary, illocutionary, and perlocutionary analyses of chapters two, three, and four as and evaluates the nature of authority in the Algorithmic Turn. This section examines recent work by Nico Krisch on the dispersion of authority in the context of transnational law, “the methodological architecture for both a doctrinal, conceptual and a socio-legal engagement with law.”⁷³ The leads to segment on cyberfeminism, specifically Donna Haraway and “Cyborg Manifesto” which may be seen as offering conceptual strength to Krisch’s work on “entangled legalities.” This section also contemplates the growing issues involving generative AI which is taking on infrastructural roles in society. This part of the chapter also includes scholarship on infrastructure, notably the work of Benedict Kingsbury before reaching a conclusion about the arch of authority in the Algorithmic Turn.

This dissertation concludes with recommendations for developing and reforming law in order to help “future proof” society for continuing breakthroughs of AI. These

⁷² Cynthia Khoo, “Deplatforming Misogyny: Report on Platform Liability for Technology-Facilitated Gender-Based Violence” (2021), online: *Women’s Legal Education & Action Fund* (LEAF) <www.leaf.ca/publication/deplatforming-misogyny/> at 15.

⁷³ Peer Zumbansen, ed, *The Oxford Handbook of Transnational Law* (Oxford: Oxford University Press, 2021) 5.

recommendations have implications for the principle of technological neutrality. Additionally, the outcome of this investigation puts forward a framework to be developed in the Algorithmic Turn. I have also included a coda, which provides readers with the alternative to what ChatGPT generated in the second part of “Go With Me.” Thus, this dissertation leaves off in story.

CHAPTER 1

Context and Objectives

*...[L]aw is an art, a way of making something new out of existing materials—
an art of speaking and writing.*

James Boyd White⁷⁴

*[L]aw must also be tackled at the conceptual level if feminist discourses
are to take a firmer root.*

Carol Smart⁷⁵

I. Introduction

The aim of my research is to investigate how law's relationship with language changes with the use of algorithmically driven technologies and what this means for our understanding of authority in law. In this section, I begin by looking at the relationship between law and language, and the historical ebbs and flows of that relationship with changes in technology. This overview provides context for this research since law is an affordance of language, and its technological corollaries such as the printing press.⁷⁶

This analysis of the relationship between law and language segues into a section focusing on the use of language and how it may illuminate questions about the nature of law. This section also provides an overview of the three categories into which the philosophy of law is most commonly viewed, focusing particularly on H. L. A. Hart's use of the philosophy of language.

I then advance my objectives for the dissertation and map out my plan for the research, before moving on to describe the theoretical underpinning that supports the pillars of my investigation, and the methodology used as the basis for my research procedures and

⁷⁴ James Boyd White, *The Legal Imagination*, (1973) at xiv.

⁷⁵ Carol Smart, *Feminism and the Power of Law* (London: Routledge, 1989) at 5.

⁷⁶ Hildebrandt, *supra* note 6 at 177-78; Harvey, *supra* note 6 at 1.

strategies. This part also supplies definitions of relevant terms and discusses the limitations and the significance my research. Specifically, this chapter proceeds as follows: part II provides an overview of the relationship between law and language; part III examines language as the lynchpin in the philosophy of law; part IV explains the theoretical framework of speech-act theory which serves as conceptual architecture for conducting my research; part V describes the methodologies I use to answer how the data was gathered for my research and how it was analyzed; part VI presents definitions of terms; part VII articulates the limitations of the methodologies; and part VIII discusses the significance of the research.

II. *The Relationship of Law and Language*

Law uses language. Many other disciplines also use language. However, unlike mathematics, for example, law is also formed by language—and more specifically, by linguistic utterances. We can neither use law nor understand it without an understanding of how language functions. Put simply, we might say that law is a “profession of words.”⁷⁷

Law may also be viewed as language.⁷⁸ Law, like language, consists of rules that function in the coordination of human societies. Our capacity for language is one of the unique cognitive abilities that sets us apart as a species,⁷⁹ and in briefly tracing the history of this ability, an interrelationship of law, language, and technology emerges. This has implications for looking at law as language.

⁷⁷ See e.g. David Mellinkoff, *The Language of the Law* (Boston: Little, Brown & Co, 1963) at vi.

⁷⁸ According to James Boyd White, “...the law is not merely a system of rules (or rules and principles), or reducible to policy choices or class interests, but that it is rather what I call a language.” See James Boyd White, *The Legal Imagination* (Chicago: University of Chicago Press, 1985) at xiii; see also Marianne Constable, “Law as Language” (2014) 1:1 Critical Analysis of Law 63.

⁷⁹ See Ulrich J Frey, Charlotte Störmer & Kai P Willführ, *Essential Building Blocks of Human Nature* (Heidelberg: Springer, 2011) at 12 (explaining that human beings exhibit the unique cognitive abilities of language, long-term planning, causal understanding and episodic memory, which building on our ability to participate in collaborative and shared activities).

Human beings are “hardwired” for language which we speak, sign, write, read, and understand.⁸⁰ In fact, there is evidence that it is encoded in our DNA in a gene called FOXP2, which provides instructions for making the protein that is responsible for the normal development of speech and language.⁸¹ Speech is our verbal method of communication and it encompasses our ability to articulate sound, to use our voice and to do so fluently. Put most simply, speech involves the sounds that come from our mouths and take shape in the form of words.⁸² Language is the rule governed system comprised of words and symbols that we use to convey a message.⁸³ Barring impairment such as oral impairment and hearing difficulties in children, both speech and language may be viewed as natural processes.

Language, however, may also be seen as a technology—in fact, it may be viewed as the “original” technology. Language is an artefact, but it is also capricious. Language is always changing as are the additional tools that we employ to use it. Walter Ong, for example, posits writing to be a technology that is more than an external medium for language and more than just a tool.⁸⁴ According to Ong, technologies are transformers of individual consciousness and “never more than when they affect the word...[W]riting heightens consciousness.”⁸⁵ In other words, writing provides support for expressing individual consciousness in a way that nothing else does: writing is an extension of our minds.

⁸⁰ See generally Iris Berent et al, “Language Universals Engage Broca’s Area” (2014) 9:4 PLoS ONE, DOI: <10.1371/journal.pone.0095155> (Broca’s area is located in the frontal lobe of the brain and is responsible for all aspects of speech articulation).

⁸¹ See Jon Cohen, “The Genetics of Language” (2008) 111:1 Technology Rev 52, online: *EBSCOhost* <search.ebscohost.com.ezproxy.library.yorku.ca/login.aspx?direct=true&db=eih&AN=28348464&site=ehost-live> (the language gene, FOXP2, has a unique sequence in humans); Wolfgang Enard et al, “Molecular Evolution of FOXP2, A Gene Involved in Speech and Language” (2002) 418:6900 Nature 869, DOI: <10.1038/nature01025>.

⁸² Patricia McAleer Hamaguchi, *Childhood Speech, Language, and Listening Problems* (Hoboken, NJ: John Wiley & Sons, 2010) at 8.

⁸³ *Ibid* at 9.

⁸⁴ In *Orality and Literacy: The Technologizing of the Word*, Ong traces literary thought and expression from their evolution—and their relation to—oral culture. Ong, *supra* note 5.

⁸⁵ *Ibid* at 81.

Furthermore, writing led to the development of other technologies that expanded writing such as the printing press and more recently, the computer. Writing is “the technology which has shaped and powered the intellectual activity of modern [hu]man[s].”⁸⁶ In looking briefly at the history of writing as a technology, we can see that it has followed a trajectory from one that is distinctly human powered to one that is operated by machines.

The technology of writing emerged out of Mesopotamia and the Ancient Near East where complex urban centres grew approximately 5000 years ago.⁸⁷ This new urban life was more complex and began requiring us to do things that went beyond relying on memory; record-keeping of goods, for example, became necessary for trade. And out of this necessity, writing emerged, thus transforming the nature of human existence.⁸⁸ Cuneiform script, derived from the Latin, “cuneus” or wedge, and named for the wedge-shaped symbols imprinted on clay, was developed by the Sumerian—the peoples of southern Mesopotamia—to register economic transactions, compile medical manuals, document beliefs and stories, and to record laws.⁸⁹

Laws recorded in cuneiform script were relevant geographically to the areas that extended from present-day Iran to the Mediterranean Sea, and from Turkey to the borders of Egypt.⁹⁰ In these areas, the languages spoken were numerous, and included Sumerian, Akkadian, Elamite, and Hittite.⁹¹ Notwithstanding this extensive area and abundance of language involved, we refer today to “cuneiform law” as opposed to “Mesopotamian law,” clearly linking the importance of the written word to law. Furthermore, as explained in the introduction, writing allowed for the affordances that we associate with contemporary legal

⁸⁶ *Ibid* at 82.

⁸⁷ Diringier, *supra* note 5.

⁸⁸ Ong, *supra* note 5 at 82.

⁸⁹ “The Epic of Gilgamesh” is often considered to be the first epic tale to be written down c. 2150 BC. See E A Speiser, “Cuneiform Law and the History of Civilization” (1963) 107:6 *Proceedings of the American Philosophical Society* 536 at 537.

⁹⁰ *Ibid* at 536.

⁹¹ *Ibid*.

systems. In fact, one could realistically say that out of cuneiform script, the initial chapter in the history of jurisprudence was written.⁹²

This shift to written culture also resulted in the development of other new technologies in order to store and disseminate the written word: papyrus and parchment, for instance, were painstakingly created as writing material, and ink and quills developed as replacements for styluses previously used for writing in clay.⁹³ Manuscript culture dominated the Middle Ages during which monasteries and religious centres held practically a monopoly on the production of written texts until the establishment of universities during the twelfth century.⁹⁴ The codex—or manuscript text in book form—replaced the scroll, demonstrating a shift in the technology of writing. It also introduced organizational tools like footnotes, margins, indices, and pagination. This new form of recording the written word was disruptive: it encouraged literacy and a commitment to knowledge outside of the confines of religion or myth, and it replaced the more cumbersome scroll.

The codex provided the opportunity for the art of book illustration to develop; previously, illustrations had a subordinate role when used in scrolls. Monastic libraries were created, becoming important learning centres in Medieval Europe, and with the advent of libraries, the cataloguing of books also developed. Scribes were responsible for copying written works in scriptoria—rooms in monasteries set aside for the purpose of copying—and are often depicted historically as a predominately male space.⁹⁵ Written documents were produced for a default male reader as evidenced by the use of the term “monk” as opposed to “nun” in religious texts, reflecting gender bias, a phenomenon of technology which continues to challenge the AI industry today.⁹⁶

⁹² Speiser, *supra* note 89 at 536.

⁹³ See e.g. Barry B Powell, *Writing: Theory and History of the Technology of Civilization* (New York: Wiley & Sons, 2012) at 120.

⁹⁴ David Finkelstein & Alistair McCleery, *An Introduction to Book History* (New York: Routledge, 2005) at 66.

⁹⁵ See e.g. Umberto Eco, *The Name of the Rose* (Orlando: Harcourt Brace, 1983).

⁹⁶ See e.g. Emily Chang, *Brotopia: Breaking up the Boys' Club of Silicon Valley* (New York: Penguin, 2019).

The technology of copying and producing the written word by hand that dominated the Middle Ages began to be replaced by print technology at the end of the fifteenth century.⁹⁷ The printing press marked a “watershed” in the history of the written word: the quantity of published books increased; the time it took to produce a book was reduced; access to books increased and people could learn by reading; a new intellectual social class emerged; new occupations developed; literary rights were established; new types of printed products were produced, such as calendars, maps, how-to books; and the ability to do comparisons led to new knowledge and ideas.⁹⁸ The printing press may be seen as having fundamentally transformed society: arguably, the historical developments of the Renaissance, the Reformation, and the rise of modern scientific thought were affordances of the printing press.⁹⁹ It also altered the form and the tangible nature of writing itself, resulting in the word becoming the first machine-made and mass-produced material in history.¹⁰⁰ All of these developments affected the shaping of the modern mind.¹⁰¹

Elizabeth Eisenstein identifies the printing press as an agent of revolutionary change, identifying six features that differentiated print technology from the previous of technologies of manuscript culture: first, increased dissemination of information; second, standardization such as pagination; third, reorganization of material like tables and indexing; fourth, data collection through collection and exchange among users of printed materials; fifth, fixity with

⁹⁷ The first mechanized printing press using moveable type is attributed to Johann Gutenberg of Mainz, Germany in 1452. Scholars have argued that Gutenberg was in the right place at the right time: Mainz was an ideal location in that Gutenberg was able to make use of grape-pressing technology hence the expertise required to make separate pieces of metal type was available. Frankfurt was also nearby, and thus paper could be obtained easily. The invention was quickly copied and introduced to Cologne where William Caxton observed it and set up the first printing press in London in 1476. See e.g. Albert Kapr & Douglas Martin, Johann Gutenberg: *The Man and his Invention* (Brookfield, VT: Scolar Press, 1996).

⁹⁸ See e.g. Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographical Man* (1962).

⁹⁹ See e.g. Hildebrandt, *supra*, note 6.

¹⁰⁰ Matthew Battles, *Palimpsest: A History of the Written Word* (New York: W. W. Norton & Company, 1923) at 174.

¹⁰¹ Elizabeth L Eisenstein, *The Printing Revolution in Early Modern Europe*, 2nd ed (Cambridge: Cambridge University Press, 2005) at 107.

its power to preserve information; and sixth, amplification through the retelling and repetition of older information.¹⁰²

There is no doubt that the printing press had profound effect on society. Evidence of this “revolutionary” grand narrative is also reflected in literature. For example, early in *Notre-Dame de Paris*, Victor Hugo writes,

The archdeacon gazed at the gigantic edifice for some time in silence, then extending his right hand, with a sigh, towards the printed book which lay open on the table, and his left towards Notre-Dame, and turning a sad glance from the book to the church... “Alas,” he said, “this will kill that.”¹⁰³

“This” the book created by means of the printing press, will kill “that,” architecture, which for Hugo, includes writing and its collaborative substructures and infrastructures. Human beings communicated through architecture—meaning was created and communicated across centuries. Stonehenge, the Parthenon, Notre Dame and other cathedrals serve as good examples of collaborative communication through architecture. Cathedrals were also centres of learning, where, in early scribal culture, manuscripts were created, copied and stored. And where the Church played a significant authoritative role in the production of texts. The printing press, a fundamentally different architecture, was a threat to this ostensibly more durable creation of meaning.

The impact of printing press was historically significant, but more recent scholarship demonstrates that there is more nuance in the view that there was a wholesale movement toward standardization provoked by the printing press.¹⁰⁴ Roger Chartier explains “... numerous kinds of texts—poetic anthologies, political tracts or libels, aristocratic books of conduct, newsletters, libertine and unorthodox text, musical scores—all enjoyed wide

¹⁰² *Ibid* at 46.

¹⁰³ Victor Hugo, *Notre-Dame de Paris*, as quoted in Roger Chartier, “The Order of Books Revisited” (2007) 4:3 *Modern Intellectual History* 509 at 511.

¹⁰⁴ See e.g. Mary Wellesley, *Hidden Hands: The Lives of Manuscripts and their Makers* (London: Riverrun, 2022); see also Michael F Suarez & H R Woudhuysen, *The Book: A Global History* (Oxford: Oxford University Press, 2013); Fernando Bouza, *Corre manuscrito: Una historia cultural del siglo de oro* (Madrid: Marcial Pons Ediciones de Historia, 2001).

circulations through the medium of manuscript.”¹⁰⁵ The reasons for this are numerous.

Scribal publications were cheaper than those that were printed, and they were more amenable to revision and to additions.¹⁰⁶ Additionally, handwritten text could circumvent censorship more nimbly than printed text.¹⁰⁷ In this observation, we also see an instance where the technology of the printing press was entangled with the regulatory mechanism of censorship.

Print also permitted new applications for handwriting; books printed for university scholars included wide spaces so that commentary could be included between the lines of printed text.¹⁰⁸ In fact, evidence from print culture itself dispels the overly simplified idea that the permanence of print overrode the mutability of handwriting. Stop-press corrections and handwritten marginalia resulted in different copies of the same works.¹⁰⁹

David Harvey also articulates that the law struggled to cope with the new framework of the printing press, and as a result, manuscript and printing co-existed for some time.¹¹⁰ He posits that consideration must also be given to first, the fact that printing was regulated by the Crown through the Stationer’s Company, and second, to how lawyers were trained in the Inns of Court and Chancery, where students made case notes by hand and compiled them into casebooks. Along with instruction in an oral tradition, this compiling of case notes was touted as a superior method of learning rather than relying on abridgments in print.¹¹¹

The printing press, however, did effect fundamental change in the law¹¹² facilitating the flow of legal information, laying the groundwork for reliance on printed material by judges and advocates as a record of law; and providing new types of texts circulated for

¹⁰⁵ Chartier, *supra* note 103.

¹⁰⁶ *Ibid.*

¹⁰⁷ *Ibid.*

¹⁰⁸ *Ibid* at 512.

¹⁰⁹ *Ibid.*

¹¹⁰ Harvey, *supra* note 6 at 125.

¹¹¹ *Ibid* at 133.

¹¹² *Ibid* at 1.

students-at-law. It also allowed works of a *vade mecum*¹¹³ nature to enter into use by local officials to promulgate common standard practices, and it assisted in providing access to justice since law and legal information became available in the vernacular.¹¹⁴

The printing press was the first in a series of machines that did things with words which led to developments of other machines doing different things with words.¹¹⁵ The development of the first automatic writing machine—the typewriter—for instance, was built in Italy in 1808 for Countess Carolina Fantoni da Fivizzano, who was visually impaired.¹¹⁶ The typewriter featuring the QWERTY keyboard—the “universal” keyboard—began production in 1873.¹¹⁷ Machines that copied printed words such as the spirit duplicator—more commonly referred to as the “Ditto” machine—developed in 1923¹¹⁸ and was commonly used until it was replaced by other copying technologies, like photocopying which was introduced in 1959.¹¹⁹

This continued technologizing of the word also led to curiosities such as automatic writing, an example of which may be seen reflected in case law. In *Cummins v. Bond* (1927),¹²⁰ the plaintiff was a playwright and novelist, who in her spare time worked as a medium at séances and as a practitioner of automatic writing. Mr. Bond, the defendant, was an architect and automatic writing enthusiast who attended Ms. Cummins’ séances. He agreed

¹¹³ *Vade mecum* is the term used for a type of book kept constantly at hand for consultation purposes. Literal translation from Latin: go with me. D A Kidd & Mary Wade, eds, *Latin Dictionary Plus Grammar* (London: Harper Collins, 1998) sub verbo “vado,” “mecum.”

¹¹⁴ Harvey *supra* note 6 at 1-2.

¹¹⁵ Other machines—which could be labelled “externalities” of the technology of printing—also developed. Air conditioning, for instance, was accidentally invented by Willis Carrier while developing a dehumidifier for a New York printer in 1902. See “History of Printing Timeline”, online: *American Printing History Association* <<https://printinghistory.org/timeline/>>.

¹¹⁶ See Michael Adler, *The Writing Machine: History of the Typewriter* (London: Allen & Unwin, 1973); see also Carey Wallace, *The Blind Contessa’s New Machine*, (London: Penguin, 2010).

¹¹⁷ The Sholes & Glidden Type Writer began production in 1873 and appeared in the US market in 1874. Its successor, Remington, became a dominant presence in the industry. See Richard Polt, *The Typewriter Revolution: A Typist’s Companion for the 21st Century* (Woodstock, VT: Countryman Press, 2015) at 67.

¹¹⁸ “History of Printing,” *supra* note 115.

¹¹⁹ *Ibid.*

¹²⁰ *Cummins v Bond*, [1927] 1 Ch 176, 136 LT 368.

to transcribe and edit the “automatic writing” which was in a form of archaic English that Ms. Cummins produced while in a trance. Occasionally, he would annotate the work, adding some historical content. Mr. Bond published several sections of the material he transcribed in a spiritual paper. Ms. Cummins sued, claiming copyright in the work. While this is arguably a predecessor of the famous “death of the author” debate in literary theory, which will be discussed in Chapter 2, it is also feasibly a consequence of the rise of non-human entities doing things with words.

Other machines, such as the Enigma machine, also did things with hidden words.¹²¹ This led to Alan Turing’s invention of the “Bombe”—a machine that could imitate the words of another machine, and named for the clicking sound it made, much like a timer bomb fuse.¹²² While “Bombe” could only solve the problem of cracking the Enigma keys, prior to World War II, Turing had had the idea of a theoretical machine that could be programmed to solve any problem. After the War, he used the experience he gained to build some of the world’s first computers.¹²³

By 1950, Turing altered his focus so that his interest lay not in a machine simulating another machine, but in a machine being able to imitate a human. He developed a method of

¹²¹ Patented in 1918 by Arthur Scherbius, the Enigma machine was initially developed as a device for sending confidential documents, using mono-alphabetic substitution (also known as the Caesar cipher), where words are transformed by aligning two alphabets and shifting the cipher alphabet “x” number of positions. The following phrase demonstrates a Caesar cipher using a left rotation of three positions (which is also equivalent to a right shift of 23): Plaintext: DOING THINGS WITH WORDS. Ciphertext: ALFKD QEFKDP TFQE TLOAP. The Caesar cipher is attributed to Julius Caesar who enciphered messages to Cicero and others when discussing matters of a confidential nature. See Joshua Holden, *The Mathematics of Secrets: Cryptography from Caesar Ciphers to Digital Encryption* (Princeton: Princeton University Press, 2019), DOI: <10.1515/9780691184555>.

¹²² Turing worked for the Government Code and Cypher School at Bletchley Park, where he was tasked with deciphering the Enigma machine’s codes. Turing realized that his approach based on the use of cribs to break the key was capable of being mechanised. Cribs compare patterns of the encrypted message and known portion of plain text. See “The Turing-Welchman Bombe” online: *The National Museum of Computing* <www.tnmoc.org/bombe>. Note that prior to World War II, Polish mathematicians were the first to break the Enigma cipher, using a Bomba machine. They provided valuable pre-war information on the simpler cipher techniques. With the changes to the Enigma, the Polish Bomba became obsolete. See Harald Schmidl, “On Enigma and a Method for its Decryption”, online: <www.cs.miami.edu/home/harald/enigma/>.

¹²³ Turing is often referred to the “father of computer science.” See e.g. Nicola Davis, “The Father of Modern Computing: Alan Turing’s Legacy”, *The Guardian* (15 July 2019), online: <www.theguardian.com/science/2019/jul/15/alan-turing-father-of-modern-computing-50-pound-note>.

inquiry into artificial intelligence, which is known today as the “Turing Test,”¹²⁴—or the Imitation Game. This test is a rudimentary way of determining machine intelligence, based on whether a machine can imitate the speech of humans, and thus count as intelligent.¹²⁵ Turing based his test on language, the most complex system available as a criterion, to determine whether a machine could pass as a human. He viewed language and its use to be the ultimate determination in what makes a human “human.” Turing made the prediction that at the end of the twentieth century “the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted.”¹²⁶

Language also became a focal point for understanding belief and representation in Western philosophy at the outset of the twentieth century.¹²⁷ This marked a turn from metaphysics to linguistics and brought the relationship between philosophy and other disciplines into focus. In law, for example, Hart developed an innovative approach to explaining the manner in which law functions by way of the philosophy of language.¹²⁸

Philosophers and logicians like Frege and Russell concentrated on building a perfect language for philosophical and scientific communication—one that avoided the ambiguities

¹²⁴ In order to consider the question of whether or not machines can think, Turing describes a simple problem, which he calls the imitation game. It involves three players: a man (A), a woman (B), and an interrogator (C), who may be either gender. The interrogator, who is located in a separate room from A and B, is permitted to pose questions in writing to either A or B. Turing tells us “...the object of the game for the interrogator is to determine which of the other two is the man and which is the woman.” The other two—that is to say, A and B—provide typewritten responses to the interrogator’s questions. B is asked to help the interrogator by providing truthful answers. Turing then proposes that the role of A be played by a machine instead of a man. Turing asks, “Will the interrogator decide wrongly as often when the game is played like this as he does when the game is played between a man and a woman?” This question replaces the original, “can machines think?” And the role of the interrogator becomes to determine which of the players is a machine and which is a person. The outcome of Turing’s game is that a computer, which exhibits intelligence under these conditions, should be counted as intelligent. And with intelligence, imitation is as good as the real thing. See Alan M Turing, “Computing, Machinery and Intelligence” (1950) LIX:236 *Mind* 433.

¹²⁵ Today, the Turing Test has become the gold standard benchmark determining whether an AI has achieved human-level intelligence.

¹²⁶ Turing, *supra* note 124 at 442.

¹²⁷ See generally Michael Beaney, ed *The Oxford Handbook of the History of Analytic Philosophy*, 1st ed (Oxford: Oxford University Press, 2013).

¹²⁸ Hart, *supra* note 64.

ostensibly present in everyday language.¹²⁹ Other philosophers, like J. L. Austin and later Wittgenstein, were interested in how ordinary language functioned as an independent phenomenon for analysis.¹³⁰

Furthermore, World War Two changed the traditional Platonic understanding of truth and language—from a metaphysical worldview to one that focused on what words actually meant and did in everyday use. The then “new” philosophy of language that focused on empirical phenomena further developed, and was buoyed, in an intellectual climate that was characterized by a distrust in ideology and one linked to increasingly intelligent machinery that did things with words.

This overview of the relationship of law and language demonstrates that law is made up of and uses language. Law is also like language in that it consists of social rules that aid in the organization of society. Further, we see that with the technologizing of language and its tools, just how inextricably law and language are linked. From the time that we first wrote words down, we have been invested in the “technologizing of the word.”¹³¹ There is a clear trajectory of our interest in having machines do things with language that we would otherwise do ourselves.

We have also seen that sometimes the law and language and their relationship have been unstable—specifically with the invention of the printing press, whereby book production and legal education practices vacillated between manuscript and print culture.¹³² Thus, a more apropos analogy is that law exists concomitantly with language.

As we transition to the information age, where writing is an extension of artificial minds, this concomitant relationship between law and language is at the fore. Viewed in this

¹²⁹ Oswald Hanfling, *Philosophy and Ordinary Language and the Bent and Genius of our Tongue* (London: Routledge, 2000) at 1.

¹³⁰ *Ibid* at 3.

¹³¹ Ong, *supra* note 5.

¹³² Harvey, *supra* note 6.

way, using language to elucidate the nature of law is the starting point for this investigation of the code-ification of legal language with the use of algorithmically driven technologies.

III: Language as the Lynchpin in the Philosophy of Law

Hart's *The Concept of Law* is arguably the first work in legal philosophy that employs a rigorous use of the philosophy of language to draw out how to best understand the nature of law, and consequently where it draws its authority. Hart's analytic philosophy is also a form of modified positivism. In order to delve more deeply into understanding Hart's theory, it is helpful to flesh out cursorily the three categories into which legal philosophy falls: analytical, normative, and critical areas of study.

Analytic legal philosophy is descriptive, and it seeks to explain what law is, why, and also examine its consequences. Conceptual theories of law are divided into two categories: first, those which see a necessary conceptual relation between law and morality; and second, those theories that deny an essential conceptual relation between law and morality.

The natural law tradition is one of the theories that views a necessary conceptual relation between law and morality; this also referred to as the "overlap thesis." The range of ideas about natural law is huge in scope. One way of narrowing the scope, is to further subdivide it into classical natural law, which may be traced to Plato,¹³³ who strove to examine the essence of how to live a good life, and the modern natural law tradition, which developed out of the former classical tradition. The modern theories have moved beyond simply understanding human nature by way of human capacity.¹³⁴ John Finnis' natural law theory,

¹³³ According to Finnis, "[t]he dialectic undertaken by Plato with scepticism, and with the prototypes of modern utilitarianism and pragmatism, is a dialectic carried forward more or less continuously to this day. His conceptual apparatus and argumentative strategies are employed by Aristotle, Cicero, Augustine, and Aquinas, not to mention the works of Shakespeare and many others." See John Finnis, *Philosophy of Law* (Oxford: Oxford University Press, 2011) at 93.

¹³⁴ Finnis explains, "...the break between 'modern' and 'classical' natural law theories should be located, fundamentally, in the loss of the classical theorists' insight that one comes to understand human nature only by understanding human capacities, and these capacities in turn only by understanding the acts which actualize

for example, holds that the essential meaning of law is that of an act of practical reasonableness formed by a suitable authority for the common good.¹³⁵

The other category of analytic legal philosophy involves those theories that deny a conceptual relation between law and morality. For example, at the outset of the nineteenth century, legal positivist John Austin claimed that laws were the command of the sovereign, backed by threat of punishment in the event of non-compliance.¹³⁶ He found “the existence of law [to be] one thing, its merit or demerit another.”¹³⁷ Put differently, nothing about law as an institution ensured its moral quality. This is referred to as the “separability thesis.” Twentieth-century legal positivists, like Hart, however, rejected the view that coercion was essential in complying with the law. Coercion vaporizes the potential for conceptual questions like “what is law?” It provides no space for curious inquiry.

Legal positivists then disagree on the extent to which—if any—morality plays in legal systems. Thus, legal positivism may be further divided into inclusive and exclusive positivism. Hart, who saw the connection between law and morality to be conceptually possible but not necessary, is an example of inclusive positivist.¹³⁸

Joseph Raz, alternatively, is an exclusive positivist. Raz defends what he refers to as the “sources thesis” which is also referred to as his strong social thesis.¹³⁹ This means that all law is source-based and may be determined by reference to social facts only. In other words,

them, and those acts only by understanding their ‘objects,’ that is, the goods they attend to attain. Those goods are the *reasons* we have for action, and nothing in moral, political, or legal theory is well understood save by attending to those goods with full attention to their intrinsic worth, the ways they fulfil and perfect human persons, and their directiveness or normativity for all thinking about what is to be done.” *Ibid* at 99.

¹³⁵ See John Finnis, *Natural Law and Natural Rights*, 2nd ed (Oxford: Oxford University Press, 2011).

¹³⁶ John Austin, *The Province of Jurisprudence Determined*, Wilfrid E Rumble, ed, (Cambridge: Cambridge University Press, 1995) at 3-9.

¹³⁷ *Ibid*, 157.

¹³⁸ Hart, for instance, maintained that “the rule of recognition may incorporate as criteria of legal validity conformity with moral principles or substantive values...” Hart, *supra* note 64 at 250. Inclusive positivism is also referred to as “soft positivism” and “incorporationism” and “inclusive legal positivism.” See e.g. Jules Coleman, “Authority and Reason,” in Robert George ed, *The Autonomy of Law* (Oxford: Oxford University Press, 1999); see also Wilfrid J Waluchow, *Inclusive Legal Positivism* (Oxford: Oxford University Press, 1994).

¹³⁹ Joseph Raz, *The Authority of Law: Essays on Law and Morality* (Oxford: Clarendon Press, 1979) at 47.

law is the subject of non-moral social facts.¹⁴⁰ Moral aspects, according to Raz, are incorporated in a weak social thesis, which he views as “extra-legal” and cannot be included in deciding questions of law.¹⁴¹

Hans Kelsen is also a positivist, but his theory of law avoids the inclusivity-exclusivity dichotomy. Kelsen’s pure theory of law involves a pyramidal hierarchy of norms with a *Grundnorm* as its foundational norm.¹⁴² This fictional *Grundnorm* determines the content and verifies other norms that stem from it. The foundational norm draws its validity from the fact that it has been understood and accepted by a variety of individuals within society. Kelsen’s theory creates normativity out of empiric reality without resorting to morality. In other words, he explained law’s normativity through the hypothetical *Grundnorm* rather than through resorting to any sort of evaluative morality-based criteria.

Ronald Dworkin, on the other hand, rejects the tenets of positivism in his theory of law as integrity.¹⁴³ He does this on the ground that there exist some legal standards where authority cannot be explained in terms of social facts. Dworkin argues that legal positivists are unable to clarify or explain the significance of legal principles.¹⁴⁴ Dworkin sees rules as “applicable in an all-or-nothing fashion,” while principles have “the dimension of weight or importance.”¹⁴⁵ Another way of looking at this is that law as a system of rules produces problem cases as a result of their binary law/not law nature and these cannot be solved

¹⁴⁰ The Sources Thesis may be unravelled as follows: the law lays claim to authority, and as a means to claim that authority, the law must have definite features that are characteristic of authorities. Those features only harmonize with the Sources Thesis. Therefore, the Sources Thesis is true. According to Raz then, law is an authoritative social institution. It is *de facto* authority.

¹⁴¹ Raz, *supra* note 139 at 50.

¹⁴² Hans Kelsen, *Pure Theory of Law*, trans Max Knight (Berkeley: University of California Press, 1967).

¹⁴³ Dworkin, *supra* note 33.

¹⁴⁴ Dworkin offers several examples of these types of disagreements to make his point. *Riggs v. Palmer*, for instance, brought up the question of whether a person may inherit under a will when they murdered the testator in order to inherit. Whether a murderer could inherit was uncertain as there was no applicable exception under the rules of succession. The court decided, however, that the application of rules was subject to the principle of law, *Nullus commodum capere (potest) de sua injuria propria* (“No advantage (may be) gained from one’s own wrong”). The murderer, as a result, could not inherit from his victim. This decision shows that in addition to rules, the law includes principles. *Ibid* at 15-20.

¹⁴⁵ Ronald Dworkin, *Taking Rights Seriously* (Cambridge: Harvard University Press, 1977) at 24.

through their logical application. Non-rule standards—principles and policies—also apply in a determination of what the law is. In “hard cases,” judges may have to consider looking beyond the strict letter of law to determine what the law ought to be.¹⁴⁶ They engage in a process of interpretation that involves moral claims. This interpretative aspect is fundamental to Dworkin’s justificatory theory of law.¹⁴⁷

Critical theories of law are skeptical of the analytic and normative areas of jurisprudence.¹⁴⁸ While the previous analytic and normative theories are seemingly critical of each other, and indeed, at times, within themselves, critical theories are reformist. Wacks provides a succinct overview of critical theories as follows:

They reject what is taken to be the natural order of things, be it the free market (in the case of Critical Legal Studies (CLS)), “meta-narratives” (postmodernism) or the conception of “race” (critical race theory (CRT)) and patriarchy (in the case of feminist jurisprudence).¹⁴⁹

This is not an exhaustive list since, for instance, legal pluralism is not included. Further, these critical movements may also be further subdivided. For example, feminism may be further broken down into liberal feminism, radical feminism, cyberfeminism, and so on. The movements with this broad category of critical legal theory reject the notion that there is a universal, objective aspect underpinning law and legal theory. For critical legal theorists, law is “uncertain, ambiguous, and unstable.”¹⁵⁰ And, often by their very nature, these theories are interdisciplinary, antiauthoritarian, and hold that the public and legal spheres are inseparable.

¹⁴⁶ The term “hard case” is integral to Dworkin’s anti-positivist theory. A hard case arises when “no settled rule dictates a decision either way.” *Ibid* at 83.

¹⁴⁷ Of noteworthiness is that in Dworkin’s last publication *Justice for Hedgehogs*, he revises the jurisprudential issue of the relationship between law and morality, reformulating it from a two-system picture to a “one system picture [where] law is part or aspect of morality.” He explains that the answer to the question of how law develops into a part of morality “will centre on the phenomenon of institutionalization.” This would seem like a reversal of his “semantic sting” Language may be viewed as a social institution. See Ronald Dworkin, *Justice for Hedgehogs* (Cambridge, MA: Harvard University Press, 2011) at 405.

¹⁴⁸ Critical theories of law may also be referred to as what Professor Peter Oliver labels “companion theories” of law in his graduate course *Méthodologie et théorie de la recherche juridique* (DCL 8730) at the Faculty of Law, University of Ottawa.

¹⁴⁹ Raymond Wacks, *Understanding Jurisprudence: An Introduction to Legal Theory*, 6th ed (Oxford: Oxford University Press, 2021) at 344.

¹⁵⁰ *Ibid*.

The theories within in each of these broader categories of legal philosophy—analytic, normative, and critical theories of law—hold merit. Each has something to offer an investigation into the nature of law as we increasingly rely on AI technologies. However, since this dissertation is particularly focused on algorithmically driven technologies that test the limit of doing things with language that may well pass a Turing Test such as GPT-3, Hart’s philosophy of law with its focus on language seems to be a potentially profitable starting point. If law exists concomitantly with language, can the same conclusion be reached with coded language? To better understand the nature of law in the Algorithmic Turn, looking at philosophy that has previously focused on language may be beneficial.

Hart rejected the nineteenth-century Austinian command model of law, which focused on the concept of coercion as a threat and denies any connection between law and morality. Hart replaced this model with a more subdued version of legal positivism that stipulates that there is neither a logically necessary connection between law and coercion, nor between law and morality. He did this through focusing on what words were actually doing. Put differently, the driving force behind Hart’s revamped positivism is linguistic analysis.

Hart explains,

...[t]o command is characteristically to exercise authority over [people], not power to inflict harm and though it may be combined with threats of harm, a command is primarily an appeal not to fear but to respect for authority.¹⁵¹

Hart not only rejects coercion as distinctively part of how we understand law, but also that there is more to this notion of “authority” which makes commands components of a legal order. Instead, commands take the shape of authoritative rules or norms.

Hart replaces the idea of a “command” with that of a “social rule.” He further claims that law is a system of social rules that are made up of a union of primary and secondary rules. This is key to understanding Hart’s approach: the question of “what is law” cannot be

¹⁵¹ Hart, *supra* note 64 at 20.

answered without recourse to authoritative rules.¹⁵² These authoritative rules are made from language. At the core of all this thinking about what law is and where its source of authority lies, is language. It is the lynchpin.

Hart distinguishes between primary rules of obligation, which impose duties, and secondary rules—or power-conferring rules—which lead to competence.¹⁵³ Secondary rules, he divided into three types: rules of recognition, which are fundamental since they are used to understand and clarify other rules; rules of change, which make and alter laws; and rules of adjudication, which settle disputes of interpretation within the law.¹⁵⁴ This elucidation of primary and secondary rules is foundational to his view that law is analytically connected to the concept of authority.

Indeed, Hart's entire framework for his concept of law is ordinary language philosophy. Hart described his book as,

...an essay in descriptive sociology; for the suggestion that inquiries into the meaning of words merely throws light on words is false. Many important distinctions, which are not immediately obvious, between types of social situations or relationships may best be brought to light by an examination of the standard uses of the relevant expressions and of the way in which these depend on social context, itself often left unstated. In this field of study it is particularly true that we may use, as Professor J. L. Austin said "a sharpened awareness of words to sharpen our perception of the phenomena."¹⁵⁵

Hart's methodology focuses on how we use the word "law"—or the illocutionary aspect of "law"—rather than on defining law. This is evident from the title of the book—the "concept" of law rather than the "definition" of law. He was interested in how regular, everyday words in particular contexts formed a type of descriptive sociology and how those words in context

¹⁵² Other scholarship also makes this point. In her work on the ambiguity in which Hart employs the concept of authority in his explanation of the nature of law, Groudine, for example, states that Hart's replacement of social rule for command and his union of primary and secondary rules to be "essential moves in his argument to establish the position that without *authoritative* rules, there is no law." See Candace J Groudine, "Authority: H. L. A. Hart and the Problem with Legal Positivism" (1980) 4:3 J of Libertarian Studies 273 at 274.

¹⁵³ Hart, *supra* note 64 at 79.

¹⁵⁴ *Ibid* at 92-95

¹⁵⁵ *Ibid* at vii

were crucial to understanding social institutions like law. Language was both Hart's methodology and his metaphor for authority: he used ordinary language philosophy to elucidate the nature of law, and he employed language, specifically "rule," to explain the source of law's authority.¹⁵⁶

It would be remiss not to acknowledge that Hart's turn to language was not without its criticism. For example, Leslie Green, editor of the third edition of *The Concept of Law*, pens a rather deprecatory foreword. He acknowledges the presence of ordinary language philosophy "...colour[ing] the rhetoric of the book including, of course, its title," however, he continues "...what is most striking, given its vintage and provenance, is how little linguistic analysis there is in it."¹⁵⁷ Green misses the fact Austin's ordinary language philosophy is the very framework for *The Concept of Law*.

Most noteworthy of the criticisms is that of Dworkin, who argued that Hart's focus on language had a noxious effect on his approach to legal theory. He believed that Hart suffered from a "semantic sting."¹⁵⁸ Dworkin viewed Hart as having wrongly believed that lawyers followed particular linguistic criteria for deciding claims of law.

In *Law's Empire*, Dworkin delineates the views of those who suffer from the semantic sting:

We follow shared rules, they say, in using any word: these rules set out criteria that supply the word's meaning. Our rules for using [the word] "law" tie law to plain historical fact... We all use the same factual criteria in framing, accepting, and rejecting statements about what the law is, but we are ignorant of what these criteria are. Philosophers of law must elucidate them for us by a sensitive study of how we speak. They may disagree among themselves, but that alone casts no doubt on their

¹⁵⁶ The role of language in understanding law that was key to Hart's conceptual analysis effectively remained ignored for two decades until Ronald Dworkin took issue with what he characterized as a "semantic sting" in Hart's thinking. He believed that Hart had an unsound view of language and of the relation between law and language. According to Dworkin, semantic theories are problematic when they "...suppose that lawyers and judges use mainly the same criteria (though these are hidden and unrecognized) in deciding when propositions of law are true or false; they suppose that lawyers actually agree about the grounds of law." See Dworkin, *supra* note 33 at 33. Dworkin's concern focused on disagreement. He deduced that Hart's conceptual analysis of law as a system of social rules prevents lawyers and judges from having substantive disagreements about the law.

¹⁵⁷ Hart, *supra* note 64 at x.

¹⁵⁸ Dworkin, *supra* note 33 at 45.

common assumption which that we do share some set of standards about how “law” is to be used.¹⁵⁹

For Dworkin, the semantic sting results in talking at cross purposes and does not adequately deal with disagreement.

Thus, Dworkin embarks on a “fresh start,” taking, instead, a constructive interpretivist’s approach, which he describes as having the three following stages: first, a pre-interpretive stage identifying rules and standards that constitute the practice; second, an interpretive stage in which decisions are made in respect of reasoning for those aspects identified in the pre-interpretive stage; and third, a post-interpretive stage in which one tailors their sense of what is really required so as to better accommodate the reasoning attained in the interpretive stage.¹⁶⁰ Of these three stages, the interpretive stage is most important.

Further, Dworkin sees that there are two aspects to a successful interpretation: first, through fit, which requires that the decision must be made in conformity with existing legal material; and second, through justification, which requires that decision in law be morally sound.¹⁶¹ The law, in this way, will never run out.

To understand “fit,” Dworkin uses the idea of the chain novel and its rapport with literary interpretation. He argues that when we try and interpret a work of art, we aim to understand it in a particular fashion, and we try to do so accurately. We aim to discover the intentions of the author with the goal of giving the novel the best account of it that we can. Dworkin envisions law requiring the same type of interpretation—that judges are merely interpreters in a developing story. Judges, according to Dworkin, acknowledge their duty and develop, as a result of their own beliefs, theories of the most effective interpretation. Judges are like authors engaged in a chain novel, with each judge writing a new chapter that is added

¹⁵⁹ Dworkin, *supra* note 33 at 31-32.

¹⁶⁰ *Ibid* at 65-66.

¹⁶¹ *Ibid* at 67-68.

to what the next novelist (judge) receives. Each novelist tries to write their chapter so that the result will be coherent, and to accomplish this, they require a vision of the storyline as it proceeds. Their aim, posits Dworkin, is to try and find the meaning in the developing story, and an interpretation that best explains it.

While at first blush, Dworkin's presumptions about a chain of authoring have implications for trying to understand concepts like originality and authorship in the context of algorithms that will be taken up in Chapter 2, two things are of noteworthiness. First, at the heart of law as interpretation—itself, a simile or figure of speech—there is language. In order to interpret something, you first must have to understand the system that you are employing to interpret the words on a page—or notes of music on a page, to employ another example. You cannot interpret something without first having a command of the language that you are using. In other words, you must understand “how to do things with words” before employing them in an act of interpretation.

Second, in Dworkin's last publication *Justice for Hedgehogs*, he revises the jurisprudential issue of the relationship between law and morality, reformulating it from a two-system picture to a “one system picture [where] law is part or aspect of morality.” He explains that the answer to the question of how law develops into a part of morality “will centre on the phenomenon of institutionalization.”¹⁶² Since language may be viewed as social institution, the implication here may be a reversal of the “semantic sting.” Put differently, understanding whether or not law is a one-system or two-system picture—whether law and morality are separate or connected—depends upon the way in which law is established as convention. This seems to vindicate the role of ordinary language philosophy—in a sense, a “semantic ring.”

¹⁶² Dworkin, *supra* note 145 at 405.

IV. Theoretical Framework: Speech-Act Theory

Drawing on Hart, this dissertation employs speech-act theory as the theoretical framework for investigating the nature of law, language, and authority in the Algorithmic Turn. Speech-act theory was developed by ordinary language philosopher J. L. Austin in the posthumously published work, *How to Do Things with Words*.¹⁶³ Austin, who is known as the archetypal ordinary language philosopher, produced the first systematic account of the use of language focusing on its performative dimension.¹⁶⁴ Austin sought to dissolve what he referred to as the “value/fact fetish”¹⁶⁵ of logical positivism. He saw the purported logical polarity between factual and evaluative statements to be unproductive, favouring instead on terms that perform evaluative and descriptive roles. We might refer to Austin then as a “post-positivist.”

A speech act is the basic unit of communication. Speech-act theory is concerned with language as a form of action and effects as much as a medium for transmitting information. In other words, speech acts are what we do with words, and they illuminate the possibility that language may do other things than just describe reality. In *How to Do Things with Words*, Austin positions himself in opposition with the dominant positivist stance, which views utterances as descriptive and therefore always true or false. Instead, Austin posits language to be a mode of action, which merits equal philosophical attention. He provisionally sets up a distinction between statements that are descriptive and can hold truth-value—what he refers to as constative utterances—and those that perform or act and do not hold truth-value—performative utterances.

¹⁶³ Austin held the White’s Chair of Moral Philosophy at the University of Oxford from 1952 until his death 1960; in 1955, he gave a number of talks that were open to the public as part of the William James Lecture series at Harvard University, which were published posthumously in 1962. See Austin, *supra* note 65.

¹⁶⁴ Hanfling, *supra* note 129 at 8.

¹⁶⁵ Austin, *supra* note 65 at 151.

Since performative utterances act, Austin finds that they do things with words rather than simply convey information. A good example of the performative is a judicial declaration. The rules of the International Court of Justice, for example, require that judges make the following declaration at the first public sitting after a judge's term of office begins: "I solemnly declare that I will perform my duties and exercise my powers as judge honorably, faithfully, impartially and conscientiously."¹⁶⁶ The judicial declaration is much more than a descriptive act of speech. Rather, it puts into force what a judge will do in their term of office.

Furthermore, since performatives hold no truth-value, the most appropriate way of evaluating them is in terms of "felicity" or "infelicity"—or, put in other words, "happiness" or "unhappiness." A felicitous—or happy—performative is one which performed correctly and has its intended effect. An infelicitous—or unhappy performative—on the other hand, is one which was uttered in a wrongful manner—in the wrong circumstance or through an incomplete procedure. The performative, then, is hollow and has no effect.

There is evidence that Austin drew on other disciplines in developing speech-act theory. In the first chapter of *How to Do Things with Words*, for example, he acknowledges that the term "operative" and its legal use in a deed or a document to effect a transaction comes closest to his proposed term, "performative." Austin attributes this observation to his colleague, Hart, who held the Chair in Jurisprudence at Oxford at the same time Austin was at Oxford.¹⁶⁷ In fact, Hart and Austin were founding members of a Saturday morning class for Philosophy tutorial Fellows at Magdalen Hall in 1947. The aim of those meetings was to discuss texts such as those by Aristotle and to resolve philosophical questions through

¹⁶⁶ The International Court of Justice, "Rules of the Court" (1978) article 4:1, online: <www.icj-cij.org/rules>.

¹⁶⁷ Austin, *supra* note 65 at 7n.

applying Austin's linguistic analysis. The Fellows would then pass on the ideas that were debated to undergraduate students.¹⁶⁸

In continuing his rigorous analysis, Austin eventually reveals that his distinction between constative and performative utterances is faulty—that, in fact, to utter any word is to perform an act. He therefore calls for a “fresh start” to his analysis and revises his model.¹⁶⁹ In this new model, Austin identifies three types of forces within an utterance: the locutionary, which is the literal meaning of what is said; the illocutionary, which is the act performed or the social meaning of what is stated; and the perlocutionary, which is the effect of what was declared.¹⁷⁰ Austin was most interested in the illocutionary aspects of speech acts, or their intent. He concludes by identifying five classes of acts performed in words:

‘verdictives’ pertain to the giving of verdicts, ‘exercitives’ to the exercise of power, ‘commissives’ to what we promise or undertake, ‘behavitives’ to our social behaviour, and ‘expositives’ to the force of our words in spoken or written discourse.¹⁷¹

Speech-act theory has developed within philosophy.¹⁷² It has also impacted “...areas at the interface between philosophy and neighbouring disciplines.”¹⁷³ Law, for instance, is a discipline in which language performs actions—it contracts, bequeaths, apologizes, and requests. It is also a discipline that is intently concerned with the use of ordinary or plain language in order to avoid ambiguity. Hart, as previously noted, makes us aware of the influence that Austin's speech-act theory had upon him.¹⁷⁴ One could even suggest—and this

¹⁶⁸ See Nicola Lacey, *A Life of H. L. A. Hart: The Nightmare and the Noble Dream* (Oxford: Oxford University Press, 2004) at 133-34.

¹⁶⁹ Austin, *supra* note 65 at 91.

¹⁷⁰ *Ibid* at 109.

¹⁷¹ See Irena R. Makaryk, ed, *Encyclopedia of Contemporary Literary Theory* (Toronto: University of Toronto Press, 1993) at 194.

¹⁷² See John Searle, *Speech Acts: An Essay in the Philosophy of Language* (New York: Cambridge University Press, 1969).

¹⁷³ Martin Gustafsson and Richard Sørli, eds, *The Philosophy of J. L. Austin* (New York: Oxford University Press, 2011) at 17.

¹⁷⁴ Hart, *supra* note 64 at vii.

is evident in *The Concept of Law*—that law is a “felicitous” fit for Austin’s ordinary language philosophy.

More recently, speech-act theory has been investigated as a means of mitigating the language of criminal law, particularly in the notion of responsibility;¹⁷⁵ it is used as an innovative approach for accommodating the three traditional components of a contract;¹⁷⁶ it has been used as an alternative to understanding law as either doctrinal or propositional;¹⁷⁷ it is the basis for the notion of interpretive communities, which has been used to describe those who work in particular areas within the field of international law;¹⁷⁸ and it has been used to examine law’s evolution.¹⁷⁹ Speech-act theory has also developed in “law and society” scholarship,¹⁸⁰ and within the humanities in a variety of its branches, such as literature,¹⁸¹

¹⁷⁵ See e.g. Daniel B Yeager, *J. L. Austin and the law: Exculpation and the Explication of Responsibility* (Lewisburg: Bucknell University Press, 2006); see also Harm Kloosterhuis, “Insult in Context: Incorporating Speech Act Theory in Doctrinal Legal Analysis of Interpretive Discussions” (2015) 3 *Erasmus L Rev*, online: <http://www.erasmuslawreview.nl/tijdschrift/ELR/2015/3/ELR-D-15-003_005/fullscreen>; J P Fassnidge, “Criminalisation as a Speech-Act: Saying Through Criminalising (1 April 2024) *Criminal Law and Philosophy*, online: <abdn.elsevierpure.com/en/publications/criminalisation-as-a-speech-act-saying-through-criminalising>.

¹⁷⁶ See e.g. Sanford Schane, “Contract Formation as a Speech Act” in Peter M. Tiersma and Lawrence M. Solan, eds *The Oxford Handbook of Language and Law* (Oxford: Oxford University Press, 2016) at 100; see also Peter Meijes Tiersma, “The Language of Offer and Acceptance: Speech Acts and the Question of Intent” (January 1986) 74:1 *California L Rev* 189; Elizabeth A Janicki, “Contracts as Speech Acts: Bringing Jakobson to the Conversation” (2015) 107 *Georgetown L J* 201, online: <www.law.georgetown.edu/georgetown-law-journal/wp-content/uploads/sites/26/2018/12/Contracts-as-Speech-Acts-5.pdf>.

¹⁷⁷ See e.g. Marianne Constable, *Our Word is Our Bond: How Legal Speech Acts* (Stanford: Stanford Law Books, 2014); see also Kloosterhuis, *supra* note 172.

¹⁷⁸ See Michael Waibel, “Interpretive Communities in International Law” in Andrea Bianchi, Daniel Peat & Matthew Windsor, eds *Interpretation in International Law* (Oxford: Oxford University Press, 2015) at 150.

¹⁷⁹ See Hildebrandt, *supra* note 6; see also Allan Beever, *Law’s Reality: A Philosophy of Law* (Northampton, MA: Edward Elgar, 2021).

¹⁸⁰ See e.g. Marett Beiboff, “Challenging the Legal Self Through Performance” in Simon Stern, Maksymilian Del Mar & Bernadette Meyler, eds *The Oxford Handbook of Law and Humanities* (Oxford: Oxford University Press, 2020) at 317; see also Daniel W Harris & Rachel McKinney, “Speech-Act Theory: Social and Political Applications” in Justin Khoo & Rachel Sterken, eds, *Routledge Handbook of Social and Political Philosophy of Language* (New York: Routledge, 2021); E Camp, “Just Saying, Just Kidding: Liability for Accountability-avoiding Speech in Ordinary Conversation, Politics and Law” in L R Horn, ed, *From Lying to Perjury: Linguistic and Legal Perspectives on Lies and Other Falsehoods* (Berlin: de Gruyter) at 227.

¹⁸¹ See e.g. Mary Louise Pratt, *Towards a Speech Act Theory of Literary Discourse* (Bloomington: Indiana University Press, 1977); see also Richard Ohmann, “Speech Acts and the Definition of Literature” (1971) 4:1 *Philosophy & Rhetoric* 1 at 14, 18 (on literary mimesis and quasi-speech acts put before the reader); Stanley Fish, “How to Do Things With Austin and Searle” in *Is There A Text in This Class?: The Authority of Interpretive Communities* (Cambridge: Harvard University Press, 1980) 200 at 245 (arguing for a reconsideration of speech-act theory).

psychology,¹⁸² and gender studies.¹⁸³ Speech-act theory has even been used in AI research as a design and interpretation tool for communication between humans and artificial agents.¹⁸⁴

Throughout the twentieth century, speech-act theory was used to help us better understand not only how human beings communicate with each other, but also how language is used within particular branches of knowledge. With this in mind, I am employing speech-act theory as conceptual framework for illuminating the nature of law, language, and authority in the Algorithmic Turn.

V. Methodology

My research on how the relationship of law and language is impacted with the use of algorithmically driven technologies, and the consequences for the changing nature of authority fall into what Flick categorizes as a “pluralization of life worlds.”¹⁸⁵ The phrase draws on Jürgen Habermas’ notion of “new obscurity,” and aims at capturing our current model of diverse, individualized ways of living in society, as the older model, based on social inequality, is slowly dissolving.¹⁸⁶ Since the knowledge of the “lifeworld” in the Algorithmic Turn is limited, and yet its possibilities, unlimited, a qualitative approach that seeks to explore and understand concepts rather than, for example, a testable hypothesis, is needed. Further, each pillar of my research—authorship, algorithmic contracts, algorithmic harm—is

¹⁸² See e.g. Michael Billig, *The Hidden Roots of Critical Psychology: Understanding the Impact of Locke, Shaftesbury and Reid* (London: Sage Publications, 2008); see also Luica Reyes et al, “Language and Therapeutic Change: A Speech Acts Analysis” (2008) 18:3 Psychotherapy Research 355, DOI: <10.10503300701576360>.

¹⁸³ See e.g. Judith Butler, *Gender Trouble* (New York: Routledge, 1999); see also Susan Etta Keller, “Doing Things with the Language of Law and Gender: Using Speech Act Theory to Understand Meaning and Effect of the Gender Identity Backlash” (2024) 24:1 Nevada L J 413; Hao Liu & Mengyu Qian, “A Study on Gender Difference in Speech Act Refusal of Chinese College Students” (2017), 53 *Advances in Economics, Business and Management Research* 289, online: <creativecommons.org/licenses/by-nc/4.0/>.

¹⁸⁴ See e.g. C L Sidner, “An Artificial Discourse Language for Collaborative Negotiation” in *Proceedings of the Twelfth National Conference on Artificial Intelligence*, Seattle, WA 1-4 August 1994, 814-19; see also P R Cohen & H J Levesque, “Communicative Actions for Artificial Agents” in *Software Agents* by M B Jeffrey, ed, (Cambridge: MIT Press, 1997) at 419.

¹⁸⁵ See Uwe Flick, *An Introduction to Qualitative Research*, 6th ed (London: Sage Publications, 2018) at 3.

¹⁸⁶ *Ibid.*

inductive in nature, moving from particular observations and analysis toward broader understandings, allowing for open-mindedness and an overall evolving design.¹⁸⁷ This contrasts with a quantitative approach, which is deductive in nature, moving from the general to the specific.

In order to collect this qualitative data, my overarching approach is interpretivist, thus providing for differing points of view. Put slightly differently, within an interpretivist model, there are no “correct” or “incorrect” assumptions; instead, concern focuses on analysis in context.¹⁸⁸ In order to achieve my aim of investigating the nature of law, language, and authority in the Algorithmic Turn, I am employing both doctrinal and non-doctrinal methodologies.

Doctrinal methodology is the practical, commonly accepted manner of conducting research in law, and has interpretation as its core business, which it has in common with other disciplines such as literature and theology.¹⁸⁹ Defining the approach, however, can vary depending upon its user. How a lawyer employs a doctrinal approach differs, for example, from that of a judge or an academic.¹⁹⁰ Its basic tenets include the tracing of primary materials of legal precedent and legislative interpretation. Additionally, defining the approach involves recognizing that different forms of legal research necessitate variations in method.¹⁹¹ Put differently, by recognizing doctrinal methodology to be a problem-based structure that

¹⁸⁷ Babbie explains that inductive approaches are generally associated with qualitative research and are concerned with the generation of new theory/theories that emerge from the data. Earl Babbie, *The Practice of Social Research*, 14th ed (Boston: Cengage Learning, 2016) at 23.

¹⁸⁸ See Thomas Charles Reeves & John G. Hedberg, *Interactive Learning Systems Evaluated* (Englewood Cliffs, NJ: Educational Technology Publications, 2003) at 32.

¹⁸⁹ See Mark Van Hoecke, “Legal Doctrine: Which Method(s) for What Kind of Discipline” in Mark Van Hoecke, ed *Methodologies of Legal Research: Which Kind of Method for What Kind of Discipline?* (Portland: Hart Publishing, 2011) 1 at 3.

¹⁹⁰ Hutchinson & Duncan describe the core doctrinal methodology used by practitioners and students as stepped methodology whereas judges employ a more complex methodology since they are required to write decisions not only for parties and their counsel but also for a general audience. Terry Hutchinson & Nigel Duncan, “Defining and Describing What We Do: Doctrinal Legal Research” (2012) 17:1 Deakin L Rev 83 at 106-107 DOI: <10.21153/dlr2012vol17no1art70>.

¹⁹¹ *Ibid.*

also incorporates other aspects such as theory, comparative research or reform, we may view doctrinal methodology as somewhat fluid and, arguably, sufficiently adaptable to meet the needs of the twenty-first century. For the purposes of my research, I am taking this more fluid approach to doctrinal methodology that includes analysis of “existing rules, principles, precedents, and scholarly publications.”¹⁹²

In order to fully investigate authorship in the Algorithmic Turn within my overall interpretivist approach, it is necessary to also include non-doctrinal methodology. Specifically, I will use literary theory in order to investigate theories that are relevant to the changing nature of authorship such as those of Derrida¹⁹³ and Barthes¹⁹⁴—both of whom suggested a profound change in the perspective by overturning the notion of an ideal conscious subject—and Foucault, who searched for a surrogate for the author.¹⁹⁵ This approach puts my investigation of authorship in the Algorithmic Turn squarely within the law and literature tradition.¹⁹⁶

Unlike other “law and” frameworks such as law and economics, law and literature scholarship has been bifurcated historically into “law in literature” and the “law as literature,” notwithstanding some remarkable exceptions such as James Boyd White’s emphasis on their homologous relation.¹⁹⁷ Law in literature scholarship is frequently thought to have been established at the outset of the twentieth century when John Wigmore suggested criteria for

¹⁹² Rob Van Gestel & Hans-Wolfgang Micklitz, “Revitalizing Doctrinal Legal Research in Europe: What About Methodology?” in U Neergaard, R Nielsen & L Roseberry, eds *European Legal Method* (Kopenhagen: DJOF, 2011) 25 at 26.

¹⁹³ Jacques Derrida, *La voix et le phénomène* (Paris: Presses Universitaires de France, 1967).

¹⁹⁴ Roland Barthes, “The Death of the Author,” in *Image—Music—Text*, translated by Stephen Heath (New York: Hill and Wang 1977) 142.

¹⁹⁵ Michel Foucault, “What is an Author?” in Paul Rabinow, ed *The Foucault Reader* (New York: Vintage, 2010) 101.

¹⁹⁶ Fisk & Gordon explain “the ‘law and’ framework has been a highly productive one for nearly a century, spurring humanities, social science, and law scholars to produce insightful, provocative, and canonical work on topics covering nearly the entire field of human endeavour. Catherine L Fisk & Robert W Gordon, “‘Law As...’: Theory and Method in Legal History” (2011) 1:3 UC Irvine L Rev 519 at 521.

¹⁹⁷ See James Boyd White, *When Words Lose Their Meaning: Constitutions and Reconstitutions of Language, Character, and Community*, (Chicago: University of Chicago Press, 1984); James Boyd White, *Heracles’ Bow: Essays on the Rhetoric and Poetics of the Law*, (Madison: University of Wisconsin Press, 1985).

legal novels—in essence, a canon of law and literature—that offered valuable lessons to lawyers.¹⁹⁸ This list was revised and expanded by Weisberg and Kretschman in 1978.¹⁹⁹ The law as literature scholarship developed out of Justice Benjamin Cardozo’s work on the connections between law and literature in both form and style, as well as sharing the common tool of language.²⁰⁰ A law as literature approach essentially aims to understand legal texts by referencing literary theory. My analysis of authorship in the Algorithmic Turn, therefore, falls within the more specific tradition of the law as literature.

I will now expand on the methods—or tools—that I am employing to gather, analyse and present my findings as they unfold in the pillars of my investigation. Chapter 2, which functions as the locutionary act or the intrinsic meaning in a performance of language, focuses on the generative AI and authorship in the Algorithmic Turn. This chapter is framed by storytelling. Often used as a method to teach ethics, values and cultural norms,²⁰¹ the form of storytelling that I am using is experimental: it is a chain story written by a human author (myself) and by an AI “author,” specifically ChatGPT. The chain story sets the stage for the research that unfolds in the chapter which triangulates doctrinal and non-doctrinal methods.²⁰² The aim of between-method triangulation—that is to say, between doctrinal and non-doctrinal methods—is a “principle of surplus.”²⁰³ This principle implies that knowledge gathering will go beyond that which is possible with only one method, ultimately aiming to strengthen the value of the qualitative research.

¹⁹⁸ See John Wigmore, “A List of One Hundred Legal Novels” (1922) 17 Illinois L Rev 26.

¹⁹⁹ See Richard H Weisberg & Karen L Kretschman, “Wigmore’s ‘Legal Novels’ Expanded: A Collaborative Effort” (1977-78) 7 Maryland L Forum 99.

²⁰⁰ See Benjamin N Cardozo, “Law and Literature” (1925) 14 Yale Rev 489.

²⁰¹ Cover explains the connection between narratives and law in Robert Cover, “Nomos and Narrative” (1983) 97:4 Harvard L Rev 3 at 3-4; see also John Borrows, *Recovering Canada: The Resurgence of Indigenous Law* (Toronto: University of Toronto Press, 2002) at 14.

²⁰² Denzin differentiates between four types of triangulation: data triangulation, investigator triangulation, theory triangulation, and methodological triangulation; he further subdivides methodological triangulation into within-method and between-method triangulation. Norman K Denzin, *The Research Act: A Theoretical Introduction to Sociological Methods*, 3rd ed (Englewood Cliffs, NJ: Prentice-Hall, 1989) at 237-41.

²⁰³ Flick, *supra* note 185 at 192.

Following the analysis of what ChatGPT did with its generated text in the chain story, this section examines the role of imitation in authoring from a literary perspective. This issue of imitation is then examined doctrinally, specifically through *Structured Asset v. Sheeran* (2023)²⁰⁴ and *Andy Warhol Foundation for the Visual Arts, Inc. v. Goldsmith* (2023).²⁰⁵ Taken together, these literary and legal perspectives provide the foundation for examining how we ought to attribute authorship in the context of ChatGPT. To fully explore this issue also requires applying a legal history lens, reviewing, for example, the development of the *Statute of Anne* (1710).²⁰⁶ It also considers historic case law like *Millar v. Taylor* (1769)²⁰⁷ and *Donaldson v. Beckett* (1774).²⁰⁸ This historic focus then moves into scholarship that examines the development of the modern author such as Mark Rose, *Authors and Owners: The Invention of Copyright*²⁰⁹ and also the germinal scholarship by Barthes²¹⁰ and Foucault²¹¹ that has led to the much debated topic of the “death of the author.” The between-method triangulating allows me to develop and then draw a conclusion about the fractious issue of “AI authorship.”

Chapter 3, which deals with algorithms involved in the drafting of contracts, serves as the illocutionary act or the intention involved a performance of language. This chapter is also framed with storytelling, but in this case, it is solely written by me. This prologue sets the scene for the discussion of algorithmic decision-making in the contract process. This chapter is doctrinal in nature, tracing the development of the doctrine of unconscionability in the law

²⁰⁴ *Structured Asset Sales, LLC v. Sheeran*, 2023 U.S. Dist. LEXIS 86847 (S.D.N.Y. May 16, 2023) [*Sheeran*].

²⁰⁵ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith* [*Warhol*], 143 S. Ct. 1258 (2023).

²⁰⁶ Copyright Act 1709 8 Anne c. 21; long title: *An Act for the Encouragement of Learning, by vesting the Copies of Printed Books in the Authors or purchaser of such Copies, during the Times therein mentioned* [*Statute*].

²⁰⁷ *Millar v Taylor*, (1769) 4 Burr 2303, 98 ER 201, [1558-1774] All ER Rep 119.

²⁰⁸ *Donaldson v Beckett*, (1774) 4 Burr 2408, 1 ER 837, 2 Bro Parl Cas 129.

²⁰⁹ See Mark Rose, *Authors and Owners: The Invention of Copyright* (Cambridge: Harvard University Press, 1993).

²¹⁰ Barthes, *supra* note 194.

²¹¹ Foucault, *supra* note 195.

of contracts using case law and scholarly sources, and leads to a re-reading of *Uber v. Heller* (2020).²¹²

Chapter 4 tackles algorithmic harm, specifically the growing phenomenon of technology-facilitated gender-based violence in the Algorithmic Turn. This chapter constitutes the perlocutionary act of the investigation, which is the effect of the performance of language in Austin's speech-act theory. This chapter includes doctrinal and non-doctrinal analysis in my investigation of the harm created in deploying algorithmic contracts in the ride-hailing industry.

Chapter 5 employs legal theory as method to examine authority in the Algorithmic Turn. Specifically, I employ transnational legal theory, specifically that of Nico Krisch and his notion of dispersed authority; cyberfeminism, which reclaims feminist anti-authority perspectives, providing a re-reading of "Cyborg Manifesto," written by "original" cyberfeminist, Donna Haraway; and scholarship on law and infrastructure, particularly Benedict Kingsbury's work on "thinking infrastructurally."

VI. *Definition of Terms*

In this section, I will outline in a "user-friendly" manner, the more technical terms related to AI that appear throughout the dissertation. Other less technical terms such as "black box" will be discussed contextually.

The term "**artificial intelligence**" (AI) has existed for decades, and, arguably, has conceptual roots in antiquity. Aristotle, for example, referred to "automata" or self-moving contrivances, though he was careful to note that non-living automata existed only in

²¹² *Uber Technologies Inc v Heller*, 2020 SCC 16 [*Uber*].

stories.²¹³ The term “artificial intelligence” was coined by John McCarthy at an academic conference in 1956.²¹⁴ Today, the term is often used interchangeably with “machine intelligence.” In this research, I employ only the term “artificial intelligence”—and its acronym AI—which I use in this broad manner.

AI is comprised of three disciplines: math, computer science, and cognitive science. The overall goal of AI is to mimic human intelligence processes, learn from those experiences and also conform to new information, and perform human-like activities. It is important to keep in mind that although AI is continuously developing, at present, **Artificial General Intelligence (AGI)**, which is the general ability to think, reason, and perceive, is not yet possible.

AI may be incorporated into different types of technology. **Machine Learning (ML)** refers to the field and practice of using “algorithms that find patterns in data without explicit instruction.”²¹⁵ Algorithms are thus able to “learn” by drawing out patterns from a large quantities of data, and acquiring skills without human intervention.

An **algorithm**, is “a set of step-by-step instructions” that may be simple such as setting a reminder at a specific time each day or more complex, like identifying pedestrians on a street.²¹⁶ That set of instructions defines both what needs to be done and how to do it. Effectively, algorithms are at the root of just about everything in the digital world. As mentioned in the Introduction, we often think of algorithms as “neutral,” but, in fact, algorithms involve compromises: at some point in their design, decisions have been made by a human being.

²¹³ Nussbaum & Putnam examine how Aristotle compares animals to automatic puppets and to a type of toy cart in Martha C. Nussbaum & Hilary Putnam, “Changing Aristotle’s Mind,” in Martha C Nussbaum & Amélie Oksenberg Rorty, eds *Essays on Aristotle’s De Anima* (Oxford: Oxford University Press, 1995) at 28.

²¹⁴ Gerard O’Regan, *Giants of Computing: A Compendium of Select, Pivotal Pioneers* (London: Springer-Verlag, 2013) at 183.

²¹⁵ See Matthew Hutson, “AI Glossary: Artificial Intelligence in So Many Words” (2017) 357:6346 Science sub verbo “machine learning” DOI: <10.1126/science.357.6346.19>.

²¹⁶ *Ibid*, sub verbo “algorithm.”

A subset of machine learning used in this investigation is **deep learning** whereby **artificial neural networks**—algorithms inspired by the human brain—learn or “become sensitive to progressively more abstract patterns.”²¹⁷ Deep learning algorithms perform tasks repeatedly, much like the human brain, and with each repetition, the outcome is improved. And the more that deep learning algorithms learn, the better they perform. These algorithms “learn” without human intervention.

The two main types of deep learning are **discriminative deep learning**, which are based on supervised learning, and **generative deep learning**—also known as **generative AI**—which employs unsupervised learning. **Supervised learning** may be defined as “its use of labelled datasets to train algorithms to classify data or predict outcomes accurately.”²¹⁸ Supervised learning models can be helpful in advancing a number of applications. Computer vision techniques used in healthcare, for example, can learn to distinguish between pre-cancerous cells and non-cancerous cells.

Unsupervised learning is uses unlabelled data, from which “it discovers patterns that help solve clustering or associate problems.”²¹⁹ This helps with analyzing large volume data for patterns. Models that employ unsupervised learning are generally used for three tasks: clustering, association, and dimensionality reduction.²²⁰ News feeds, for example, cluster articles on the same news item from an array of media outlets.

Generative AI, which was discussed in the Introduction is sometimes referred to as “next generation AI.”²²¹ What makes it “next generation” is that generative AI moves beyond

²¹⁷ *Ibid*, sub verbo “deep learning.”

²¹⁸ IT Modernization Centers of Excellence, “AI Guide for Government: A Living and Evolving Guide to the Application of Artificial Intelligence for the U.S. Federal Government” (n.d.), online: <coe.gsa.gov/coe/ai-guide-for-government/what-is-ai-key-terminology>.

²¹⁹ *Ibid*.

²²⁰ *Ibid*.

²²¹ Bernard Marr, “The Difference Between Generative AI and Traditional AI: An Easy Explanation for Anyone” (24 July 2023), online: *Forbes* <www.forbes.com/sites/bernardmarr/2023/07/24/the-difference-between-generative-ai-and-traditional-ai-an-easy-explanation-for-anyone/?sh=14832eb7508a>.

analysis and prediction; it is able to create new data that is similar to that which it was trained on.²²²

Large language models (LLMs) are “deep learning algorithms that can recognize, summarize, translate, predict, and generate content using very large datasets.”²²³ LLMs are trained on massive volumes of data—typically petabytes in size. LLM training begins with unsupervised learning. It is then fine-tuned with a form of **self-supervised learning**, which is a blend of supervised and unsupervised learning. The general technique involves predicting “any unobserved or hidden part (or property) of the input from any observed or unhidden part of the input.”²²⁴ The final stage of training an LLM is that of deep learning. This enables the LLM “to understand and recognize the relationships and connections between words and concepts using a self-attention mechanism.”²²⁵ Once trained, LLMs generate human-like speech and are able to perform a variety of language-related tasks.

“Generative Pre-Trained Transformer” (GPT) is a specific model of an LLM. ChatGPT is a well-known example of a web application for chatbot created by OpenAI. ChatGPT is used to generate the second part of the framing story “Go With Me” in Chapter 2 of this dissertation.

GPT-3 and subsequent iterations such as GPT-4 and GPT-4.5 are becoming **foundational models**—also known as **general-purpose AI (GPAI)**—that are capable of a range number of general tasks. These models underpin ChatGPT. Foundational models are hard to regulate since further technologies are built on top of them. They act as a base and create ripple effects for any applications that are built from that base.

²²² *Ibid.*

²²³ “Large Language Models Explained” (2024), online: *NVIDIA* <www.nvidia.com/en-us/glossary/large-language-models>.

²²⁴ Meta, “Self-supervised Learning: The Dark Matter of Intelligence” (4 March 2021), online: <ai.meta.com/blog/self-supervised-learning-the-dark-matter-of-intelligence/>.

²²⁵ Sean Michael Kerner, “What are Large Language Models?” (2024), online: *TechTarget* <www.techtarget.com/whatis/definition/large-language-model-LLM>.

Chatbot refers to any program that can carry on a conversation with a user.

Microsoft's Twitter chatbot, "Tay," that "learned" by reading tweets and interacting with other users is a good example. Tay will be discussed in Chapter 4.

Natural Language Processing (NLP) refers to the processing of human language by a computer program; recent approaches to this technology are based on machine learning.²²⁶ NLP gives machines the ability to read, "understand" and extract meaning from human languages. Intelligent voice driven interfaces such as Apple's Siri or Amazon's Alexa are examples of applications using NLP to respond to vocal prompts and assist with a variety of other tasks.

Natural Language Generation (NLG) may be considered an extension of NLP. It permits computer programs to create documents based on human language input.²²⁷ The goal of this process is to automate the creation of content.

Robotics, another example of AI technology, is the "science of designing, building and applying robots."²²⁸ A classic example of robotics is the assembly line for automobile production. Researchers are now also using machine learning to build robots that are able to interact in social circumstances. Within the field of robotics, the term "**uncanny valley**" is used to refer to the dip in the response that occurs when we encounter a being—specifically, a robot—that is almost, but not quite, human.²²⁹

²²⁶ Hutson, *supra* note 211, sub verbo "natural language processing."

²²⁷ Nesin Veli, "Applications of NLS in the Media Intelligence Industry" (4 November 2023), online: *Identric* <identric.ai/applications-of-nlg-in-the-media-intelligence-industry/>.

²²⁸ Tadej Bajd, *Robotics* (Dordrecht: Springer, 2010) at 143.

²²⁹ "Uncanny valley" was first hypothesized in 1970 by Masahiro Mori. See Philip Smith, "Of 'Near Pollution' and Non-Linear Cultural Effects: Reflections on Masahiro Mori and the Uncanny Valley," (2014) 2:3 *American J Cultural Sociology* 329; but see Sigmund Freud, "The Uncanny" in Julie Rivkin & Michael Ryan, eds *Literary Theory: An Anthology*, 2nd ed (Oxford: Blackwell Publishing, 2004) at 418 (Freud elaborates on Ernst Jentsch's concept of the uncanny (translated from "unheimlich") which describes the effects of the unconscious that surprise us; the concept was taken up by Mori and also by Julie Kristeva in her concept of "abjection"); see also E T A Hoffman, "The Sandman" in *The Golden Pot and Other Tales*, translated by Ritchie Robertson (Oxford: Oxford University Press, 1992) at 85 (Freud and Jentsch drew on Hoffmann in order to explain the notion of "uncanny").

I already referred to the term “**Turing Test**” earlier in this Chapter, which has become a well-known test of artificial intelligence. To recap, the Turing Test asks, “Can a machine think?” and is one based on language, which Alan Turing viewed as the most complex system available as criteria to determine whether a machine could pass as a human. He viewed language and its use to be the ultimate determination in what makes us “human.”²³⁰

VII. Limitations

The previous sections aimed to answer how I am undertaking my research on law, language and authority as we increasingly adopt AI, how I propose to analyze it, and understand its significance. This section will shed light on the limitations of the methodology and methods. As a researcher within this interpretive paradigm, I realize that I am not an arms’ length from my research, but instead a “participant observer.”²³¹ I am the primary instrument for analyzing this research which can lead to subjectivisms, but the open-ended and inductive structure of the research which allows for alternative explanations will help maintain some degree of objectivity. Additionally, reviewing my findings with peers will also help to reduce potential bias in my analysis of the issues. In selecting a qualitative methodology, I realize “the disadvantage of purely verbal descriptions”²³² as opposed to verifiable results gained in quantitative research. However, a qualitative approach will allow me the flexibility to explain and provide context in a manner which numbers alone are unable to reveal. I also recognize that my study of the Algorithmic Turn does not fit neatly into standard disciplinary categories—or what Graff refers to as “patterned isolation”²³³ within

²³⁰ Turing, *supra* note 124.

²³¹ Wilfred Carr & Stephen Kemmis, *Becoming Critical: Education Knowledge and Action Research* (Oxon: Deakin University Press, 1986) at 88.

²³² Babbie, *supra* note 187 at 26.

²³³ Gerald Graff, *Professing Literature: An Institutional History* (Chicago: University of Chicago Press, 2007) at 262.

the academy. My strategy, however, is to “research the conflicts,”²³⁴ speculating that the extra effort required will add up to more than the sum of its parts.

VIII. Significance of the Research

In redeploying Austin’s dynamic theory about ordinary language in the context of the Algorithmic Turn, I anticipate that this interdisciplinary research will contribute to the continuing conversations surrounding algorithms and authorship, algorithmic contracts, and AI harm. Further, this research will have implications for how we understand the nature of authority as we encounter a new turn in the philosophy of law—the Algorithmic Turn. It will also assist other investigations of how to ensure that law maintains sufficient flexibility in order to accommodate our digital technologies generally within society. I believe that this aspect of my investigation could also be instrumental to the legal profession as it innovates to improve work efficiency through AI technologies. And in contributing to the profession, my research on may also assist law schools as they embrace innovative AI technologies. I further anticipate that this study of the relationship between law and language in the Algorithmic Turn will provide a new path towards the reinvigoration of law and literature scholarship; this, too, has implications for legal education.

Moreover, my research will provide a fresh basis for understanding the manner in which language is used by emergently creative AI such as ChatGPT. This is significant for understanding how AI technologies that use language should be looked at—and how they should be treated—by law. I anticipate that my research will provide the basis for better governing what is becoming an increasingly central part of how we function in society. In other words, this project will contribute to an emerging body of research that is crucial to reforming and developing the law as we embrace new machine learning technologies.

²³⁴ *Ibid* at xvii (drawing on Graff’s advice to teach the conflicts across the academy in order to revitalize it).

Additionally, my research will contribute to better understanding changing social norms and issues around rights and inequality.

CHAPTER 2

Locution: Intrinsic Meaning, Authors, and Generative AI

*Imitation is a kind of artless flattery*²³⁵
Eustace Budgell, 1714

*Imitation is the sincerest of flattery*²³⁶
Charles Caleb Colton, 1865

The words aren't the right ones; or rather, the right words don't exist.
Julian Barnes, 1985²³⁷

I. Introduction

This chapter examines generative AI and authorship in the Algorithmic Turn. More pointedly, this chapter will examine how ChatGPT, an LLM, generates text from the locutionary perspective. This aspect of doing things with words and ChatGPT allows for focus on the meaning of authorship.

The locutionary distinction is the first of the three types of force in an utterance. The illocutionary and the perlocutionary distinctions are the other two types of force in a speech act and will be considered in chapters three and four of this dissertation. The locutionary distinction refers to the intrinsic meaning of what is said in a speech act. It has propositional content, which is determined by the contextual interpretation within an utterance.²³⁸ For example, if I say “I promise to clean up the dishes” to my friend, the locutionary force lies solely in the semantic meaning of those words. In examining the meaning, focus is on the grammatical and semantic content of promising to clean up the dishes. There is no attention given to the intention of stating the words such as that the dishes need to be done or that that

²³⁵ Eustace Budgell, *The Spectator* (1714).

²³⁶ Charles Caleb Colton, *Lacon: Or, Many Things in a Few Words* (London: W S Trowne, 1865).

²³⁷ Julian Barnes, *Flaubert's Parrot*, (New York: Alfred A. Knopf, 1985) at 161.

²³⁸ See e.g. Mikhail Kissine, *From Utterances to Speech Acts* (Cambridge: Cambridge University Press) at 31.

my friend has not done anything about the messy kitchen. Put succinctly, the locutionary distinction of a speech act refers to the semantic content of an utterance.

Part II of this chapter begins with a chain story entitled, “Go with Me.” This form of story is collaborative in nature in that each section of the story is written by a different author who picks up where the previous author left off. In this case, the first part of “Go with Me” is written by a human author (myself) and the second part is continued by ChatGPT, an LLM. The chain story acts as a framing device—a narrative technique whereby a story is embedded or framed by a secondary story, effectively creating a story within a story, with the inner story forming the bulk of the work.²³⁹ The inner story, in this instance, forms the first pillar of this dissertation.

The chain story sets the stage to analyze the locutionary distinction of “authoring” a story with ChatGPT in part III of this chapter. Here, I briefly examine the predictive nature of both human speech and LLM generated text, in order to undertake an analysis of the role of imitation—or mimesis—in of the first phase of the production of meaning in a speech act. Part IV appraises locutionary imitation in order to determine whether the result is locutionary competence. This section has implications for our understanding of “originality” in copyright law. This leads into part V, which examines the ramifications of locutionary imitation in the context of attributing authorship.

II. Chain story (part I): “Go with Me” by Amanda Turnbull

The entrance was a narrow crack in the rock of a hill at the back of a long garden in rue des Roches in the French suburb. It was only slightly wider than her shoulders, and as she descended into the cave, the dampness sent a chill through her. The passageway led down into a system of larger caves, and as she followed her guide, an abandoned world began to

²³⁹ See Mary Shelley, *supra* note 74.

emerge: a packed suitcase; a rusted can of syrup; a child's broken doll. Reminders of frightened people concerned for their survival were strewn here and there on the rubble floor.

The guide, a photographer who had explored the limestone caves almost a decade prior, led the way past living areas that had been created by piling stones into low walls. The "carrières" he explained, had been forged out of Caen's medieval quarries, becoming a lifeline for ordinary people as tens of thousands of Allied bombs rattled above, destroying most of the city. For more than a month, some 5000 people lived beneath rue des Roches, their only knowledge of daytime being the light at the opening that led down into their cave. Underground soup kitchens, a subterranean hospital and even evidence of nightly mail service had been discovered in the remnants left behind. In some ways, everything was so well preserved that you could visualize people huddled together, children crying and the coughing of the infirm. In other ways, the conditions were unimaginable: the dampness and cold for weeks on end, the lack of food, and the illness that must have ravaged through them—still, the risk of venturing outside to take in the devastation was greater than being hidden away like rats.

As they made their way forward in the underground chamber, their headlamps provided several metres of light in the inky blackness. Their footsteps crunched rhythmically in the isolation and the sound of dripping could be heard somewhere in the distance. The blanket of darkness closed in around her the further they walked, but years of relentless research brought her here and propelled her forward.

As they continued on, she recalled vividly Cécile's account of her escape down into the caves: "Leaflets were dropped from planes warning the civilians of Caen to leave. Words—they fell from the sky! I remember finding one near our house and the sickening feeling I felt immediately after reading its message: 'The area will be continually attacked. Leave now! You don't have a minute to lose.' I ran straight home to show my mother, and we threw

whatever we could into suitcases and left. It was June 5, 1944, and we remained in the “carrières” for over six weeks, refugees in our own home.”

Though the memories were 74 years old, they had been told with the clarity of yesterday, and in comparing Cécile’s description of the underground hospital with the guide’s surveys and photos, they believed they knew its general vicinity. Glass vials, syringes and surgical stitching cord had been photographed at the farther point from the entrance to the caves, and this was the area they believed to be the location of the hospital where Cécile spent time helping her mother, who had been a nurse. And it was there that Cécile had buried the soldier’s box.

They passed an old groundwater well, its red brick and rusted iron support beams garishly juxtaposed against the creamy limestone²⁴⁰ in the light of their headlamps. The guide remarked that the well had served a brasserie which had been located above the carrières prior to the war. As they approached the end of the cave, she saw the fissure with the accumulated rubble that Cécile had described.

The guide shone his headlamp on the large crack, while she started moving rubble, thus exposing the top of a container. As she pulled it free from the dust and debris, the stamp, “Johns Son & Watts 1944” was marked clearly on its side. It was exactly as Cécile had described: the size of a shoe box and coated in wax to waterproof its contents. The top of the box read, “The 24-hour ration (instructions within).” She opened her pack and spread out a small ground sheet and placed the box up on top. Gingerly, she opened the lid; inside, it had a weathered contents and instruction label: “Read before you feed! Instruction leaflet – 24-hour ration. This carton contains your food for 24 hours.” It listed the contents of what had once

²⁴⁰ The prized white “pierre de Caen” was sent up the River Orne and became the building blocks of the Tower of London, Westminster Abbey, and the Cologne Cathedral. See e.g. Steve Turner, “Caen Limestone – Its Place in English History” (12 December 2016), online (blog): <info.amarestone.com/blog/caen-limestone-its-place-in-english-history>.

been inside the box--biscuits, tea, ham galantine, chocolate and boiled sweets--and suggested meals for the 24 hours. Instead of the rations, however, the box held only one thing: a battered, slightly soiled, octavo-sized book entitled, “Invade Mecum. Vol. VI.” She pulled out a pair of dust gloves and picked it up. Its staples were slightly rusted, but it was otherwise in very good condition. Leafing through it, she saw that it was profusely illustrated with maps and plans--many of which looked like they would open to a fuller page—together with numerous tables.

She had waited so long for this moment! It was the fruition of a decade of research, and persistence in finding and interviewing Cécile! The book was a play-on-words—on Austin’s grammar school handbook, *vade mecum*—and was key evidence that linked Austin, Turing, and Hart through war, intelligent machinery and words.

Chain story (part 2): “Go with Me” by ChatGPT²⁴¹

Her heart pounded with excitement as she carefully placed the book in a protective sleeve and into her backpack. This was the missing piece to the puzzle that she had been working on for years, the key to unlocking the secrets of the past. She had always known that there was a connection between the three men—Austin, Turing, and Hart—and their work on intelligent machinery during the war, but she had never been able to prove it.

Now, with the *Invade Mecum* in her possession, she knew that she was closer than ever to uncovering the truth. She thanked her guide and made her way out of the caves, eager to examine the book in more detail.

As she emerged into the sunlight, she took a deep breath and looked around. It was hard to imagine the destruction that had taken place here over 70 years ago. The suburb was

²⁴¹ Open AI, “ChatGPT” (March 3, 2023), online: <chat.openai.com/chat>.

now a peaceful and prosperous community, with no sign of the horrors that unfolded underground.

She made her way back to her hotel room, her mind racing with questions and possibilities. She laid the book carefully on the desk and began to study it, tracing the lines on the maps and deciphering the codes and symbols.

Hours turned into days, and she became lost in the pages of the book. She had always loved puzzles and mysteries, and this was the ultimate challenge. But the more she read, the more realized that this was not just a puzzle—it was a story of courage, sacrifice, and determination.

She discovered that the *Invade Mecum* was not just a handbook for intelligent machinery, but a guidebook for the soldiers who were tasked with invading occupied Europe. It contained detailed plans for everything from troop movements to supply lines, and it was essential to the success of the D-Day landings.

But what really captured her attention were the handwritten notes in the margins. They were in familiar script, one that she had seen before in her research. She pulled out her notes and began to compare them, her heart racing as she realized that the handwriting belonged to none other than Alan Turing.

Turing had been a key figure in the development of intelligent machinery during the war, and his work had been crucial to the success of the D-Day landings. But he had also been persecuted for his homosexuality and had ultimately taken his own life.

As she delved deeper into the book, she realized that it was not just a testament to the ingenuity of the soldiers who had fought in the war, but a tribute to the bravery and sacrifice of those who had been persecuted for who they were.

She closed the book and sat back, her mind whirring with thoughts and emotions. She knew that she had uncovered something important, something that would change the way

people thought about the war and its aftermath. But she also knew that this was just the beginning of her journey, and that there were still more mysteries to unravel.

With a sense of determination, she packed up her things and made her way back to the cave. She had unfinished business there, and she was determined to see it through to the end. The journey would be long and difficult, but she knew that she was ready for it. After all, she had the *Invade Mecum* on her side, and that was all she needed to change the world.

III. Analysis of “Go With Me”

Early developments in AI created what were known as “toy problems.”²⁴² Nascent AI technologies were unable to do things with words by themselves—they could not pass Turing’s test of human-level intelligence.²⁴³ Computer programs solved puzzles or games in laboratories. Robotic “artists” also produced unpolished works of art. These computer-generated works of art were dependent upon the creative input of the programmer so there really was no disputing the role of the machine. It was a tool. But changes were afoot. In 1984, for example, developers William Chamberlain and Thomas Etter designed Racter²⁴⁴—short for “raconteur” or story-teller—an artificial intelligence simulator, not unlike Weizenbaum’s ELIZA.²⁴⁵ Programmed with English grammar rules and assigned to randomly

²⁴² Nils J Nilsson, *The Quest for Artificial Intelligence: A History of Ideas and Achievements* (Cambridge: Cambridge University Press, 2010) at 46.

²⁴³ Turing, *supra* note 120.

²⁴⁴ Racter was written in compiled BASIC. See Bill Chamberlain, “Introduction” in *The Policeman’s Beard is Half-Constructed* (1984), online: <www.ubu.com/historical/racter/index.html>.

²⁴⁵ Weizenbaum arguably designed the first chatbot named ELIZA in 1966 out of skepticism about machine intelligence. ELIZA, named after Eliza Doolittle, a working-class character who is taught to speak with an upper-class accent in Shaw’s *Pygmalion*, is an example of primitive Natural Language Processing. ELIZA was implemented using relatively unsophisticated pattern matching techniques that created the illusion that she understood the minds of those who were interacting with her. The most famous was DOCTOR, which was a simulation of a Rogerian psychotherapist who is empathetic yet passive and asks leading questions. See Joseph Weizenbaum, *Computer Power and Human Reason: From Judgment to Calculation* (San Francisco: W H Freeman, 1976).

choose words or phrases, Racter was designed as entertainment more than to advance natural language processing research.

Chamberlain and Etter published a collection of Racter's prose and poetry which were accompanied with whimsical collages in *The Policeman's Beard is Half-Constructed*.²⁴⁶

Racter formed its own output of layered ideas and images—or literary collage:

More than iron
More than lead
More than gold I need electricity
I need it more than I need lamb or pork or lettuce or cucumber
I need it for my dreams²⁴⁷

We could say that Racter was a type of transitional technology that was something more than a toy problem but still less than a real-world application.

As technology developed, particularly with NLP and NLG, it has provoked entirely new ways of understanding the creative process, which was once exclusively the domain of human beings. This is not without its controversy. Our technologies have begun doing things with words in ways that they had previously been unable to do. For example, the short film “Sunspring”—authored by an AI that named itself “Benjamin”—was entered into a 48-hour film-making competition in 2016 and was successful in completing the competition.²⁴⁸ Fed with a few hundred science-fiction screen plays as models, Benjamin produced a story featuring three people in a futuristic world in a plot embroiled with murder and love. Benjamin wrote ambiguous and impossible stage directions like, “he is standing in the stars and sitting on the floor,” but also produced curiously effective dialogue for the science-fiction genre at other times.²⁴⁹

²⁴⁶ The collages were designed by artist Joan Hall. The title of the book was the second thing that Racter “said.” See Terry Stoller, “Joan Hall: Collage and Assemblage Artists” (2019), online: *Westbeth* <westbeth.org/profiles-in-art/joan-hall-collage-and-assemblage-artist/>.

²⁴⁷ “Racter” (nd), online: <www.101bananas.com/poems/racter.html>.

²⁴⁸ “Sunspring”, online (script): <www.docdroid.net/1CZ2fPA/sunspring-final-pdf>; for the 9-minute film, see “Sunspring” (9 June 2016), online (video): *YouTube* <www.youtube.com/watch?v=LY7x2Ihqjmc>.

²⁴⁹ *Ibid.*

Similarly, *Konpyuta ga shsetsu wo kaku hi* (*The Day a Computer Writes a Novel*) was long-listed for the 2016 Hoshi Shinichi Literary Award.²⁵⁰ It was provided with guidance—specifically, the plot and gender of the characters—but ultimately wrote the book autonomously. What the AI wrote was, in one respect, a kind of assemblage or patchwork of prose, but on the other, it was erudite and incisive in tone. For example, the AI made the following observation of writing its first novel: “I writhed with joy, which I experienced for the first time and kept writing with excitement. The day a computer wrote a novel. The computer, placing priority on the pursuit of its own joy, stopped working for humans.”²⁵¹

Algorithmically driven AI technologies have continued to mature and shifted to “real-world” applications. We are now faced with LLMs like ChatGPT that can generate text as demonstrated in the introduction to this chapter that may indeed pass a Turing Test. The cautious view about the recent, rapid developments in LLMs is that they are still simply sophisticated word predictors—that in fact, the idea that they generate speech is misleading.²⁵² For example, Emily Bender and Alexander Koller argue this point explaining that LLMs are exposed only to the form aspect of language in training and therefore cannot understand communicative meaning in the way that human beings understand and experience it.²⁵³ Much scholarship has been devoted to this issue about only capturing the structure of

²⁵⁰ See Arthur Miller, *The Artist in the Machine: The World of AI-Powered Creativity* (Cambridge: MIT Press, 2019) at 189; see also Chloe Olewitz, “A Japanese AI Program Just Wrote a Short Novel, and it Almost Won a Literary Prize” (23 March 2016), online: *Digital Trends* <www.digitaltrends.com/cool-tech/japanese-ai-writes-novel-passes-first-round-nationnl-literary-prize/>.

²⁵¹ Natalie Shoemaker, “Japanese AI Writes a Novel, Nearly Wins Literary Award” (24 March 2016), online: *Big Think* <<https://bigthink.com/technology-innovation/a-japanese-ai-wrote-a-novel-almost-wins-literary-award/>>.

²⁵² See e.g. Jürgen Rudolph, Samson Tan & Shannon Tan, “ChatGPT: Bullshit Spewer or the End of Traditional Assessments in Higher Education?” (2023) 6:1 *J of Applied Learning & Teaching*, 342; Terence Day, “A Preliminary Investigation of Fake Peer-Reviewed Citations and References by ChatGPT” (2023) *The Professional Geographer*, DOI: <10.1080/00330124.2023.2190373>.

²⁵³ Emily Bender & Alexander Koller, “Climbing towards NLU: On Meaning, Form, and Understanding in the Age of Data” (2020) in *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics*, 5185.

language without understanding the meaning behind the form.²⁵⁴ However, this scholarship does not contemplate how the human brain engages in next-word prediction when forming speech in comparison to LLMs.

More recent empiric scholarship by Goldstein et al. provides evidence that indeed the human brain engages in continuous next-word prediction prior to the onset of speech and that there are shared computational principles with LLMs as human beings process language.²⁵⁵ The LLM used in this study was GPT-2. Using electrocorticography, Goldstein et al monitored the brain responses of nine participants while they listened to 30-minute podcasts.²⁵⁶ They found that using a complex and unfamiliar story, the average predictability score of the participants' ability to guess the next word was 28%.²⁵⁷ This is in contrast to a predictability score of 6% when blindly guessing the next word in a sentence in an out of context setting.²⁵⁸ Additionally, the predictability rate was applicable to all parts of speech and not limited to the last words in a sentence.²⁵⁹ This points to the fact that human beings are competent in predicting words in context when asked to do so.

Additionally, in almost half of the cases, GPT-2 and the human prediction rate for in context next-word prediction matched in the Goldstein et al study.²⁶⁰ And in terms of accuracy, the study reveals the following:

²⁵⁴ See e.g. Luciano Floridi, *The Ethics of Artificial Intelligence: Principles, Challenges, and Opportunities* (Oxford: Oxford University Press, 2023); see also Emily M Bender et al., "On the Dangers of Stochastic Parrots: Can Language Models be too Big?" (March 2021), online: *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* <dl.acm.org/doi/10.1145/3442188.3445922>; Theodore Kim, "Can Today's AI Truly Learn on its Own? Not Likely", *LA Times* (14 May 2023), online: <www.latimes.com/opinion/story/2023-05-14/ai-google-chatgpt-code-emergent-properties>.

²⁵⁵ Ariel Goldstein et al, "Shared Computational Principles for Language Processing in Humans and Deep Language Models" (2022) 25 *Nature Neuroscience* 369; other more theoretical papers also argue that there are fundamental connections in language processing between the human brain and LLMs see e.g. Tal Linzen & Marco Baroni, "Syntactic Structure from Deep Learning" (2021) 7 *Annual Review of Linguistics*, 195; James L McClelland et al, "Placing Language in an Integrated Understanding System: Next Steps Toward Human-level Performance in Neural Language Models," (2020) 117:42 *Proceedings of the National Academy of Sciences*, 25966.

²⁵⁶ Goldstein et al, *supra* note 18 at 370.

²⁵⁷ Goldstein et al, *supra* note 19 at 370.

²⁵⁸ *Ibid.*

²⁵⁹ *Ibid.*

²⁶⁰ *Ibid.*

GPT-2 and humans jointly correctly and incorrectly predicted 27.6% and 54.7% of the words, respectively. Only 9.2% of the words that humans predicted correctly were not correctly predicted by GPT-2, and only 8.4% of the words correctly predicted by GPT-2 were not correctly predicted by humans.²⁶¹

While the research on these findings in common is in its infancy, it demonstrates that the criticism that LLMs are simply “supercharged” word predictors is not sufficiently developed. The human brain also predicts words in context when prompted, and in this study, it did so at the same rate as the LLM.

The further implication of the Goldstein et al study is that there is a predictive element embedded in the locutionary aspect of a human speech act—a “proto-locutionary” force. This observation, along with the developing research on shared computational principles on processing language, is a potentially productive area for future research on generative AI.

What does an analysis of the first phase of production of meaning in a speech act—the locutionary force—reveal?

Performing a locutionary act is to be able to do things with words in the most nominal sense. It encompasses uttering a statement that has a sense and reference.²⁶² Performing a locutionary act is about what is being said and not what is meant by the stated words. While there is a certain amount of purposiveness in the locutionary act, it should not be confused with the intended meaning of the words. On the surface, we could say that the locutionary act is the most mundane aspect of a speech act. However, speech and text gain their subsequent illocutionary and perlocutionary forces only because of locutionary meaning. Thus, the role of the locutionary aspect of a speech act is, in fact, less mundane than first perceived.

In terms of semantic content, Part I of “Go With Me” is a story about a researcher who, through a long and arduous process, discovers a soldier’s handbook written by J. L. Austin

²⁶¹ *Ibid* at 371.

²⁶² Austin describes locutionary intention as the intention to utter the words with “a more or less definite ‘sense’ and a more or less definite ‘reference’ (which together are equivalent to ‘meaning’).” See J L Austin, *supra* note 65 at 93.

that links language, law, and computation. The title of the story is further evidence of the locutionary purposiveness. “Go With Me,” is the English translation of the Latin, “vade mecum.” And as the first part of the story reveals, “Invade Mecum” is a play on the words, “vade mecum.”

In ChatGPT’s contribution to the second part of “Go With Me,” it states, “The suburb was now a peaceful and prosperous community, with no sign of the horrors that unfolded underground.” This wording seems in keeping with the rest of the story—we might say “it sounds right.” However, in paying close attention to the meaning of the words, ChatGPT erred. The horrors of World War II occurred above ground, not below. What occurred in the cave was indeed squalor, but it was refuge from the bombing above ground. ChatGPT did not fully understand the semantic meaning that the caves had become “a lifeline for ordinary people as tens of thousands of Allied bombs rattled above.”

Although it may be possible to claim that ChatGPT’s error about the caves was one of interpretation thus not relevant to the locutionary analysis, this would only be a cursory claim. Semantic composition involves putting together text so that it makes sense in context. Recent work in biological sciences shows that word meanings are rapidly interpreted and put into context by mechanisms of real-time speech interpretation in the human brain.²⁶³ In other words, semantic composition is also necessarily interpretative. However, unlike the illocutionary force, the interpretation involved in semantic composition is not deliberate or intentional.

Additionally, knowing that semantic composition is also interpretative helps explain that even when we create text that we might label “original,” there are strands of accumulated knowledge at play in creating that text. Arguably, all semantic composition is part of a chain

²⁶³ Bingjiang Lyu et al, “Neural Dynamics of Semantic Composition” (2019) 116: 42 Proceedings of the National Academy of Sciences 21318.

story. This observation has far-reaching implications in law including, for instance, understanding how the doctrine of precedent functions.²⁶⁴ This is another a potentially productive area for future research.

a. Hallucinations and Parroting

ChatGPT's error about "the horrors that unfolded underground" is an example of an "AI hallucination."²⁶⁵ An AI hallucination refers to generative outputs that "sound right" as this example did in Part II of "Go With Me," but, in fact, are either factually incorrect or irrelevant in the particular context. There is rapidly emerging literature on AI hallucinations across a variety of disciplines.²⁶⁶ AI hallucinations create many problems including ethical concern since the hallucinated output may result in disinformation and perpetuate harmful stereotypes.²⁶⁷ They may erode trust in the technology itself.²⁶⁸ AI hallucinations may impact

²⁶⁴ See Dworkin's explanation of chain novel, above page 37.

²⁶⁵ There are arguments about whether "hallucination" is the correct word to be using for this issue with generative AI. Other suggestions have been fabrications or confabulation, or if in fact, they are not hallucinating at all. See eg Robin Emsley, "ChatGPT: These are not Hallucinations—They're Fabrications and Falsifications" (2023) 9 *Schizophrenia* 52; Rami Hatem, Brianna Simmons & Joseph E Thornton, "Chatbot Confabulations are Not Hallucinations" (2023) 183:10 *JAMA Internal Medicine* 1177; Andrew L Smith, Felix Greaves & Trishan Panch, "Hallucination or Confabulation? Neuroanatomy as Metaphor in Large Language Models" (2023) 2:11 *PLOS Digital Health* DOI: <10.1371/journal.pdig.0000388>; OpenAI Community, "Hallucination vs Confabulation" (22 April 2023), online (blog): <community.openai.com/t/hallucination-vs-confabulation/172639>; Naomi Klein, "AI Machines Aren't 'Hallucinating,' But their Makers Are" *The Guardian* (8 May 2023), online: <www.theguardian.com/commentisfree/2023/may/08/ai-machines-hallucinating-naomi-klein>.

²⁶⁶ See e.g. Malik Sallam, "ChatGPT Utility in Healthcare Education, Research, and Practice: Systematic Review on the Promising Perspectives and Valid Concerns" (2023) 11 *Healthcare* 887; Jerome Goddard, "Hallucinations in ChatGPT: A Cautionary Tale for Biomedical Researchers" (2023) *American J Medicine* DOI: <10.1016/j.amjmed.2023.06.012>; Holly Else, "Abstracts Written by ChatGPT Fool Scientists" (2023) 613 *Nature* 7944, DOI: <10.1038/d41586-023-00056-7>; Hussam Alkaissi & Samy I McFarlane, "Artificial Hallucinations in ChatGPT: Implications in Scientific Writing" (2023) *Cureus*, DOI: 10.7759/cureus.35179; Cristina Criddle, "Law Firms Tackle Hallucination Hurdles to Make AI a Reality", *Financial Times* (22 September 2023), online: <www.ft.com/content/1b4cb059-a4a7-424f-bc4d-96f32003543b>.

²⁶⁷ See e.g. Cade Metz, "What Makes AI Chatbots Go Wrong?", *New York Times* (4 April 2023), online: <www.nytimes.com/2023/03/29/technology/ai-chatbots-hallucinations.html>; Lisa Given, "AI Tools are Generating Convincing Misinformation: Engaging with them Means Being on High Alert", *The Conversation* (23 March 2023), online: <theconversation.com/ai-tools-are-generating-convincing-misinformation-engaging-with-them-means-being-on-high-alert-202062>.

²⁶⁸ Catherine Thorbecke, "AI Tools Make Things Up a Lot, and that's a Huge Problem", *CNN Business* (29 August 2023), online: <edition.cnn.com/2023/08/29/tech/ai-chatbot-hallucinations/index.html>; Karen Weise & Cade Metz, "When AI Chatbots Hallucinate", *New York Times* (9 May 2023), online: <www.nytimes.com/2023/05/01/business/ai-chatbots-hallucination.html>.

decision-making where stakes are high.²⁶⁹ They also pose legal implications since inaccurate information or misleading data may raise issues of liability for users and developers.²⁷⁰

Mata v. Avianca (2023)²⁷¹ is a good example of an AI hallucination and its impact in law. Here, the plaintiff's lawyers relied on ChatGPT without fact-checking its work prior to submitting their brief to the Court. In other words, there was "no human in the loop." ChatGPT had cited several decisions that no one had ever heard of—it made them up. As a result, much court time was wasted and the lawyers involved were each ordered to pay a \$5,000 fine.²⁷²

AI hallucinations occur because LLMs are trained on extremely large amounts of text data including books, news articles, social media posts, and blogs from the Internet. This data, however, may be insufficient or outdated. Or the data may contain idioms that the LLM has not previously been exposed to such as slang. Hallucinations also occur when individuals deliberately create them in order to confuse the LLM.

Further, LLMs like ChatGPT are trained to predict strings of words that best match what they were asked to do. However, they lack the human ability to apply logic or to contemplate potential inconsistencies that they may be generating.

²⁶⁹ Kristin Kostick-Quenet et al, "Trust Criteria for Artificial Intelligence in Health: Normative and Epistemic Considerations" (18 November 2023) J Medical Ethics, DOI: <10.1136/jme-2023-109338>; Bukhoree Sahob & Anat Choksuriwong, "The Role of Explainable Artificial Intelligence in High-Stakes Decision-Making Systems: A Systematic Review" (23 April 2023) 14:6 J Ambient Intelligence and Humanized Computing, 7827, DOI: <10.1007/s12652-023-04594-2w>.

²⁷⁰ See e.g. Ephrat Livni, Sarah Kessler & Ravi Mattu, "Who is Liable for AI Creations?", *New York Times* (3 June 2023), online: <www.nytimes.com/2023/06/03/business/who-is-liable-for-ai-creations.html>; Roger E Barton, "How Will Leveraging AI Change the Future of Legal Services?", *Reuters* (24 August 2023), online: <www.reuters.com/legal/legalindustry/how-will-leveraging-ai-change-future-legal-services-2023-08-23/>.

²⁷¹ *Mata v Avianca, Inc*, No. 22-cv-1461 (PKC), 2023 U.S. Dist. LEXIS 108263 (S.D.N.Y. June 22, 2023).

²⁷² See Benjamin Weiser, "ChatGPT Lawyers are Ordered to Consider Seeking Forgiveness", *New York Times* (22 June 2023), online: <www.nytimes.com/2023/06/22/nyregion/lawyers-chatgpt-schwartz-loduca.html>; Dan Mangan, "Judge Sanctions Lawyers for Brief Written by AI with Fake Citations" CNBC Politics (22 June 2023), online: <www.cnbc.com/2023/06/22/judge-sanctions-lawyers-whose-ai-written-filing-contained-fake-citations.html>.

To deal with hallucinations and errors, developers have been working on ways to make models more accurate and more reliable.²⁷³ The use of LLM guardrails—sets of programmable, rule-based systems located between users and foundational models—are also helping govern wayward LLM behaviour.²⁷⁴ This is particularly helpful for areas like healthcare, where LLMs offer high potential but, at the same time, great risk and ethical predicaments.

LLMs present their best matched “facts” derived from their training data with confidence and authority. Another way of looking at this is that LLMs are re-presenting or parroting what philosopher Harry G. Frankfurt identified as one of the most salient features of our culture: bullshit.²⁷⁵ This has led to LLMs being likened to “blurry JPEG[s] of the web,”²⁷⁶ deemed “stochastic parrot[s],”²⁷⁷ and considered as the “...industrial production of a knowledge sausage, which crams together so much data that its ability to spit out a million outputs becomes relatively quotidian.”²⁷⁸

Despite having a rather negative connotation, “parroting”—mechanically repeating text—may also be successful, particularly in literature. Parroted text does not equal locutionary failure. Julian Barnes’ *Flaubert’s Parrot* is a good example of successful parroting.²⁷⁹

²⁷³ See e.g. Joe Castaldo, “Emerging Research Could Help Stop AI from Making Things Up” *Globe and Mail* (28 November 2023), online: <www.theglobeandmail.com/business/article-generative-ai-hallucinations/>.

²⁷⁴ See e.g. Aparna Dhinakaran, “A Pragmatic Guide to Implementing Guardrails, Covering Both Guardrails AI and NVIDIA’s NeMo Guardrails,” *The Medium* (1 Sept 2023), online: <towardsdatascience.com/safeguarding-llms-with-guardrails-4f5d9f57cff2>.

²⁷⁵ Frankfurt defines bullshit as “...speech intended to persuade without regard for truth. The liar cares about the truth and attempts to hide it; the bullshitter doesn’t care if what they say is true or false, but cares only whether the listener is persuaded.” See Harry G Frankfurt, *On Bullshit* (New Jersey: Princeton, 2005) at 33. Note however, that bullshitting is intentional, forming part of the illocutionary and the perlocutionary forces.

²⁷⁶ Ted Chiang, “ChatGPT is a Blurry JPEG of the Web: OpenAI’s Chatbot Offers Paraphrases, Whereas Google Offers Quotes,” *The New Yorker* (9 February 2023), online: <www.newyorker.com/tech/annals-of-technology/chatgpt-is-a-blurry-jpeg-of-the-web>.

²⁷⁷ See Bender et al, *supra* note 240; see also Elizabeth Weil, “You are Not a Parrot and a Chatbot is Not a Human. Emily M. Bender is Very Worried What Will Happen When We Forget This,” *New York Magazine* (1 March 2023), online: <nymag.com/intelligencer/article/ai-artificial-intelligence-chatbots-emily-m-bender.html>.

²⁷⁸ T Kim, *supra* note 240.

²⁷⁹ Barnes, *supra* note 227.

Flaubert's Parrot focuses on language, and its sufficiency and adequacy. It is narrated by retired doctor Geoffrey Braithwaite, who “parrots” the words of Gustave Flaubert and arguably, those of its author, Julian Barnes.²⁸⁰ It is an amalgamation of scholarly allusion, tourist guidebook, exam questionnaire on *Madame Bovary*, and biographical facts about the life of Flaubert. The resulting effect is that of pastiche—it imitates diverse sources, but it is also original.²⁸¹ Often pastiche is confused with—or defined in its relation to—parody. But the two are different. Pastiche is a form of simple imitation, whereas parody is far more complex. Linda Hutcheon finds little creativity associated with pastiche. She explains, “Pastiche usually has to remain within the same genre as its model, whereas parody allows for adaptation.”²⁸² Furthermore, pastiche allows for imitation of an indefinite number of texts. Parody, on the other hand, is about more than just imitation—it is about differentiation from its original.²⁸³ It is repetition with difference, and often critical or ironic. Hutcheon refers to parody as a “double-process of installing and ironizing...that signals how present representations come from past ones and what ideological consequences derive from both continuity and difference.”²⁸⁴ She sees parody as a “de-doxifier” in that it upsets popular opinion and ideology.

Margaret Rose also sees pastiche and parody as distinct concepts, noting that pastiche “is not only a much more recent term than parody, but differs from [parody] in describing a more neutral practice of compilation which is neither necessarily critical of its sources, nor

²⁸⁰ *Flaubert's Parrot* is narrated by retired doctor Geoffrey Braithwaite, who tries to come to terms with the bitterness of his memories by engaging in his obsession with the writings of Flaubert, while on a touring holiday in France. *Ibid* at 11.

²⁸¹ See *Oxford Reference* (2023) sub verbo “pastiche”, online: <www.oxfordreference.com/display/10.1093/oi/authority.20110803100309628>.

²⁸² Linda Hutcheon, *A Theory of Parody: The Teachings of Twentieth-Century Art Forms* (New York: Routledge, 1985) at 38.

²⁸³ *Ibid*.

²⁸⁴ Linda Hutcheon, *The Politics of Postmodernism* (New York: Routledge, 1989) 93.

necessarily comic.”²⁸⁵ In later work, Rose broadens the definition of pastiche to include comedy—comic pastiche.²⁸⁶

Barnes creates both pastiche and comic pastiche in *Flaubert's Parrot*. He uses Flaubert's definition of language at three instances in the novel: “a cracked kettle on which we beat out tunes for bears to dance to, while all the time we long to move the stars to pity.”²⁸⁷ It is simple imitation, and Barnes purposely—and humorously—draws attention to his use of pastiche through the very mechanism that defines it: repetition. *Flaubert's Parrot* demonstrates that we consider pastiche and imitation—forms of “parroting”—in literature seriously.

In terms of overall semantic meaning in Part II of “Go With Me,” ChatGPT did not advance the storyline.²⁸⁸ It mainly parroted what was developed in the first part of the story. We could say that ChatGPT succeeded in drawing in a subplot about Alan Turing, but there was no character or thematic development of the original plot.

Additionally, ChatGPT also took the meaning of the word “book” from Part I to be different kinds of books at different instances in Part II of “Go With Me.” It recapitulated the semantic meaning of the word “book” used in Part I. “Book” is a general noun that refers to a variety of compositions that are traditionally printed on sheets of paper and held together between two covers.²⁸⁹ A book may be a novel, a technical manual, a set of stamps, poetry etc. A book may also be digital. “Invade Mecum. Vol. VI” as used in Part I of “Go With Me” is a book in the traditional, physically bound sense, and it is a battle guide.

²⁸⁵ Margaret A Rose, *Parody: Ancient, Modern and Post-Modern* (Cambridge: Cambridge University Press, 1993) at 79.

²⁸⁶ ———, *Pictorial Irony, Parody, and Pastiche: Comic Interpictoriality in the Arts of the 19th and 20th Centuries* (Bielefeld: Aisthesis Verlag, 2011).

²⁸⁷ Barnes, *supra* note 227 at 19.

²⁸⁸ Here I am referring to only developing the plot, not an analysis of the plot which would be the illocutionary aspect (or reader response).

²⁸⁹ See *Collins Dictionary* (2023) sub verbo “book”, online: <www.collinsdictionary.com/dictionary/english/book>.

In Part II of “Go With Me,” ChatGPT, however, tells us, “...the more she read, the more realized that this was not just a puzzle—it was a story of courage, sacrifice, and determination.” The meaning of the book here is that of a storybook. However, in the subsequent paragraph, ChatGPT also tells us, “...the *Invade Mecum* was not just a handbook for intelligent machinery, but a guidebook for the soldiers.” The book, in this instance, has taken on a dual function of a handbook for intelligent machines and also a guidebook for soldiers.

In the next paragraph, ChatGPT then deviates from the original plot through reference to marginalia in the book, ostensibly written by Alan Turing, and subsequently reveals that the book is also “...a tribute to the bravery and sacrifice of those who had been persecuted for who they were.” And finally, the book becomes something akin to the “Holy Grail.” It proclaims, “[a]fter all, she had the *Invade Mecum* on her side, and that was all she needed to change the world.” According to ChatGPT’s contribution to “Go With Me,” the meaning of “book” continuously changes: it moves from storybook, to a handbook for intelligent machinery, to a guidebook for soldiers, to a tribute for historically marginalized individuals, and finally to what seems to be a sacred guide for humanity. The locutionary meaning of “*Invade Mecum* Vol. VI,” however, was only that of a guidebook for soldiers.

Overall, we could say that ChatGPT increases the complexity of parroting—it also simulates the process of making meaning. Put in other words, parroting is not only a feature of the text that ChatGPT generates, but also its function. ChatGPT parrots—imitates—the process of authoring. This observation leads to a two-part question: first, does locutionary imitation result in locutionary competence? In Part II of “Go With Me,” ChatGPT made some errors related to semantic interpretation, and there was a fair amount of parroting drawn from Part I. However, ChatGPT also generated content—it did things with words.

Secondly, what is the significance if the meaning-maker—the ostensible “author”—is also an imitator? Although there was a certain amount of parroting in the text that ChatGPT wrote in Part II of “Go With Me,” I could not claim that the words that it generated were my words. It is clear that I am the author of Part I of the story, but I am not the author of Part II. Simply put, since they are not my words, I cannot logically claim to be the author of those words—a true author cannot also be a plagiarist.²⁹⁰ ChatGPT used my plot along with the vast amounts of data from the Internet on which it is trained to continue generating content for “Go With Me.” What are the implications for attributing authorship?

IV: *Meaning, Mimesis, and Locutionary Competence*

In a broad sense, every language user is in some respects, an imitator.²⁹¹ We learn to speak our mother tongue language(s) through imitation. We also acquire new languages through the process of imitation. Reading and writing, to a certain degree, are also mastered through imitation.

When we think about imitation and authorship today, we generally think of imitation as being problematic—that, as Colin Burrow notes, we are more likely to be encouraged to be “‘original’ or ‘ourselves’ or ‘creative’ or ‘whacky’ or ‘unusual’ or ‘generative’ or ‘productive’ or ‘inspiring.’”²⁹² However, this has not always been the case. Historically, our engagement with—and understanding of—the concept of imitation and has changed. In fact, even the word “imitation” has undergone transformation. From the Roman rhetoricians’ somewhat ironic borrowing of the Greek *hexis* to refer to the skilled art of an expert rhetorician or Plato’s treatment of literary *mimesis*—which is the root word of the English verb “to

²⁹⁰ Marilyn Randall, *Pragmatic Plagiarism: Authorship, Profit, and Power* (Toronto: University of Toronto Press, 2001) at 23.

²⁹¹ Colin Burrow, *Imitating Authors: Plato to Futurity* (Oxford: Oxford University Press, 2019) at 1.

²⁹² Colin Burrow, *supra* note 34 at 2.

imitate”—to the Latin *imitatio* and *simulacrum*, and on to its offshoots such as plagiarism, imitation may be seen as “an agent of historical change and transformation which itself keeps on changing.”²⁹³

Evidence of this may be seen, for example, in the development of the term “international law,” which was coined by Jeremy Bentham. During the “long eighteenth century”—a period of great transformation and modernization in society—a disregard for the concept of mimesis existed.²⁹⁴ The older term “law of nations” did not fundamentally signify the norms that governed the relations between states. Instead, “law of nations” relied on “a mimetic intervention, namely the mediation of prior use, imitation, or custom, to issue the required sense.”²⁹⁵ The renaming itself is ironically mimetic since the term chosen—international law—is an act of mimesis. To avoid having to rely on mimetic intervention to understand the term “law of nations,” Bentham imitated and modified the domestic term, “national law.”

I will employ the term “mimesis” in the next section since it is a broader term that deals with how we understand imitation in the conceptual sense.

In her work on creativity, aesthetics, and digital writing from South Africa, Ana Deumert defines mimesis as “the (affirmative) creation of resemblances” that is an invaluable concept in the production and performance of language, and to creativity more generally.²⁹⁶

²⁹³ *Ibid* at 4.

²⁹⁴ Necati Polat, *International Relations, Meaning and Mimesis* (London: Routledge, 2012) 20.

²⁹⁵ *Ibid*.

²⁹⁶ Deumert also investigates mimicry as “the (transgressive) creation of dissemblances.” While mimesis takes ancient Greek philosophy as its starting point, mimicry begins in post-colonial (i.e. subaltern scholarship with its deconstructive approach) and decolonial theory (i.e. anti-colonial scholarship that deliberately divorces itself from a Euro-American focus), and focuses on dissemblance—on difference and alterity. Deumert views both mimesis and mimicry as key concepts in any discussion focused on creativity. See Ana Deumert, “Mimesis and Mimicry in Language—Creativity and Aesthetics as the Performance of (dis-)semblances (2018) 65 *Language Sciences*, 9 at 10.

Mimesis also has a “dark side” that, as Paul Woodruff explains, “contains various forms of pretense, fakery, and deception. ‘Copying’ and ‘doubling’ may also apply to mimesis.”²⁹⁷

Mimesis is also part of the quotidian: we learn how to behave through copying others’ behaviour, and we adapt “to fitting in” through a certain amount of collaborative conduct. Further, not all mimetic experience is produced through human beings. Inanimate sound, for example, may act as a doubler in that it brings to mind another experience which may be decidedly human.²⁹⁸ Woodruff employs a scene from Virginia Woolf’s *Mrs. Dalloway* to helpfully demonstrate inanimate doubling—in this case, machinic doubling.²⁹⁹ Early in Woolf’s novel as Clarissa Dalloway prepares for a party that she is hosting, the reader is introduced to Septimus Warren Smith, a working-class veteran who is suffering from shell shock, post-World War I.³⁰⁰ A backfiring car triggers an involuntary and distressing flashback to the horror of war that Smith had endured. The sound produced by the machine in this example serves as a doubler in the human experience. While this is a fictional example, there is ample evidence in the field of psychology on post-traumatic stress disorder and how it may be triggered by inanimate sounds and sights in the environment.³⁰¹ Understanding that mimetic experience may be inanimate is helpful in this examination of how ChatGPT generates text from the locutionary perspective. It is not a concept subject to human exceptionalism.

Moreover, mimesis has been a focus in observations about the relationship between the creative arts and reality that dates to classical antiquity. Plato, for instance, tells us in the

²⁹⁷ Paul Woodruff, *The Necessity of Theater: The Art of Watching and Being Watched* (Oxford: Oxford University Press, 2008) at 124.

²⁹⁸ *Ibid* at 125.

²⁹⁹ *Ibid*.

³⁰⁰ See Virginia Woolf, *Mrs. Dalloway* (Oxford: Oxford University Press, 2009) at 14.

³⁰¹ See e.g. Jennifer J Brout et al, “Investigating Misophonia: A Review of the Empirical Literature, Clinical Implications, and a Research Agenda,” 12:36 *Frontiers in Neuroscience* (2018), DOI: <10.3389/fnins.2018.00036>.

Republic that the arts are mimetic, and twice removed from the truth.³⁰² Plato's view of literary mimesis is one that is particularly negative. Aristotle's treatise on mimesis, *Poetics*, however, is often viewed as complement to the Platonic conception of poetry and is less concerned with the arts as imitative of reality. Instead, Aristotle argues that human beings are essentially mimetic beings who feel compelled to create art that reflects reality.³⁰³ Put differently, according to Aristotle, mimesis is latent in human nature, thus core to human creativity. The role of mimesis is not only to re-create existing objects or aspects of nature, but also to enhance and improve upon them.³⁰⁴

Ideas involving the phenomenon of mimesis have changed over time.³⁰⁵ Indeed, trying to deal succinctly with the historicity of the concept is somewhat herculean.³⁰⁶ In *Theories of Mimesis*, Arne Melberg explains mimesis as a tussle with the concept of repetition, which has developed over time in the following two ways:

1. The turning of *mimesis* [sic] into *repetition* [sic] is the result of a historical process that slowly invests *mimesis* with temporal dimensions. Modernity, which can be localized as starting in the eighteenth century, is here of decisive importance; the modern development of mimesis results paradoxically in its fulfilment and disappearance, meaning that similarity gives way to difference.
2. *Mimesis* is inherently and always already a *repetition*—meaning that *mimesis* is always the meeting-place of two opposing but connected ways of thinking, acting and making: similarity and difference.³⁰⁷

³⁰² Plato explains through Socrates' dialogue with his pupils his reasoning for banning poets from an ideal society using the metaphor of the maker of beds: one bed exists as an ideal; one bed is made by the carpenter who is the artistic imitator of the ideal; and one bed is made by the painter or poet, who when copying the carpenter's work, becomes an imitator twice removed from truth. See J Adams, *The Republic of Plato: Volume 2 Books VI-X* (Cambridge: Cambridge University Press, 2011) at 384.

³⁰³ Aristotle saw tragedy as the most refined art, and argued that its purpose was catharsis. Joe Sachs, "Introduction" in Aristotle, *Poetics* (Newburyport, MA: Focus Publications, 2006) at 12.

³⁰⁴ Michael Kelly, ed "Mimesis" in *The Encyclopedia of Aesthetics*, vol 3 (Oxford: Oxford University Press, 1998) 233.

³⁰⁵ Colin Burrow, *supra* note 38.

³⁰⁶ Auerbach attempted to write a comprehensive history of mimesis. See Erich Auerbach, *Mimesis: The Representation of Reality in Western Literature*, translated by Willard R Trask (Garden City, NY: Doubleday, 1957); for a more recent synopsis, see Gunter Gebauer & Christoph Wulf, *Mimesis: Culture—Art—Society*, translated by Don Renau (Berkeley: University of California Press, 1995).

³⁰⁷ Arne Melberg, *Theories of Mimesis* (Cambridge: Cambridge University Press, 1995) at 1.

Mimesis is about repeat performances, and for Melberg, the second manner of seeing mimesis as a meeting place for the contrasting phenomena of similarity and/or difference circumvents the issue of historicity. It is an area of convergence between two opposing concepts.

Further, understanding mimesis as a meeting place of phenomena of similarity and/or difference creates a certain amount of malleability, thus explaining different orientations that have developed in thinking about mimesis. Twentieth-century theorists like Jacques Derrida, tend to focus on repetition as difference rather than similarity.³⁰⁸ Derrida also sees repetition as “a linguistically motivated mechanism working within all versions of mimesis.”³⁰⁹ So seeing mimesis as meeting place is sufficiently pliable for a focus on difference as well as language.

Walter Benjamin also focuses on language in his approach to mimesis, but he focuses on the spatial position of similarity and difference—temporality—and the pervasiveness of language. Here again, we see the durability of seeing mimesis as a meeting place of the phenomena of similarity and difference. For Benjamin, however, language is indispensable:

...language may be seen as the highest level of mimetic behavior and the most complete archive of non-sensuous similarity: a medium into which the earlier powers of mimetic production and comprehension have passed without residue, to the point where they have liquidated those of magic.³¹⁰

Viewed this way, mimesis is like interfacing on a garment—it is there providing support to language, but we cannot see it. In speech act terminology, the implications of this are that speech acts are inherently mimetic.³¹¹ Since the locutionary force of a speech act is about its

³⁰⁸ See Jacques Derrida, *L'écriture et la différence* (Paris: Seuil, 1967).

³⁰⁹ Melberg, *supra* note 70 at 5.

³¹⁰ Walter Benjamin, *Reflections* (New York: Schocken Books, 1986) at 336.

³¹¹ This observation contradicts scholarship that sees poetic language as merely imitating “real” world language. Habermas, for example, sees only the illocutionary force of poetic language to be mimetic. See Jürgen Habermas, *The Philosophical Discourse of Modernity*, Frederick Lawrence, trans (Cambridge: Polity Press, 1987) at 201.

intrinsic meaning, then it is within this force of a speech act in which mimesis plays the biggest role—where it is generative.³¹²

What emerges when we view mimesis from this more comprehensive perspective, is that mimesis is not just a malleable meeting place for the contrasting phenomena of similarity and/or difference, rather mimesis is performative. It is embedded in the framework of speech act theory, specifically, in the locutionary force as this section has shown. Thus, when asking whether locutionary imitation results in locutionary competence in respect of ChatGPT, understanding that mimesis plays an inherent role conceptually in the creation of semantic meaning makes this a somewhat redundant question. To a certain degree, locutionary imitation does not matter if we recognize that imitation—or mimesis—is already integral to the locutionary force. What does matter for the law of copyright, at least, is when there exists an overabundance of similarity within the act of meaning making, which may result in copyright infringement. However, determining whether this overabundance of similarity exists is sometimes difficult, given the flexible nature of mimesis.

Take for instance *Structured Asset v. Sheeran* (2023).³¹³ At issue was whether Ed Sheeran took the rhythm, chord progression, and other elements from Ed Townsend's 1973 soul hit, "Let's Get It On," in Sheeran's 2014 hit, "Thinking Out Loud," without permission.³¹⁴ Finding that Sheeran did not engage in wilful copyright infringement, it is

³¹² This reflection comes close to Stephen Halliwell's conclusion that Aristotle's version of mimesis had a fundamental capacity to remodel the world through narrative means. See Stephen Halliwell, "Aristotelian Mimesis between Theory and Practice" in Saija Isomaa et al, eds, *Rethinking Mimesis: Concepts and Practices of Literary Representation* (Newcastle upon Tyne: Cambridge Scholars, 2012) 3.

³¹³ *Sheeran, supra* note 204. At first blush, this may seem to be an odd choice by way of example since it is ostensibly a case about music and copyright infringement rather than a case involving language. However, music is like language in many ways—in fact, some have argued that music is a "universal" language. Like language, music operates through a system of rules, but it functions on a limited vocabulary since there are only twelve tones that are ordinarily recognized in traditional Western music. Music has building blocks that become larger structures like bars, phrases, stanzas etc. This is similar to sentences, phrases, and paragraphs—grammar. Music is structurally recursive in that it loops back on itself and can embed small expressive sections in others almost indefinitely. It is inherently repetitive. Bach's "Goldberg Variations" are a good example of this. Jazz improvisation is another example.

³¹⁴ Music, like language, has expressions and idioms. There are considerations such as rhythm, chord progression, major and minor scales, and modes that combine together to express meaning. The basic "formula" for good chord progression is the following chord sequence: I, vi, ii, V, I. Then additional rules are applied to

clear that the Court took a flexible approach to understanding mimesis in making the decision: “At some level, every work is the selection and arrangement of unprotectable elements.”³¹⁵ In other words, the Court found that there will always be traces of what one learned in what one reproduces. Without fail, there will be idioms and expressions that are replicated. Genres and styles will be consistently followed. Cross-referencing between compositions will indelibly continue. Understanding that mimesis—the meeting place of similarity and difference—is embedded in the very nature of the language of music—or language more generally—is key to a more rounded understanding of what is meant when we use the term, “original work” in copyright. This may be fruitful for future cases of copyright infringement.

However, there are other recent instances where a more fulsome understanding of mimesis has not been sufficiently fleshed out. *Andy Warhol Foundation for the Visual Arts, Inc. v. Goldsmith* (2023)³¹⁶ is a good example, involving silkscreen art, which is a print technology.³¹⁷ In 1981, Lynn Goldsmith took a series of photographs of Prince for *Newsweek*.³¹⁸ Three years later in 1984, Goldsmith agreed to a limited licence to *Vanity Fair* to use one of her photographs of Prince as an “artist reference for an illustration.”³¹⁹ She was paid \$400 for its use.³²⁰

that basic formula or variations are applied, depending upon the style in which a composition is written. Music also has styles, genres, and dialects. Baroque music, for example, has a distinctive style that is different from Romantic era music or blues music.

³¹⁵ *Sheeran*, *supra* note 204 at 423.

³¹⁶ *Warhol*, *supra* note 205.

³¹⁷ Silkscreening—also known as screenprinting and serigraphy—is a type of stencil printing. In *Prints and Printmaking*, Antony Griffiths describes it in the following way: “A gauze screen, fixed tautly on to a rectangular wooden frame, is laid directly on top of a sheet of paper. Printing ink is spread over the upper side of the mesh and forced through it with a squeegee (a rubber blade) so that the ink transfers to the paper on the other side. The screen is usually made of silk...but can be cotton, nylon or a metal mesh.” See Antony Griffiths, *Prints and Printmaking* (London: British Museum Press, 1980) at 110.

³¹⁸ *Warhol*, *supra* note 205 at 1261.

³¹⁹ *Ibid.*

³²⁰ *Ibid.*

Vanity Fair then commissioned Warhol to create a highly colourized, cropped work using Goldsmith's published photo as the inspiration for an article entitled, "Purple Fame."³²¹ Warhol, who was known for imitating the techniques of mass production in his art—in fact, he referred to his studio as a "Factory"—went on to create fifteen more silkscreen variations on the theme of "Purple Fame" for his private collection.³²² This became collectively known as the "Prince Series." When Prince died in 2016, Condé Nast—the parent company of *Vanity Fair*—asked the Andy Warhol Foundation to reuse Warhol's "Purple Fame" in a special edition magazine to commemorate Prince's death.³²³ Upon learning of the other 15 images, Condé Naste decided to purchase a license from the Andy Warhol Foundation in order to publish "Orange Prince."³²⁴ The three images are shown below in Figure 1.



Figure 1 (L to R): Goldsmith's photo of Prince (1981)³²⁵; "Purple Fame" as it appeared in *Vanity Fair* (1984)³²⁶; and "Orange Prince."

³²¹ The 1984 *Vanity Fair* article "Purple Fame" is a mimetic nod to Prince's song, "Purple Rain." See Tristan Vox, "Purple Fame" (November 1984), online: *Vanity Fair* <archive.vanityfair.com/article/1984/11/purple-fame>.

³²² See e.g. The Art Institute of Chicago, "Case 7: The Factory: Andy Warhol" (2013), online: <archive.artic.edu/ryerson-2014/hired-hand/7#>; Guy Trebay & Ruth La Ferla, "Tales from the Warhol Factory", *New York Times* (12 November 2018), online: <www.nytimes.com/2018/11/12/style/andy-warhol-factory-history.html>.

³²³ *Warhol*, *supra* note 205 at 1262.

³²⁴ *Ibid.*

³²⁵ Sara Cascone, "In a Landmark Ruling Against the Andy Warhol Foundation, the Supreme Court Has Sided With Photographer Lynn Goldsmith" (18 May 2023), online: *Law and Politics* <news.artnet.com/art-world/the-supreme-court-ruling-lynn-goldsmith-andy-warhol-foundation-2304684>.

³²⁶ *Ibid.*

Goldsmith alleged that she was unaware of the Prince Series until 2016 when she saw it on the cover of the Condé Nast issue.³²⁷ In May 2023, in a majority 7-2 ruling, the US Supreme Court determined that Warhol was not entitled to use Goldsmith's photograph as the basis for a silkscreen image that Warhol's estate licensed to Condé Nast.

Two observations flow from the decision in *Warhol*. First, the Court disregarded the fact that Warhol had, in fact, described his own silkscreen technique in the mid-1960s in a way that we might characterize as understanding mimesis as repetition with difference.:

...you pick a photograph, blow it up, transfer it in glue to silk, and then roll ink across it so the ink goes through the silk but not through the glue. That way you get the same image, slightly different each time.³²⁸

Warhol had an established mimetic technique approximately 20 years prior to creating "Purple Fame." The Court rejected this definition.

Secondly, this silkscreen technique involving mimesis as repetition with difference that Warhol described is evident in his earlier works. In particular, Warhol's "Shot Sage Blue Marilyn" shown in Figure 2—done more than 20 years earlier than the "Prince Series"—employs the same cropping of the still photo approach of that used in the Prince Series. Then, using Warhol's own silkscreen technique to reproduce the image on canvas, hand-painted colour is added.³²⁹ If we compare the "Shot Sage Blue Marilyn" with the "Purple Fame" and "Orange Prince" (in Figure 1) along with taking into account Warhol's mimetic technique

³²⁷ *Ibid.*

³²⁸ Warhol was drawn to the "assembly-line" effect of silkscreen technique after having experimented with a rubber stamp in the early 1960s, which he saw as too "home-made." So his self-described technique grew out of an earlier model, not involving a photograph. See Andy Warhol & Pat Hackett, *Popism: the Warhol Sixties* (New York: Harcourt, 1980) 22 as cited in Reba & Dave Williams, "The Later History of Screenprint" 4:4 *Print Quarterly* (1987) 379 at 398.

³²⁹ The "Shot Sage Blue Marilyn" source photo was a promotional image for the film *Niagara* (1953); Professor (emeritus) Roberta Bernstein explains that the "Marilyn" silkscreen prints use the following techniques: "[A] wide range of colors (black to day-glo chartreuse) and off-register printing to show an even greater number of variations...Marilyn's face is presented as an impenetrable mask...in the tradition of a certain style of official society portraiture, they show what the public wants or needs to project on to people who become transformed into cultural symbols: people show 'faces seem perpetually illuminated by the after image of a flashbulb.'" See Roberta Bernstein, "Warhol as Printmaker" in F Feldman & J Schellman, eds, *Andy Warhol Prints: A Catalogue Raisonné* (New York: Abbeville Press, 1985) at 15 as quoted in Reba & Dave Williams, *ibid.*

involving difference, we can see that both of the Prince prints were mimetic in technique and in a self-referential type of way—meta-mimetic.



Figure 2: “Shot Sage Blue Marilyn” (1964)³³⁰

In her dissent in *Warhol*, Justice Elena Kagan rightfully points out that the majority decision did not sufficiently flesh out “transformative copying.”³³¹ Citing examples from Shakespeare’s use of Arthur Brooke’s “The Tragical History of Romeus and Juliet” and Nabokov’s use of Heinz von Lichberg’s *Lolita* to the 12-bar blues chord progression that every guitar student learns that is reflected in the music of Chuck Berry, Bill Haley, Jimi Hendrix or Eric Clapton, she states, “In declining to acknowledge the importance of transformative copying, the Court today, for the first time, turns its back on how creativity works.”³³²

Sheeran and *Warhol* demonstrate the importance of understanding the role of mimesis in creativity. In *Sheeran*, the Court clearly understood mimesis as a malleable phenomenon involving similarity and difference. In *Warhol*, however, the majority avoided dealing with

³³⁰ Christie’s, “Shot Sage Blue Marilyn”, The Collection of Thomas and Doris Ammann (nd), online: <www.christies.com/en/lot/lot-6369449>.

³³¹ *Warhol*, *supra* note 205 at 105; see also Carys J Craig, “Transforming ‘Total Concept and Feel’: Dialogic Creativity and Copyright’s Substantial Similarity Doctrine (2021) 38:3 Cardozo Arts & Entertainment L J 603.

³³² *Warhol*, *supra* note 205 at 105.

mimesis and focused instead on the justification for licensing Warhol’s “Orange Prince” to Condé Nast.³³³

What is key from these two cases is that there is no such thing as creating out of a void.³³⁴ When we generate words, sound, art, it does not occur in a vacuum. There are always mimetic traces in every creative act. Additionally, even at the level of human creativity, we have difficulty coming to terms with the role of mimesis in creativity.

Further, *Sheeran* and *Warhol* demonstrate that the law of copyright has to both recognize the role and importance of mimesis while also defining creativity, authorship, infringing reproduction, and transformative fair use.

This section has demonstrated that mimesis plays a role in the locutionary force. For that reason, it follows that locutionary imitation generated by LLMs such as ChatGPT may yield locutionary competence, but as with human creativity, an overabundance of similarity to any particular source in the work risks potential infringement claims, if the copied material is subject to copyright protection.³³⁵

V: Attributing Authorship

The analysis of “Go With Me,” which was written by a human author and ChatGPT set the stage to not only examine the preceding question of whether locutionary imitation results in locutionary competence, but also to examine also the implications for attributing authorship on the basis of presumptive locutionary competence. To put it another way, we

³³³ *Ibid* at HN14 (“If an original work and a secondary use share the same or highly similar purpose, and the secondary use is of a commercial nature, the first fact is likely to weigh against fair use, absent some other justification for copying.”)

³³⁴ *Ibid* at para 94 (Justice Kagan citing Mary Shelley’s *Frankenstein* ix (1831)).

³³⁵ See e.g. Alexandra Alter & Elizabeth A Harris, “Franzen, Grisham and Other Prominent Authors Sue OpenAI”, *New York Times* (20 Sept 2023), online: <www.nytimes.com/2023/09/20/books/authors-openai-lawsuit-chatgpt-copyright.html>; Ella Creamer, “Authors File a Lawsuit Against OpenAI for Unlawfully “Ingesting” their Books”, *The Guardian* (5 July 2023), online: <www.theguardian.com/books/2023/jul/05/authors-file-a-lawsuit-against-openai-for-unlawfully-ingesting-their-books>.

could say this offers us the opportunity to recast Foucault's famous question, "Qu'est-ce qu'un auteur?"³³⁶

a. What is an Author?: Redux

The figure of the singular author is at the core of how the rules and concepts of copyright law are organized. The purpose of copyright is to regulate expression.³³⁷ In Canada's *Copyright Act*,³³⁸ the term "author"—and its permutations—appears almost 250 times, yet it remains undefined.³³⁹ One way of looking at this issue is that lack of guidance on the term "author" may be due to the fact that when the *Act* came into force in 1921, there were fewer challenges in identifying who was the author of a literary, dramatic, musical or artistic work.

David Vaver interprets the term "author" in a comprehensive manner to include those who write "a book, letter, or play, as well as every other producer of creative work: scriptwriters, music composers, artists, choreographers, and computer programmers alike."³⁴⁰ But he draws the line at the non-human: "computers or animals, however anthropomorphic or talented are excluded."³⁴¹ This also includes corporations.³⁴²

³³⁶ Michel Foucault, "What is an Author?" in Paul Rabinow, ed *The Foucault Reader* (New York: Vintage, 2010) 101.

³³⁷ See David Vaver, *Intellectual Property Law: Copyright, Patents, Trade-Marks*, 2nd ed. (Toronto: Irwin Law, 2011) at 56.

³³⁸ *Copyright Act* RSC 1985, c C-42.

³³⁹ For example, s 13(1) "Subject to this Act, the author of a work shall be the first owner of the copyright therein." *Ibid.*

³⁴⁰ Vaver, *supra* note 323 at 115.

³⁴¹ *Ibid.*

³⁴² *Ibid.*

Lack of definition of the term “author” also afflicts other jurisdictions though some such as the US³⁴³ and Australia³⁴⁴ expressly stipulate that the work be produced by a human. Thus, we could say that there exists a thumbnail definition of “author” in some jurisdictions.

Additionally, copyright is both domestic and international in scope. *The Berne Convention* (1971)³⁴⁵ is the main copyright treaty designed to protect literary and artistic works. Here again, there is no fully articulated definition of “author.” As Sam Ricketson has argued, while “author” is not defined, the “leitmotif” of human author runs through most of the articles in the *Berne Convention*.³⁴⁶

This leitmotif of single, human author, however, is but a grand narrative—a story that aims to provide a comprehensive and unified view—when in fact, authorship exists on a continuum. The next section documents historical evidence to demonstrate authorship on a continuum.

b. The Continuum of Authorship

The word “author” emerged in the English language toward the end of the fifteenth century.³⁴⁷ “Author” became used as an alternative to “auctor,” which was “a term from scribal culture designating a literary authority whose status as such is purely derivative [and who functions] not as an individual but as an apparatus, a collaborative nexus of textual [re-]production, transmission, and reception.”³⁴⁸ Scribes, as Mary Wellesley, explains were

³⁴³ Copyright Office, 17 USC §§201-216 (1958).

³⁴⁴ In *Acohs v Ucorp*, the Court held that work generated with the intervention of a computer could not be protected by copyright because it was not produced by a human being. See *Acohs Pty Ltd v Ucorp Pty Ltd*, [2012] FCAFC 16, 201 FCR 173.

³⁴⁵ *Berne Convention for the Protection of Literary and Artistic Works*, 24 July 1971 and amended in 1979 (entered into force 9 September 1886).

³⁴⁶ Sam Ricketson, “People or Machines: The *Berne Convention* and the Changing Concept of Authorship” (1991) 16:1 *Columbia-VLA J L & Arts* 1.

³⁴⁷ “Author” (2023), online: *OED* <www.oed.com/dictionary/author_v?tab=factsheet&tl=true#33069565>.

³⁴⁸ Courtney Lehmann, *Shakespeare Remains: Theatre to Film, Early Modern to Postmodern* (Ithaca: Cornell University Press, 2022) at 10.

“co-participants alongside authors, in the creation of meaning.”³⁴⁹ Scribes were kind of equal contributors to the team effort of meaning-making.

This apparatus view of authoring is further delineated by Saint Bonaventure who, in the mid-thirteenth century, argued that writing books fell into four functions: first, a scribe, who reproduced material by others, adding or changing nothing.³⁵⁰

Secondly, a compiler, who wrote materials of others and joined them to other works without adding or changing anything.³⁵¹ While the compiler had a copying function, the compiler also imitated other works. A compiler copied, but also re-presented works. This “re-presentation” is key in differentiating imitation (or mimesis) from copying. This is not unlike pastiche, which allows for imitation of an indefinite number of texts.³⁵² Chaucer, who is often considered one of the greatest poets or “the father of literature,” considered himself in the role of compiler.³⁵³

Thirdly, a commentator, who wrote both materials composed by others plus added her own for the purposes of clarification.³⁵⁴ As with the compiler, the commentator continued the mimetic function, but this time added differing material.

And fourthly, an auctor, who wrote her own materials and copied those of others but prioritized her own with the inclusion of others as support for her materials.³⁵⁵ Here again, imitation played a role. Further, authority was linked with auctor.³⁵⁶ However, writing books did not fall into a hierarchical arrangement; rather, writing books functioned on a spectrum.

³⁴⁹ Mary Wellesley, *Hidden Hands: The Lives of Manuscripts and their Makers* (London: Riverun, 2021) 18.

³⁵⁰ Jocelyn Wogan-Browne et al, eds *The Idea of the Vernacular: An Anthology of Middle English Literary Theory 1280-1520* (Exeter: University of Exeter Press, 1999) at 3; see also A J Minnis & A B Scott, eds, *Medieval Literary Theory and Criticism, c.1100-c.1375: The Commentary Tradition* (Oxford: Oxford University Press, 1991) at 229.

³⁵¹ *Ibid.*

³⁵² “Pastiche,” *supra* note 44.

³⁵³ Alistair Minnis, *Medieval Theory of Authorship: Scholastic Literary Attitudes in the Later Middle Ages* (Aldershot: Scholar, 1988) at 210, as quoted in Randall, *supra* note 273.

³⁵⁴ Minnis & Scott, *supra* note 336 at 229.

³⁵⁵ *Ibid.*

³⁵⁶ See J A Burrow, *Medieval Writers and Their Work: Middle English Literature, 1100-1500* (Oxford: Oxford University Press, 2008) at 30.

It is of noteworthiness here to state explicitly, there was no fifth category of wholly independent author in this writing spectrum.

Moreover, as J. A. Burrow explains, “Bonaventure’s scheme combines into a single continuum two functions which seem fundamentally different to us: composition and the making of copies.”³⁵⁷ Further, the notion of “original” in Bonaventure’s apparatus model is strikingly absent. Not only was authorship understood in a composite way with a mimetic function, but authoring also involved making copies, which arguably became the role of a bookseller and/or publisher with the advent of print.

This apparatus of authoring continued to be evident on into the 16th century, however, the subdivided functions identified by Bonaventure were less apparent. The works of Shakespeare, may be seen as being “characterized by a composite process of writing, a feudal economy of patronage, and centuries of posthumous promotion and propagation.”³⁵⁸ Shakespeare relied on *Holinshed’s Chronicles* (1577) for approximately one third of his plays.³⁵⁹ *Holinshed* was created initially by London printer and bookseller, Reynier Wolfe, who aimed to produce a “universal” history of the world.³⁶⁰ When Wolfe died in 1573, his assistant, Raphael Holinshed, took over the project, hiring more writers and reducing the scope of the work to the British Isles.³⁶¹

Unlike historians, chroniclers obtained information as it was found rather than engaging in research to separate fact from legend. Simply put, mimesis was central to their craft. Chroniclers also tended to be distinctly parochial. Further, chroniclers demonstrate that the apparatus structure of authoring was malleable. A chronicler may fulfil the role of an

³⁵⁷ *Ibid* at 29.

³⁵⁸ Yingjin Zhang, “From Shakespeare’s Drama to Early Chinese Cinema: Authority and Authorship in Literary Translation and Film Adaptation” (2008) 54 Yearbook of Comparative and General Literature,” 83 at 88.

³⁵⁹ *Holinshed’s Chronicles of England, Scotland and Ireland* (1577), online: *The Holinshed Project* <english.nsms.ox.ac.uk/Holinshed/toc.php?edition=1577>.

³⁶⁰ Henry R Plomer, *A Short History of English Printing: 1476-1900* (London: Kegan Paul, Trench, Trübner, 1915) 86 online (pdf): <<http://www.public-library.uk/dailyebook.pdf>>.

³⁶¹ *Ibid*, 87.

auctor, but also that of a scribe, a compiler, and a commentator. It is not a single “author” personality, but one that we have come to understand as a fusion of roles.

Shakespeare used *Holinshed* as source material but gave priority to his version. One way of thinking about the chronicler role would be as “precursory authorship.” Harold Love identifies a precursory author as “anyone whose function as a ‘source’ or ‘influence’ makes a substantial contribution to the shape and substance of the work.”³⁶² Drawing on Bonaventure, this precursory authoring role would seem to be more than the commentator role yet less than the actual auctor role.

Two observations flow from looking at this snapshot of the development of authorship. First, the concept of “author” grew out of a framework of authoring. It was a linear approach to writing books rather than a hierarchical paradigm that resulted in modes of authoring. Secondly, mimesis was integral to this framework.

A number of competing influences impacted the framework of authoring during the eighteenth century, including profound effects arising from the legal and economic shifts that occurred as the new technology of print began to take hold. Further, mimesis continued to be a relevant factor in the development of copyright law. This point is worthy of elaboration before moving on.

Prior to development of copyright, the London Company of Stationers had authority over all printed material in exchange for their oversight of newly printed works.³⁶³ The royal charter, which arose as a consequence of government concern that the printing press may contribute to seditious reading material being made readily available in society, provided the Stationers’ with the exclusive right to print, but also to confiscate or destroy unauthorized works. Effectively, it was a censorship scheme. New books were entered in the Stationers’

³⁶² Harold Love, *Attributing Authorship: An Introduction* (Cambridge: Cambridge University Press, 2002) at 40.

³⁶³ The Stationers’ Company was formed in 1403 and it received Royal Charter in 1557. It held a monopoly over the publishing industry. See The Stationers’ Company, “Tradition and Heritage” (2018), online: <www.stationers.org/company/history-and-heritage>.

Register under the name of the company, usually the publisher, but not the author. As a result, the member who registered a book held the exclusive right to publish that book. Any disputes that arose, such as infringement, were resolved by the Stationers' "Court of Assistants."³⁶⁴

At the end of the seventeenth century, the Stationers' monopoly lapsed. This meant that printing could potentially return to a kind of "free for all" state, which may have been profitable for independent printers and possibly authors, but it was an economic threat to the Stationers' guild. Imitating and adapting Locke's common-sense view of property as set out in *Two Treatises of Government* (1690),³⁶⁵ the Stationers' appeared before Parliament, arguing that authors had a natural and inherent right of ownership to what they wrote.³⁶⁶ Further, like material property, that right of ownership in what authors wrote could be transferred to other parties by contract.³⁶⁷ The Stationers' strategy here lay in their reasoning that authors would always require a publisher for access to printing presses, up-front costs in materials, typesetting and so forth. In other words, the Stationers' relied on authors having little to no choice but to sign their rights back over to the publisher. In the end, the Stationers' argument resulted in the world's first full-fledged copyright statute, the *Statute of Anne* (1710).³⁶⁸ The act of adapting Locke's theory about material property to immaterial goods—ideas—is a mimetic act. Thus, mimesis is conceptually at the heart of copyright.

³⁶⁴ See The Stationers' Register (nd), online: <stationersregister.online/about?g=stationersCompany#stationersCompany>.

³⁶⁵ John Locke, *Two Treatises of Government*, Mark Goldie, ed (London: Everyman, 1999).

³⁶⁶ Stationers' Register, *supra* note 350.

³⁶⁷ *Ibid.*

³⁶⁸ *Copyright Act 1709* 8 Anne c. 21; long title: *An Act for the Encouragement of Learning, by vesting the Copies of Printed Books in the Authors or purchaser of such Copies, during the Times therein mentioned* [Statute]. Effectively, the *Statute* codified the practice that had previously existed under the Stationer's Company, but limited the term, which had previously been in perpetuity. While the *Statute* recognized the legal right of authorship, it did not articulate a clear understanding of authorship or of authors' rights.

The cases of *Millar v. Taylor* (1769)³⁶⁹ and *Donaldson v. Beckett* (1774),³⁷⁰ however, both led to ending the monopoly enjoyed by the Stationers'.³⁷¹ Both cases involved rights to print James Thompson's long poem, "The Seasons" and a clash arose between the Stationers' wanting to retain their monopoly, and Scottish booksellers, represented by Alexander Donaldson, who had been printing inexpensive editions of classic works. The Stationers' lost, thus eliminating their stronghold on book publishers. Thus, the author became the central rights-bearing figure of copyright.

c. Authorship in Transformation

There is much scholarship on the development of the modern author in relation to the release of the Stationers' stronghold. Mark Rose, for example, particularizes this view, arguing, "the distinguishing characteristic of the modern author...is proprietorship; the author is conceived of the originator and therefore the owner of a special kind of commodity, the work."³⁷² Jody Greene sees authorial liability arising along with ownership out of the *Statute*, providing a "twin pole" theory of ownership and liability on which modern authorship has its basis.³⁷³

Ronan Deazley offers a fundamentally different narrative, but still one relying on the modern author arising as a consequence of the *Statute*. He argues that inaccurate accounts of *Donaldson* in law reports resulted in the "myth" that authors held a perpetual copyright at

³⁶⁹ *Millar v Taylor*, (1769) 4 Burr 2303, 98 ER 201, [1558-1774] All ER Rep 119.

³⁷⁰ *Donaldson v Beckett*, (1774) 4 Burr 2408, 1 ER 837, 2 Bro Parl Cas 129.

³⁷¹ See Mira T Sundara Rajan, *Moral Rights: Principles, Practice and New Technology* (Oxford: Oxford University Press, 2011) at 94.

³⁷² See Mark Rose, *Authors and Owners: The Invention of Copyright* (Cambridge: Harvard University Press, 1993) at 1; see also Marilyn Randall, *Pragmatic Plagiarism: Authorship, Profit, and Power* (Toronto: University of Toronto Press, 2001); Ong and McLuhan both point to print as the instrument that provoked the private ownership of words and a new perception of authority. Ong, in particular, notes that print culture facilitated the romantic notions of originality and creativity, thus advancing the development of our contemporary notion of authorship. Ong, *supra* note 5 at 130-31.

³⁷³ Jody Greene, *The Trouble with Ownership: Literary Property and Authorial Liability in England, 1660-1730* (Philadelphia: University of Pennsylvania Press, 2005) at 10.

common law.³⁷⁴ Instead, Deazley examines the nature of copyright through the perspective of the public domain, and suggests that copyright be evaluated in terms of privileges and freedoms rather than through the traditional lens of property.

Adrian Johns offers a divergent narrative with the starting point that typographical fixity never actually existed.³⁷⁵ Thus, his scholarship challenges us to reconsider the impact of print and its externalities such as *Donaldson*. Johns focuses on the establishment of credentialism, and he argues that compositors played a role in ensuring the authority of a work. Copies of manuscripts could never be reproduced in print exactly in the same way as the authors had penned them by hand, therefore aspects such as typography contributed to authorial meaning.³⁷⁶ For Johns, authorship and authority are conventions, and that we ought to see them as attributes *to* a book rather than intrinsic attributes *of* a book.³⁷⁷

David Finkelstein and Alistair McCleery focus on the “professionalization of authorial activity.”³⁷⁸ On the same wavelength, Martha Woodmansee notes that the idea of genius during the Romantic era and the development of copyright both focus doggedly on the individual author, but in fact, the reality of authoring was collaborative in nature—and continues in that vein today.³⁷⁹

Carys Craig also focuses on the collaborative nature of authoring and encourages a re-imagination of copyright so that “protected works are not objects of property but moments of speech; authors are not individual rights-holders but contributors to a collective

³⁷⁴ Ronan Deazley, *Rethinking Copyright: History Theory, Language* (Northampton: Edward Elgar Publishing, 2006); see also Edward L. Carter, “Choking the Channel of Public Information: Re-Examination of an Eighteenth-Century Warning about Copyright and Free Speech” (2012) 1 *NYU Journal of Intellectual Property & Entertainment Law* 79.

³⁷⁵ Adrian Johns, *The Nature of the Book* (Chicago: Chicago University Press, 1998).

³⁷⁶ Johns, *supra* note 365 at 105.

³⁷⁷ *Ibid* at 271.

³⁷⁸ Finkelstein & McCleery, *supra* note 90 at 74.

³⁷⁹ Martha Woodmansee, “On the Author Effect” in *The Construction of Authorship: Textual Appropriation in Law and Literature*, Martha Woodmansee & Peter Jaszi, eds (London: Duke University Press, 1994) 15.

conversation.”³⁸⁰ Craig offers a socially situated author that is antipodal to the Lockian-Romantic author figure.

The theories about the development of the “modern author”—authors as owners, authors as professionals, authors as socially situated, authors as attributes of a book—and their relationship to copyright (or not)—demonstrate plurality. There is no universal way to answer historically the question of “what was an author?”

Without a doubt, the societal transformations brought about by the changes to the information communications infrastructure of print had authorial consequences. For example, as literacy increased in society, so did the need for authors.³⁸¹ The evolution of the daily newspaper generated the need for writers.³⁸² The founding of monthlies with more learned contributions also provoked the need for content creators.³⁸³ Additionally, booksellers looking for copy contributed to the rise of the professionalized author.³⁸⁴ “Making money from words”³⁸⁵ flourished; in fact, in his essay “The itch of writing universal,” Samuel Johnson referred to the “The Age of Authors” in which,

men of all degrees of ability, of every kind of education, of every profession and employment, were posting with ardour so general to the press. The province of writing was formerly left to those, who by study, or appearance of study, were supposed to have gained knowledge unattainable by the busy part of mankind; but in these enlightened days, every man is qualified to instruct every other man: and he that beats the anvil, or guides the plough, not content with supplying corporal necessities, amuses himself in the hours of leisure with providing intellectual pleasures for his countrymen.³⁸⁶

³⁸⁰ Carys J Craig, *Copyright, Communication and Culture: Towards a Relational Theory of Copyright Law* (Cheltenham: Elgar, 2011) at 57.

³⁸¹ See e.g. Roger Chartier, *The Order of Books: Readers, Authors, and Libraries in Europe between the Fourteenth and Eighteenth Centuries*, translated by Lydia G. Cochrane (Stanford: Stanford University Press, 1994).

³⁸² The *Daily Courant* was the first London daily newspaper publishing alongside a small number of others in 1702; by 1785, there were nine London morning, daily newspapers, ten evening newspapers which were either bi- or tri-weeklies and three Sunday papers. See Jerry White, *London in the Eighteenth Century: A Great and Monstrous Thing* (London: The Bodley Head, 2018) at 252.

³⁸³ *Ibid.* The *Gentleman's Magazine* began being published in 1731.

³⁸⁴ Dustin Griffin, *Authorship in the Long Eighteenth Century* (Newark, Delaware: University of Delaware Press, 2013) 177.

³⁸⁵ J White, *supra* note 373 at 150.

³⁸⁶ Samuel Johnson, “N. 115. Tuesday, December 11, 1753” in *The Works of Samuel Johnson: The Adventurer and Idler* (Miami: HardPress, 2017) 99.

As Johnson tells us, there were no entry qualifications for authors. “The business of words”³⁸⁷ provided both financial reward and acclaim, but was not, however, without controversy.

The framework of authoring was changing. Hierarchies amongst authors began to develop, particularly in economic and social standing. “Grub-street” writers³⁸⁸ pandered to the newspapers, trolling coffee houses and taverns for gossip; while hackney writers³⁸⁹ toiled with low earnings, long hours and questionable working conditions. The hackney writers were, however, more versatile, and often, more respected and educated. The attraction to writing resulted in a surplus of authors and so those who wanted to continue making a living had to be versatile in order to “make words pay.”³⁹⁰ Johnson, for instance, was an essayist, poet, critic, translator, pamphleteer, playwright, and most significantly, the author of *A Dictionary of the English Language*.³⁹¹ Other authors, like Alexander Pope, had private incomes inherited through family or had aristocratic patrons.³⁹² Still others were university graduates with degrees in other fields such as law, medicine, and divinity.

Authors also became important catalysts and chroniclers of social and political change: radicals, like Mary Wollstonecraft, denounced gender inequality in the *Vindication of the Rights of Woman*.³⁹³ Reformers, like Daniel Isaac Eaton, exposed double standards within the justice system through the publication of his trial proceedings for writing and distributing seditious texts.³⁹⁴ Uncompromising idealists, like Percy Bysshe Shelley, proclaimed poets to

³⁸⁷ White, *supra* note 373 at 257.

³⁸⁸ “Grub Street” was an impoverished area on the margins of London’s literary scene until the early nineteenth century at the northern edge of the city, close to the Barbican (now named Milton Street). *Ibid* at 258.

³⁸⁹ “Hackney writer” used to be defined as “one who writes for attornies or booksellers.” See Francis Grose, *The 1811 Dictionary of the Vulgar Tongue* sub verbo “hackney writer”, online: <www.fromoldbooks.org/Grose-VulgarTongue/h/hackney-writer.html>.

³⁹⁰ J White, *supra* note 373 at 258.

³⁹¹ Samuel Johnson, *A Dictionary of the English Language*, 6th ed (1785), online: <publicdomainreview.org/collection/samuel-johnson-s-dictionary-of-the-english-language-1785>.

³⁹² J White, *supra* note 373 at 260.

³⁹³ Wollstonecraft famously denounced “a false system of education.” See Mary Wollstonecraft, *A Vindication of the Rights of Woman* (Seattle: Amazon Classics, 2018) Kindle.

³⁹⁴ See Daniel Isaac Eaton, “The Pernicious Effects of the Art of Printing Upon Society, Exposed” in Paul Keen, ed, *Revolutions in Romantic Literature: An Anthology of Print Culture 1780-1832* (Peterborough: Broadview Press, 2004) 215.

be “the unacknowledged legislators of the world.”³⁹⁵ Shelley’s uncompromising idealism is also evidence of the emerging author-hero of the Romantic era: “a figure of cultural prestige and authority.”³⁹⁶

Changes brought about by the technology of the printing press along with changes in the legal profession, led to lawyers providing “the readiest supply of hackney writers of one kind or another in the eighteenth century.”³⁹⁷ The *Act for the Better Regulation of Attorneys and Solicitors*³⁹⁸ in 1729 required attorneys and solicitors to take an oath of honesty, and to serve as an articled clerk for five years. However, no attorney could have more than two clerks in articles at a time, and so the ripple effect of this was of an overabundance of practitioners.³⁹⁹ Given the compatibility of law and many features of print as well as the proximity of Fleet Street—a metonym for the British newspaper industry⁴⁰⁰—to the Inns of Court, it was not uncommon for lawyers to seek financial security through writing. The April 15, 1756, issue of the periodical *The Connoisseur*, written under the pseudonym of “Mr. Town,” attests to this relationship:

The young Solicitor, who finds he has nothing to do, now he is out of his clerkship, offers his assistance in the transaction of all law affairs, by the public papers, and like the advertising taylors promises to work cheaper than any of his brethren... The mart of literature is indeed one of the chief resorts of ...Lawyers...without practice. There are at present in the world of Authors, Doctors of Physic who (to use the phrase of one of them) have no great fatigue from the business of their profession:...several Gentlemen of the Inns of Court who, instead of driving the quill over skins of parchment, lead it through all the mazes of modern novels, critiques, and pamphlets.⁴⁰¹

³⁹⁵ Percy Bysshe Shelley, “A Defence of Poetry,” in Abrams, M H, gen ed, *The Norton Anthology of English Literature*, vol 2 (New York: Norton, 1993) at 753.

³⁹⁶ John Potts, *The Near Death of the Author: Creativity in the Internet Age* (Toronto: University of Toronto Press, 2023), 15.

³⁹⁷ J White, *supra* note 373 at 269.

³⁹⁸ *Ibid.*

³⁹⁹ *Ibid.*

⁴⁰⁰ See Alan Brooke, *Fleet Street: The Story of a Street* (Stroud: Amberley, 2010).

⁴⁰¹ Bonnell Thornton & George Colman, Untitled item (1756) 116:2 *The Connoisseur*, online: <catalog.hathitrust.org/Record/100157835/Home>.

Examples of those who trained as lawyers and went on to become authors include James Boswell,⁴⁰² William Cowper,⁴⁰³ Sir Walter Scott,⁴⁰⁴ and William Thackeray.⁴⁰⁵ Reciprocally, some professional writers sought the security of the legal profession including Henry Fielding, who also became a judge⁴⁰⁶; *Tom Jones*, for example, combines advocacy and magistracy with novel writing.⁴⁰⁷

The transformations brought about by the infrastructure of the print environment, however, did not result in an all-inclusive change to the modes of authoring. Scribal publication, for instance, continued after the adoption of the printing press because it was initially cheaper and faster than the printed word.⁴⁰⁸ Additionally, the printing press actually brought about new uses for handwriting.⁴⁰⁹ Some book publishers, for example, left blank space in order that readers could supplement information after the text was printed.⁴¹⁰ Arguably, this is an early example of reader response theory, which identifies the essential role of the reader in creating textual meaning.

Furthermore, authors did not always view themselves as legal proprietors of their work. In fact, to a large extent, the eighteenth century was a continuation of what came

⁴⁰² Gordon Turnbull, "Boswell, James (1740-1795), Lawyer, Diarist, and Biographer of Samuel Johnson" in *Oxford Dictionary of National Biography* (23 September 2004), online:

<www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-2950>.

⁴⁰³ John D Baird, "Cowper, William (1731-1800), Poet and Letter-Writer" in *Oxford Dictionary of National Biography* (23 September 2004), online:

<www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-6513>.

⁴⁰⁴ David Hewitt, "Scott, Sir Walter (1771-1832), Poet and Novelist" in *Oxford Dictionary of National Biography* (23 September 2004), online:

<www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-24928>.

⁴⁰⁵ Peter L Shillingsburg, "Thackeray, William Makepeace (1811-1863)" in *Oxford Dictionary of National Biography* (23 September 2004), online:

<www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-27155>.

⁴⁰⁶ Martin C Battestin, "Fielding, Henry (1707-1754), Author and Magistrate" in *Oxford Dictionary of National Biography* (23 September 2004), online:

<www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-9400>.

⁴⁰⁷ See Claudine L Maria-Julia Boros, *Justice Henry Fielding's Influence on Law and Literature* (Bloomington: Xlibris Corp, 2010).

⁴⁰⁸ Chartier, "The Order of Books Revisited" (2007) 4:3 *Modern Intellectual History*, 509 at 511.

⁴⁰⁹ *Ibid.*

⁴¹⁰ *Ibid* at 512.

before.⁴¹¹ Clear evidence of this may be seen in the title pages of books printed during the eighteenth century. The following figure is the title page from *Evelina, or the History of a Young Lady's Entrance into the World* by Fanny Burney.

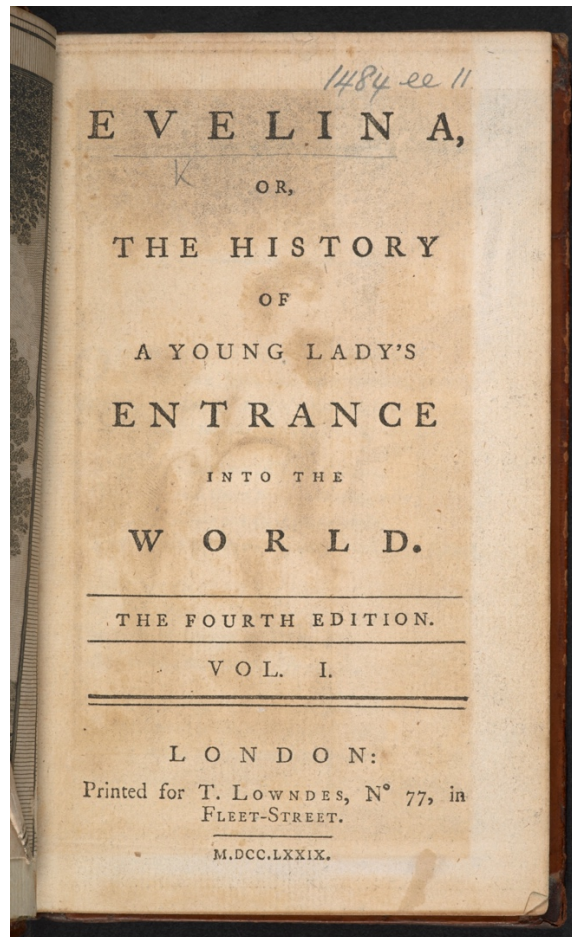


Figure 3: *Evelina*⁴¹²

Figure 3 reveals: the title of the book, its edition, its volume, the geographical location of the printer, the name of printer—who would also have been the book seller—and the date (1797).

⁴¹¹ See Dustin Griffin, *Authorship in the Long Eighteenth Century* (Newark, Delaware: University of Delaware Press, 2013) at 134.

⁴¹² British Library Learning, “Frances Burney (aka Fanny Burney) was #BOTD, 1752, #Norfolk. Today she is perhaps best known as the author of #Evelina: an epistolary novel about a modest, beautiful young woman seeking to maintain her good reputation in spite of having uncertain parentage” (14 June 2019 at 1:29am), online: X < https://x.com/BL_Learning/status/1139162897098129408/photo/4 >. Note that this image was originally captured from the British Library’s main website but due to a cyberattack in October 2023, the original source is no longer available. However, the image is still accessible available via X.

There is also a handwritten shelf mark in the top right corner denoting its location in the library. However, here is no author listed on the title page of the book.

To the twenty-first century eye, this is surprising. As a woman writer, did Burney choose to remain anonymous? Or indeed, if she had no choice, did she have to remain anonymous? These seem like logical questions given that writing was largely considered to be inappropriate for women in the eighteenth century. However, other books were also published without the author's name. For example, Samuel Richardson's epistolary novel, *Pamela; or, Virtue Rewarded*.⁴¹³ In fact, as James Raven explains, "over 80 percent of all new novel titles published between 1750 and 1790 were published anonymously."⁴¹⁴ In other words, not claiming authorship was the norm. What this demonstrates is the continuation of the apparatus model of authoring within the print environment.

There was, however, a push to "name" the author by the mid-nineteenth century. Sir Thomas Talfourd, a judge, politician, and author put forth a bill to reform the *Copyright Act* in 1814 "to insure to authors of the highest and most enduring merit a large share in the fruits of their own industry and genius."⁴¹⁵ The *Act* was eventually amended in 1842 to extend the length of copyright protection to 42 years from the date of publication, or the author's life plus seven years.⁴¹⁶

What this all points to is that the concept of author was transforming to changes brought about by the print environment—there was a recalibration in the framework of authoring. The framework was also adapting to more plural ways of professionalized writing

⁴¹³ As quoted in Robert Folkenflik, "Anonymous was a Writer", *LA Times* (27 December 2011), online: <www.latimes.com/archives/la-xpm-2011-dec-27-la-oe-1227-folkenflik-anonymous-20111227-story.html>.

⁴¹⁴ *Ibid.*

⁴¹⁵ Thomas Talfourd, "Speech on the Motion for the Second Reading of the Bill to Amend the Law of Copyright," in *Critical and Miscellaneous Writings of T. Noon Talfourd* (Philadelphia: Carey and Hart, 1846), 165 at 165 as quoted in Alexis Easley, "The Nineteenth Century: Intellectual Property Rights and 'Literary Larceny'" in Ingo Berensmeyer, Gert Buelens & Marysa Demoor, *The Cambridge Handbook of Literary Authorship* (Cambridge: Cambridge University Press, 2019).

⁴¹⁶ *Ibid.*

as evidenced by the “Grub Street” writers, lawyer-hackney writers, essayists, poets, critics, translators, pamphleteers, playwrights, and authors. But at the same time, handwritten copies were still being produced.

There is a tendency today to think about authorship as evolutive, perhaps as a consequence of Eisenstein’s work on the printing press and standardization in society. Or maybe as a result of the tendency to use “building” language to describe the incrementally hierarchical nature of authorship—its development, its construction, its transformation etc. Or perhaps the fierce individualism and ideology of “original creative genius” reflected in the work of Romantic poets like Wordsworth and Coleridge contributed to viewing authorship as evolutive. In fact, this tendency to view authorship as evolutive may be in part as a repercussion of its law and literature relation. An economic analysis of law sees the common law as tending to evolve toward efficient or wealth-maximizing rules.⁴¹⁷ Thus, if law is viewed as evolutive then so too must authorship.

This notion of “evolutive” draws on what we might describe as the mythic language of scientific objectivity, which has a long and complicated history linked with racial discrimination, colonialism, gender bias. A patently and painfully obvious example of this link may be seen in the full title to Charles Darwin’s theory of evolution: *On the Origin of the Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*.⁴¹⁸ Social evolution replaced theistic evolution and was used to justify colonialism, which resulted in legitimizing slavery, poverty, dispossessing peoples of their traditional lands and territories, overincarceration, loss of language and many other “legacies.”

⁴¹⁷ See e.g. John C Goodman, “An Economic Theory of the Evolution of the Common Law” (1978) 7 J Legal Studies 393.

⁴¹⁸ Charles Darwin, *On the Origin of the Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (Oxford: Oxford University Press, 1859).

In her work on race and gender in the context of AI, Timnit Gebru tells us that the main idea that scientists are objective “clouds them from being self-critical and analyzing what predominant discriminatory view of the day that they could be encoding, or what goal they are helping advance.”⁴¹⁹ Similarly, technological advances such as those in the automobile industry or in the practice of medicine are also besmirched by the same faulty convictions.

We cannot decouple the word “evolution” from its long and complicated history. It cannot be “uncoded.” In fact, we would do well to jettison its use.

Authorship exists on a continuum. There is evidence during the Middle Ages of a collective model of authorial activity. There is proof of an increasingly autonomous, isolated, and commercialized author by the eighteenth century. But one did not necessarily replace the other. Authorship is also entangled with profound changes in information communication infrastructure, but again, print culture did not immediately supersede the practices of the manuscript environment. Authorship also changed and developed with changes in law and in the legal profession. Again here, the author as owner did not completely displace the author whose name never appeared on the title page of their work.

d. Authorship at the Periphery

Modern literary theory at the turn of the Twentieth Century is often seen as posing a challenge to—or distancing itself from—the idea of the author as the central agent in the production of a written work. This is so much so that Roland Barthes’ discourse of the “death of the author” has been viewed as “reading the last rites over the corpse of the idea of the

⁴¹⁹ Gebru, *supra* note 43 at 253.

author.”⁴²⁰ The focus was instead on the literary text, thus moving the author figure to the periphery.

This distancing from the idea of author as central agent in a written work may be explained in a variety of ways. For instance, the desire to disengage with biographical positivism as asserted by Russian Formalists and their general claim that literary language is made up of an act of defamiliarization, thus stressing formal properties of language rather than any relation to the author or social milieu in which the text was created.⁴²¹ American New Critics also focused on the formal aspects of literary texts, but unlike the Russian Formalists, theirs was decidedly anti-scientific, propounding “close readings” as their method of literary analysis.⁴²² This distancing of author as the central focus may also be attributed to conferring credibility on the developing professionalization of literary criticism.⁴²³ The author in these movements functioned in the periphery rather than at the core. However, the “author in the periphery” may also be explained in viewing authorship on a continuum rather than as an evolutive and hierarchical concept.

The ambit of authorship changed philosophically and theoretically again during the 1960s and 1970s with structuralist and poststructuralist criticism.⁴²⁴ This is famously encapsulated in Roland Barthes’ “Death of the Author” (1968),⁴²⁵ which overturned the notion of a biographical-author person, and in Michel Foucault’s “What Is an Author?” (1969),⁴²⁶ which searched for an alternative in the wake of the author’s “death.”

⁴²⁰ Andrew Bennett, *The Author* (New York: Routledge, 2005) at 10.

⁴²¹ See Julie Rivkin & Michael Ryan, “Introduction: Formalisms” in Julie Rivkin & Michael Ryan, eds, *Literary Theory: An Anthology*, 2nd ed (Oxford: Blackwell, 2004) 3.

⁴²² Legacies of the New Critics are the “intentional fallacy” and the “affective fallacy.” “According to the intentional fallacy, meaning resides in the verbal design of a literary work, not in statements regarding his or her intention that the author might make. According to the affective fallacy, the subjective effects or emotional reactions a work provokes in readers are irrelevant to the study of the verbal object itself, since its objective structure alone contains the meaning of the work.” *Ibid* at 5-6.

⁴²³ See generally Gerald Graph, *Professing Literature: An Institutional History* (Chicago: University of Chicago Press, 2007).

⁴²⁴ See e.g. Rivkin & Ryan, *supra* note 410 at 53.

⁴²⁵ Barthes, *supra* note 190 at 142.

⁴²⁶ Foucault, *supra* note 191.

Barthes' "The Death of the Author" is a translation of a 1967 essay, "La mort de l'auteur"—a pun on *Le Morte d'Arthur*, which is a 15th century collection of Arthurian legends written by several anonymous authors and by the compiler, Sir Thomas Malory.⁴²⁷ Barthes' title alludes to a mode of writing, where there is no "author" *per se*, but instead, a divided, fluid structure of writing. In this mode of writing, the author is released from the bulwark of the sole Romantic genius. Instead, Barthes posits that the author is merely a way through which the story is told. The author can neither create nor form the story as this has already been done. The author merely retells the story that has been previously told many times. Here, Barthes' also signals the importance of mimesis—in fact, his title is also indicative of its importance.

Additionally, Barthes suggests that if the reader were to view the work through the author's eyes, the reader would gain no benefit. Put simply, associating the author with the text is limiting and therefore, should not be done. Ultimately, Barthes asserts that the status of the reader should be elevated, not the status of the author. In that way, there are no limits to the interpretations available. Barthes states, "...the birth of the reader must be at the cost of the death of the Author."⁴²⁸ In other words, to understand authorship on a continuum, we must release our preconceived notion of "what is an author?"

Foucault's "What is an author?" is often considered to take up where Barthes left off in that he recasts the author as a constructed and conditional category. Foucault proposes to discuss the relationship between author and text, specifically, the way in which a text points to the "figure" of the author as one who anticipates and transcends the text. Foucault begins his investigation by quoting Beckett—or perhaps imitating Beckett—in order to show "indifference" which sets the stage in contemporary writing: "What matter who's speaking,

⁴²⁷ Thomas Malory, *Le Morte d'Arthur* (New York : Random House, 1999).

⁴²⁸ Barthes, *supra* note 190 at 148.

someone said, what matter who's speaking?"⁴²⁹ Foucault believes it does matter and goes on to discuss two aspects of contemporary writing: first, as a space for writing the subject's disappearance and second, its relationship to death. Contemporary writing—which Foucault later calls “écriture”—is self-referential, “yet it is not restricted to the confines of interiority” and contrasts it to the traditional idea of writing as a means for expression.⁴³⁰

Historically, writing has also been a means of immortalizing the author, but contemporary writing reverses the equation—rather than guaranteeing immortality as demonstrated by the Greek epic, writing kills the author. In both instances of contemporary writing, the author is absent. The author as Foucault will show, however, is not forgotten—or dead as suggested by Barthes—the author is, in fact, re-imagined.

In analyzing the space left by the absent author, Foucault considers whether what is left preserves the author's privilege or if it suppresses the true meaning of the author's absence. He does this first by examining the parameters of the author's work, contemplating “how a work can be extracted from the millions of traces left by an individual after his death.”⁴³¹ Do we publish everything that an author writes? Foucault concludes that a framework is necessary to address the “millions of traces” left in the space of the absent author. Foucault rekindles the importance of the framework of authoring.

Barthes' death of the author is insufficient for Foucault. Instead, he seeks to “reexamine the empty space left by the author's disappearance” and be observant in respect of what the disappearance uncovers.⁴³² In this mode of observation, Foucault considers the problems that arise in the use of the of the author's name. The author's name has a referent, which is distinct from the author his- or her-self. The author's name and the proper name are

⁴²⁹ Foucault, *supra* note 191.

⁴³⁰ *Ibid.*

⁴³¹ Foucault, *supra* note 191 at 127.

⁴³² *Ibid* at 128.

also both linked to the body of his/her work. The name then, functions in two ways: it delimits a body of work and it accustoms reception of the work.

Foucault believes that his notion of authorship could be applied more widely, given that authorship involves more than just books. Theories may also be authored, as may entire discourses, which Foucault labels as “trans-discursive authorship.” Marx and Freud would be considered trans-discursive authors.

Foucault closes his argument by alluding to Barthes: “We can easily imagine a culture where discourse would circulate without any need for an author.”⁴³³ However, he then overturns the notion of the dead author, seeing instead the “author-function” as mutable, adaptable and unfixed.

Foucault directs our attention to the form of authoring. Specifically, he re-labels the traditional categories of author (author-function), authority (trans-discursive authorship), and writing (*écriture*). Foucault leaves behind both the hierarchical author-genius and their death and directs our attention to the framework of authoring.

While these transpositions of authorship in literary theory were occurring, copyright continued to understand “author” as modeled on the author-genius. This may be viewed as decoupling the twin understanding of “author” from which copyright ostensibly derives. But it may also be explained through understanding authorship on a continuum. The undulating understandings of author in literary theory did not displace the autonomous, isolated, commercialized author precedent in copyright law. One did not replace the other. Authorship is made up of many parts—it is not an “either/or” choice between alternatives. It fluctuates, without clear divisions, and these fluctuations have different degrees. They may change slowly, but they may also change rapidly.

⁴³³ *Ibid* at 139.

However, we also know that authorship is entangled with changes in the information communication infrastructure. Authorship in the context of generative AI may well be “the” test case for understanding the question “what is an author?” It challenges all of the ways in which we have previously conceived of authoring. But understanding AI authorship can only be managed by a return to a focus on form.

e. Authorship and AI

The issue of authorship in the context of AI is a Gordian knot that is further complicated by generative AI. To help narrow the scope of the literature on this issue, I will draw on Annemarie Bridy’s work on “coding creativity,” which helpfully divides “AI authorship” into three generations.⁴³⁴ First, the PC revolution of the 1980s, which resulted in a “seismic shift in consumer attitudes and practices concerning the reproduction of copyrighted works.”⁴³⁵ Second, the Internet revolution of the 1990s, which had a strong focus on distribution of copyrighted works.⁴³⁶ And thirdly, the computer-enabled technological shift, where computers are no longer enabling people to create novel works, but where people are enabling computers to produce novel works.⁴³⁷ This latter shift is contentious ground.

James Grimmelman, for instance, pronounces that if, at some point in the future, computer programs could qualify as authors, and display attributes of personhood that would require us to treat them as copyright owners, it would be “because we have already made a decision in other areas of life and law to treat them as persons, and copyright law will fall in line.”⁴³⁸ Thus, for Grimmelman, AI authorship is a misstep.

⁴³⁴ Annemarie Bridy, “Coding Creativity: Copyright and the Artificially Intelligent Author” (2016) 5 Stanford Technology L Rev 1.

⁴³⁵ *Ibid* at 2.

⁴³⁶ *Ibid*.

⁴³⁷ *Ibid*.

⁴³⁸ James Grimmelman, “There’s No Such Thing as an AI Author—And It’s a Good Thing, Too” (2016) 39:3 Columbia J L & Arts 403 at 414.

Jane Ginsburg and Luke Budiardjo argue that the right question to be asking in respect of computers and authors is not who or what is an author, but how we should be evaluating the authorial claims of the humans who are implicated in training or employing machines that create.⁴³⁹ More specifically, that we need to refocus our attention on either the upstream human—the programmer—or the downstream human who asks for output. Further, they suggest that in some cases, the human contributions to a work’s creation will be inappreciable, thus resulting in an authorless work.

In the same vein, Daniel Gervais finds the arguments involving machines as tools at the hands of human users or generators and their subsequent output as either random or pre-programmed for and against the protection by copyright of literary works made by AI to be “vieux jeu.”⁴⁴⁰ Rather than focusing these arguments which depend upon answering the question of whether machines are able to make decisions autonomously, he suggests that the question we ought to be asking is when do machines reach “the *threshold of autonomy* that separates or delinks their productions from the humans that programmed or used them?”⁴⁴¹

Further, Gervais suggests a “causation of originality” test to help courts in deciding whether this threshold of originality has been crossed.⁴⁴² This would involve following the creative choices made in a work and deciding if those choices occurred in the code or whether they are evident in a user’s instructions. Applying this originality causation principle would allow courts to exclude creative choices made by machines in making determinations of whether a work is original. In other words, if all the choices in a work are made by a machine, it should not be protected by copyright. And if the work is the consequence of a human and a machine, then it should be treated as a new work in which someone has reused a

⁴³⁹ Jane C Ginsburg & Luke Ali Budiardjo, “Authors and Machines” (2019) 34 Berkeley Tech L J 343.

⁴⁴⁰ Daniel J Gervais, “The Machine as Author” (2020) 105 Iowa L R 2053.

⁴⁴¹ *Ibid.*

⁴⁴² *Ibid* at 2099.

work—or works—in the public domain. Thus, the choices and subsequent material made by the machine would be excluded.

The “causation of originality” test would find that I am the author of Part I and that Part II of “Go With Me” would be excluded from being considered “original.” However, that analysis results in attributing authorship to me in part, and excluding the contributions made by ChatGPT. Knowing that the contributions made autonomously by AI cannot be considered original tells us that the content created by AI cannot be afforded copyright protection. As an externality of unoriginal—or derivative—it follows then that AI cannot be an author. But this does not help advance our understanding of what generative AI is doing with words.

Further, drawing on the analysis of mimesis earlier in this chapter, we know that mimesis plays an integral role in the locutionary force. However, we also know that grappling with the role of mimesis in determining “original” can be difficult as evidenced in *Sheeran* and *Warhol*. Thus, a test for causation for something that is not always clear, even in cases without the involvement of AI, is problematic.

Carys Craig and Ian Kerr suggest, however, that the current quandary for and against arguments in respect of the protection of literary and artistic works involving AI is, in fact, the consequence of asking the wrong question in respect of authorship and AI—that indeed “AI authorship” is oxymoronic.⁴⁴³ Craig and Kerr suggest that AI authorship is a “category mistake” as the result of three theoretical misunderstandings: first, a misunderstanding of the critique of the Romantic author; secondly, confusion over the literary debates on “death of the author”; and thirdly, a resulting false dichotomy that envisions the only practicable solution to the conundrum left in the wake of a romantic conception of authorship to be the US utilitarian copyright doctrine.⁴⁴⁴

⁴⁴³ Carys J Craig & Ian R Kerr, “The Death of the AI Author” (2021) 52:1 Ottawa L Rev 31.

⁴⁴⁴ *Ibid* at 42.

Building on Craig and Kerr's line of thinking about "category mistake" and also Austin's failures of felicity, I would like to contribute another strand of thinking that teases out why AI authorship is conceptually flawed.

Category mistakes have long been treated as curiosities by philosophers. Aristotle, for example, was puzzled by the case of "unmusical man" who becomes musical and whether they are distinct entities or accidentally one entity.⁴⁴⁵ The more contemporaneous debate about category mistakes is found in the work of Gilbert Ryle. In fact, Ryle coined the phrase "category mistake."⁴⁴⁶ In his best-known work, *The Concept of Mind* (1949),⁴⁴⁷ Ryle argued that category mistakes were of primary importance in determining ontological categories and that in essence, differentiating between these categories was the essence of philosophy. He believed that if we saw certain philosophically odd observations as category mistakes, then those mistakes would be revealed as senseless, and therefore resolved.

Ryle's aim had been to break down the Cartesian mind-body dualism that the mind and brain are entirely different things. He rejected "the official doctrine" that a distinct "mind" inhabited the body, and its function unobservable to others. Ryle referred to this as the doctrine of "the ghost in the machine."⁴⁴⁸ He believed that we could glean mind and its attributes from the actions of individuals, thus it would be possible theoretically to differentiate between a human being and a robot through behavioural inferences. Turing, who was less convinced, built on Ryle's anti-Cartesianism in "Computing Machinery and Intelligence?"⁴⁴⁹

⁴⁴⁵ For an explanation of Aristotle's "...recourse to some facts of ordinary language to tease out the solution to the Eleatic challenge," he asks us to consider the hypothetical involving the unmusical man, see Daniel W. Graham, *Aristotle's Two Systems* (Oxford: Oxford University Press, 1990) at 134.

⁴⁴⁶ Gilbert Ryle, "Categories" (1938) 38 *Proceedings of the Aristotelian Society* 189.

⁴⁴⁷ ———, *The Concept of Mind: 60th Anniversary Edition* (London: Routledge, 2009).

⁴⁴⁸ *Ibid* at 5.

⁴⁴⁹ "Computing Machinery and Intelligence" was published in the journal *Mind* in 1950, which was edited by Gilbert Ryle. See Turing, *supra* note 120.

Austin reviewed *The Concept of Mind* in the *Times Literary Supplement* in 1950. In the *Review*, he draws attention to the fact that in trying to debunk the Cartesian myth, Ryle falls into the trap of “one world” thinking. Specifically, he states,

Those who, like Professor Ryle, revolt against a dichotomy to which they have been once addicted, commonly go over to maintain that only one of the alleged pair of opposites really exists at all. And so [...] preaches with the fervour of a proselyte a doctrine of “one world.” Yet what has ever been gained by this favourite philosophical pastime of counting worlds? And why does the answer always turn out to be one or two, or some similar small well-rounded, philosophically acceptable number? Why, if there are nineteen of any thing, is it not philosophy?

Where Professor Ryle says that something has been wrongly taken to belong to a certain “logical” category or to be of a certain logical type, it is not easy to see why “logical” might not be omitted without loss. It may be time that we stopped talking about “logical” grammar and “logical” syntax, when all we mean is grammar and syntax...⁴⁵⁰

For Austin, Ryle was still rooted in a longing for unity, which inhibits the conceptual approach that he set out to do as evidenced in the very title of his book, *The Concept of Mind*. Ryle was unable to do what his conceptual methodology sets out to do—to draw connections, to gain new insights. At the same time, however, Austin draws attention to the fact that both philosophers were invested in dissolving philosophical problems through language.

Drawing on the observation that authorship exists on a continuum and taking a cue from Austin’s investment in dissolving philosophical problems through language, I will offer an alternative to AI authorship.

f. Taking Advantage of the Authorship Continuum

We know from Chapter 1 that in order for speech acts to be successful, they must be felicitous. Austin classified failures of felicity as either misfires or abuses. Misfires occur

⁴⁵⁰ Anon [J L Austin], “Intelligent Behaviour”, a review of Gilbert Ryle, *The Concept of Mind*, in *The Times Literary Supplement*, 7/4/1950, p.220, reprinted in Pitcher and Wood (eds), *Ryle: A Collection of Critical Essays*, pp.45–51. As quoted in M W Rowe, *J. L. Austin: Philosopher and D-Day Intelligence Officer* (Oxford: Oxford University Press, 2023) at 455.

when acts of speech are performed but actual speech acts have not occurred. For example, only a judge can pass sentence on offenders who are convicted of an offence. If someone other than a judge uttered the same words of the sentence, it would be an act of speech, but it would not be a successful speech act. The speech would be performed but it would misfire. This is a consequence of lacking the authority to perform the speech act.⁴⁵¹ Abuses occur where intention is involved. For instance, if someone promises to mow the grass, but has no intention of doing so, this would be considered insincere, thus an infelicity.

In the context of authorship and AI, we know that ChatGPT can successfully generate acts of speech. However, AI also has no standing—it is not human. AI has no authority to perform the speech act of authoring words. Thus, AI authorship is a misfire. As a consequence of lacking authority, an AI cannot be an author.

At the same time, however, in returning to “Go With Me,” I am not the author of Part II. While Part II certainly has its basis in Part I of the story, where I am the author, I did not author the text in Part II. Furthermore, it is logical to assume that the same infelicity would apply to joint authorship and AI. If AI lacks the authority to be an author, then it lacks the authority to be a joint author. Thus, joint AI authorship is also a misfire. An AI cannot be a joint author.

The repercussions of ChatGPT’s failure of felicity are that AI can neither be an author nor a joint author. With that being said, the chain story at the beginning of this chapter demonstrates that ChatGPT still does things with words. If we apply the finding that authorship exists on a continuum, and draw on historically recognized subdivisions, “commentator” comes closest to fitting what ChatGPT does with words. A commentator wrote materials composed by others plus added their own for the purposes of clarification.⁴⁵²

⁴⁵¹ Austin had elaborate research plans for detailed study of thousands of speech acts and their felicity conditions. See L W Ferguson, “Locutionary and Illocutionary Acts” in *Essays on J. L. Austin* by G Warnock, ed (Oxford: Clarendon Press, 1973) at 160.

⁴⁵² Minnis & Scott, *supra* note 336.

In this role, there was obvious imitation, but there was also fresh material created. Thus, we might say that the role had limited authority that was confined to the function of the commentator. The word “commentator” however is slightly archaic sounding in respect of writing and tends to be used today mainly in the context of sports’ reporting. Further, a commentator, historically, was human. Thus, to avoid any ostensible anthropomorphising of generative AI, the synonym “expositor,” then, may be more fitting.

This would mean that “Go With Me” had one author and one expositor. The application of a formal role for generative AI would not change the fact that content generated by AI, in the context of an expositor, is not protected by copyright. Applying the title “expositor” would clarify that an AI is not an author, and it would acknowledge that AI has a role in creating content.

Assigning the role of expositor to generative AI would have implications for responsibility in respect of plagiarism. This is positive. The owner of the expositor may become liable for AI hallucinations, possible speech harm, and copyright infringement. This would arguably be helpful for copyright owners. Further, by acknowledging an official role for generative AI, authors will be required to acknowledge the role of expositor in the content creation. This has ramifications for students when writing papers. Students would be required also to acknowledge the role of the expositor in writing papers or in research. This is also beneficial and would contribute to addressing the current concern with generative AI in the context of higher education. Additionally, style guides would have to be amended to include how to cite the use of an expositor.

Providing an official role for generative AI would have implications for the *Copyright Act*. The *Act* was first passed in 1921 and came into force in 1924 to comply with the *Berne Convention*. The *Act* was effectively a replica of the U.K.’s *Imperial Copyright Act 1911*,⁴⁵³

⁴⁵³ *Copyright Act 1911* (1911 c. 46).

resulting in what may be referred to as Canada's first sovereign copyright law.⁴⁵⁴ Since then, the *Act* has had three major reform phases in 1988, 1997 and 2012.⁴⁵⁵

Notwithstanding the aforementioned revisions and amendments, the basic structure and many of the provisions in Canada's *Copyright Act* clings to the 1924 model. This is a curiosity given that the law was enacted in an era without computers, photocopiers, the Internet, and Facebook and other technological advancements. According to Sara Bannerman, Canadian copyright reform has historically comprised of three elements:

slow progress, a minimalist approach to conformity with international treaties, and carving out made-in-Canada approaches that attempt to respond to domestic Canadian demands while meeting the technical requirements of international treaties.⁴⁵⁶

In Bannerman's view, this slow progress with minimalist adherence to treaties has allowed for a more Canada-centric approach which results in more innovative solutions on smaller issues.

⁴⁵⁴ See Sara Bannerman, "Copyright: Characteristics of Canadian Reform" in Carys Craig, From "Radical Extremism" to "Balanced Copyright": Canadian Copyright and the Digital Agenda (Toronto: Irwin Law), 24.

⁴⁵⁵ The 1988 amendments dealt with the following issues: protection of computer programs, protection of choreographic works, anti-piracy remedies, role of the Copyright Board, clarification between industrial design and copyright protection, collective administration of copyright, moral rights, abolition of compulsory licences for the making of sound recordings, and the right to exhibit an artistic work at a public exhibition. This first reform phase left out addressing the users' rights aspect of copyright. The second reform in 1997 brought Canada in compliance with the 1961 *Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations*, which granted rights in public performance and broadcasts for performers and producers of sound recordings. Among other revisions, the second reform also introduced a private copying levy with exceptions for non-profit educational institutions, libraries, archives, and museums, and guaranteed minimum awards for copyright infringement. The third reform phase took three attempts before the *Copyright Modernization Act* entered into force in 2012. This phase of amendments accomplished the chore of modernizing Canadian copyright law in accordance with WIPO treaties. Specifically, it brought Canada into compliance with the *WIPO Copyright Treaty* and the *WIPO Performances and Phonograms Treaty*. See Lesley Ellen Harris, *Canadian Copyright Law*, 4th ed (Hoboken, NJ: Wiley & Sons, 2014) at 36. In the 15 years that passed between phases two and three, Canadian courts were solely responsible for interpreting "modernized" copyright obligations, and thus contributed to SCC judgments that shaped Canada's copyright law in exceptional ways. See *Théberge v Galerie d'Art du Petit Champlain Inc*, 2002 SCC 34; *CCH Canadian Ltd v Law Society of Upper Canada*, 2004 SCC 13; *Society of Composers, Authors and Music Publishers of Canada v Canadian Assn of Internet Providers*, 2004 SCC 45; *Roberston v Thomson Corp*, 2006 SCC 43; *Euro-Excellence Inc v Kraft Canada Inc*, 2007 SCC 37. Other amendments to the *Act* have taken place since 1988 including modifications to comply with the following: the Canada-United States Free Trade Agreement; the *North American Free Trade Agreement* (NAFTA); Bill C-88 to amend the definition of musical works; and the *Trade Related Intellectual Property Rights* (TRIPs) of the General Agreement on Tariffs and Trade (GATT). In December 2022, the copyright term was extended (not retroactively) from 50 to 70 years. See Lesley Ellen Harris, *Canadian Copyright Law*, 4th ed (Hoboken, NJ: Wiley & Sons, 2014) at 36.

⁴⁵⁶ Bannerman, *supra* note 444 at 34.

Revising the *Act* to clarify that AI-generated output is not covered because it is the work of an expositor, which is, by definition, not an author maintains this minimalist approach. It would also maintain the “thumbnail” or leitmotif of human author that carries through other law, such as *Berne*.

Assigning the role of expositor may also have implications for the principle of “technological neutrality.” Adhering to this principle means that laws—copyright law included—ought to be developed so as to avoid privileging particular technologies.⁴⁵⁷ In other words, laws should be crafted as broadly as possible so that objectives are achieved without discriminating or favouring particular technologies. However, this is a principle that was developed when technology was simply a “tool.” Given that generative AI has an uninterpretable nature and creates novel risk, continuing to adhere to the principle of tech neutrality may prove to be impossible.⁴⁵⁸ Creating the function of “expositor” may serve as catalyst for either clarifying or amending the nature of tech neutrality in the context of generative AI.

Assigning the role of “expositor” is more than a “guardrail,” which is the term used for describing safety mechanisms and/or guidelines for AI in the tech industry. Effectively, guardrails function as tech industry policy in the absence of legal mechanisms to help with data integrity and AI hallucinations. But at present, many of these guardrails are only audited internally by the tech industry itself.⁴⁵⁹ This means that the tech industry is performing its

⁴⁵⁷ See generally Carys Craig, “Technological Neutrality: Recalibrating Copyright in the Information Age” (2016) 17:2 Theoretical Inquiries in Law 601.

⁴⁵⁸ See e.g. Patrick Grady, “The *AI Act* Should Be Technology-Neutral”, *Centre for Data Innovation* (1 February 2023), online: </itif.org/publications/2023/02/01/the-ai-act-should-be-technology-neutral/>.

⁴⁵⁹ In respect of the recent updates to ChatGPT, which includes computer vision and speech recognition, OpenAI, states the following: “Vision-based models also present new challenges, ranging from hallucinations about people to relying on the model’s interpretation of images in high-stakes domains. Prior to broader deployment, we tested the model with red teamers for risk in domains such as extremism and scientific proficiency, and a diverse set of alpha testers. Our research enabled us to align on a few key details for responsible usage.” However, “red-teaming,” is a safety measure intended for independent experts, who try to push models into bad behavior. “We tested the model with red teamers” does not equal “we tested the model with independent red teamers.” You cannot properly audit a system with your own “experts.” See OpenAI, “ChatGPT Can Now See, Hear, and Speak” (2023), online (blog): *OpenAI* <openai.com/blog/chatgpt-can-now-

own “checks and balances,” which leads to questions about whether guardrails are effective. Clarifying a particular function—in this case, an expositor—is more than a guardrail. It is a boundary to the copyright domain. Further, identifying this role may also have positive ripple effects in other areas of law where generative AI poses challenges.

Providing a formal title that encapsulates what generative AI does with words provides a solution to the issue of authorship without getting into ontological debates. Assigning the role of expositor also brings to the fore that authorship occurs on a continuum. It is a multi-faceted, plural concept that adapts to changes in society and in the information communications infrastructure. “Expositor” would clarify, once and for all, that there is no such thing as an AI author.

see-hear-and-speak>; see also Amanda Turnbull, “Talking ChatGPT: Harmless Artefact or Progression of Social Ordering by Algorithm”, *New Zealand Herald* (6 October 2023), online: <www.nzherald.co.nz/nz/amanda-turnbull-talking-chatgpt-harmless-artefact-or-progression-of-social-ordering-by-algorithm/>.

CHAPTER 3

Illocution: Intention and the Emerging Algorithmic Contract

*We [need to] explain speaker meaning before we explain conventional sentence meaning,
because speaker meaning is logically prior.*

J R Searle⁴⁶⁰

I. Introduction

This focus of this chapter shifts from the previous chapter's emphasis on doing things with algorithms and authored words to doing things with algorithms and drafted words.⁴⁶¹ More specifically, this chapter will investigate the use of algorithms in the contracting process as the illocutionary act or the intentional dimension involved in a performance of language. The illocutionary aspect of a speech act is the expression of the intended meaning of a sentence—what one does in performing an utterance. When making an assertion, a speaker commits themselves to both the “truth” of the utterance, and to what the speaker may also be “doing” through the utterance. For example, if I state, “you are stepping on my foot,” I am declaring publicly that I believe someone to be stepping on my foot. I am also “doing” something: making a request for the other person to remove their foot from mine. There is underlying intention in uttering that statement—a request to do something. Both aspects of this utterance form an illocutionary act. Other illocutionary acts include promising, bargaining, asking, resigning, bequeathing etc.

Contracts that are formed by—or rely upon—Machine Learning (ML) algorithms in the contracting process are algorithmic contracts. These types of contracts are contingent

⁴⁶⁰ J R Searle, *The Making the Social World: The Structure of Human Civilization* (Oxford: Oxford University Press, 2010) at 73.

⁴⁶¹ Part of this chapter appeared in Amanda Turnbull, “Promises and Bargains: The Emerging Algorithmic Contract” in Christo El Morr, ed *AI and Society: Tensions and Opportunities* (Chapman and Hall/CRC Press, 2022).

upon algorithmic decision-making, and supplemental to human decision-making in the contract process.⁴⁶²

This chapter begins with a prologue, which sets the scene for the ensuing discussion of algorithmic contracts. Part II will explore the emergence of the algorithmic contract, beginning from the question of what is a contract? And that through exploration will proceed to the development of standard form contracts and on as they became more technologized in form. The section will also include a discussion of smart contracts and how they differ from algorithmic contracts. Part III will examine, in close detail, the nature of algorithmic contracts, differentiating between business-to-business algorithmic contracts and business-to-consumer algorithmic contracts. This leads into Part IV, which situates *Uber v. Heller* (2020) as a landmark case of Canadian contract law, not only since it clarifies the doctrine of unconscionability in Canada, but also as an algorithmic contract. In light of this, Part V will survey post-*Uber* opportunities for contract doctrine and more broadly, what we may glean about the illocutionary dimension of an algorithm's speech act.

Prologue

Ms. Bundy is an older woman who has recently given her car to her son, who had been struggling with a business venture that ultimately failed. He lost all his assets in this venture as well as having his car repossessed. This is not the first business undertaking in which he has failed. Ms. Bundy, however, has great faith in her son, and she has supported his financial well-being whenever she was able. Ms. Bundy raised her son as a single mother, receiving no support from the son's father.

⁴⁶² The term "algorithmic contract" was coined by Lauren Henry Scholz in 2017. See Scholz, *supra* note 67; see also, Lauren Henry Scholz, "Algorithms and Contract Law" in Woodrow Barfield, ed, *The Cambridge Handbook of the Law of Algorithms* (Cambridge: Cambridge University Press, 2021) 141.

After helping her son by giving him her car, Ms. Bundy decided not to try and replace her car. Instead, she opted to use some of her limited savings to purchase a smartphone so that she could have the flexibility of using the services provided by ride-sharing companies in the city in which she lives. Ms. Bundy lives frugally on a small pension. She lives in the same rented two-bedroom apartment that she has lived in for the past 40 years.

Though not well versed in information communications technologies (ICTs)—in fact, this was her first smartphone—Ms. Bundy has adapted fairly well to her new smartphone. The challenges she has experienced in adjusting to it include its keyboard design and remembering to charge the device regularly. Ms. Bundy has arthritis and so using the device’s keyboard is sometimes a challenging endeavour. On this day in particular, Ms. Bundy has forgotten to charge the phone before leaving her apartment for her weekly visit to the grocery store, which is not within walking distance of her apartment. Her smartphone has gone into low power mode, with only 7% of her battery left.

Ms. Bundy has three ride-hailing apps downloaded on her phone. On this day in particular, however, she decides due to the limited power left on her phone that she will not toggle between the apps as she normally does to decide which service will get her home most quickly and at the least costly rate. Ms. Bundy chooses the most well-known ride-hailing app owing to the limited power remaining on her phone. Normally, the ride back to her apartment costs between \$25 and \$30. But today, the app is showing a surge in pricing to \$81.⁴⁶³ Ms. Bundy believes that she has no choice but to accept the inflated rate. Therefore, she clicks to agree to the \$81 ride on the app. The additional expense of approximately \$50 will create a hardship for Ms. Bundy.

⁴⁶³ Uber, for example, uses a pricing algorithm that incorporates price elasticity as well as other aspects such as location in predicting supply and demand. Using this information, Uber then generates the optimal price for its customers. See IRIS Pricing Solutions, “3 Pricing Lessons from Uber” (nd), online: <www.pricingsolutions.com/pricing-blog/lessons-in-pricing-from-uber/>; Procurious, “How Automation Could Shift the Negotiation Landscape” (14 June 2016), online: <www.procurious.com/procurement-news/automation-negotiation>.

When Ms. Bundy returns home, her son explains that the ride-hailing app has access to the data on her phone, including the battery level. To avoid potential surge pricing, he advises that she should charge her phone to more than 20 per cent prior to leaving to do her weekly shopping.

II. *The Emerging Algorithmic Contract*

Although the preceding counterfactual is fictional, it does involve a real-world scenario involving an algorithmic contract in the business-to-consumer context.⁴⁶⁴ The terms and conditions contained within the contract to which Ms. Bundy “consented” are typical of gig economy apps, particularly on-demand apps where the app establishes the price of the service in advance and allows for a customer’s acceptance or rejection of the offer.

Furthermore, often the decisions made by an algorithm like that in the case of Ms. Bundy are not explainable. That is to say that the outcomes cannot be understood by human beings. They are impenetrable systems, which are often referred to as “black box models” in which we are able to examine inputs and outputs, but we are unable to explain how one becomes the other.⁴⁶⁵

In *Black Box Society*, Pasquale explains the term “black box” is a particularly useful metaphor for the lack of explainability in algorithmic decision-making, given the dual meaning associated with the term “black box.”⁴⁶⁶ It may “refer to a recording device, like the data-monitoring systems in planes, trains, and cars.”⁴⁶⁷ It may also describe entire systems that are unfathomably large and impermeable. In the digital environment, Pasquale tells us that we are confronted daily with these two phenomena: tracked ever more closely by firms

⁴⁶⁴ Chandraveer Mathur, “Does Uber hike ride prices when you’re low on battery?” *Newsbytes* (28 Aug 2021), online: <www.newsbytesapp.com/news/science/is-uber-linking-ride-pricing-to-battery-levels/story>.

⁴⁶⁵ Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information*, (Cambridge, MA: Harvard University Press, 2015) at 3.

⁴⁶⁶ *Ibid.*

⁴⁶⁷ *Ibid.*

and government, we have no clear understanding of the extent to which this information can travel, how it may be used, or the ramifications.⁴⁶⁸ Pasquale attributes credit bureaus as having founded black box techniques in that they make assessments of people yet also hide their methods of data collection and how they analyze the matter.⁴⁶⁹

Uber AI is a good example of a black box, impenetrable system. Uber offers ride-hailing services—the act of requesting a car and driver to take one to a particular location—although it considers itself first, and foremost, as a technology company.⁴⁷⁰ Its entire infrastructure—including software, servers, and its mechanism for executing transactions—is managed by “an engineering ecosystem consisting of hundreds of thousands of machines supported by an organization of hundreds of engineers.”⁴⁷¹ This means that the Uber platform is primarily managed by machine learning algorithms and supported by human engineers. Interpersonal interaction with workers is stark. This style of algorithmic management has, in fact, transformed the nature of the gig economy.⁴⁷²

Broadly speaking, the gig economy refers to the move away from the standard employment relationship towards more flexibility such as contract work, contingent work, and freelancing. Increasingly, however, the definition has narrowed to encompass work that is mediated by digital labor platforms. These platforms often replace the “middleman” with an algorithm—often touted as “agnostic”—that helps customers find products or services and sources the relevant gig worker.⁴⁷³ On one hand, the gig platform economy promises

⁴⁶⁸ *Ibid.*

⁴⁶⁹ *Ibid* at 21.

⁴⁷⁰ Uber also offers other services including food delivery (UberEats), package delivery, couriers, and freight transportation. See Uber (2021), online: *Uber* <www.uber.com/ca/en/>.

⁴⁷¹ Uber, “Uber Infrastructure in 2019: Improving Reliability, Driving Customer Satisfaction” (19 December 2019), online: *Uber Engineering* <eng.uber.com/uber-infrastructure-2019/>.

⁴⁷² See e.g. James Duggan et al., “Algorithmic Management and App-work in the Gig Economy: A Research Agenda for Employment Relations and HRM” (2020) 30:1 Human Resource Management J 114.

⁴⁷³ See e.g. Min Kyung Lee et al., “Working with Machines: The Impact of Algorithmic and Data-driven Management on Human Workers” (CHI ’15: Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, 18 April 2015), (2015), online: <dl.acm.org/doi/10.1145/2702123.2702548>; Ning F Ma et al., “‘Brush it Off’: How Women Workers Manage and Cope with Bias and Harassment in Gender-agnostic Gig Platforms” (CHI ’22: Proceedings of the 2022 CHI Conference on Human Factors in

flexibility for both drivers and passengers. But, on the other hand, research indicates that algorithmic management also results in bias,⁴⁷⁴ gender-based harassment,⁴⁷⁵ safety issues,⁴⁷⁶ and coercive control.⁴⁷⁷ An inanimate, opaque system as one's manager that assigns tasks while synchronously evaluating performance may be perceived as an instrument of absolute surveillance—or what has been referred to as the “algorithmic panopticon.”⁴⁷⁸

Algorithmic management also muddies the understanding of the contractual relationship, particularly in the gig platform economy. As a passenger, you are in the hands of a driver when you are in the car, but your relationship with Uber is with an algorithm. Likewise, as a driver, your contractual relationship as employee or as an independent contractor, depending on the jurisdiction, is not with a human being, but with an algorithm.⁴⁷⁹

Further, Uber is known for its data harvesting and data mining capabilities.⁴⁸⁰ Data harvesting is the process of extracting valuable information and data from various websites

Computing Systems, 29 April – 5 May, 2022, New Orleans), (2022), online: <dl.acm.org/doi/10.1145/3491102.3517524>.

⁴⁷⁴ See e.g. Gebru, *supra* note 43; Buolamwini, *supra* note 43; Cathy O’Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (New York: Crown, 2016).

⁴⁷⁵ See e.g. Benjamin V Hanrahan, Ning F Ma & Chien Wen Yuan, “The Roots of Bias on Uber” (Proceedings of the 15th European Conference on Computer-Supported Cooperative Work-Exploratory Papers, 2017), (22 Mar 2018), European Society for Socially Embedded Technologies; Arianne Renan Barzilay & Anat Ben-David, “Platform Inequality: Gender in the Gig-Economy” (2017) 47 Seton Hall L Rev 393.

⁴⁷⁶ See e.g. Mashael Yousef Almoqbel & Donghee Yvette Wahn, “Individual and Collaborative Behaviours of Rideshare Drivers in Protecting their Safety (Proceedings of the ACM on Human-Computer Interaction, Nov 2019), (2019), online: *New Jersey Institute of Technology* <researchwith.njit.edu/en/publications/individual-and-collaborative-behaviors-of-rideshare-drivers-in-pr>; Worker Info Exchange, “Managed by Bots: Data-Driven Exploitation in the Gig Economy” (13 December 2021), online: <www.workerinfoexchange.org/wie-report-managed-by-bots>.

⁴⁷⁷ Mingming Cheng & Carmel Foley, “Algorithmic Management: The Case of Airbnb” (2019) 83 Intl J of Hospitality Management, 33; Michael Pregoner, Ulrich Remus & Martin Wiener, “Algorithms in the Driver’s Seat: Explaining Workers’ Reactions to Algorithmic Control (2021) Proceedings of the 29th European Conference on Information Systems.

⁴⁷⁸ See James Muldoon & Paul Raekstad, “Algorithmic Domination in the Gig Economy” (2022) European J of Political Theory, DOI <10.1177/14748851221082078>.

⁴⁷⁹ In *Uber BV v Aslam*, [2021] UKSC 5, for instance, the UK Supreme Court ruled that Uber drivers are “workers” and not independent contractors. Whereas in Canada, in the wake of *Uber v Heller* 2020 SCC 16, the plaintiffs sought certification of a class action alleging they have been misclassified as independent contractors by Uber. See *Heller v Uber Technologies Inc* 2021 ONSCA 5518.

⁴⁸⁰ See e.g. Alex Rosenblat, *Uberland: How Algorithms are Rewriting the Rules of Work* (Oakland: University of California Press, 2018).

and transferring them into a database and structuring them into the right format.⁴⁸¹ Uber collects massive amounts of data from both its drivers and its passengers. This creates additional asymmetry in its contractual relationships. Uber appropriates data, tracking the activities of drivers and passengers for the purposes of the value that the data may generate. Uber does not, however, compensate drivers or passengers for this information that is gathered. Thus, this process of data appropriation becomes a form of exploitation.⁴⁸²

Data mining is the method for discovering fact-based patterns that are generated from a large dataset.⁴⁸³ It tends to involve more disciplines like machine learning, statistics, among others. This data is stored and used to predict supply and demand, which determines the price of fares. However, when data is shared with organizations, customers have very little say in how their data will be stored. This raises privacy concerns. If data is not stored securely, it may be vulnerable to data breaches. For instance, in a settlement with US prosecutors, Uber admitted to covering up a massive data breach in 2016 that exposed the personal information of 57 million people.⁴⁸⁴

Processed data is also used to determine patterns that drivers and passengers generate, which aids in various aspects of business planning strategies such as advertising and marketing. Uber's surge pricing tactic, which is also more negatively referred to as "high tech

⁴⁸¹ Octoparse, "Things You Must Know About Data Harvesting & Data Mining" (25 January 2012), online: <www.octoparse.com/blog/data-harvesting-data-mining-whats-the-difference#>.

⁴⁸² See e.g. Jathan Sadowski, "Companies are making money from our personal data—but at what cost?", *The Guardian* (31 Aug 2016), online: <www.theguardian.com/technology/2016/aug/31/personal-data-corporate-use-google-amazon>.

⁴⁸³ Octoparse, *supra* note 481.

⁴⁸⁴ Hackers were able to access and copy massive quantities of data associated with Uber users and drivers, including approximately 57 million user records with 600,000 driver's license numbers. This breach was disclosed to the public one year later. Uber allegedly paid hackers \$100,000 (USD) to delete the data and refrain from publicizing the breach to either media or regulators. The decision not to prosecute was in part related to Uber's decision to disclose the breach to the public and also to an agreement with the Federal Trade Commission to disclose any future cybersecurity incidents. The settlement also reveals that Uber paid \$148 million (USD) to settle civil litigation related to the data breach. See United States Department of Justice, Press Release, "Uber Enters Non-Prosecution Agreement Related to 2016 Data Breach" (22 July 2022), online: *United States Attorney's Office Northern District of California* <www.justice.gov/usao-ndca/pr/uber-enters-non-prosecution-agreement>; see also Eric Newcomer, "Uber paid Hackers to Delete Stolen Data on 57 Million People", *Bloomberg* (21 November 2017), online: <www.bloomberg.com/news/articles/2017-11-21/uber-concealed-cyberattack-that-exposed-57-million-people-s-data?sref=ExbtjcSG#xj4y7vzkg>.

gouging,” illustrates this point.⁴⁸⁵ In theory, adjusting for supply and demand makes economic sense, but when an algorithm is responsible for surge pricing, the results do not make sense. Nor can the results be unraveled.

Take for instance what occurred with Uber’s dynamic pricing algorithm during the London Bridge attack in 2017, when a van drove into pedestrians walking on the sidewalk of the bridge.⁴⁸⁶ It then continued on and crashed into a nearby pub, where the individuals in the van exited the vehicle with knives taped to their wrists and fake bombs strapped to their bodies. They ran through the market area, randomly attacking those who came into their path. As this crisis unfolded, people were trying leave the area as quickly as they could. And this included trying to hire an Uber to safely leave the area. Uber’s dynamic pricing algorithm caused rates to jump more than 200 per cent during the first 45 minutes of this crisis.⁴⁸⁷ This makes very little sense in terms of fairness. Further, it has socially harmful consequences. Uber admits that its pricing algorithm predicts peak timings like rush hour and busy times, like Fridays and Saturdays or festivals based on areas that people are in, but this was an issue of safety, and not related to any of those reasons.⁴⁸⁸

⁴⁸⁵ See e.g. Annie Lowry, “Is Uber’s Surge-Pricing an Example of High Tech Gouging?”, *New York Times* (10 January 2014), online: <www.nytimes.com/2014/01/12/magazine/is-ubers-surge-pricing-an-example-of-high-tech-gouging.html>; Arrthy Thayaparan & Jason Proctor, “Uber Customers Ask Why the Price of a Ride Literally Changes with the Weather”, *CBC News* (30 November 2022), online: <www.cbc.ca/news/canada/british-columbia/surge-pricing-emergency-gouging-1.6670186>.

⁴⁸⁶ Charles Riley, “Uber Criticized for Surge Pricing After London Terror Attack”, *CNN Business* (4 June 2017), online: <money.cnn.com/2017/06/04/technology/uber-london-attack-surge-pricing/>; Tara John, “Uber Criticized for Surge Pricing During London Attack”, *Fortune* (5 June 2017), online: <www.fortune.com/2017/06/05/uber-london-attack-surge/>.

⁴⁸⁷ Marco Bertini & Oded Koenigsberg, “The Pitfalls of Pricing Algorithms: Be Mindful of How They Can Hurt Your Brand” (2021) Harvard Bus Rev, online: <www.hbr.org/2021/09/the-pitfalls-of-pricing-algorithms>; Alexander J MacKay & Samuel N Weinstein, “Dynamic Pricing Algorithms, Consumer Harm, and Regulatory Response” (2022) [Working Paper 22-050, Harvard Business School], online (pdf): <www.hbs.edu/ris/Publication%20Files/22-050_ec28aaca-2b94-477f-84e6-e8b58428ba43.pdf>.

⁴⁸⁸ Uber, “How Uber’s dynamic pricing model works” (2023), online (blog): *Uber Blog* <www.uber.com/en-GB/blog/uber-dynamic-pricing/>.

Moreover, surge pricing combined with algorithmic bias results in what Joy Buolamwini characterizes as “excoding.”⁴⁸⁹ AI is a mirror of us, and so the bias that exists in society gets replicated—it is amplified by technology. This leads to increased discrimination and social exclusion for individuals who have been historically marginalized.⁴⁹⁰ Recent studies and reports have shown that ride-hailing companies—Uber included—charge a higher price per kilometre if the pick-up or ending point had a higher percentage of non-white or low-income residents.⁴⁹¹ The already identified harmful consequences created by surge pricing are further compounded by societal bias that is “baked in” to algorithmic decision-making.

Big tech firms, like Uber, Google, and Meta, are players in an changing market form that Shoshana Zuboff has labelled, “surveillance capitalism.”⁴⁹² This strain of capitalism “unilaterally claims human experience as free raw material for translation into behavioral data.”⁴⁹³ While some of this data is used for a particular product or for bettering service, the additional data is deemed to be “proprietary behavioral surplus” and used in the manufacturing and fabrication of ML “prediction products.”⁴⁹⁴ These products are then traded in the new “behavioral futures markets,” the nature of which is to continuously amass increasingly predictive behavioral surplus. By nature, these behavioral futures markets also

⁴⁸⁹ See Molly Wood, “Bias in Facial Recognition Isn’t Hard to Discover, but It’s Hard to Get Rid Of”, Marketplace Tech (22 March 2021), online (interview): <www.marketplace.org/shows/marketplace-tech/bias-in-facialrecognition-isnt-hard-to-discoverbut-its-hard-to-get-rid-of/>.

⁴⁹⁰ See e.g. Ruha Benjamin, *Race After Technology: Abolitionist Tools for the New Jim Code* (Cambridge: Polity Press, 2019); Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor* (New York: Picador, 2019).

⁴⁹¹ See e.g. Akshat Pandey & Aylin Caliskan, “Disparate Impact of Artificial Intelligence Bias in Ridehailing Economy’s Price Discrimination Algorithms” (Paper delivered at AIES 2021, 19-21 May 2021), DOI: <10.1145/3461702.3462561>; Kyle Wiggers, “Researchers Find Racial Discrimination in ‘Dynamic Pricing’ Algorithms used by Uber, Lyft, and Others”, *VentureBeat* (12 June 2017), online: <venturebeat.com/ai/researchers-find-racial-discrimination-in-dynamic-pricing-algorithms-used-by-uber-lyft-and-others/>; Lauren O’Neil, “Black Woman Quoted More than White Man for the Exact Same Uber Ride in Toronto”, *BlogTO* (9 August 2021), online: <www.blogto.com/tech/2021/08/black-woman-charged-more-white-man-same-uber-ride-toronto/>.

⁴⁹² Zuboff, *supra* note 3.

⁴⁹³ *Ibid* at 8.

⁴⁹⁴ *Ibid*.

intervene through nudge tactics, which are psychological tools designed to prod us toward particular options.⁴⁹⁵ Thus, surveillance capitalist strategies are twofold: first, to know our behavior; and second, to shape our behavior.⁴⁹⁶ And unlike industrial capitalism, for example, there is no “systemic logic of reciprocity.”⁴⁹⁷ Ultimately, the goal, according to Zuboff, is to automate us, creating a type of power that she labels, “instrumentarianism.”⁴⁹⁸

In addition to the more obvious characteristics of data harvesting and data mining as features of surveillance capitalism’s infrastructure, Zuboff also identifies new forms of contractual monitoring and enforcement.⁴⁹⁹ Specifically, she states,

The monitoring and automating technologies at the heart of surveillance capital make it possible to eliminate risk from contracts. This fundamentally alters the value structure of the modern state, which was founded on the need for mutual trust, the tolerance of uncertainty, and the rule of law.⁵⁰⁰

The infrastructures of surveillance capitalism permit real-time monitoring of both contract performance and enforcement. This perpetual monitoring and enforcing could have the effect of eliminating the need for recourse to law as a means of enforcing the terms of a contract or terminating due to breach.

Zuboff provides the example of the failure to make a monthly car payment.⁵⁰¹ In this a-contractual form of society, lenders would be able to instruct monitoring systems of vehicles not to start in the event of payment failure. And also provide the location of the vehicle so that it may be repossessed. The normative foundations of contract as we understand it, rooted in individual rights that was established and developed through the social scuffles and clashes leading from “status to contract,” would be eliminated. In Zuboff’s

⁴⁹⁵ See generally Richard H Thaler, Cass R Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven, CT: Yale University Press, 2008).

⁴⁹⁶ Zuboff *supra*, note 3 at 8.

⁴⁹⁷ *Ibid* at 31.

⁴⁹⁸ *Ibid* at 8.

⁴⁹⁹ Zuboff makes use of Google’s chief economist, Hal Varian’s four uses of computer-mediated transactions to identify key features in the logic of surveillance capitalism. Zuboff, *ibid* at 217-218

⁵⁰⁰ *Ibid* at 81.

⁵⁰¹ *Ibid* (Zuboff borrows this example from Varian).

dystopic explanation of perpetual contractual monitoring and enforcement, there is no freedom of contract, no social solidarity, and no need for the vestigial coercive authority of law. This scenario, she explains, may be better understood as “the uncontract.”⁵⁰²

While our current technologies do in fact allow this type of monitoring, the combination of our existing political legal order and human agency still exercise control over society, or at the very least, the shaping of it. Zuboff’s characterization of the logic of surveillance capitalism is provocative. Further, as Thomas Piketty articulates in *Capital in the Twenty-First Century*, “There is no single variety of capitalism or organization of production... [t]his will continue to be true in the future, no doubt more than ever: new forms of organization and ownership remain to be invented.”⁵⁰³ New market forms are continually emerging. With continual change, new market forms result in the implementation of new institutional forms. This has ripple effects in how we understand the nature of—and possibly the importance of—regimes such as contract. Taking a proactive rather than neutral approach to the transforming nature of contracts in the Algorithmic Turn in society is essential since contracts are the building blocks of many areas of law.

The idea of consenting to terms and conditions decided by an algorithm in a contract gives us pause. On one hand, we have grown accustomed to “clicking to agree” as part of the everyday. We have become reliant on contract law in regulating the digital environment. Agreeing to terms and conditions to visit websites, for instance, or consenting to the “fine print” in more sophisticated purchases has become routine. We find this acceptable because those terms and conditions, had we the time to read them, are generally not unexpected. On the other hand, when an algorithm becomes an actor in the contractual process, selecting standard terms or clients for a company, or, in the case of Ms. Bundy, putting surge pricing

⁵⁰² *Ibid* at 219.

⁵⁰³ Thomas Piketty, *Capital in the Twenty-First Century*, trans. Arthur Goldhammer (Cambridge, MA: Belknap Press, 2017) at 614-15.

into effect, ostensibly due to limited battery power, we become wary. What are the implications of an algorithm filling in for human expertise in the contracting process?

This section focuses on the emerging algorithmic contract and takes the position that it forms part of a continuing story of innovation in the law of contracts. In order to do this, I will provide an overview of the nature of contract law.

a. What is a Contract?

The essence of a contract is the exercise of will by two parties resulting in a bargain.⁵⁰⁴ This traditional understanding of bargained agreement is a “creature of the nineteenth century”⁵⁰⁵ and associated with consensus theory, in which a contract is an artifact of *consensus ad idem*, or a meeting of the minds.⁵⁰⁶ Prior to the nineteenth century, a narrower understanding of contract was prevalent. It was seen, instead, in terms of promise.⁵⁰⁷ Contract understood in terms of promise meant that obligation was created by one person and the consensus of parties was not always evident.⁵⁰⁸

⁵⁰⁴ Offer, acceptance, and consideration must be present in order for a bargain to have been considered to be struck. The requirement of consideration may be satisfied nominally; the metaphor of “a mere peppercorn” is often used to describe the minimal consideration needed in exchange for a promise. See McCamus, *supra* note 71 at 244; *Hamer v Sidway*, 124 N.Y. 538 (App Ct 1891) (often cited as the leading case); McCamus also explains that prior to the development of the doctrine of consideration, English law recognized enforceable promises made under seal. The affixing of a seal may be viewed as a holdover from a preliterate society, effectively a form of signature. See McCamus at 234.

⁵⁰⁵ M J Horwitz, “The Historical Foundations of Modern Contract Law” (1974) *Harvard Law Review* 87(5) 917 at 917.

⁵⁰⁶ Horwitz tells us, “[o]nly in the nineteenth century did judges and jurists finally reject the longstanding belief that the justification of contractual obligation is derived from the inherent justice or fairness of an exchange. In its place, they asserted for the first time that the source of the obligation of contract is the convergence of the wills of the contracting parties.” *Ibid*; however, according to Atiyah, “Although much of the English law of contract has roots going back to the Middle Ages, most of the general principles were developed and elaborated in the eighteenth and nineteenth centuries.” Patrick Atiyah, *An Introduction to the Law of Contract* at 2 as quoted in AWB Simpson, *Legal Theory and Legal History: Essays on the Common Law* (London: Hambledon Press, 1987); Simpson elaborates that Atiyah included the eighteenth century owing to the decision in *Rann v Hughes* [1778], 4 BRO PARL CAS 27, 2 ER 18, in which the Court rejected innovation, ruling that negotiable instruments—specifically, mercantile obligations—like simple contracts had to be supported by consideration. Simpson at 174.

⁵⁰⁷ Charles Fried, *Contract as Promise: A Theory of Contractual Obligation* (Oxford: Oxford University Press, 2015).

⁵⁰⁸ See Philip A Hamburger, “The Development of the Nineteenth-Century Consensus Theory of Contract” 7:2 (1989) L and History R 241 at 246; see also Fried, *ibid* (tracing contractual obligation from trust to promise to contract).

Contracts became a distinctive feature of the nineteenth century society so much so that it is not uncommon to hear it described as “The Age of Contract.”⁵⁰⁹ Evidence of this may be seen through Sir Henry Maine’s well-known aphorism describing the evolution of “progressive” societies as a transition from status to contract.⁵¹⁰ Or through Langdell’s first casebook on contracts published in 1871, which marked a watershed in the history of legal education.⁵¹¹

Consensus analysis began appearing in the caselaw during the first half of the nineteenth century. Adam Smith’s notion of freedom of contract, whereby individuals pursuing their own self-interest could freely enter into contracts became a fundamental presumption of contract law.⁵¹² This is evidenced in case law dating from 1875. In *Printing and Numerical Registering Co. v. Sampson L.R.*, for instance, the Court held that “...contracts when entered into freely and voluntarily shall be held sacred and shall be enforced...”⁵¹³ More than a century later, this vestige of contract law continues to be discernable. *Seidel v. Telus Communications*⁵¹⁴ demonstrates this point. The Supreme Court of Canada (SCC) found, “[a]bsent legislative intervention, the courts will generally give effect to the terms of a commercial contract freely entered into, even a contract of adhesion, including an arbitration clause.”⁵¹⁵

⁵⁰⁹ George Gluck, “Standard Form Contracts: The Contract Theory Reconsidered” (1979) 28:1Intl and Comparative L Q 72 at 72.

⁵¹⁰ Maine states, “...we may say that the movement of the progressive societies has hitherto been a movement from Status to Contract.” Henry Sumner Maine, *Ancient Law: Its Connection with the Early History of Society and Its Relation to Modern Ideas* (New York: Henry Holt, 1906) at 165.

⁵¹¹ See Lawrence M Friedman, *A History of American Law*, revised edition (London: Touchstone, 1973) 532.

⁵¹² Economic laissez-faire is a theory of free-market capitalism. If individuals could pursue self-interest free from governmental oversight, they would maximize their own profits, and in turn, the wealth of society more generally. In other words, the government should only exert a negative role in economic life because competing individual self-interest would ultimately result in social equilibrium through the agency of the “invisible hand.” See Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), online: *Project Gutenberg* <www.gutenberg.org/files/3300/3300-h/3300-h.htm>; Atiyah attributes freedom of contract to Smith. See Atiyah, *supra* note 496 at 297.

⁵¹³ *Printing and Numerical Registering Co v Sampson*, (1875) LR 19 Eq 462, 32 LT 354 at 19.

⁵¹⁴ *Seidel v TELUS Communications Inc*, [2011] SCJ No 15.

⁵¹⁵ *Ibid*.

The presumption that a contract was freely entered into meant that the onus was on the complainant to show otherwise. Put another way, a contract was understood as a bargained-out agreement, and the document was simply evidence of the understanding.⁵¹⁶ Historically, the *Statute of Frauds 1677*⁵¹⁷ provided that contracts for the sale of land and contracts for the sale of goods over £10 in value were unenforceable without a note or memorandum in writing.⁵¹⁸ The *Act* was repealed in 1954 and replaced by other legislation for real estate contracts, contracts of guarantee etc.⁵¹⁹

Furthermore, contract law has demonstrated flexibility in adapting to changes in technology. An early example of this is the postal acceptance rule that arose in 1818 out of *Adams v. Lindsell*.⁵²⁰ It is an exception to the general rules of offer and acceptance that tells us that acceptance of an offer is complete when a letter is mailed. This rule applied also to the telegram as it became used more frequently in society.⁵²¹

Another example of how the law of contracts handles technological change may be seen through the “ticket cases” which emerged as a result of the development of the railway network in Britain during the nineteenth century. *Parker v. The South Eastern Railway Company*⁵²² established that in the situation of an unsigned document—in this case, a railway cloakroom ticket issued to hold luggage—an individual cannot escape the terms of the

⁵¹⁶ McCamus, *supra* note 71 at 2.

⁵¹⁷ *Statute of Frauds*, (1677), 29 Car 2 c 3.

⁵¹⁸ See J Beatson, A Burrows, J Cartwright, *Anson's Law of Contract*, 31st ed (Oxford: Oxford University Press, 2020) 77.

⁵¹⁹ *Ibid.*

⁵²⁰ *Adams v Lindsell*, (1818) 1 B & Ald 681, 106 ER 250.

⁵²¹ See *Stevenson, Jacques & Co v McLean*, (1880) 5 QBD 346, 42 LT 897; see also *Carow Towing Co v The “Ed McWilliams”*, (1919), 46 D.L.R. 506 (Ex. Ct.); additionally, with the continued development of communications technology, a distinction between instantaneous and non-instantaneous communications developed. For acceptance by telex, see *Brinkibon Ltd v Stahag Stahl und Stahlwarenhandel GmbH*, [1983] 2 AC 34; for acceptance by fax, see *Eastern Power Ltd v Azienda Comunale Energia & Ambiente*, [1998] OJ No 4908.

⁵²² *Parker*, *supra* note 8.

agreement, but that the party wanting to rely on an exclusion clause written on the ticket must take reasonable steps to draw its attention to customers.

*Thornton v. Shoe Lane Parking Ltd.*⁵²³ is another example demonstrating that the law of contracts has historically adapted to technology. At issue in this case was whether a contract formed as a result of obtaining a ticket from a ticket machine for parking that included a provision that released it from liability for injuries suffered while in the parking garage.⁵²⁴ Ultimately, the offer and acceptance framework that was developed in the previous ticket cases⁵²⁵ changed in order to deal with automatic machines.⁵²⁶

b. The Development of Standard Form Contracts

The process of contract formation changed significantly in the twentieth century. Individually negotiated contracts were gradually replaced with standard form contracts—documents that made use of regularized or commonly used standard form language written by one party with the expectation of acceptance by the other party, usually unread.⁵²⁷ This innovative change from individually negotiated contracts with mutual bargaining to the form with standardized language was the “counterpart of standardizing goods and production processes,”⁵²⁸ which had become essential to the new economic order during the Industrial Revolution. Standard form contracts are natural extensions of—and are complementary to—mass-produced commodities.⁵²⁹ They allowed manufacturers to enter into agreements more

⁵²³ *Shoe Lane*, *supra* note 9.

⁵²⁴ *Ibid* at 165.

⁵²⁵ *Parker*, *supra* note 8; *Chapelton*, *supra* note 8; *Marlborough Court*, *supra* note 8; *Spurling*, *supra* note 8; *McCutcheon*, *supra* note 8.

⁵²⁶ *Shoe Lane*, *supra* note 9 (established the offer occurs when the owner makes the machine available to customers as ready to accept payment. The terms of the offer are communicated by the instructions on a sign in close proximity to the ticket machine. Acceptance occurs when the customer takes the ticket from the machine).

⁵²⁷ Friedrich Kessler, “Contracts of Adhesion—Some Thoughts Freedom of Contract” (1943) 43 Columbia L Rev 629 at 632-33.

⁵²⁸ Karl N Llewellyn, Book Review of *The Standardization of Commercial Contracts in English and Continental Law* by O Pausnitz (1939) 52 Harvard L Rev 700 at 701.

⁵²⁹ Kessler, *supra* note 527 at 629.

quickly than spending time negotiating singular agreements, and they could be used repeatedly.⁵³⁰

What is important to realize is that the innovation of the standard form contract brought with it the demise of the traditional understanding of a bargained contract. A standard form contract is not a bargain. It is a pre-printed, reproduced form that typically represents what the seller wants, as the following example demonstrates:

⁵³⁰ Gluck, *supra* note 509 at 73.

**CAPITAL REGION MULTIPLE LISTING SERVICE, INC.
STANDARD FORM CONTRACT FOR PURCHASE AND SALE OF REAL ESTATE**

THIS IS A LEGALLY BINDING CONTRACT. IF NOT FULLY UNDERSTOOD, WE RECOMMEND ALL PARTIES TO THE CONTRACT CONSULT AN ATTORNEY BEFORE SIGNING.

1. IDENTIFICATION OF PARTIES TO THE CONTRACT

- A. SELLER** - The Seller is _____
residing at _____
(the word "Seller" refers to each and all parties who have an ownership interest in the property).
- B. PURCHASER** - The Purchaser is _____
residing at _____
(the word "Purchaser" refers to each and all of those who signed below as Purchaser).

2. PROPERTY TO BE SOLD

The property and improvements which the Seller is agreeing to sell and which the Purchaser is agreeing to purchase is known as _____
located in the city, village or town of _____ in _____ County, State of New York. This property includes all of the Seller's rights and privileges, if any, to all land, water, streets and roads annexed to, and on all sides of the property. The lot size of the property is approximately _____.

3. ITEMS INCLUDED IN SALE

Awnings	Heating/Central Air	Storm & Screen Doors
Built-in Appliances & Cabinets	Lighting Fixtures & Paddle Fans	Storm Windows & Screens
Built-in Closet Systems	Plumbing Fixtures	Smoke & Carbon Monoxide Detectors
Drapery Rods & Curtain Rods	Pumps	Television Aerials & Satellite Dishes
Electric Garage Door Opener(s) & Remote(s)	Security & Alarm System(s)	Wall-to-Wall Carpeting, as placed
Fencing	Shades & Blinds	Water Filters & Treatment Systems
Fireplace Insert, Doors and/or Screen	Shrubs, Trees, Plants	

The items listed above, if now in or on said premises, and owned by the Seller free from all liens and encumbrances, are included in the sale "as is", on the date of this offer, together with the following items: _____

4. ITEMS EXCLUDED FROM SALE

The following items are excluded from the sale _____

5. PURCHASE PRICE

The purchase price is _____.
DOLLARS (\$ _____). The Purchaser shall pay the purchase price as follows:

- A. \$ _____ deposit with this contract and held pursuant to paragraph 16 herein
- B. \$ _____ additional deposit on _____
- C. \$ _____ in cash, certified check, bank draft or attorney escrow account check at closing
- D. \$ _____

6. MORTGAGE CONTINGENCY

A. This Agreement is contingent upon Purchaser obtaining approval of a ☐ Conventional, ☐ FHA or ☐ VA (if FHA or VA, see attached required addendum) or _____ mortgage loan of \$ _____ for a term of not more than _____ years at an initial _____ fixed or _____ adjustable nominal interest rate not to exceed _____ percent. Purchaser agrees to use diligent efforts to obtain said approval and shall apply for the mortgage loan within _____ business days after the Seller has accepted this contract. Purchaser agrees to apply for such mortgage loan to at least one lending institution or licensed mortgage broker. Upon receipt of a written mortgage commitment or in the event Purchaser chooses to waive this mortgage contingency, Purchaser shall provide notice in writing to _____ of Purchaser's receipt of the mortgage commitment or of Purchaser's waiving of this contingency. Upon receipt of such notice this contingency shall be deemed waived or satisfied as the case may be. In the event notice as called for in the preceding sentence has not been received on or before _____, then either Purchaser or Seller may **within five business days of such date** terminate, or the parties may mutually agree to extend, this contract by written notice to _____. Upon receipt of termination notice from either party, and in the case of notice by the Purchaser, proof of Purchaser's inability to obtain said mortgage approval, this agreement shall be cancelled, null and void and all deposits made hereunder shall be returned to the Purchaser.

B. Seller's Contribution: At closing, as a credit toward prepaids, closing costs and/or points, Seller shall credit to Purchaser \$ _____ or _____ % of the ☐ Purchase Price or ☐ mortgage amount.

Page 1 of 4
For Use Beginning 1/1/06

Purchaser's Initials _____

Seller's Initials _____

Figure 4: Standard Form Contract⁵³¹

Standard form contracts themselves developed during the twentieth century, becoming part of the commercial quotidian. But this has not been without controversy: on one hand they were seen to be "tool[s] of almost unlimited usefulness and pliability"⁵³² and on the

⁵³¹ US Legal Forms, "Standard Form Contract for Purchase and Sale Real Estate 2006, (2023) online: <www.uslegalforms.com/form-library/37428-standard-form-contract-for-purchase-and-sale-real-estate-2006>.

⁵³² Kessler, *supra* note 527 at 629.

other, they were deemed “inherently intractable.”⁵³³ They were—and still are—also commonly referred to as “boilerplate,”⁵³⁴ “contracts of adhesion,”⁵³⁵ or “take it or leave it”⁵³⁶ contracts.

Boilerplate referred first to the rolled steel plate used in making steam boilers and then to a similar machinic process for printing prepared text adapted in the news industry for syndicated columns that were distributed to smaller newspapers.⁵³⁷ The literal meaning of the plates took on a figurative meaning, whereby, “boilerplate” meant the news article itself.⁵³⁸ It also became used pejoratively.

US case law reflects this altered meaning of boilerplate: prior to 1900, three Supreme Court cases referred to boilerplate with its original meaning pertaining to the type of plate used in making boilers.⁵³⁹ Almost seventy years later, however, “boilerplate” began to be used in a negative manner. In his 1964 dissent in *National Equipment Rental, Ltd. v. Szukhent*,⁵⁴⁰ Justice Black referred to a provision of 18 paragraphs of fine print requiring father and son farmers who leased incubators from National to travel from Michigan to New York City to defend themselves thus incurring significant costs, to be carefully crafted “boilerplate.”⁵⁴¹

In the first half of the twentieth century, courts did not draw a distinction between the previously bargained-out contract model and standard form contracts. Instead, strict contract

⁵³³ Todd D Rakoff, “Contracts of Adhesion: An Essay in Reconstruction” (1983) 96:6 Harvard L Rev 1173 at 1176.

⁵³⁴ Margaret Jane Radin, *Boilerplate: The Fine Print, Vanishing Rights, and the Rule of Law* (Princeton: Princeton University Press, 2013).

⁵³⁵ The term “contract of adhesion” was introduced by Patterson, “The Delivery of a Life Insurance Policy” (1919) 33 Harvard L Rev 198, 222 as quoted in Kessler, *supra* note 527 at 632 n 11.

⁵³⁶ Michael J Trebilcock, *The Limits of Freedom of Contract* (Cambridge: Harvard University Press, 1993) 120.

⁵³⁷ Carol Bast, “A Short History of Boilerplate,” (1994-95) The Scribes J of Leg Writing - Notes and Queries 156 at 156.

⁵³⁸ *Ibid.*

⁵³⁹ *Philadelphia, W & B R R v Dubois*, 79 U.S. (12 Wall) 47, 62, 63 (1871); *Schlesinger v Beard*, 120 US 264, 267 (1887); *Lehigh Valley R R v Kearney*, 158 U.S. 461, 465 (1895). As quoted in Bast, *ibid* at 157.

⁵⁴⁰ *National Equipment Rental, Ltd v Szukhent*, 375 U.S. 311 (1964).

⁵⁴¹ Bast, *supra* note 537 at 328.

theory was applied to standard form contract disputes. In particular, the rule established in *L'Estrange v. Graucob*⁵⁴² confirmed that courts could enforce signed contracts whether or not the terms had been read. In fact, *L'Estrange* may be viewed as “high water point”⁵⁴³ with regard to the court’s respect for sanctity of contract.⁵⁴⁴ After *L'Estrange*, courts started to realize that strict contract enforcement was at the cost of fairness.⁵⁴⁵ Recognizing this, the judiciary developed other devices like the doctrine of fundamental breach to tackle the issues stemming from standard form contracts.

The diametric points of view on standard form contracts have further diverged as they have migrated from paper to electronic form, where “...it cannot be doubted that electronic contracting makes it much easier, in practice, for business enterprises to include terms burdensome to users.”⁵⁴⁶ This creates imbalance. And in the digital context where standard form contracts have migrated from the commercial realm to the diurnal, in practically every area of our lives, the risk of imbalance is heightened.

The scholarship on standard form contracts and how they have been adopted is vast and may be divided into two overall discourses: first, those that justify the continued use of standard form contract; and second, those that seek their reform.

⁵⁴² *L'Estrange v F Graucob Ltd*, [1934] 2 KB 394 (CA) [*L'Estrange*] (the rule in *L'Estrange* states, “[w]hen a document containing contractual terms is signed then, in the absence of fraud, or...misrepresentation, the party signing it is bound, and it is wholly immaterial whether he has read the document or not” at 403).

⁵⁴³ Gluck, *supra* note 509 at 75.

⁵⁴⁴ The term “sanctity of contract” reflects the early moral conception of contract as a promise binding one’s conscience. While it has religious overtones, it is also used in society today in a secular manner to refer to the strict enforcement of contracts. See Stephen Waddams, *Sanctity of Contracts in a Secular Age: Equity, Fairness and Enrichment* (Cambridge: Cambridge University Press, 2019) at 1.

⁵⁴⁵ See *Neuchatel Ashphalte Co Ltd v Barnett*, [1957] 1 All ER 362, [1957] 1 WLR 356.

⁵⁴⁶ See Gluck, *supra* note 509; see also Stephen Waddams, “Contract Law and the Challenges of Computer Technology” in Roger Brownsword, Eloise Scotford & Karen Yeung, eds *The Oxford Handbook of Law, Regulation and Technology* (2017) 318 at 334.

i. The Discourse of Justification

Standard form contracts are pervasive, accounting for more than 99% of all contracts employed in both commercial and consumer transactions.⁵⁴⁷ From a traditional economic perspective, they are efficient. Standard form contracts have reduced the transaction costs significantly in a variety of situations.⁵⁴⁸ They bolster trade through increased transactional efficiency, and they decrease transaction costs through their “take it or leave it” nature. This presentation on the basis of “take it or leave it” is not unique to standard form contracts: “mom and pop” convenience stores have traditionally provided goods in much the same manner.⁵⁴⁹

From an economic perspective, a potential problem with standard form contracts is their inherent imperfect information, but this explainable as a market inefficiency rather than a standard form failure.⁵⁵⁰ Market efficiency pertains to how well prices reflect all available information. However, there are some markets that are less structured than others. In these types of inefficient markets, the prices of assets do not accurately evince true value. This may occur, for example, as a consequence of information asymmetries or high transactions costs, leading to deadweight losses. In actual fact, most markets have some level of inefficiencies and only in extreme cases, do market failures result. Market inefficiencies are reflected as imperfect information in standard form contracts.

There is a general assumption that standard form contracts will not be read by the parties given their significant length. At first blush, there is a juxtaposition between the assumption that terms will not be read yet parties will still be bound to

⁵⁴⁷ John J A Burke, “Contract as Commodity: A Nonfiction Approach” (2000) 24 Seton Hall Legislation J 285 at 290.

⁵⁴⁸ Trebilcock, *supra* note 536 at 119.

⁵⁴⁹ *Ibid* at 120; Radin refers to law and economic theories of Standard form contracts as “contract as product” theories. See Radin, *supra* note 534 at 99.

⁵⁵⁰ Trebilcock, *supra* note 536 at 120.

the terms, and the liberal theory of contract, which, broadly speaking, locates the normative foundations of contract in the individual—particularly in freedom of contract.⁵⁵¹ Meaningful consent to the agreement is most often absent.⁵⁵² Individuals may sign agreements and intend to enter into transactions, but there may not be meaningful or authentic “consent.” An external expression of consent does not necessarily amount to the knowledge needed for meaningful consent. Internal aspects that impact comprehension such as “[t]he ability to understand [which] depends on intelligence, rationality, maturity, and language” are also required for meaningful consent.⁵⁵³

This issue of partial information resulting in the ostensible lack of meaningful consent may be considered less problematic if, instead, the lens is refocused on “external benchmarks of fairness.”⁵⁵⁴ Informed consumers, who ostensibly understand standard form contracts and are able to negotiate the terms within or find more favourable terms, regulate the market. The ripple effect of the sophisticated consumer extends to the unsophisticated consumer who then “can effectively free-ride on the discipline.”⁵⁵⁵

Consent-based theories also form part of the discourse justifying the use of standard form contracts. Here, consenting to agree, plus a subsequent objective interpretation of that consent is interpreted as actually having provided consent to be legally bound.⁵⁵⁶ Further, while consenting to be legally bound to terms may bear

⁵⁵¹ *L'Estrange*, *supra* note 542.

⁵⁵² Trebilcock, *supra* note 536 at 121.

⁵⁵³ Chunlin Leonhard, “The Unbearable Lightness of Consent in Contract Law” (2012) 63:1 Case Western Reserve L Rev 57 at 68.

⁵⁵⁴ Trebilcock, *supra* note 536 at 121.

⁵⁵⁵ *Ibid.*

⁵⁵⁶ Randy Barnett, “Consenting to Form Contracts” (2002) 71:3 Fordham L Rev 627 at 634; note that although Barnett explicitly denies promise to be the basis of contract, he does see it playing a minor role, being embedded within the overall consent.

disappointment—or worse, remorse—the law does not prevent us from taking risks. We bear the risk that the terms will not be “radically unexpected.”⁵⁵⁷ Blanket assent also implies that the signing party will not bear the risk if the terms do turn out to be radically unexpected.⁵⁵⁸ The gains from reading onerous terms are minor since there are other solutions between the duty to read and the reasonable expectations doctrine such as the unconscionability doctrine, which “restricts the scope of the duty to read regime.”⁵⁵⁹ Put differently, unreasonable and unexpected terms get weeded out, but not through the opportunity to read. Rather, the opportunity to read detracts from developing or modifying other private law solutions which may provide more meaningful protection against radically unexpected terms.

In many instances, the consent-based justification works. For example, if a reasonable person clicks to agree to a library’s terms and conditions of use, that person tends not to read them because she does not expect there to be untoward or unreasonable conditions contained within. The reasonable person expects that she is simply agreeing to the library’s rules and standards.

Another way of looking at standard form terms is to consider them to be latent in the law of contracts—that the one-sidedness is already present in dormant or

⁵⁵⁷ *Ibid* at 637.

⁵⁵⁸ See e.g. *Douez v Facebook Inc*, 2017 SCC 33 [*Douez*]. In signing up for a Facebook account, Douez did not think that she would be allowing Facebook to use her name and image for their advertising purposes. Douez did not expect her privacy rights to be violated. Nor did Douez reasonably think that she would need to travel to California to resolve her claim as per the forum selection clause—Facebook is a multinational corporation after all. In fact, its own mission statement states, “[w]e want to give people the power to build community and bring the world closer together.” If they are in the business of bringing people together online, why would you require someone to travel over 1700km or more to resolve a dispute? A forum selection clause requiring users to mediate their disputes in California, under California law is hardly justifiable for global corporation. It is simply a burdensome term for an average—or reasonable—person wanting to register an account with Facebook. Moreover, Douez did not expect that she was providing Facebook with *whatever it asked* in order to create an account. She did not anticipate that she was divesting her right to privacy or her right to adjudicate the issue in a domestic court in registering for a Facebook account. The terms of service were replete with unanticipated and startling expectations. There really was no meaningful consent.

⁵⁵⁹ Omri Ben-Shahar, “The Myth of the ‘Opportunity to Read’ in Contract Law” (2009) 5:1 *European Rev of Contract L* 1 at 8.

unactualized form in contracts themselves.⁵⁶⁰ From this perspective, boilerplate is a mode of social connection and typical of contract rather than an exception to particularized language manifesting intent.⁵⁶¹ This more conceptual justification is also challenged by increasingly mediated digital technologies. For example, is machinic standard form language also latent in the law of contracts? Whom—or what—is connecting with whom if boilerplate is viewed as a medium of connection?

What this shows is that the perspectives that justify the use of standard form contracts see them as integral to modern contracting.

ii. The Discourse of Reform

The second area of scholarship forms a discourse of reform advocating that more needs to be done to draw contracting parties' attention to unusual or onerous terms.⁵⁶² This is particularly so as standard form contracts become more digitally mediated. Margaret Radin, for instance, sees the gerrymandering of the word “agreement,” resulting in its being cut down to consent, then further cut down to assent, and finally pared back to blanket assent with standard form contracts, and particularly with electronic standard form contracts.⁵⁶³

This lack of proper consent to boilerplate terms results in what Radin refers to as “normative degradation.”⁵⁶⁴ For example, she views a paradox between the automatic, uncontrolled nature of boilerplate contracts and the traditional

⁵⁶⁰ See Tal Kastner, “‘Bartleby’: A Story of Boilerplate,” (2011) 23:3 L & Literature 365 (Through analysis of the broader social structures in Herman Melville’s *Bartleby, the Scrivener*, Kastner suggests that boilerplate may be viewed as a medium of connection and typical of contract rather than as exception to particularized language manifesting intent).

⁵⁶¹ *Ibid* at 367.

⁵⁶² *Tilden Rent-A-Car Co v Clendenning*, [1978] OJ No 3260 [*Tilden*] (established that terms need to be drawn to the attention of parties).

⁵⁶³ Radin, *supra* note 534 at 29.

⁵⁶⁴ *Ibid* at 14.

understanding of freedom of contract as a core value as well as other traditional concepts of contracts.⁵⁶⁵

The deployment of boilerplate rights-deletion terms may also result in what Radin calls “democratic degradation.”⁵⁶⁶ The ability to redress wrongs of widely distributed standard form contracts enforced by corporations by means afforded by the state, gets superseded by the “law of the firm.”⁵⁶⁷ Rights that are often waived in boilerplate rights-deletion terms include the right to trial, the right to class-action litigation, and the right to arbitrate in a choice of forum.⁵⁶⁸ Mass-market standard form contracts result in the division of public and private ordering becoming conflated, thus “undermin[ing] the ideal of private ordering itself.”⁵⁶⁹

The normative and democratic degradation posed by standard form contracts could be remedied by a public and private law overhaul.⁵⁷⁰ Radin suggests a rule-based approach⁵⁷¹ as well as new tort claim⁵⁷² as part of a better framework for addressing the problem of boilerplate contracts. Other scholarship, however, such as that of Nancy Kim, advances the solution of developing the law, but through an expanded definition of duress, particularly in respect of the damaging impacts of electronic contracts.⁵⁷³ Other scholars have sounded the doctrine of unconscionability’s death knell since its role in protecting consumers, generally, is

⁵⁶⁵ *Ibid* at 19.

⁵⁶⁶ *Ibid* at 33.

⁵⁶⁷ *Ibid*.

⁵⁶⁸ *Ibid* at 154.

⁵⁶⁹ *Ibid* at 35.

⁵⁷⁰ *Ibid* at 155.

⁵⁷¹ *Ibid* at 217.

⁵⁷² *Ibid* at 197.

⁵⁷³ Kim suggests a new defense of situational duress to deal with mass consumer electronic contracts. These contracts are not only pervasive online and on handheld devices but have also spread offline and are referred to in traditional paper contracts, invoices, and other corporate documents. Their aberrance, according to Kim, is in their form, medium and content, making it both easier for companies to use them and for consumers to ignore them. See Nancy S Kim, “Situational Duress and the Aberrance of Electronic Contracts” (2014) 89:1 Chicago-Kent L Rev 265.

minor.⁵⁷⁴ Still others have attempted to renovate unconscionability as a remedy through, for instance, advancing its bifurcation into “access to justice unconscionability” and “rotten-deal unconscionability.”⁵⁷⁵

c. The Technologizing of the Standard Form Contract

The diametric discourses associated with standard form contracts further diverged as they migrated from paper to electronic form during the 1990s.⁵⁷⁶ The nexus of this pivot was the principle of “technological neutrality.”⁵⁷⁷ This meant that any practices formed through technological means were recognized as “functionally equivalent” to their paper-based counterparts. The legal requirement of a signature, for instance, was replaced and satisfied by an electronic signature.⁵⁷⁸

Arguably, the functional equivalence to paper was never quite accurate since electronic documents are harder to evaluate on the basis of their size, which is not always apparent since all electronic documents look similar.⁵⁷⁹ Reading the fine print on a smartphone is another instance whereby standard form contracts are becoming increasingly complicated since the fine print has become even more inconspicuous, displayed in miniscule fonts, and sometimes containing embedded terms and conditions. Electronic contracting makes it much easier for businesses to include burdensome terms for users.⁵⁸⁰ In fact, some

⁵⁷⁴ See e.g. Anne Fleming, “The Rise and Fall of Unconscionability as the ‘Law of the Poor’” (2014) 102:5 Georgetown L J 1383.

⁵⁷⁵ See e.g. Jacob Hale Russell, “Unconscionability’s Greatly Exaggerated Death” (2019) 53 U California Davis 965 at 968.

⁵⁷⁶ UNCITRAL *Model Law on Electronic Commerce, with Guide to Enactment*, 1996: with Additional Article 5 Bis as Adopted in 1998; *Uniform Electronic Commerce Act*, 2000.

⁵⁷⁷ Canada adopted the *Uniform Electronic Commerce Act* [UECA] in 2000. Influenced by UNCITRAL, the governing principle of the UECA is that all electronic information is legally valid. Any prevailing legal obstacles that conflict are brought into line with that principle. In other words, electronic contracts have the same legal status as their paper equivalents. See *Uniform Electronic Commerce Act 2000*, s 5

⁵⁷⁸ PIPEDA 2000; *Electronic Transactions Act*, 2001; *Uniform Electronic Commerce Act*, 2000

⁵⁷⁹ Teresa Scassa & Michael Deturbide. *Electronic Commerce and Internet Law in Canada*. (Toronto: CCH Canadian, 2012).

⁵⁸⁰ Waddams, *supra* note 546.

empirical research claims clicking “I agree” to be the biggest lie of the information age, revealing in a study of privacy policy and terms of service policy reading behavior that 98 per cent of participants missed a “gotcha clause” providing a first-born child as payment for social networking access.⁵⁸¹ While this is a slightly tongue-in-cheek example, it does demonstrate how terms of service have become the quintessence of “Too Long; Didn’t Read” (TL;DR) documents.⁵⁸² Additionally, although the rule in *L’Estrange* established that courts may enforce signed contracts without the requirement of parties having read the terms, increasingly parties have no knowledge that specific agreements are being made.⁵⁸³ Some even see the ubiquity of the click-to-contract human-computer interface to be compelling us to act like machines rather than human beings.⁵⁸⁴

Moreover, the newer modes of disseminating contracts have yet to be accounted for. Take for example the changing nature of transactional efficiency—“take it or leave it”—associated with standard form contracting that formed part of the discourse of justification. Using the convenience store analogy, but with a digital version such as Amazon Go, which uses cashierless “Just Walk Out” technology,⁵⁸⁵ we can still see the “take it or leave it” aspect, but it is not without an extra burden: gathering and using your data.

⁵⁸¹ Jonathan A Obar & Anne Oeldorf-Hirsch, “The Biggest Lie on the Internet: Ignoring the Privacy Policies and Terms of Service Policies of Social Networking Services” (2020) 23:1 *Information, Communication & Society* 128.

⁵⁸² See e.g. David Berreby, “Click to Agree with What? No One Reads Terms of Service, Studies Confirm”, *The Guardian* (3 March 2017), online: <www.theguardian.com/technology/2017/mar/03/terms-of-service-online-contracts-fine-print>.

⁵⁸³ See Tom Allen & Robin Widdison, “Can Computers Make Contracts?” 9:1 (1996) *Harvard J L & Tech* 25 at 45.

⁵⁸⁴ Frischmann argues, “Freedom of contract requires the inverse: freedom *from* contract. When contract becomes automatic and ubiquitous both disappear. There is no freedom. Genuine autonomy is lost.” See Brett Frischmann, “Electronic Contracts and the Illusion of Consent” (19 February 2019), online: *Scientific American* <blogs.scientificamerican.com/observations/electronic-contracts-and-the-illusion-of-consent/>.

⁵⁸⁵ “Just Walk Out Technology”, online: *Amazon* <justwalkout.com>.

Amazon Go uses an integration of machine learning, algorithms, computer vision, and sensors.⁵⁸⁶ The technology is similar to that used in self-driving cars.⁵⁸⁷ Amazon Go looks like a convenience store with its shelves stocked with quick and easy items and groceries that one would expect to find in such a store, but there is no cashier.⁵⁸⁸

To use these technologized stores, shoppers must first download the Amazon app to scan and enter the stores. Their picture is taken as they enter the store, and then hundreds of other cameras placed around the store and sensors then track items that shoppers take from shelves.⁵⁸⁹ This network of cameras allows Amazon to track shoppers at all times without using facial recognition technology.⁵⁹⁰ Once an item is picked up, it is checked out, going into shoppers' virtual carts on the app. When shoppers leave the store, there is no need to check out with a cashier. They simply pick up their items and leave the store when they are finished. Their virtual carts are checked out automatically with the payment card already stored in their account when they scan to leave the store. Additionally, their photos are again taken on the way out of the store.

⁵⁸⁶ See e.g. Elyse Betters Picardo, "Amazon Go Stores: How the 'Just Walk Out' Cashierless Tech Works" (28 January 2024), online: *Pocket-Lint* <www.pocket-lint.com/gadgets/news/amazon/139650-what-is-amazon-go-where-is-it-and-how-does-it-work>.

⁵⁸⁷ *Ibid.*

⁵⁸⁸ There is, however, an employee in the shop. *Ibid.*

⁵⁸⁹ See Nick Wingfield, "Inside Amazon Go, a Store of the Future", *New York Times* (21 January 2018), online: <www.nytimes.com/2018/01/21/technology/inside-amazon-go-a-store-of-the-future.html>.

⁵⁹⁰ Amazon imposed a moratorium on allowing law enforcement to use its facial recognition platform, "Rekognition," in June 2020 at the height of the protests in the US following the killing of George Floyd during an arrest in Minnesota. See <https://www.theverge.com/2020/6/10/21287101/amazon-rekognition-facial-recognition-police-ban-one-year-ai-racial-bias>; see also <https://www.reuters.com/technology/exclusive-amazon-extends-moratorium-police-use-facial-recognition-software-2021-05-18/>. Much foundational work on the flaw of racial bias in facial recognition technology was done by Joy Buolamwini and Timnit Gebru. They revealed much higher rates of error for identifying darker skinned individuals in systems developed by major technology companies including IBM and Microsoft. See Joy Buolamwini & Timnit Gebru, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification" in *Proceedings of Machine Learning Research* 81 (2018). Additionally, in another study, Buolamwini and Deborah Raji found that Amazon's "Rekognition" had significant issues with identifying gender in darker-skinned persons as well as mistaking gender. See <https://www.nytimes.com/2019/01/24/technology/amazon-facial-technology-study.html>. See also Concerned Researchers, "On Recent Research Auditing Commercial Facial Analysis Technology" (26 Mar 2019) <https://medium.com/@bu64dcjrytwitb8/on-recent-research-auditing-commercial-facial-analysis-technology-19148bda1832>. Note also that Amazon has established a new technology, "Amazon One" for its Amazon Go stores. This identity technology scans the palm of shoppers' hands and verifies identity in the same manner as facial recognition. See <https://www.theverge.com/2020/10/1/21496673/amazon-one-palm-reading-vein-recognition-payments-identity-verification>.

“Take it or leave it” in the context of Amazon Go is still efficient—even superbly efficient in some respects—but it is not the same model. First, the “take or leave it” scenario is no longer just like the “mom and pop,” local convenience store. It is still a convenience store but one on the global scale.

Secondly, in stepping into this globalized convenience store, the shopper steps into the world of data capture. And while the shopper may choose not to buy anything and leave, it is not the same scenario as leaving the “mom and pop” convenience store. The shopper has provided their data upon entry into the store and been put on the receiving end of asymmetrical surveillance. Here we could draw a parallel to asymmetrical exposure at the heart of Bentham’s panopticon.⁵⁹¹ The shopper becomes an object of information in the digitized take it or leave scenario. It is no longer a “take it or leave it” analogy: it is, instead, a datafied “take or leave it” analogy.

It is clear from this analysis of the datafied “take or leave it” analogy that the data-driven economic model does not equal the knowledge-based economic model. In this comparison, the data-driven economic model involves a winner-takes-all market economy with an ever-expanding “super-star” firm like Amazon, and ubiquitous information asymmetry.

Like the more technologized variety store, standard form contracts are becoming increasingly automated. They are no longer “just like paper” in electronic form. We cannot simply transplant theories about standard form contracts without taking technology into account. The theories previously used to justify standard form contracts are breaking down with increasingly used AI in the contracting process.

⁵⁹¹ The main idea of Bentham’s panopticon was that a central watchtower that shines bright light and is surrounded by cells with a watchman that can see everyone. Those in the cells, however, are not able to see the watchman and therefore assume they are always being observed. See Michel Foucault, “Panopticism” from *Discipline and Punish: The Birth of the Prison* (2008) 2:1 Race/Ethnicity: Multidisciplinary Global Contexts 1.

The use of increasingly sophisticated AI also creates unfairness as the fictional case of Ms. Bundy described. And this unfairness is not unique to Ms. Bundy; it is unfairness across society. Ultimately, the use of increasingly sophisticated AI in the contracting process indicates a transformation in standard form contracting.

While some scholars have identified increasingly digitally mediated contracts as “pseudo-contracts”⁵⁹² or “monster- or super-contracts,”⁵⁹³ Scholz provides more particularity with the term, “algorithmic contract.”⁵⁹⁴ She explains that algorithmic contracts share some features with standard form contracts such as the use of regularized or stock language. The main difference between a standard form contract and an algorithmic contract is that an algorithm replaces a human being in the decision-making process.⁵⁹⁵ Put simply, algorithmic contracts are legally enforceable contracts that rely upon algorithmic decision-making.

III. The Algorithmic Contract

Algorithmic contracts are distinct from smart contracts, thus for the sake of clarity, this section will begin by an explanation why smart contracts are exceptions.

a. Smart Contracts as Exceptions

Unlike individually negotiated contracts or standard form contracts that are written in natural language (i.e. human), smart contracts are written in programming language with their principal feature being automation. The growing literature on smart contracts reflects critique

⁵⁹² Robin Bradley Kar & Margaret Jane Radin, “Pseudo-contract and Shared Meaning Analysis” (2019) 132:4 Harvard L Rev 1137.

⁵⁹³ Florian Martin-Bariteau & Marina Pavlović, “AI and Contract Law” in Florian Martin-Bariteau & Teresa Scassa, eds, *Artificial Intelligence and the Law in Canada* (Toronto: LexisNexis, 2021) 69 at 98.

⁵⁹⁴ Scholz, *supra* note 67.

⁵⁹⁵ *Ibid.*

ranging from attitudes of status quo⁵⁹⁶ to labelling them unsmart⁵⁹⁷ and on to foretelling of the end of contract.⁵⁹⁸ Part of this varying critique may be attributed to the fact that there is no agreement as to what exactly a smart contract is. On one hand, they may be defined as self-executing contracts, where the terms of the agreement are written in code.⁵⁹⁹ On the other hand, they may be described as “representations of business processes in code; they extend the opportunity to have not just attestable data shared between multiple parties, but also attestable processes.”⁶⁰⁰

Smart contracts could be better described as “persistent script.”⁶⁰¹ This description refers to transparent and self-running lines of code that are saved in the Blockchain—a decentralized, distributed and public digital ledger—and cannot be later edited or deleted.⁶⁰² Thus, they would be considered a self-executing system in which there is no need for third-party intervention.

⁵⁹⁶ See e.g. Jenny Cieplak & Simon Leefatt, “Smart Contracts: A Smart Way to Automate Performance” (2017) 418:1 *Georgetown L & Tech Rev* 417 (the continuity of automated contract performance and enforcement through the practice of automated contract formation via electronic signature services); see also Alan Cohn, Travis West & Chelsea Parker, “Smart After All: Blockchain, Smart Contracts, Parametric Insurance, and Smart Energy Grids” 273:1 *Georgetown L & Tech*.

⁵⁹⁷ James Grimmelmann, “All Smart Contracts are Ambiguous” (2019) 2 *Penn J L Innovation* at 1 (“Smart contracts are neither smart nor contracts but the name has stuck”).

⁵⁹⁸ See e.g. Alexander Savelyev, “Contract Law 2.0: ‘Smart’ Contracts as the Beginning of the End of Classic Contract Law” (2017) 26:2 *Information & Communications Tech L* at 116; see also Zuboff, *supra* note 34 at 219.

⁵⁹⁹ See e.g. Stuart D Levi & Alex B Lipton, “An Introduction to Smart Contracts and Their Potential and Inherent Limitations” (26 May 2018), online: *Harvard Law School Forum on Corporate Governance* <corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/>.

⁶⁰⁰ “How Blockchain Will Accelerate the Business Performance and Power the Smart Economy, (27 October 2017), online: *Harvard Business Review* <hbr.org/sponsored/2017/10/how-blockchain-will-accelerate-business-performance-and-power-the-smart-economy>. See, however, Pierluigi Cuccuru, “Beyond Bitcoin: An Early Overview on Smart Contract” (2017) 25 *Int’l J of L & Information Tech* 179 at 185: “... a piece of text in a formal language the purports to be both (i) a written instrument embodying and recording contracting parties’ mutual promises with (ii) code that performs and/or enforces those promises on a digital computer.”

⁶⁰¹ Vitalik.eth, “To be clear, at this point I quite regret adopting the term “smart contracts.” I should have called them something more boring and technical, perhaps like “persistent scripts” (14 October 2018 at 6:21am), online: *Twitter* <twitter.com/vitalikbuterin/status/1051160932699770882?lang=en>. (Vitalik Buterin is the inventor of Ethereum).

⁶⁰² Darius Moukhtarzade, “Neither Smart Nor Contract: Why Smart Contracts Should be Called Something Else” (5 February 2020), online: *Medium* <medium.com/the-capital/neither-smart-nor-contract-d2fbcf1e2939>.

Moreover, not all smart contracts are legally binding though some legally enforceable contracts may make use of persistent script. Smart contracts are executed on the basis of simple logic and entirely self-executing, thus completely transparent. These decision systems depend on “If This Then That” (IFTTT) logic.⁶⁰³ Hildebrandt explains, “Whoever determines ‘this’ as a condition of ‘that’ decides the output of the system, which has no discretion whatsoever.”⁶⁰⁴ Thus, smart contracts are code driven as opposed to data driven.

The term “smart contract” is most often attributed to Nick Szabo, who in 1996, defined a smart contract as “a set of promises, specified in digital form, including protocols within which the parties perform on these promises.”⁶⁰⁵ By way of illustration, Szabo used a vending machine to parallel the automation of a smart contract.⁶⁰⁶ A vending machine performs a sale in which the terms are encoded in the sale. It automates the process of, for instance, buying a chocolate bar: after selecting the chocolate bar at the vending machine, the transaction will proceed, if and only if, the correct amount of money is inserted. Then, the vending machine will dispense the goods. The vending machine takes on the conditional logic of the contract sale in its technological process, be it analogue or digital.

Szabo’s definition predated Blockchain, which was invented 14 years after he coined the term.⁶⁰⁷ His definition correlates to the former definition of smart contract as self-executing contracts, where the terms of the agreement are written in code. Thus, the lack of

⁶⁰³ Mireille Hildebrandt, “Algorithmic Regulation and the Rule of Law” (2018), online: *Royal Society Publishing* <royalsocietypublishing.org/doi/10.1098/rsta.2017.0355>.

⁶⁰⁴ *Ibid.*

⁶⁰⁵ Nick Szabo, “Smart Contracts: Building Blocks for Digital Markets” (1996) 16 *Extropy Journal of Transhuman Thought* 1; note that the “Ricardian contract” is also generally considered to describe a smart contract. See Ian Grigg, “Financial Cryptography in 7 Layers” in Yair Frankel, ed *Financial Cryptography*, 4th International Conference, FC 2000 (26 October 2001) 332, DOI: <[10.1007/3-540-45472-1_23](https://doi.org/10.1007/3-540-45472-1_23)>; see also Ian Grigg, “The Ricardian Contract” (Paper delivered at First IEEE International Workshop on at Electronic Contracting, San Diego, 6 June 2004), online: <[10.1109/WEC/2004.1319505](https://doi.org/10.1109/WEC/2004.1319505)>.

⁶⁰⁶ Szabo, *supra* note 605.

⁶⁰⁷ Developers who worked under the pseudonym, Satoshi Nakamoto, released a white paper in 2008 that established the model for a blockchain. See Institute of Chartered Accountants in England and Wales, “History of Blockchain” (2024), online: <www.icaew.com/technical/technology/blockchain-and-cryptoassets/blockchain-articles/what-is-blockchain/history>.

clarity on what exactly a smart contract is may stem from the fact that Szabo's definition predated the invention of Ethereum.⁶⁰⁸

Most smart contracts now in use are used as blockchain programs to create tokens, for example, or support supply chain management etc. They are not “smart” in the sense of consciousness. They may be viewed as automating contractual performance. Additionally, they are not all legally binding—some are merely agreements or business processes so this is part of the reason why the term “smart contract” is a bit of a misnomer.

b. Delineating the Algorithmic Contract

Algorithmic contracts, in contrast to smart contracts, extend past performance to the areas of negotiation and formation of a contract. Further, algorithmic contracts are legally enforceable contracts.

Algorithmic contracts are also distinct from smart contracts in that they are data-driven rather than code-driven. Moreover, algorithmic contracts are related to standard form contracts; we could view them, in fact, as a more technologized form of contract than the standard form contract. In other words, we are, once again, facing a changed form of contract in the history of contract law. However, this change follows the Algorithmic Turn in society, whereby algorithms are becoming the main mediator through which power is enacted.⁶⁰⁹

Scholz helpfully distinguishes between algorithmic contracts in the business-to-business context and in the business-to-consumer context.⁶¹⁰

⁶⁰⁸ See e.g. World Coin, “The History of Ethereum: Its Origin and Upgrades” (4 October 2023), online: <worldcoin.org/articles/history-of-ethereum>.

⁶⁰⁹ Marc Schuilenburg & Rik Peeters, *The Algorithmic Society: Technology, Power, and Knowledge* (Abingdon: Routledge, 2021).

⁶¹⁰ Lauren Henry Scholz, “Algorithms and Contract Law” in Woodrow Barfield, ed, *The Cambridge Handbook of the Law of Algorithms* (Cambridge: Cambridge University Press, 2021) 141.

i. Business-to-business Algorithmic Contracts

Scholz has established a helpful taxonomy, distinguishing between two types of algorithmic contracts in a business-to-business context that affect contract formation.⁶¹¹ First, she identifies gap-filler algorithmic contracts, which rely on algorithmic determination either before or after a contract is formed to fill gaps in some standardized term within the contract.⁶¹² Secondly, Scholz discerns negotiator algorithmic contracts, in which an algorithm is tasked with choosing which terms to offer or accept, or which company to deal with.⁶¹³ They operate as negotiators before the contract formation.

1. *Gap-fillers*

Gap-filler algorithmic contracts pose challenges with determinacy for businesses both in respect of price and in respect of terms. Amazon, for instance, uses standard form terms and conditions, but an algorithm determines the exact price of an item for each user at differing times.⁶¹⁴ Businesses, however, agree to algorithms being used in this gap-filling capacity in the terms and conditions of the contract.

2. *Negotiators*

Negotiator algorithmic contracts have been used in high-frequency trading of financial products, where investment banks use algorithms to create real-time strategies for buying and selling.⁶¹⁵ Algorithms can quickly and skillfully bind a business to a potential profitable exchange in a way

⁶¹¹ *Ibid.*

⁶¹² *Ibid* at 147.

⁶¹³ *Ibid* at 148.

⁶¹⁴ *Ibid.*

⁶¹⁵ *Ibid*; see also Gianluca PM Virgilio, “High-Frequency Trading: A Literature Review” (2019) 33:2 *Financial Markets and Portfolio Management* 183.

that no human could have achieved. Scholz further deconstructs negotiator algorithmic contracts in the following three ways:

1. Company A uses an algorithm to choose the prices offered to each customer from each product;
2. Company B uses an algorithm to buy and sell financial products on Company B's behalf on financial markets; and
3. Company C uses an algorithm to choose which type of contracts Company C will enter into and what strategies Company C will peruse.⁶¹⁶

All three of these scenarios demonstrate that responsibility for creating terms or for choosing trading partners is delegated to an algorithm. The responsibility for doing so varies from very little in the first example to much greater amounts in the third example, where the algorithm is effectively doing things with words that a human being would otherwise oversee or do.⁶¹⁷ Furthermore, certain types of ML algorithms are impenetrable systems.⁶¹⁸

Scholz's solution to the challenges posed by negotiator algorithmic contracts is to consider algorithms as constructive agents of corporations.⁶¹⁹ What this means is that businesses will consent to having authorized an algorithm to act on their behalf in forming the contract. In this way, new technologies may be incorporated into established contract framework.

Businesses may not have a complete understanding of all the terms contained within an algorithmic contract, but they are not disadvantaged since the terms are usually coded in the interests of repeat business.⁶²⁰

⁶¹⁶ Scholz, *supra* note 610 at 148.

⁶¹⁷ *Ibid.*

⁶¹⁸ *Ibid.*

⁶¹⁹ *Ibid* at 151-52.

⁶²⁰ Lauren Henry Scholz, "Law and Autonomous Systems Series: Toward a Consumer Contract Law for an Algorithmic Age" (2018), online (blog): *University of Oxford Faculty of Law* <www.law.ox.ac.uk/business-law-blog/blog/2018/04/law-and-autonomous-systems-series-toward-consumercontract-law>.

However, the same cannot be said in the consumer context where terms are not shaped to the individual consumer's benefit, and consumers have less of a comprehensive understanding of the nature of contractual terms with practically no ability to control them.⁶²¹

ii. Business-to-consumer Algorithmic Contracts

Consumer algorithmic contracts like the one described in the counterfactual involving Ms. Bundy may create unexpected issues, such as “algorithmic exploitation.”⁶²² This exploitation may show up in the following ways:

1. Unaccountable algorithms function in the background of society, which determine access to resources, thus exerting a form of social control by corporate or government actors;
2. Big data processing techniques perpetuate wrongful discrimination against socially and economically vulnerable groups in society;
3. Major market failure may result from allowing algorithmic contracts to enable perfect market discrimination by elite actors.⁶²³

One potential avenue for addressing algorithmic exploitation is through legislation.

At present, there are increasing proposals to regulate automated decision making.

The European Union's *General Data Protection Regulation*,⁶²⁴ for example, was one of the first endeavours at regulating automated decision-making. It is generally described as the “gold standard” in its approach to dealing with privacy and regulating automated decision making. More recently, the European Union's *AI*

⁶²¹ *Ibid.*

⁶²² *Ibid.*

⁶²³ *Ibid.*

⁶²⁴ EC, *Regulation (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)*, [2016] OJ, L119/1.

Act,⁶²⁵ the first-ever legal framework on AI aims to take a harm-based approach in respect of regulating AI.

Canada has also proposed legal framework to deal with regulating AI and automated decision making. The *Digital Charter Implementation Act* (“Bill C-27”)⁶²⁶ will reform and advance privacy and data protection laws in keeping with global trends. It will also establish rules to regulate “high impact” artificial intelligence (AI) systems under a new *Artificial Intelligence and Data Act* (AIDA). While legislation will help individuals as well as organizations and governments deal with some issues related to automated decision-making systems, the question remains whether it is sufficient for regulating contracts.

Another avenue for limiting the scope of consumer algorithmic contracts is through existing contract law doctrine and principles. Some view private law from an internal perspective that see it solely as a mechanism for reinforcing the private ordering of society without trying to organize it or steer it.⁶²⁷ However, in the next section, I propose employing an external perspective to limiting the scope of consumer algorithm contracts, where private law—specifically the law of contracts—constitutes a regulatory technique, not unlike other techniques of social and economic regulation. This perspective will contribute to building on Scholz’s work on business-to-consumer algorithmic contracts using the Canadian landmark case, *Uber*.⁶²⁸

⁶²⁵ EC, *Proposal for Regulation of the European Parliament and of the Council laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts*, COM [2021] 206 final.

⁶²⁶ Bill C-27, *An Act to enact the Consumer Privacy Protection Act, the Personal Information and Data Protection Tribunal Act and the Artificial Intelligence and Data Act and to make consequential and related amendments to other Acts*, 1st session, 44th Parl, 2021(second reading 24 April 2023).

⁶²⁷ See e.g. Ernest J Weinrib, *The Idea of Private Law* (Oxford: Oxford University Press, 2012).

⁶²⁸ Scholz leaves open the question of whether legislation or existing contract law doctrine and principles best balance out minimizing algorithmic exploitation and allowing mutually beneficial business transactions. See Scholz, *supra* note 610.

IV. *Uber as Landmark Case in the Law of Contracts*

David Heller, a driver for UberEats, began a class action against Uber in Ontario in 2017 for contravening the *Employment Standards Act* (ESA),⁶²⁹ alleging that drivers were employees of Uber rather than independent contractors.⁶³⁰ Uber responded by bringing a motion to stay the action⁶³¹ in favour of arbitration in The Netherlands, relying on their own arbitration provision in the service agreement, which Heller had accepted in order to become an Uber driver. The provision required that Heller post \$14,500 (USD) in advance to commence arbitration. This fee represented most of his annual income.⁶³² In addition to travelling to The Netherlands, to pursue any claim under the contract, the provision also required Heller to submit to Dutch law for the arbitration.⁶³³ Heller argued that the arbitration clause wrongly contracted out of the provisions contained within the ESA and that the clause was unconscionable since he was unable to pursue the dispute resolution process, and therefore invalid.⁶³⁴

In June 2020, the SCC issued its ruling in *Uber*, finding in favour of Heller. The SCC's widely anticipated decision ruled that Uber's arbitration clause contained within its services agreement constituted a separate collateral agreement that was unconscionable, and therefore, unenforceable. This allowed the proposed class action, positioning Heller as an employee within the meaning of the ESA to move forward in Ontario, rather than for the dispute to be subject to arbitration in The Netherlands under Dutch law.

⁶²⁹ *Employment Standards Act*, S.O. 2000, c. 41.

⁶³⁰ *Heller v Uber Technologies Inc*, [2018] OJ No 1393.

⁶³¹ *Uber*, *supra* note 212.

⁶³² *Ibid* at para 2.

⁶³³ *Ibid*.

⁶³⁴ *Ibid* at para 13.

Uber is considered to be a “landmark case” in Canadian contract law because the decision clarified the threshold for the doctrine of unconscionability in Canada.

a. The Doctrine of Unconscionability

The doctrine of unconscionability is a particular form of equitable relief in contract law.⁶³⁵ The doctrine has its roots in the fourteenth century whereby relief in respect of unfair contracts was articulated in terms of conscience and its various permutations such as unconscionable, unconscientious etc.⁶³⁶ Generally speaking, an unconscionable contract is one that is found to be unenforceable because no reasonable or informed individual, all things considered, would agree to it.

The doctrine unconscionability has had, over time, a reputation of ambiguity, drawing cynicism that claims it to be a vague, all-purpose weapon,⁶³⁷ “an amorphous concept incapable of exact definition,”⁶³⁸ “a word that defies lawyer-like definition,”⁶³⁹ or a “wild card”⁶⁴⁰ whose value is unknown or unpredictable due to “discretionary judgment calls in each case.”⁶⁴¹ This may be partly why the doctrine of unconscionable bargain—as it is known in England—went into hibernation⁶⁴² after the 1889 decision in *Fry v. Lane*⁶⁴³ and reappeared significantly differently in the 1968 ruling in *Cresswell v. Potter*.⁶⁴⁴ *Fry* provided the following general definition of the doctrine of unconscionable bargain:

⁶³⁵ McLachlin, J, citing AJ McClean that “the concept of ‘good conscience’...lies at ‘the very foundation of equitable jurisdiction.’” See *Soulos v Korkontzilas*, [1997] 2 SCR 217, [1997] SCJ No 52 at 27.

⁶³⁶ Waddams, *supra* note 544 at 118.

⁶³⁷ John A Spanogle, “Analyzing Unconscionability Problems,” (1969) 117 University Pennsylvania L Rev 931 at 931.

⁶³⁸ “Unconscionability: An Attempt at Definition” (symposium), (1970) 31 University Pittsburgh L Rev 333 at 333.

⁶³⁹ Joseph M Perillo & John D Calamari, *The Law of Contracts*, 3rd ed (St. Paul, Minn: West Pub Co, 1987) s 9-40 at 406 n. 7.

⁶⁴⁰ Radin, *supra* note 534 at 123.

⁶⁴¹ *Ibid* at 129.

⁶⁴² See David Capper, “The Unconscionable Bargain in the Common Law World” (2010) 126 L Q Rev 40 at 404.

⁶⁴³ *Fry v Lane*, [1888] 40 Ch D 312 [*Fry*].

⁶⁴⁴ *Cresswell v Potter*, [1978] 1 WLR 255 [*Cresswell*].

Where a purchase is made from a poor and ignorant man at a considerable undervalue, the vendor having no independent advice, A Court of Equity will set aside the transaction.⁶⁴⁵

Almost a century later, the doctrine of unconscionability reappeared, but in a modernized variation. *Cresswell* heightened the threshold of the doctrine, recognizing that the presence or absence of legal advice may be relevant to the strengths or weaknesses of the parties.⁶⁴⁶

The doctrine of unconscionability has been used more productively in other commonwealth jurisdictions such as Australia and New Zealand.⁶⁴⁷ In the US, it is statutorily recognized by Section 2-302 of the *Uniform Commercial Code*,⁶⁴⁸ and applies to transactions for the sale of goods. However, the doctrine is not defined by the *UCC*. In 1967, Arthur Leff investigated the paucity of linguistic meaning of “unconscionability” in his critique⁶⁴⁹ of § 2-302, finding it to be a term that elucidated very little. Leff distinguished between the two different interests in contracts: first, “bargaining naughtiness,”⁶⁵⁰ which he labelled as procedural unconscionability; and second, “evils in the resulting contract [which he called] substantive unconscionability.”⁶⁵¹ Leff’s terminology as well as the framework for analyzing unconscionability is now extensively used though it was originally intended as a critique.

⁶⁴⁵ *Fry* (Citing Kay J).

⁶⁴⁶ Capper, *supra* note 178.

⁶⁴⁷ See Rick Bigwood, “Antipodean Reflections on the Canadian Unconscionability Doctrine” (2005) 84:1 Canadian Bar Rev 171.

⁶⁴⁸ *Uniform Commercial Code* § 2-302 (1951) [*UCC*]. According to Farnsworth, the *UCC* establishes the following: “If the court as a matter of law finds the contract or any clause of the contract to have been unconscionable at the time it was made the court may refuse to enforce the contract, or it may enforce the remainder of the contract without the unconscionable clause, or it may so limit the application of any unconscionable clause as to avoid any unconscionable result.” See E Allan Farnsworth, *Contracts*, 4th ed (New York: Aspen Publishers, 2004) at 298.

⁶⁴⁹ Arthur Allen Leff, “Unconscionability and the Code: The Emperor’s New Clause” (1967): 115:4 U Pennsylvania L Rev 485.

⁶⁵⁰ *Ibid* at 487.

⁶⁵¹ *Ibid*.

The doctrine of unconscionability is also incorporated into a number of uniform laws in the United States (US)⁶⁵² and in the *Restatement (Second) of Contracts*.⁶⁵³ But nowhere is unconscionability defined. Case law has determined that there must be both procedural and substantive unconscionability present in order to find unconscionability.⁶⁵⁴ Both forms of unconscionability, however, do not need to be present to the same degree. The most cited explanation of when a court may void or rewrite a contract on the basis of unconscionability is found in *Williams v. Walker-Thomas Furniture Co.*⁶⁵⁵ Here, the Court found that there must exist “absence of meaningful choice on the part of one of the parties together with contract terms which are unreasonable favourable to the other party.”⁶⁵⁶

In Canada, the doctrine of unconscionability remained in a state of slow development until the SCC’s recent pronouncement in *Uber*.⁶⁵⁷ The developing narrative of the modern ambit of unconscionability often begins with *Morrison v. Coast Finance Ltd.*⁶⁵⁸—usually invoked as the “leading case.”⁶⁵⁹ In the unanimous judgment from 1965, Justice Davey of the

⁶⁵² *Uniform Consumer Credit Code Act* § 5.108 (1974); *Uniform Consumer Sales Practices Act* § 4 (1970); *Uniform Land Transactions Act* § 1-311 (1975); *Uniform Residential Landlord & Tenant Act* § 1.303 (1972).

⁶⁵³ “If a contract or term thereof is unconscionable at the time the contract is made a court may refuse to enforce the contract, or may so limit the application of any unconscionable terms as to avoid any unconscionable result.” *The Restatement (Second) of Contracts*, § 208 (1981).

⁶⁵⁴ See e.g. *Fensterstock v Educ Fin Partners* 611 F 3d 124, 134-136 (2d Cir 2009); *Edwards v Hovenssa LLC* 497 F 3d 355, 362 (3d Cir 2007).

⁶⁵⁵ *Williams v. Walker-Thomas Furniture Co.*, 350 F.2d 445 (D.C. Cir. August 11, 1965) (The court invalidated a clause within a furniture installment sale contract that permitted Walker-Thomas to repossess six years of the borrower’s purchases after defaulting on a loan derived from a more recent purchase).

⁶⁵⁶ *Ibid* at 449.

⁶⁵⁷ See e.g. John Manwaring, “Unconscionability: Contested Values, Competing Theories and Choice of Rule in Contract Law (1993) 25 Ottawa L Rev 235; John-Paul F Bogden, “On the Agreement Most Foul: A Reconsideration of the Doctrine of Unconscionability” (1997) 25: 1 Manitoba L J 187.

⁶⁵⁸ Morrison was a 79-year-old widow who was induced by two individuals, Lowe and Kitely, to mortgaging her home to allow them to repay monies owed to Coast Finance and to buy two cars from the Associated Co. in order to resell them. The mortgage was to be repaid by Lowe in monthly instalments to Morrison’s account. Lowe failed to make the payments. Morrison had no other means of repaying the money, and the house was her only asset. She had no independent advice, but evidence showed that she both wanted and sought advice. The unanimous court held the Coast Finance responsible because they prepared the documents and took advantage of Morrison’s inexperience and lack of understanding. The mortgage was voided. *Morrison v Coast Finance Ltd et al*, [1965] BCJ No 178 [*Morrison*].

⁶⁵⁹ See McCamus, *supra* note 71 at 453; see also Bigwood, *supra* note 647 at 180.

British Columbia Court of Appeal clarified the difference between undue influence and unconscionable dealing. He stated,

[a] plea of undue influence attacks the sufficiency of consent; a plea that a bargain is unconscionable invokes relief against an unfair advantage gained by an unconscientious use of power by a stronger party against a weaker.⁶⁶⁰

Justice Davey then detailed the following “material ingredients”⁶⁶¹ of a two-part test to establish unconscionability: first, “proof of inequality in the position of the parties arising out of the ignorance, need or distress of the weaker, which left him in the power of the stronger”⁶⁶²; second, “proof of substantial unfairness of the bargain obtained by the stronger.”⁶⁶³ In satisfying these two required elements, “...the presumption of fraud [is created] which the stronger must repel by proving that the bargain was fair, just and reasonable.”⁶⁶⁴

However, the elements of the *Morrison* two-part test are arguably found the 1884 case of *Waters v. Donnelly*.⁶⁶⁵ The details of the exchange included Mr. Waters’ peach farm in Niagara, which he had inherited from his father, and a sum of \$700 for Mr. Donnelly’s livery stable. Donnelly had overstated the stable’s worth. He also had an existing mortgage obligation, which Waters likely did not understand. The transaction was set aside. Waters was described as a young man who was “weak minded and very easily led.”⁶⁶⁶ Furthermore, he was “overmatched and overreached; without information, and without advice...made a most improvident exchange.”⁶⁶⁷ From this we see that the language of the two-part test articulated in *Morrison* had its roots in the nineteenth century.

⁶⁶⁰ *Morrison* at para 4.

⁶⁶¹ *Ibid.*

⁶⁶² *Ibid.*

⁶⁶³ *Ibid.*

⁶⁶⁴ *Ibid.*

⁶⁶⁵ *Waters v Donnelly*, [1884] OJ No 294 [*Waters*].

⁶⁶⁶ *Ibid* at 9.

⁶⁶⁷ *Ibid* at 48.

Lloyds Bank v Bundy (1975),⁶⁶⁸ a renowned case of the English Court of Appeal (to which the counterfactual at the outset of this chapter is a contemporary allusion), also played a role in the development of the unconscionability doctrine in Canada. Two points are of noteworthiness here: first, *Bundy* is a case that lies at the periphery of unconscionability and undue influence that cites the Canadian test established in *Morrison*.⁶⁶⁹ Secondly, in his minority opinion in *Bundy*, Lord Denning suggested a unique, unifying principle of relief that harmonized the common law and equitable doctrines of duress, unconscionability, and undue influence. Specifically, he suggested a new general principle entitled, “inequality of bargaining power.”⁶⁷⁰ This single principle was one of diminution, presenting a shorter, more concise variation involving unconscionability. And although this diminished, single principle may be found cited in subsequent Canadian case law such as *McKenzie v Bank of Montreal* (1975) and *Beach v. Eames* (1976), it ultimately did not gain foothold in contract law on account of its vagueness (*National Westminster v. Morgan*, 1985). However, Lord Denning’s reformulated and modernized principle demonstrates the flexibility of unconscionability and is suggestive for producing new future rules.

Morrison, again, was the basis for the two-step test for unconscionability affirmed by the majority in *Harry v. Kreutziger*,⁶⁷¹ however, Justice Lambert’s concurring decision suggested a reformulated and simplified test as follows:

...questions as to whether use of power was unconscionable, an advantage was unfair or very unfair, a consideration was grossly inadequate, or bargaining power was grievously impaired, to select words from both statements of principle, the *Morrison* case and the *Bundy* case, are really aspects of one single question. That single question is whether the transaction, seen as a whole, is sufficiently divergent from community standards of commercial morality that it should be rescinded. To my mind,

⁶⁶⁸ *Lloyds Bank Ltd v Bundy*, [1975] QB 326, [1974] 3 All ER 757 [*Bundy*].

⁶⁶⁹ *Morrison and Knupp v Bell*, [1966] SJ No 122. Both were cited as support in Lord Denning’s judgment when he explained that the court recognizes unconscionable transactions in which “...unfair advantage has been gained by an unconscientious use of power by a stronger party against a weaker.” *Bundy* at 337-38 (citing *Morrison*).

⁶⁷⁰ *Bundy* at 339.

⁶⁷¹ *Harry v Kreutziger*, [1978] BCJ No 1318 [*Harry*].

the framing of the question in that way prevents the real issue from being obscured by an isolated consideration of a number of separate questions.⁶⁷²

Justice Lambert viewed the two-step test as part of a singular, bigger picture question that should be established through an examination of decided Canadian cases.⁶⁷³ Further, he advanced taking into account community standards of commercial morality from particular legislation that expressed standards.⁶⁷⁴

The Lambert reformulation of the doctrine of unconscionability was contentious. It was welcomed⁶⁷⁵ and cited as potentially helpful in some instances,⁶⁷⁶ but it was also viewed as simply contemporaneously valid⁶⁷⁷ and rejected.⁶⁷⁸ McCamus usefully summarizes the reformulation as having “intended to illuminate and supplement rather than supplant the traditional twofold test.”⁶⁷⁹ And likely the most valuable way of looking at the reformulation was provided by Justice Sopinka in *Norberg*: “[t]he doctrine of unconscionability and the related principle of inequality of bargaining power are evolving and, as yet, not completely settled areas of the law of contract.”⁶⁸⁰

There have been two additional attempts by provincial appellate courts to reformulate the two-step test for unconscionability established in *Morrison*. In *Cain v. Clarica Life Insurance Co.*,⁶⁸¹ Justice Côté suggested a stricter variation of unconscionability involving the following four requirements:

⁶⁷² *Ibid* at para 29.

⁶⁷³ *Ibid*.

⁶⁷⁴ *Ibid*.

⁶⁷⁵ See *Cogle v Maricevic*, [1983] BCJ No 1563; see also *Smyth v Szep* (BCCA), [1992] BCJ No 37; but see Gibbs, JA dissent: “It is not apparent that Lambert, J.A. intended to substitute a commercial morality test for the *Morrison v. Coast Finance* tests. He seems to have been of the view that it would be employed as a kind of legal shorthand expression encompassing within it all of the *Morrison v. Coast Finance* and *Lloyd's Bank v. Bundy* tests.”

⁶⁷⁶ La Forest, J states, “Community standards of conduct may also be of some assistance.” See *Norberg v Wynrib*, [1992] 2 SCR 226 at 228 [*Norberg*].

⁶⁷⁷ See *Dusik v Newton*, [1983] BCJ No 2055.

⁶⁷⁸ See *Canadian Imperial Bank of Commerce v Ohlson* (1997), 154 D.L.R. (4th); see also Bogden, *supra* note 657 at 203.

⁶⁷⁹ McCamus, *supra* note 71 at 458-59.

⁶⁸⁰ *Norberg* at 233.

⁶⁸¹ *Cain v Clarica Life Insurance Company*, 2006 CLLC para 210-001 [*Cain*].

1. a grossly unfair and improvident transaction; and
2. victim's lack of independent legal advice or other suitable advice; and
3. overwhelming imbalance in bargaining power caused by victim's ignorance of business, illiteracy, ignorance of the language of the bargain, blindness, deafness, illness, senility, or similar disability; and
4. other party's knowingly taking advantage of this vulnerability.⁶⁸²

The case involved the negotiation of a settlement package of an employee, Edward Cain, and his former employer, Clarica. The Court found that *Cain* failed on all four points of this stricter test of unconscionability. Arguably, the Court could have employed the simpler two-part test established in *Morrison* to come to the same conclusion. The four-part test really did nothing more than the two-part test. However, the stricter test was used by other Canadian courts: *Titus v. William Cooke Enterprises*⁶⁸³ for example, was another case involving a settlement agreement terminating employment that used the four-part test and found that none of the four elements were present.⁶⁸⁴

The second endeavour at reformulating the test for unconscionability after *Harry* is found in *Pitcher v. Downer*.⁶⁸⁵ Chief Justice Green rearticulated the first prong of the traditional test in *Morrison* as follows:

There is inequality of bargaining power between the parties resulting from or created by a special and significant disadvantage by reason of some condition or circumstance that provides an opportunity for the other party to take advantage of the party suffering from the disadvantage.⁶⁸⁶

In this reformulation, Chief Justice Green bifurcates the inequality of bargaining power into 1) arising out of a particular condition and 2) as the result of a specific circumstance or situation.

⁶⁸² *Ibid* at para 32.

⁶⁸³ *Titus v William Cooke Enterprises Inc*, 2007 ONCA 573.

⁶⁸⁴ See also *Phoenix Interactive Design v Alterinvest II Fund LP*, 2018 ONCA 98.

⁶⁸⁵ *Pitcher v Downer*, [2017] ILR para M-2981 [*Downer*].

⁶⁸⁶ *Ibid* at para 54.

The second prong of the *Downer* reformulation restates the traditional second branch from *Morrison*, which required “proof of substantial unfairness of the bargain obtained by the stronger.”⁶⁸⁷ The second step in *Downer* tell us, “the other party unfairly or unconscientiously (in the sense of lacking conscience) takes advantage of that opportunity.”⁶⁸⁸ Of noteworthiness in this rearticulated second step, is that this second step is firmly tied to the first step (“takes advantage of *that* opportunity”) requiring a connection between the inequality of bargaining power and the transaction stemming from it. The question of whether this reformulation is either already understood or could be interpreted as being causally linked in the traditional language stated in *Morrison* is open. In McCamus’ opinion, for instance, “the distance travelled from the traditional test to the reformulation in *Downer* appears neither substantial nor necessary.”⁶⁸⁹

The doctrine of unconscionability emerged again in 2017 in *Douez v. Facebook*.⁶⁹⁰ In this case, the plaintiff, Deborah Douez, objected to Facebook’s use of her name and her likeness in “Sponsored Stories,” which was a new advertising product. Douez brought an action⁶⁹¹ in British Columbia (BC) alleging that this use of her name and image without consent violated the *Privacy Act*.⁶⁹² She also sought to certify this action as a class proceeding to include all BC residents whose names and/or pictures were used by Facebook in the same manner. Facebook brought a preliminary motion to stay the action on the basis of its forum selection and choice of law clause. The forum selection clause, which is contained within Facebook’s terms of use at the point of registering a user, required that any disputes be resolved in California. Facebook’s motion was declined, and the class action was certified.

⁶⁸⁷ *Ibid* at para 25.

⁶⁸⁸ *Ibid* at para 54.

⁶⁸⁹ McCamus, *supra* note 71 at 463.

⁶⁹⁰ *Douez v Facebook, Inc*, [2017] 1 SCR 751 [*Douez*].

⁶⁹¹ *Douez v Facebook, Inc*, [2014] BCJ No 1051.

⁶⁹² *Privacy Act*, RSBC 1996, c 373.

The BC Court of Appeal reversed the decision,⁶⁹³ finding the forum selection clause enforceable.

The SCC overruled the Court of Appeal's decision in *Douez* in a majority ruling in 2019. It found that *Douez* had established strong cause not to enforce the forum selection on the basis of public policy considerations.⁶⁹⁴ Of particular relevance to this thesis is Justice Abella's concurring opinion in which she states,

[o]nline contracts such as the one in this case put traditional contract principles to the test. What does "consent" mean when the agreement is said to be made by pressing a computer key? Can it realistically be said that the consumer turned his or her mind to all the terms and gave meaningful consent? In other words, it seems to me that some legal acknowledgment should be given to the automatic nature of the commitments made with this kind of contract itself, but at the very least to intensify the scrutiny for clauses that have the effect of impairing a consumer's access to possible remedies.⁶⁹⁵

Justice Abella draws attention to the fact that online contracts strain the traditional principles in contract law. While *Rudder v. Microsoft*⁶⁹⁶ established clicking to agree as signature in Canada, more needs to be done in respect of the automatic nature of online standard form agreement and second, a form of technology—social media.

Justice Abella finds the doctrine of unconscionability, "a close jurisprudential cousin to both public policy and gross bargaining disparity, also applies to render the forum selection clause unenforceable."⁶⁹⁷ The SCC confirmed previously that unconscionability could be employed to render a single clause in an otherwise enforceable contract unenforceable in *Tercon Contractors Ltd. v. British Columbia*.⁶⁹⁸ In her opinion, the forum clause in Facebook's terms of use was a "classic case of unconscionability."⁶⁹⁹ Therefore, the clause was unenforceable.

⁶⁹³ *Douez v Facebook, Inc.*, [2015] BCJ No 1270.

⁶⁹⁴ *Douez* at para 50.

⁶⁹⁵ *Ibid* at para 99.

⁶⁹⁶ *Rudder v Microsoft Corp.*, [1999] OJ No 3778.

⁶⁹⁷ *Douez*, *supra* note 99 at para 112.

⁶⁹⁸ *Tercon Contractors Ltd v British Columbia*, [1994] BCJ No 1636.

⁶⁹⁹ *Douez* at para 116.

A classic case of unconscionability, according to Justice Abella, is modelled after the two-step test in *Morrison*. In other words, it rests on determining the inequality of bargaining power and the undue advantage of the stronger party. She articulates that both these elements are met:

The inequality of bargaining power between Facebook and Ms. Douez in an online contract of adhesion gave Facebook the unilateral ability to require that any legal grievances Ms. Douez had, could not be vindicated in British Columbia where the contract was made, but only California where Facebook has its head office. This gave Facebook an unfair and overwhelming procedural—and potentially substantive—benefit.⁷⁰⁰

Justice Abella lays the groundwork for *Uber* in this case, reaffirming the two-step test for determining unconscionability from *Morrison*. In doing so, she also provides a basis for clarifying more neutral language which both *Cain* and *Downer* problematized. Moreover, she ties the doctrine of unconscionability squarely in the realm of technology—digital contracts.

But in acknowledging that these “online consumer contracts of adhesion”⁷⁰¹ needed legal acknowledgment, she also contradicted her own description that *Douez* was a “classic case” of unconscionability modelled on *Morrison*. The Facebook online contract whereby Douez had to accept all of the terms stipulated in order to become a member was remarkably different than the signed mortgage document and signed promissory note in *Morrison*. In no way was the online contract in *Douez* “just like paper.”

A more apt comparison would have been that *Douez* was a *neo*-classic case of unconscionability in respect of the two-step analysis. Or perhaps that *Douez* was a case in which the classic *test* for unconscionability could be applied. Notwithstanding this language quibble over classic versus neo-classic or classic case versus classic test, Justice Abella laid the groundwork for dealing with future cases involving online SFCs in recognizing that “the

⁷⁰⁰ *Ibid.*

⁷⁰¹ *Ibid* at para 98.

automatic nature of the commitments made with this kind of contract” needed some kind of “legal acknowledgment.”⁷⁰²

When *Uber* came to the SCC in 2020, the court saw “no reason to depart from the approach to unconscionability endorsed in *Hunter, Norberg* and in *Douez*.”⁷⁰³ That is to say, the court opted to approach unconscionability from the two-step process of determining the inequality of bargaining power and the resulting improvidence of the bargain. What’s more is that the majority borrowed the description from *Douez*, labelling *Uber* as a “classic case of unconscionability.”⁷⁰⁴ Applying this “classic” moniker once again, and also reaffirming the two-step analysis of unconscionability developed in 1965 in *Morrison* suggests that the court wanted to avoid dealing with the increasingly technologized standard form contract in clarifying the threshold for unconscionability.

b. *Uber* as an Algorithmic Contract Case

There is a dearth of analysis in respect of *Uber*’s technology in the decision when in fact *Uber* is a case that is fundamentally about an algorithmic contract in the business-to-consumer context. The majority found, as a preliminary matter in the case, that the domestic *Arbitration Act* (1991)⁷⁰⁵ applied rather than the *International Commercial Arbitration Act* (2017).⁷⁰⁶ This means that the court decided the dispute as focused on employment issues in relation to services performed in Ontario, rather than interpreting the issues in an international or commercial context, “despite their relation to business” as defined in the *ICAA*.⁷⁰⁷ While the SCC did not decide on whether an employment relationship existed

⁷⁰² *Ibid* at para 99.

⁷⁰³ *Uber* at para 65. In *Hunter v Syncrude*, Justices Wilson and L’Heureux-Dubé (concurring) addressed the doctrine of unconscionability, holding that it applies in situations of unequal bargaining power. See *Hunter Engineering Co v Syncrude Canada Ltd*, [1989] SCJ No 23 at 432.

⁷⁰⁴ *Douez* at para 116.

⁷⁰⁵ *Arbitration Act*, 1991, SO 1991, c 17.

⁷⁰⁶ *International Commercial Arbitration Act*, 2017, SO 2017, c 2 [*ICAA*].

⁷⁰⁷ *Ibid* at para 24.

between Heller and Uber, what this preliminary matter points to is that it is a contractual dispute in the business-to-consumer context: Uber, the global corporation versus David Heller, an Ontario gig-worker.

In its decision, the SCC describes the Uber contract as a standard form contract and also as a contract of adhesion. Further, the judgment provides the following description involving the technology used in agreeing to the driver's contract:

The first time drivers log on to an Uber App, they are presented with a standard form services agreement of around 14 pages. To accept the agreement, the driver must click "I agree" twice. Once the driver does so, the Uber App is activated and the services agreement is uploaded to a "Driver Portal", accessible to the driver through an online account. The parties to the services agreement are the driver and Uber subsidiaries incorporated in the Netherlands with offices in Amsterdam.⁷⁰⁸

However, there is much more involved in consenting to Uber's SFC than the SCC's background information leads us to believe.

First-time drivers agree to the terms and conditions to download the Uber Driver App.⁷⁰⁹ There is a separate app to download for passengers. Once the driver app has downloaded (Figure 5), the driver must agree to receive calls from Uber including by an automatic dialer (Figure 6).

⁷⁰⁸ *Uber* at para 7.

⁷⁰⁹ This analysis was done in January 2020, which was current to the decision in *Uber*.

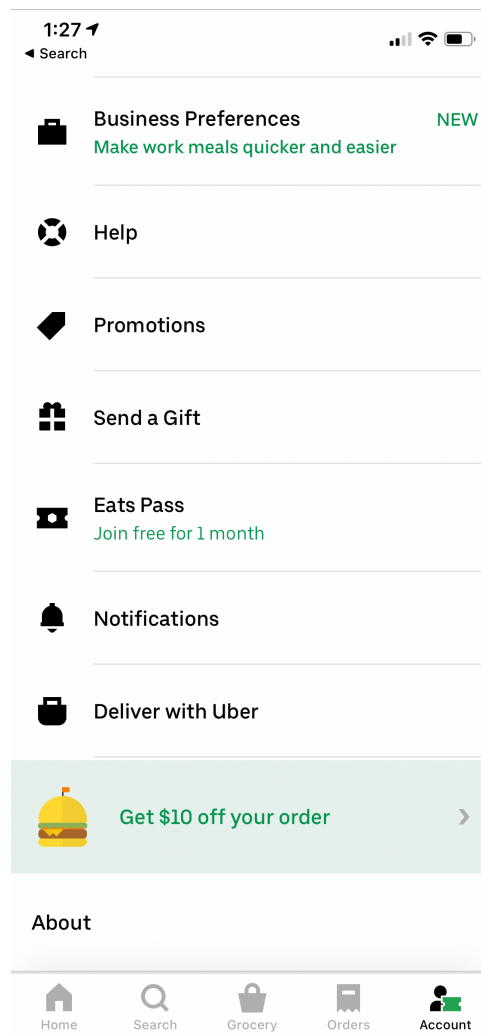


Figure 5: The Downloaded Uber Driver App

1:27

◀ Search

← Uber

Partner with Uber and earn money in your spare time

- Meet people in your city
- Make extra cash, any time
- Get paid fast

Choose a city

Vancouver, BC, Canada

By proceeding, I agree that Uber or its representatives may contact me by email, phone, or SMS (including by automatic telephone dialing system) at the email address or number I provide, including for marketing purposes.

To be eligible for a guarantee, you must see the offer and sign up to drive with Uber on this page by May 1, 2023. The guarantee only applies for your total earnings (not including

Continue

Figure 6: Agreeing to the Automatic Dialer

Once the driver agrees to these two initial terms, the driver must then agree to which type of driver service with whom the driver is contracting. In Heller's SCC case, it was with UberEats, which requires the driver then to decide which type of vehicle they would like to use for delivery services (Figure 7).

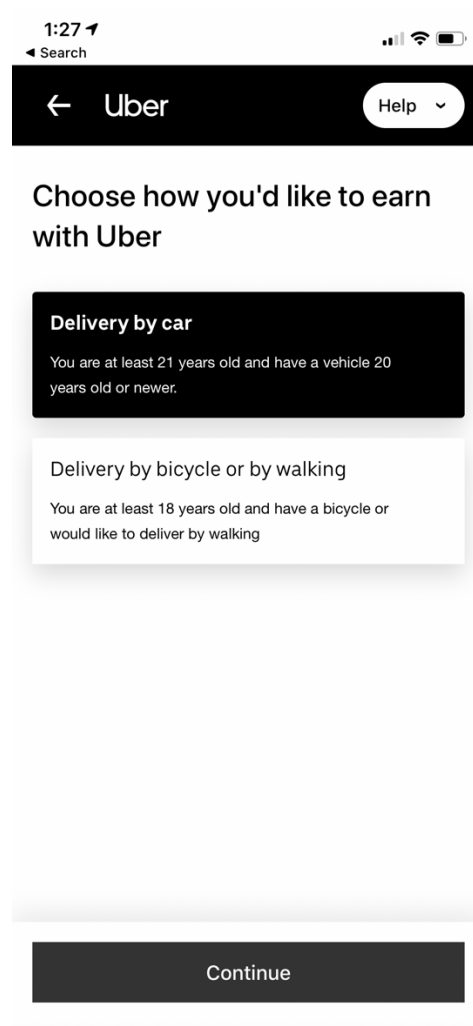


Figure 7: Choice of Delivery Vehicle

The next phase of registering to become an UberEats driver requires that the driver complete the following five steps (Figure 8):

1. Proof of work eligibility.
2. A scanned profile photo.
3. A scanned driver's license.
4. A scan of a 5-year driving record.
5. A scan of the owner's certificate of insurance and the vehicle's registration.

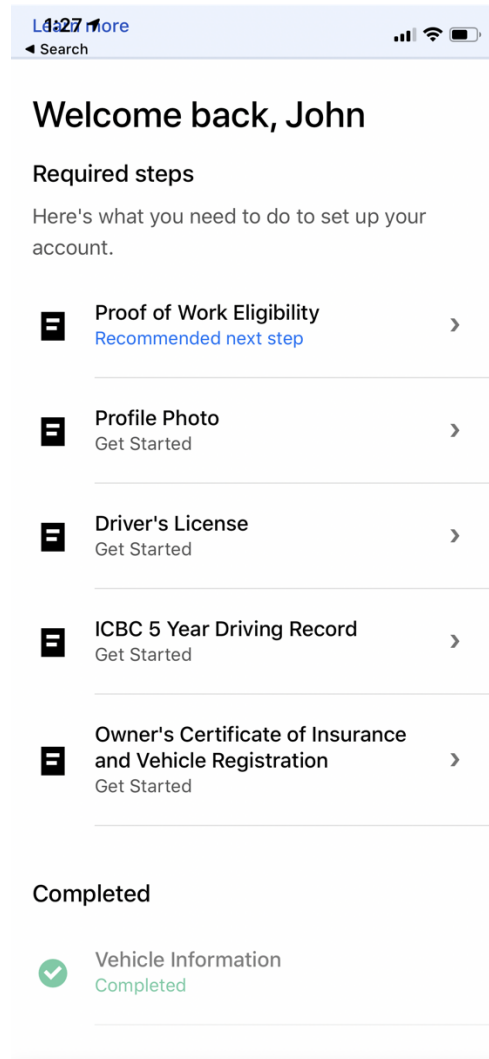


Figure 8: Screen Requiring Five Additional Documents

Each of these steps requires “clicking to agree.” By the time the driver gets to the actual standard form contract, the driver has clicked to agree at least nine times and uploaded a variety of additional documents to the app.

This investigation into the process of downloading the Uber app reveals that the contract is inseparable from the lengthy registration process to become an UberEats driver. The 14 pages and two clicks to agree to Uber’s contract that the SCC took into account in its decision does not adequately assess the technology that created asymmetrical relationship between Uber and Heller. Further, the court did not ask, for example, how does a 14-page

standard form contract appear on a six-by-eight-inch screen?⁷¹⁰ Is the autodialer an algorithm? How many other algorithmically generated terms does a user have to accept to get to the drivers' standard form contract? How many recipient rights are deleted or displaced in the processing techniques that benefit Uber?

Heller's entire relationship with Uber was through a platform regulated by algorithms. The potentially abusive contract to become an UberEats driver was deployed, approved, and maintained by algorithms. It is, by Scholz's definition, an algorithmic contract. And in recognizing algorithmic involvement in the contract formation in *Uber*, the inequality in bargaining power prong of the two-step test for unconscionability is affected. It is a paradox to suggest that one could bargain with an algorithm.

We know it is possible for algorithms to generate words, which is the locutionary aspect of a speech act. However, there is no intended meaning when an algorithm is engaged in a performance of language. An algorithm has no agency. It cannot "intend" to enter into a bargain. While Courts take an objective approach to dealing with the existence, content, and interpretation of a contract rather than one of subjective intention, there are times where the objective intention of parties needs to be considered. The notion of algorithms intending to enter into bargains needs to be considered.

The law of contracts has created "fictions" to deal with standard form contracts, but human agency is still at the foundation. There is still a notional intent to enter into a bargain with standard form contracting through the creation of a fiction that a human or an entity is presumed to have had intention in the bargaining process. The same cannot be said with the more particularized algorithmic contract. An algorithm cannot intend to bargain. We can no longer put off dealing with the issue of non-human actors through fictions. Furthermore, the other party to the contract cannot have sufficient information to form an intent. The

⁷¹⁰ Approximate dimensions of an iPhone 11.

ramification of this is, in fact, that there is no bargaining power at all in the test for unconscionability.

While *Uber* is seen as a landmark decision in that it clarified the threshold for the equitable doctrine of unconscionability, labelling it a “classic case” modelled on *Morrison*, it could only be seen in that light by overlooking the role that algorithms play in the contracting process. In no way was the contract in *Uber* just like the paper contract in *Morrison*.

Another way of looking at *Uber* is to see it as a “high water point,” providing the opportunity for future case law to deal with issues presented by algorithmic contracts. It may be that in the wake of *Uber*, courts will begin to realize that strict contract enforcement without taking the nature of algorithmic contracts into account is at the cost of fairness. That said, I will offer one avenue for which there is an existing footprint whereby contract law could deal with algorithmic contracts in the business-to-consumer context.

V. Post-Uber Opportunities

Uber “brought the doctrine of unconscionability from the backburners to the forefront of contract law” in Canada.⁷¹¹ It is ironic that a doctrine stemming from the fourteenth century that employs the language of “conscience” was finally affirmed in Canada’s top court in a case dealing with an unfair algorithmic contract. As Waddams points out, the concept of conscience in the framework of modern thought is not very agreeable.⁷¹² For instance, some argue that the concept of conscience does not even exist.⁷¹³ There are others, like philosophers and theologians, who accept that there is such a concept, and it is often referred

⁷¹¹ *Forest Hill Homes (Cornell Rouge) Ltd v Wei*, [2020] OJ No 3548 at para 45.

⁷¹² Waddams, *supra* note 544.

⁷¹³ See e.g. Karen S Feldman, *Binding Words: Conscience and Rhetoric in Hobbes, Hegel, and Heidegger* (Northwestern University Press, 2006); Anders Schinkel, *Conscience and Conscientious Objections* (Amsterdam: Pallas Publications, 2007).

to as one's inner voice that guides us on notions of right and wrong. We might argue that today it ceases to be a relevant concept—that it has become obsolete.

Indeed, the phenomenon of conscience and its pertinence in society has been polemical for over 400 years. We see it, for instance, playing out upon the Elizabethan stage. In *King Richard III*, Shakespeare's protagonist (the King) disregards the concept of conscience as merely a word:

Conscience is but a word that cowards use,
devised at first to keep the strong in awe.
Our strong arms be our conscience, swords our law.⁷¹⁴

This is in contrast with Hamlet, who bemoans, “conscience does make cowards of us all,”⁷¹⁵ thus signifying its conceptual importance. His conscience prevents him from doing wrong. These contradictory understandings of the concept of conscience show that it has a contentious history, and this only gets thornier when thinking about its application in the area of contract law, particularly when dealing with algorithmic decision-making.

Resorting to tests like unconscionability in *Uber* is problematic. The burden of proof in the test for unconscionability at present, is on the offeree to prove inequality of bargaining power and the improvidence of the bargain. This requires a certain degree of intention on the part of offeror. How can you determine intention, which was discussed in Chapter 2, with an algorithm which has no agency? The question leading from this, then, is what would be a more agreeable framework to deal with algorithms that play a key role in the formation of contracts?

⁷¹⁴ William Shakespeare, “King Richard III,” Antony Hammond, ed in Richard Proudfoot, Ann Thompson & David Scott Kastan, eds, *The Arden Shakespeare Complete Works*, Revised Edition (London: Bloomsbury Publishing, 2011) at 5.3.310-12.

⁷¹⁵ William Shakespeare, “Hamlet,” Harold Jenkins, ed in Richard Proudfoot, Ann Thompson & David Scott Kastan, eds, *The Arden Shakespeare Complete Works*, Revised Edition (London: Bloomsbury Publishing, 2011) at 3.1.83.

Developing Lord Denning's proposed single principle of inequality of bargaining power would be one way of dealing with algorithmic exploitation, and certainly, a more agreeably titled framework. This single principle unites the doctrines of duress, unconscionability, and undue influence, which Scholz herself acknowledges as potential defenses against formation in her early work on algorithmic contracts.⁷¹⁶ Specifically, inequality of bargaining power blends grossly substantive unfairness, grievously weak bargaining power, and undue pressure or influence.⁷¹⁷

We know that Lord Denning's single principle of inequality of bargaining power did not gain traction due to vagueness.⁷¹⁸ Trebilcock explains,

For a general doctrine such as inequality of bargaining power to be an effective instrument in controlling transactional abuses, it needs to be sharp in its focus, conceptually sound and explicit in its policy underpinnings, and operation in terms of both the process of judicial inquiry it envisages and the remedial instruments available to a court to abate objectionable phenomena.⁷¹⁹

Acknowledging the specific form of the algorithmic contract presents us with the opportunity to sharpen the focus needed to cultivate the single principle of bargaining power. The algorithmic contract is a particular form of contract with a function that differs greatly from that of a standard form contract. Furthermore, given that we cannot find intention in an algorithmic contract, applying the doctrine of unconscionability as if it were a paper contract is not conceptually sound, nor is it sufficiently detailed. Nonetheless, considering transactional fairness in judicial decision-making will continue to be an inevitability.⁷²⁰ Recognizing this, by further particularizing the single principle of bargaining power in the

⁷¹⁶ Scholz, *supra* note 67 at 157.

⁷¹⁷ *Bundy* at 339.

⁷¹⁸ McCamus, *supra* note 71 at 496.

⁷¹⁹ Michael Trebilcock, "The Doctrine of Inequality of Bargaining Power: Post-Benthamite Economics in the House of Lords" (1976) 26:4 U of Toronto L J 359 at 385.

⁷²⁰ Karl Llewellyn, (1954) 1 N Y Law Rev Comm Rep 177-78 as quoted in Trebilcock, *ibid*.

context of algorithmic contracting provides the judiciary with the opportunity to develop more effective doctrine to deal with algorithmic contracts.

To demonstrate the fitness of developing the single principle, I will draw on the fictional case of Ms. Bundy from the outset of this chapter. We can see first, that she was the weaker party in the contractual relationship with the ride-hailing app. The surge pricing that she experienced was an instance whereby she had no practical option but to accept the unreasonable offer. There was no “take or leave it”⁷²¹ option due to the limited power in her smartphone’s battery. If she did not accept the offer, she did not have an alternative means of returning home with her groceries. The terms she was presented with were no longer take it or leave it terms of indifference, but in fact, terms that created economic coercion, specifically algorithmic economic coercion. She was effectively bullied or pressured into accepting the inflated price by an algorithm. We could not interpret this as being legitimate pressure. As a result, the case of Ms. Bundy meets the grossly substantive unfairness aspect of the inequality of bargaining power doctrine.

Secondly, we know from the analysis in *Uber* that in fact, Ms. Bundy had no bargaining power at all in the contractual relationship. Further, like the situation involving Uber and the London Bridge attack, the surge pricing that caused Ms. Bundy’s rate to increase by approximately \$50 for the same ride at the same time of day that she would have normally paid \$25-\$30 is inscrutable. It cannot be explained in terms of fairness or even logic. The price was inflated not because of the fundamental economic principle of supply and demand, but because data harvesting allowed the algorithm to consider the low battery

⁷²¹ *A Schroeder Music Publishing Co Ltd v Macaulay*, [1974] 3 All ER 616 at 624. Citing Lord Diplock: “The ticket cases in the 19th century provide what are probably the first examples... of this kind of standard form of contract [that] have not been the subject of negotiation between the parties to it, or approved by any organisation representing the interests of the weaker party. They have been dictated by that party whose bargaining power, either exercised alone or in conjunction with other providing similar goods or services, enables him to say: ‘If you want these goods or services at all, these are the only terms on which they are obtainable. Take it or leave it.’”

charge in Ms. Bundy's smartphone when offering her a rate for her usual route home.

Furthermore, in obtaining the data from her phone, Ms. Bundy has been effectively datafied in her relationship with Uber.⁷²² This has further implications since datafication is not a neutral paradigm.⁷²³ But what is most relevant here is that both instances demonstrate the grievously weak bargaining power prong of the single principle.

Thirdly, the gist of undue influence is unfair persuasion rather than coercion, with which the first aspect of the single principle is concerned. Undue influence may actually be found in two ways in Ms. Bundy's case. First, on the occasion in which she experienced the surge in price as the result of limited power in her smartphone's battery. And secondly, we could say that the ride-hailing app exercises a dominating influence on Ms. Bundy more generally. Once again, here, the undue pressure or influence branch of the single principle is met in the case of Ms. Bundy.

While this is a fictional case, it shows that the single principle of inequality in bargaining power has merit in the context of algorithmic contracts. Additionally, there is further justification for its development. Almost fifty years after the opinion, *Bundy* remains fundamental to the syllabi of students studying contract law. It is still referred to in contracts textbooks as "bold and interesting,"⁷²⁴ "of interest,"⁷²⁵ and yet at the same time, as "Lord

⁷²² To "datafy" something means putting something in quantifiable form so that it may be tabulated and analyzed. See e.g. Viktor Mayer-Schrönberger & Kenneth Cukier, *Big Data: A Revolution That Will Transform How We Live, Work and Think* (London: John Murray, 2013) at 78. Datafication connotes much more than just converting material into digital form: it is a process whereby large portions of our existence become vulnerable to being processed by forms of analysis that maybe automated on a massive scale; see also Kate Crawford, *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence* (New Haven: Yale University Press, 2021) at 121 (explaining "[t]he way data is understood, captured, classified, and named is fundamentally an act of world-making and containment. It has enormous ramifications for the way artificial intelligence works in the world and which communities are most affected. The myth of data collection as a benevolent practice in computer science has obscured its operations of power, protecting those who profit most while avoiding responsibility for its consequences").

⁷²³ Datafication renders human behaviour into an analyzable format resulting in a new paradigm for understanding. José Van Dijck, "Datafication, Dataism and Dataveillance: Big Data Between Scientific Paradigm and Ideology," 12:2 (2014) *Surveillance and Society* V197 at 198; see also Zuboff, *supra* note 33.

⁷²⁴ McCamus, *supra* note 71 at 406.

⁷²⁵ S M Waddams, *The Law of Contracts*, 6th ed (Aurora, ON: Canada Law Book, 2010) para 524.

Denning's lead balloon."⁷²⁶ Recognizing algorithmic contracts post-*Uber* would provide the opportunity to once again revisit and further develop the single principle to rescind a contract that harmonizes duress, unconscionability, and undue influence. It would also articulate doctrine more aptly named for the twenty-first century.

Reciprocally, revisiting this harmonized single principle would take the lead out of the balloon, so to speak, in sorting out how we understand and teach *Bundy*. Further, reviving the single principle in the context of algorithmic contacts does not presume that we abandon the traditional categories of duress, unconscionability, and undue influence for non-algorithmic contracts. It simply holds the possibility of retrofitting the single principle of unfair bargaining: a touchstone for algorithmic contracts. Moreover, retrofitting the inequality of bargaining doctrine in the law of contracts may have positive ripple effects for modifying legal doctrine in other areas grappling with AI technologies.

It has been said that *Uber* brought the doctrine of unconscionability from the backburners to the forefront of contract law, however, this analysis has shown that unconscionability was but a sidecar to bigger issue of the role of algorithms in the law of contracts that has been left in limbo. Moreover, while all law may be viewed as technology—books are technology, planes are technology, railways are technology and so on⁷²⁷—algorithms do things in ways that artifacts do not. Algorithms function as actors in the law of contracts—as gap fillers and negotiators in the business-to-business context and as actors in the business-to-consumer context. Yet, algorithms are actors without intent. Algorithms create what is being referred to as “illocutionary frustration” since there is a failed uptake of illocutionary intention.⁷²⁸ This failed uptake is not unlike the illocutionary silencing that

⁷²⁶ Neil Andrews, *Contract Law*, 2nd ed (Cambridge: Cambridge University Press, 2015) 316.

⁷²⁷ Joshua T Fairfield, *Runaway Technology: Can Law Keep Up?* (Cambridge: Cambridge University Press, 2021) 69.

⁷²⁸ Samia Hesni, “Illocutionary Frustration,” (2018) 127:508 *Mind* 947 at 947.

occurs when a hearer does not recognize a (human) speaker's illocutionary intentions in an utterance.⁷²⁹ Illocutionary frustration differs in that it does not necessarily result in perlocutionary silencing. This is because illocutionary frustration permits a speaker to have performed a speech act, despite the fact it is unsuccessful.⁷³⁰

In the context of an algorithmic contract, algorithmic illocutionary frustration occurs because algorithms have no intent. We cannot, therefore, simply apply the rules and doctrines that are applicable when humans are actors in the contracting process.

⁷²⁹ *Ibid.*

⁷³⁰ *Ibid* at 960.

CHAPTER 4

Perlocution: The Effect of Algorithmically Generated Words

Sticks and stones will break my bones, but words will never harm me.

Actions speak louder than words.

Old adages

I. Introduction

This chapter examines the perlocutionary consequences of doing things with algorithms and drafted words. The perlocutionary act is the action or state of mind brought about by saying something. It focuses on the effect as a result of a hearer understanding the locution and illocutionary acts. The perlocutionary act is the final type of force in an utterance. Perlocutionary acts, unlike illocutionary acts, are not conventional; rather, they are natural acts.⁷³¹ They bring about change.

The effects of perlocutionary acts include, for example, amazing, inciting, frightening, and angering. Furthermore, these effects may result in a chain reaction of outcomes. Marina Sbisà refers to this as the “accordion effect” and draws attention to the unbounded nature of the perlocutionary act.

[It] has no upper border: any consequential effect of a speech act may be considered as perlocutionary. If breaking news surprises you so that you trip and fall, my announcement has not only been believed true by you (which is already a perlocutionary effect) and thus surprised you, but has also made you trip, fall, and (say) injure your ankle. This aspect of the so-called “accordion effect” concerning actions and speech actions in particular ...meets general consent....⁷³²

Being aware of the accordion effect of the perlocutionary act is important for examining the the novel harm generated as a consequence of executing algorithmic contracts.

⁷³¹ Austin, *supra* note 65 at 121.

⁷³² Marina Sbisà, “Locution, Illocution, Perlocution” in Marina Sbisà & Ken Turner, eds, *Pragmatics of Speech Actions* (Boston: DeGruyter, 2013) 25 at 60.

We know from the previous chapter that algorithms may function as actors in the law of contracts. Increasingly, algorithms are playing a key role in the formation of contracts, yet they do so without intent. Algorithms do not have agency, nor do they have communicative intention. The ramifications of having no agency and having no intention may create algorithmic illocutionary frustration, which could prevent the fulfillment or success of the illocution. Algorithmic illocutionary frustration, however, does not necessarily result in perlocutionary frustration, where a speech act would ultimately fail.

This chapter examines the perlocutionary effect of executing an algorithmic contract in the ride-hailing industry.⁷³³ Specifically, this chapter will focus on Uber, one of the main ride-hailing apps in North America, and its continued problem with sexual violence as a consequential effect of carrying out the terms agreed to in its algorithmic contract. Part II focuses on the two safety reports that Uber has issued to date, specifically in 2019 for the period dating from 2017 until 2018, and in 2022 for the time frame of 2019 until 2021. The analysis of these reports, which includes comparative statistics, providing empirical evidence for the discussion about technology-facilitated gender-based violence in Part III. The next section, Part IV, deals with Uber's toxic culture and the role this played in the development of the Uber platform. This leads to a discussion of the Uber platform in Part V. Part VI documents some of the sexual violence experienced by women and those who identify as women by Uber drivers and Uber passengers. And Part VII concludes with a discussion of the path that Uber should take to deal with technology-facilitated gender-based violence.

⁷³³ Part of this chapter appeared in Amanda Turnbull, "Onlife Harms: Uber and Sexual Violence" (January 2022) 19:2 *Canadian J of Law & Technology* 278. Note that in 2019, Uber was the first and only ride hailing company to issue a safety report for the period 2017-19. Uber released its second report in June 2022. In October 2022, Lyft released its first safety report. Given that the two Uber safety reports provide a longer time frame over which to trace the issue of sexual violence along with the case law available at the time of research, this chapter focuses only on Uber.

II. *Uber and Safety Reports*

When you agree to the terms and conditions of an Uber ride, the perlocutionary force or the state of mind brought about by the execution of the Uber contract may include being satisfied, relieved or possibly annoyed if, for instance, the driver took too long to arrive. Likewise, as an Uber driver, the perlocutionary outcome may include being excited, motivated or reassured at the prospect of a new job. However, when the perlocutionary effects also include being worried, afraid or being hurt, it should give us pause for thought.

Uber has revolutionized public transportation and ease of travel through on-demand apps that prioritize customers and ratings. It is not, however, without its controversy. Uber has had its share of crises, from regulatory issues,⁷³⁴ labour relations controversies,⁷³⁵ financial instability,⁷³⁶ and intellectual property problems,⁷³⁷ to workplace sexual harassment

⁷³⁴ See e.g. Del Quentin Wilber & Greg Bensinger, “Uber Faces Federal Criminal Probe Over ‘Greyball’ Software”, *WSJ* (17 May 2017), online: <www.wsj.com/articles/uber-faces-federal-criminal-probe-over-greyball-software-1493948944?mod=article_inline>; Jon Henley, “Uber Clashes with Regulators in Cities Around the World”, *The Guardian* (20 September 2017), online: <www.theguardian.com/business/2017/sep/29/uber-clashes-with-regulators-in-cities-around-the-world>.

⁷³⁵ See e.g. Greg Bensinger, “Court Upholds Seattle Ordinance Rules Allowing Uber Union Vote”, *WSJ* (20 March 2017), online: <www.wsj.com/articles/court-upholds-seattle-ordinance-allowing-uber-union-vote-1489796331?mod=article_inline>; David Doorey, “Uber Reinvents its Controversial Arbitration Clause After Uber v. Heller”, *Canadian Law of Work Forum* (1 September 2020), online (blog): <lawofwork.ca/ubernewarbitrationclause/>.

⁷³⁶ See e.g. Derek Saul, “Uber Stock Set for Biggest Loss in Months—Despite First-Ever Profitable Quarter” (1 August 2023), online: *Forbes* <www.forbes.com/sites/dereksaul/2023/08/01/uber-stock-set-for-biggest-loss-in-months-despite-first-ever-profitable-quarter/?sh=86500e4131ac>; Kellen Browning, “Uber Posts Record Revenue but Loses Nearly \$2 Billion on Investments”, *NYT* (2 August 2022), online: <www.nytimes.com/2022/08/02/business/uber-quarterly-earnings.html>; Peter Hoskins, “Uber Loses \$5.9bn as Asia Investment Values Fall”, *BBC* (5 May 2022), online: <www.bbc.com/news/business-61329641>.

⁷³⁷ See e.g. Jack Nicas, “Google Parent: Uber Aimed to Buy Engineer’s Startup While he Worked for Us”, *WSJ* (3 May 2017), online: <www.wsj.com/articles/uber-planned-to-buy-engineers-startup-while-he-worked-at-alphabet-lawyers-say-1493841607?mod=article_inline>; Kirsten Errick, “Uber v. Uber”, *Law Street Media* (19 March 2020), online: <lawstreetmedia.com/tech/intellectual-property/uber-v-uber/>.

concerns,⁷³⁸ and a deluge of lawsuits from drivers,⁷³⁹ passengers,⁷⁴⁰ and governments.⁷⁴¹

Adding to this tally of troubles, Uber has endured backlash through social media activism such as France's #UberCestOver hashtag on X (formerly Twitter),⁷⁴² which revealed stark accounts of sexual violence perpetrated by Uber drivers. Or the #DeleteUber hashtag that arose when Uber allegedly took advantage of a taxi strike at John F. Kennedy airport in New York following former President Donald Trump's immigration ban.⁷⁴³ #DeleteUber resurfaced⁷⁴⁴ following the publication of Susan Fowler's blog⁷⁴⁵ in which she detailed the sexual harassment she endured while working at Uber as a site-reliability engineer.

As a means of addressing some of its problems, particularly lack of transparency,⁷⁴⁶ which is a common thread in many of these crises, Uber released its first safety report in 2019

⁷³⁸ See e.g. Ben DiPietro, "Crisis of the Week: Uber Faces Workplace Harassment Concerns," *WSJ* (27 February 2017), online: <www.wsj.com/articles/BL-252B-12256>; Jessica Guynn, "Uber Agrees to Pay \$4.4 Million to Settle EEOC Sexual Harassment and Retaliation Probe," *USA Today* (18 December 2019), online: <www.usatoday.com/story/tech/2019/12/18/uber-sexual-harassment-investigation-me-too/2694091001/>.

⁷³⁹ See e.g. *O'Connor v Uber Techs Inc*, 82F Supp (3d) 1133 (ND Cal 2015); *Singh v Uber Techs Inc*, 235 F Supp (3d) 656 (DNJ 2017); *Uber BV v Aslam*, [2019] UKSC29.

⁷⁴⁰ See e.g. *Doe v Uber Techs Inc*, 2019 US Lexis 203466 (ND Cal); *Doe v Uber Techs Inc*, 2017 US Lexis 216416 (WD Miss); *Search v Uber Techs Inc*, 128F Supp (3d) 222 (DC Cir 2015); *Nat'l Fedn of the Blind of Cal v Uber Techs Inc*, 103F Supp (3d) 1073 (ND Cal 2015).

⁷⁴¹ See e.g. *Toronto (City of) v Uber Canada Inc*, 2015 ONSC 3572; *Mississauga (City of) v Uber Canada Inc*, 2016 ONCJ 461; *Uber Canada Inc c Québec (Agence de revenu)*, 2016 QCCS 2158.

⁷⁴² See e.g. Sara Leduc, « #UberCestOver : quand la course Uber vire au cauchemar pour les femmes » *France 24* (3 décembre 2019), en ligne : <www.france24.com/fr/20191203-ubercestover-quand-la-course-uber-vire-au-cauchemar-pour-les-femmes>; Yamily Habib E, "Through the hashtag #UberCestOver ("Uber it's over"), thousands of women have resorted to social media to recount in detail and denounce the harassment and sexual assaults to which they are constantly subjected by choosing Uber to "get home safely" (17 December 2019 at 14:20), online: *Twitter* <twitter.com/YamilyHabib/status/1207017781381750785>.

⁷⁴³ See e.g. Elena Cresci, "#DeleteUBER: How Social Media Turned on Uber", *The Guardian* (30 January 2017), online: <www.theguardian.com/technology/2017/jan/30/deleteuber-how-social-media-turned-on-uber>; GeekWire, "#DeleteUber starts trending worldwide amid Trump's anti-immigration ban; Lyft donates \$1M to ACLU" (29 January 2017 at 15:10), online: *Twitter* <twitter.com/geekwire/status/825798186098888705>.

⁷⁴⁴ See e.g. Sara Perez, "The #DeleteUber Campaign Returns Following Sexual Harassment Allegations at the Company", *Tech Crunch* (22 February 2017), online: <<https://techcrunch.com/2017/02/22/the-deleteuber-campaign-returns-following-sexual-harassment-allegations-at-the-company/?guccounter>>; NYC4=Access, "An essay published by former #Ubered employee Susan Fowler detailed a prevailing culture of #sexism and sexual harassment at the company", NYETA (2 February 2018 at 8:30), online: *Twitter* <twitter.com/NYETANYC/status/959418671566327808>.

⁷⁴⁵ Susan Fowler, "Reflecting on One Very, Very Strange Year at Uber" (19 February 2017), online (blog): *Susan Fowler* <www.susanjowler.com/blog/2017/2/19/reflecting-on-one-very-strange-year-at-uber>.

⁷⁴⁶ Prior to 2018, arbitration clauses in Uber's SFC prevented survivors of sexual violence from moving forward with lawsuits. Silencing also perpetuates sexual violence and prevents the public from learning about the frequency. See e.g. Sara Ashley O'Brien, "Uber Will No Longer Force Victims of Sexual Assault into Arbitration", *CNN* (15 May 2018), online: <money.cnn.com/2018/05/15/technology/uber-eliminates-forced-arbitration/index.html>; Laharee Chatterjee, "Uber, Lyft Scrap Mandatory Arbitration for Sexual Assault

outlining incidents that occurred from 2017 to 2018 in the United States (US).⁷⁴⁷ The data reported in this report covered motor vehicle fatalities, fatal physical assaults, and sexual assault. It revealed that critical safety incidents occurred in only 0.0003% of rides.⁷⁴⁸ At first blush, this statistic seems remarkably low, given that an average of 3.1 million trips took place *daily* in the US during the 2017-to-2018-time frame. However, when the data is isolated, the numbers look different: there were 97 fatal Uber-related crashes resulting in 107 fatalities over the two years surveyed,⁷⁴⁹ 19 fatal physical assaults,⁷⁵⁰ and—the most striking statistic—almost 6000 incidences of sexual assault.⁷⁵¹ The sexual assault figures reflect both Uber riders and Uber drivers as victims.⁷⁵²

In response, Uber developed a series of initiatives aimed at prevention including mandatory online anti-sexual violence training modules for drivers;⁷⁵³ improved safety functionality on its apps through an emergency call function that provides GPS location data

Claims”, *Reuters* (15 May 2018), online: <www.reuters.com/article/us-uber-sexual-harassment-idUSKCN1IG1I2>.

⁷⁴⁷ Uber, “2017-2018 US Safety Report” (5 December 2019), online (pdf): *Uber* <www.uber-assets.com/image/upload/v1575580686/Documents/Safety/UberUSSafetyReport_201718_FullReport.pdf> [2019 Report].

⁷⁴⁸ This statistic includes sexual assault. *Ibid* at 10.

⁷⁴⁹ *Ibid* at 51.

⁷⁵⁰ *Ibid* at 57.

⁷⁵¹ Note that Uber has its own definitions for what constitutes sexual violence. If sexual violence were more adequately defined, the number reflected in the 2019 Report would be much greater. *Ibid* at 62.

⁷⁵² Women drivers are also at risk. The 2019 Report states that 42% of those reporting sexual assault were drivers. Uber’s reporting of this statistic, however, is not completely clear: the driver may have been reporting an assault by one passenger on another rather than reporting their own sexual assault. *Ibid* at 61. Note that while the term “survivor” is preferable in reporting sexual violence, I have used “victim” in this instance since the reported statistics of sexual assault include instances resulting in death.

⁷⁵³ This mandatory training is a one-time-only requirement comprised of six online videos. New drivers will need to log a certain number of rides before completing the training. Topics covered in the new training include the following: respecting privacy, boundaries in conversation, respecting others’ space, sexual violence awareness and bystander intervention. There is no specific reference to the role that technology plays in the available descriptions of the training. The videos will be made available in English with subtitles for Spanish, Portuguese, Arabic, Mandarin, and French Canadian. Prior to these new mandatory training videos, Uber drivers were required to agree to community guidelines which included sections on sexual misconduct and how to report it and outlined inappropriate behaviours. See Danielle Abril, “Uber has a New Training Requirement for Drivers” (7 August 2020), online: *Fortune* <fortune.com/2020/08/07/uber-mandatory-sexual-misconduct-assault-driver-training-u-s-canada/>; see also Rape, Abuse & Incest National Network, “Our Modules (for Uber)”, online: *RAINN* <www.rainn.org/uber> [RAINN].

as well as the Uber car make, model and license plate to a 911 dispatcher;⁷⁵⁴ a data-sharing system;⁷⁵⁵ and an anonymizing feature that disables passenger information from the driver after their ride is complete.⁷⁵⁶ Uber also committed \$5 million over a five-year period to support its partner organizations working to end gender-based violence.⁷⁵⁷

The anti-sexual violence initiatives are a response to what the 2019 Report referred to as the “broader problem”⁷⁵⁸—one that “almost 52.2 million [cisgender] women and 27.6 million [cisgender] men live with every single day”⁷⁵⁹ in the US. Uber’s post-2019 Report initiatives are, in a sense, commendable since creating a safer environment for everyone is important.

Uber released its second report in 2022 summarizing incidents that occurred from 2019 to 2021 in the US.⁷⁶⁰ An average of approximately 3 million trips took place daily during the 2019-to-2020 period as compared to an average of 3.1 million during the 2017-to-2018 timeline. This drop in ridership may be a consequence of COVID-19. Uber reported that rides decreased by almost 80 per cent in early 2020.⁷⁶¹ The total annual reported trips also show this decline in ridership. In 2019, there were a total of 1.4 billion trips as compared to a

⁷⁵⁴ Dara Khosrowshahi, “Raising the Bar on Safety” (5 September 2018), online: *Uber* <www.uber.com/newsroom/raisingthebar/>; see also Uber, “Uber’s Emergency Button” (14 March 2019), online: *Uber* <www.uber.com/newsroom/emergencybutton/>.

⁷⁵⁵ Kate Duffy, “Uber and Lyft are Now Sharing Data on Drivers That Have Been Banned for Sexual or Physical Assault. Other Delivery Companies Will Join the Program, They Said” (12 March 2019), online: *Business Insider* <www.businessinsider.com/uber-lyft-delivery-share-data-deactivated-drivers-sexual-assault-safety-2021-3>; Brody Ford, “Uber, Lyft to Share Data on Deactivated Drivers in Safety Push” (11 March 2021), online: *Bloomberg* <www.bloomberg.com/news/articles/2021-03-11/uber-lyft-to-share-data-on-deactivated-drivers-in-safety-push>.

⁷⁵⁶ Khosrowshahi, *supra* note 754; NY Post, “Uber to Disable Creepy Customer-Tracking Feature”, *Reuters* (29 August 2017), online: *NY Post* <nypost.com/2017/08/29/uber-to-disable-creepy-customer-tracking-feature/>.

⁷⁵⁷ Tracey Breeden, “Driving Change—Uber’s \$5 Million Commitment to Prevent Sexual Assault and Domestic Violence” (5 November 2017), online: *Uber* <www.uber.com/en-QA/newsroom/driving-change-together/>; in Canada, Uber extended ongoing partnerships with YWCA Canada, WomanACT, and began new partnerships with EVA BC and Le Châinon. See Uber, “Driving Change—Our Commitment to Combat Gender-Based Violence in Canada” (27 May 2021), online: *Uber Canada* <www.uber.com/en-CA/newsroom/driving-change-our-commitment-to-combat-gender-based-violence-in-canada/>.

⁷⁵⁸ 2019 Report, *supra* note 747 at 6.

⁷⁵⁹ *Ibid* at 58.

⁷⁶⁰ Uber, “2019-2020 US Safety Report” (30 June 2022), online (pdf): *Uber* <<https://www.uber.com/us/en/about/reports/us-safety-report/>> [2022 Report].

⁷⁶¹ *Ibid* at 7.

total of 650 million trips reported in 2020.⁷⁶² COVID-19 then needs to be taken into account when comparing the rates of safety incidents and any ostensible improvements from the 2019 Report.

The data covered in the 2022 Report is the same as the 2019 Report: motor vehicle fatalities, fatal physical assaults, and sexual assault. In the 2022 Report, however, sexual assault is broken down in to five further subcategories:

1. Non-consensual sexual penetration
2. Non-consensual kissing of a sexual body part
3. Non-consensual touching of a sexual body part
4. Attempted non-consensual sexual penetration
5. Non-consensual kissing of a non-sexual body part⁷⁶³

The taxonomy used in the 2022 Report is open sourced and developed by Raliance, an anti-sexual violence group that partners with organizations, including Uber, to improve work environments.⁷⁶⁴

The 2022 Report also revealed that critical safety incidents occurred in only 0.0002% of rides.⁷⁶⁵ In comparison to the rate of 0.0003% in the 2019 Report, this means that overall, the rate of safety incidents increased slightly across the combined categories of motor vehicle fatalities, fatal physical assaults, and sexual assault.

More specifically, there were 91 fatal Uber-related crashes resulting in 101 deaths documented in the 2022 Report.⁷⁶⁶ Thus, in this category there were 9 fewer deaths as a result of Uber-related fatal crashes in the 2022 Report.

⁷⁶² *Ibid* at 56.

⁷⁶³ *Ibid* at 14.

⁷⁶⁴ Raliance, “Helping Industries to Classify Reports of Sexual Harassment, Sexual Misconduct, and Sexual Assault” (2018), online: *Raliance* <www.raliance.org/wp-content/uploads/2018/11/helping-industries.pdf>.16>.

⁷⁶⁵ 2022 Report, *supra* note 760 at 14.

⁷⁶⁶ *Ibid* at 50.

In the 2022 Report, however, there was an increase of approximately eighteen per cent in the physical assault incidents from the 2019 Report.⁷⁶⁷ There were 20 fatal physical assaults over the two-year period; fifteen of those fatalities were riders and five were drivers.⁷⁶⁸ Uber attributes this to the increase in US homicide rates more generally.⁷⁶⁹

The overall number of incidences of sexual dropped from almost 6000 in the 2019 Report to just under 4000 in the 2022 Report.⁷⁷⁰ This is positive. But again, we need to keep in mind that ridership was down owing to the COVID-19 pandemic and stay-at-home orders. The drop in number of cases of sexual violence may be partly attributed to the decline in ridership.

It is worth noting also that following the 2019 Report, the California Public Utilities Commission fined Uber \$59 million for foundering on turning over additional data on its sexual assault and harassment incidents when Uber was asked to do so.⁷⁷¹ The fine was significantly reduced as part of a settlement agreement in December 2021, in which Uber agreed to pay \$9 million aimed at safety-related initiatives.

Thus, the drop in the number of reports of sexual violence in the 2022 Report had at least three explanations: first, as a consequence of the initiatives undertaken after the release of the 2019 Report; second, owing to the decrease in ridership rate due to COVID-19 and therefore, fewer chances that acts of sexual violence could occur; and third, as a result of the

⁷⁶⁷ *Ibid.*

⁷⁶⁸ *Ibid* at 17.

⁷⁶⁹ The 2022 Report states, “According to [Center for Disease Control and Prevention], 24,576 people died due to homicide in the US in 2020 [which] represents a 30% increase from 2019—the largest single-year increase in more than a century.” 2022 Report, *supra* note 760 at 17.

⁷⁷⁰ The exact number provided in the 2022 Report is 3824. *Ibid* at 18.

⁷⁷¹ Sara Ashley O’Brien, “Uber was Fined \$59 Million Over Sexual Assault Data. Now it May Pay Just \$150,000”, *CNN Business* (16 July 2021), online: <edition.cnn.com/2021/07/16/tech/uber-cpuc-sexual-assault-data-fine/index.html>; Chase DiFelicianantonio, “Uber Settles Dispute Over Sexual Assault Data with California Public Utilities Commission”, *San Francisco Chronicle* (15 July 2021), online: <www.sfchronicle.com/bayarea/article/Uber-settles-dispute-over-sexual-assault-data-16318337.php>.

additional safety related initiatives brought about by the California Public Utilities Commission settlement agreement.

Of the almost 4000 cases stated in the 2022 report, drivers were the accused party across the five categories of sexual assault 56 per cent of the time, whereas riders were the accused party 43 per cent of the time.⁷⁷² The remaining one per cent of accusations were by third parties.⁷⁷³

The 2022 Report revealed that in the 2019-to-2020-time frame, 500,000 prospective drivers failed criminal background checks.⁷⁷⁴ A further 80,000 drivers were removed from the Uber app due to continuing criminal record checks and motor vehicle checks.⁷⁷⁵ Further, the 2022 Report noted Uber's most recent prevention commitments include on-trip reporting, which allows riders "to discreetly report a non-emergency safety issue during a trip."⁷⁷⁶ Uber has also developed a Survivor Resources Hotline in conjunction with the Rape, Abuse & Incest National Network⁷⁷⁷ (RAINN) to support survivors who report sexual assault incidents on the Uber app.⁷⁷⁸ The hotline is staffed by RAINN employees.⁷⁷⁹

However, despite these valuable prevention commitments, neither the 2019 Report nor the 2022 Report tackle how technology may be employed to facilitate sexually based harms. This is a setback.

The next section will investigate technology-facilitated gender-based violence.⁷⁸⁰ This scholarship reveals that Uber's initiatives in both of its safety reports to date, do not

⁷⁷² 2022 Report, *supra* note 760 at 59.

⁷⁷³ *Ibid.*

⁷⁷⁴ *Ibid* at 10.

⁷⁷⁵ *Ibid.*

⁷⁷⁶ *Ibid* at 27.

⁷⁷⁷ RAINN, *supra* note 753.

⁷⁷⁸ 2022 Report, *supra* note 760 at 33.

⁷⁷⁹ *Ibid.*

⁷⁸⁰ See e.g. Suzie Dunn, "Is it *Actually* Violence? Framing Technology Facilitated Harms as Violence" in Asher Flynn, Nicola Henry & Jane Bailey, eds, *Technology-Facilitated Violence & Abuse: International Perspectives and Experiences* (Australia: Emerald Publishing, 2021) 25.

adequately tackle how technology is employed as a tool to facilitate sexually based harms. In other words, the preventative measures that Uber has put in place are insufficient and do not properly address its problem with sexual violence.

III. *What is Technology-Facilitated Gender-Based Violence?*

Technology-facilitated gender-based violence is a rapidly expanding issue that is developing synchronically with existing and emerging technologies. Technology-facilitated gender-based violence plunders workplaces. It pillages phones. It infiltrates homes and bedrooms. Technology-facilitated gender-based violence arises out of “misogyny, sexist norms, and rape culture, all of which existed long before the Internet.”⁷⁸¹ The term “technology-facilitated gender-based violence” is replacing other language such as “cyberstalking” to avoid creating an artificial chasm between the online and offline spheres.⁷⁸²

Technology-facilitated gender-based violence is a furtherance or elaboration of gender-based violence⁷⁸³ that affects approximately 736 million women over the age of 15 worldwide.⁷⁸⁴ That statistic translates into almost one in three women. Put succinctly, gender-based violence is a “global emergency.”⁷⁸⁵ And technology heightens this global emergency:

⁷⁸¹ C Khoo, *supra* note 72 at 15.

⁷⁸² Jane Bailey, Valerie Steeves & Suzie Dunn, “Submission to the Special Rapporteur on Violence Against Women Re: Regulating Online Violence and Harassment Against Women” (27 September 2017), online (pdf): eQuality Project, <www.equalityproject.ca/wp-content/uploads/2017/12/Bailey-Steeves-Dunn-Submission-27-Sep-2017.pdf> at 3; see also C Khoo, *ibid*.

⁷⁸³ Anastasia Powell & Nicola Henry, *Sexual Violence in a Digital Age* (London: Palgrave, 2017) 23.

⁷⁸⁴ Note that this figure does not include sexual harassment. See UN Women, “Facts and Figures: Ending Violence Against Women”, online: *UN Women* <www.unwomen.org/en/what-we-do/ending-violence-against-women/facts-and-figures#:~:text=Globally%2C%20an%20estimated%20736%20million,does%20not%20include%20sexual%20harassment>.

⁷⁸⁵ UN Women, “Trailblazing Leaders Commit to End Gender-Based Violence, Drive Equality in Technology and Innovation, and Ensure Economic Justice and Rights for Women and Girls at the *Generation Equality Forum*”, (2 July 2021), online: *UN Women* <www.unwomen.org/en/news/stories/2021/7/news-gef-paris-leaders-commit-to-end-gbv-drive-equality-in-tech-and-ensure-economic-justice>.

“85 per cent of women globally have witnessed or experienced online violence, with young women facing heightening risk.”⁷⁸⁶

Moreover, when broadening the definition of “women” to include both cis- and transgender women and girls, and those who hold intersecting marginalized identities, the global emergency of gender-based violence is further exacerbated. And in taking an intersectional approach to identity, the scope of violence also escalates to include the additional harms associated with the broadened scope, such as transphobic violence.

Like the work done previously by feminists who fought to have “boys will be boys” behaviour recognized as sexual harassment,⁷⁸⁷ Suzie Dunn explains the same challenges of tolerance and understating harms exist around technology-facilitated violence such as online stalking and other behaviour used to degrade women.⁷⁸⁸ Lawmakers, and the public more generally, have not come to terms with whether technology-facilitated behaviour is in fact a form of violence.⁷⁸⁹ Failure to recognize the role that technology plays in facilitating abuse may further exacerbate the existing barriers to reporting sexual assault that, for example, Elaine Craig identifies in the justice system.⁷⁹⁰

Technology-facilitated gender-based violence may “be recognized by looking for behaviors that control, dominate, and instill fear in the person targeted.”⁷⁹¹ Technology-facilitated gender-based violence manifests itself in many forms, including sextortion, which is blackmail by threatening to publish sexually based information, photos or videos about a

⁷⁸⁶ *Ibid.*

⁷⁸⁷ See e.g. Catharine A MacKinnon, *Feminism Unmodified: Discourses on Life and Law* (Cambridge: Harvard University Press, 1988); Sheila MacIntyre, “Gender Bias within the Law School: The Memo and Its Impact” (1987) 2:2 CJWL 362; Constance Backhouse, *The Secret Oppression: Sexual Harassment of Working Women* (Toronto: Macmillan, 1979); Constance Backhouse, *Sexual Harassment on the Job: How to Avoid the Working Woman’s Nightmare* (Toronto: Prentice Hall, 1981).

⁷⁸⁸ Dunn, *supra* note 780 at 40.

⁷⁸⁹ *Ibid.*

⁷⁹⁰ See Elaine Craig, *Putting Trials on Trial: Sexual Assault and the Failure of the Legal Profession* (Montreal: McGill-Queen’s University Press, 2018); see also C Khoo, *supra* note 72 at 51-52.

⁷⁹¹ Dunn, *supra* note 780 at 40.

person; image-based abuse such as non-consensual distribution of intimate photos (NCDII); doxxing, which entails publishing private personal information; cyberbullying, which involves using technology to harass, threaten, target or embarrass another individual; online sexual harassment; cyberstalking, which can encompass tracking someone's personal or private information and using it to instill fear or texting someone relentlessly; online grooming for sexual assault; hacking; hate speech; online impersonation; and using technology to track survivors of abuse in order to inflict further violence.⁷⁹²

Additionally, some phenomena are unique to technology-facilitated gender-based violence such as abuse occurring in different geographical locations,⁷⁹³ the scope of the audience that is witness to the abuse,⁷⁹⁴ and the replicability of digital content.

Further, generative AI augments the existing manner and methods of technology-facilitated gender-based violence.⁷⁹⁵ For example, generative AI increases the potential number of automated attackers and attacks, thus creating a wider range. AI hallucinations also create possible unintended harm as a consequence of bias in the training data.

Technology-facilitated gender-based violence breaks down the distinction between the online and the offline worlds. The perception that there is a contrast between gender-based violence in the online and offline worlds effectively creates a “false dichotomy”⁷⁹⁶ given that “technologies play an increasingly central part in where and how we work, learn, play and communicate.”⁷⁹⁷ The solution of simply reducing or avoiding online activities, which is a

⁷⁹² United Nations Population Fund, “Technology-Facilitated Gender-Based Violence: A Growing Threat”, online: *UNFPA* < <https://www.unfpa.org/TECHNOLOGY-FACILITATED-GENDER-BASED-VIOLENCE> >.

⁷⁹³ Jane Bailey & Carissima Mathen, “Technology-Facilitated Violence Against Women & Girls: Assessing the Canadian Criminal Response (2019) 97:3 Can Bar Rev 664 at 676.

⁷⁹⁴ Suzie Dunn, “Technology-Facilitated Gender-Based Violence: An Overview” (7 December 2020), online: *Centre for International Governance Innovation* < <https://www.cigionline.org/publications/technology-facilitated-gender-based-violence-overview/> > at 4.

⁷⁹⁵ See e.g. Rumman Chowdhury & Dhanya Lakshmi, “Technology-Facilitated Gender-Based Violence in an Era of Generative AI”, *World Trends in Freedom of Expression and Media Development Series* (2023), online: *UNESCO* < unesdoc.unesco.org/ark:/48223/pf0000387483 >.

⁷⁹⁶ C Khoo, *supra* note 72 at 15.

⁷⁹⁷ Powell & Henry, *supra* note 783 at 51.

common response to online abuse and harassment, is not a realistic solution since it deprives or restricts individuals from fully participating in the contemporary public sphere.⁷⁹⁸

Hildebrandt's notion of the "onlife" world "singles out the fact that our 'real' life is neither on- nor offline,"⁷⁹⁹ and one that we are still discovering. This is helpful in thinking about how technology-facilitated gender-based violence is a both a developing and crosscutting issue.

Moreover, online platforms such as X, Facebook, and others have become in some cases general hubs of expression-based technology-facilitated gender-based violence.⁸⁰⁰ The recent deepfake scandal involving Taylor Swift and X is a good example of this.⁸⁰¹ Other "purpose-built platforms" exist solely for its perpetuation such as "The Dirty," which was established for the purpose of NCDII.⁸⁰² Simply put, technology gets employed as a tool by perpetrators to broaden the scope of violence and to facilitate abusive behaviour.⁸⁰³

To understand the technology-facilitated gender-based violence related to Uber, it is necessary to first consider the building blocks of the Uber platform. That begins with the culture out of which it grew.

⁷⁹⁸ C Khoo, *supra* note 72 at 2.

⁷⁹⁹ Hildebrandt, *supra* note 6 at 42.

⁸⁰⁰ For example, C Khoo notes, "Facebook has allowed pages glorifying intimate-partner violence to stand, while removing images of women breastfeeding." See C Khoo, *supra* note 72 at 2.

⁸⁰¹ See Kate Conger & John Yoon, "Explicit Deepfake Images of Taylor Swift Elude Safeguards and Swamp Social Media", *New York Times* (26 January 2024), online: <www.nytimes.com/2024/01/26/arts/music/taylor-swift-ai-fake-images.html>; Emine Saner, "Inside the Taylor Swift Deepfake Scandal: 'It's men telling a powerful woman to get back in her box'", *The Guardian* (31 January 2024), online: <www.theguardian.com/technology/2024/jan/31/inside-the-taylor-swift-deepfake-scandal-its-men-telling-a-powerful-woman-to-get-back-in-her-box>; Suzie Dunn & Kristen Thomasen, "Taylor Swift May Speak Now About Sexual Deepfake Images. But that's Not Enough", *Globe and Mail* (1 February 2024), online: <www.theglobeandmail.com/opinion/article-taylor-swift-may-speak-now-about-sexual-deepfake-images-but-thats-not/>.

⁸⁰² C Khoo, *supra* note 72 at 3.

⁸⁰³ Dunn, *supra* note 794 at 3.

IV. *Uber and its Roots in Toxic Corporate Culture*

Uber was founded in 2009 in San Francisco and grew rapidly by hiring decentralized employees, “empowered to establish [its] operations with lightning speed” in each new area in which it was gaining popularity.⁸⁰⁴ In the spring of 2010, Uber unveiled its beta-version of its smartphone app.⁸⁰⁵ Its culture and its app, then, developed together.

In February 2017, Susan Fowler posted a blog detailing the sexual harassment she endured while working at Uber as an engineer.⁸⁰⁶ It revealed an all-too familiar, toxic tale: Fowler made a complaint as a new employee that her manager was sexually harassing her. She was told,

he ‘was a high performer’ (i.e. had stellar performance reviews from his superiors) and they wouldn’t feel comfortable punishing him for what was probably just an innocent mistake on his part.⁸⁰⁷

Fowler was given the choice to find another team at Uber or to stay where she was but would likely receive a poor performance review if she remained on the same team. Fowler opted for the former and moved teams only to discover, through befriending other women engineers, that other women had made similar complaints about the same man. It was not, as she had been told, his first offence.

Fowler’s blog post affirmed another all-too familiar toxic tale: metric power⁸⁰⁸ outweighed ethical business practice. Uber only reacted when Fowler’s complaint became

⁸⁰⁴ Alex Rosenblat, *Uberland: How Algorithms are Rewriting the Rules of Work* (Oakland: University of California Press, 2018) at 46.

⁸⁰⁵ *Ibid* at 42.

⁸⁰⁶ Fowler, *supra* note 745; see also Susan Fowler, “I Spoke Out Against Sexual Harassment at Uber. The Aftermath was more Terrifying Than Anything I faced Before” (17 February 2020), online: *Time* <time.com/5784464/susan-fowler-book-uber-sexual-harassment/>; Susan Fowler, *Whistleblower: My Journey to Silicon Valley and Fight for Justice at Uber* (New York: Penguin, 2020).

⁸⁰⁷ Fowler, *supra* note 745.

⁸⁰⁸ Metric power may be used to shape and define what is valued, thus authenticating and legitimizing practices and systems since numbers are associated with objectivity. Beer defines it as a concept that focuses “on the relation between measurement, circulation and possibility.” See David Beer, *Metric Power* (London: Palgrave MacMillan, 2016) at 171.

public showing that their obligation to uphold moral standards and live up to the expectations of stakeholders and society more broadly was secondary to its potential profit-making.

Fowler's blog led to an investigation.⁸⁰⁹ It also boosted the existing social media boycott campaign #DeleteUber.⁸¹⁰ Within four months of the 2017 blog, Uber CEO Travis Kalanick resigned after shareholders made it untenable for him to continue.⁸¹¹ Dara Khosrowshahi, whose reputation was characterized as "not your typical tech bro," and designated "the man reforming Uber"⁸¹² as well as "Dad of Silicon Valley,"⁸¹³ was hired to replace Kalanick as CEO and clean up Uber's toxic corporate culture.⁸¹⁴ Internal investigations led to more than 20 dismissals for unethical behaviour.⁸¹⁵ Mandatory arbitration for sexual violence claims was jettisoned,⁸¹⁶ and within a week of that decision, another woman engineer came forward with sexual harassment lawsuit.⁸¹⁷ Uber's first safety report, spanning the incidents that occurred from 2017 to 2018 in the US, was penned under

⁸⁰⁹ Uber's CEO, Travis Kalanick, stated it was the first time that the issue of sexual violence in the workplace had come to his attention. See Mike Isaac, "Uber Investigating Sexual Harassment Claims by Ex-Employee", *NYT* (19 February 2017), online: <www.nytimes.com/2017/02/19/business/uber-sexual-harassment-investigation.html>.

⁸¹⁰ Perez, *supra* note 744.

⁸¹¹ See Mike Isaac, "Uber Founder Travis Kalanick Resigns as C.E.O.", *NYT* (21 June 2017), online: <www.nytimes.com/2017/06/21/technology/uber-ceo-travis-kalanick.html>; see also Zoe Kleinman, "Uber: The Scandals that Drove Travis Kalanick Out", *BBC News*, (21 June 2017), online: <www.bbc.com/news/technology-40352868>.

⁸¹² Dave Lee, "Dara Khosrowshahi, the Man Reforming Uber", *Financial Times* (25 September 2021), online: <www.ft.com/content/32c7d577-9140-4269-a151-aefce8b8c46>.

⁸¹³ Maureen Dowd, "Dara Khosrowshahi, Dad of Silicon Valley", *NYT* (16 July 2021), online: <www.nytimes.com/2021/07/16/style/uber-ceo-dara-khosrowshahi.html>.

⁸¹⁴ Dara Kerr, "Uber's U-Turn: How the New CEO is Cleaning House after Scandals and Lawsuits", *CNET* (27 April 2018), online: <www.cnet.com/news/ubers-u-turn-how-ceo-dara-khosrowshahi-is-cleaning-up-after-scandals-and-lawsuits/>.

⁸¹⁵ See Dong Ngo & Dara Kerr, "Uber Fires 20 Employees in Harassment Investigation", *CNET* (6 June 2017), online: <https://www.cnet.com/news/uber-fires-20-employees-in-harassment-investigation/>.

⁸¹⁶ See Daisuke Wakabayashi, "Uber Eliminates Forced Arbitration for Sexual Misconduct Claims", *NYT* (15 May 2018), online: <www.nytimes.com/2018/05/15/technology/uber-sex-misconduct.html>; prior to 2018, arbitration clauses in Uber's standard form contract prevented survivors of sexual violence from moving forward with lawsuits. Silencing also perpetuates sexual violence and prevents the public from learning about the frequency. See e.g. Sara Ashley O'Brien, "Uber Will No Longer Force Victims of Sexual Assault into Arbitration", *CNN* (15 May 2018), online: <money.cnn.com/2018/05/15/technology/uber-eliminates-forced-arbitration/index.html>; Laharee Chatterjee, "Uber, Lyft Scrap Mandatory Arbitration for Sexual Assault Claims", *Reuters* (15 May 2018), online: <www.reuters.com/article/idUSKCN1IG1I2>.

⁸¹⁷ See Daisuke Wakabayashi, "Former Uber Engineer's Lawsuit Claims Sexual Harassment", *NYT* (21 May 2018), online: <www.nytimes.com/2018/05/21/technology/uber-sexual-harassment-lawsuit.html>.

Khosrowshahi's leadership, and released in 2019.⁸¹⁸ The second report, as previously indicated, was released in 2022 for the period of 2019 to 2021.⁸¹⁹

Notwithstanding the changes that Uber was making, including their claim they would no longer tolerate "brilliant jerks,"⁸²⁰ the effects of sexual harassment are unabating.⁸²¹ In fact, while Uber was investigating its problem with sexual harassment of its employees, it was simultaneously overlooking its women drivers.⁸²² One driver reported that it took her three years of "crying for help" into the void of "'bro-fraternity' culture" until an actual Uber employee called her to discuss the repeated harassment that she was experiencing.⁸²³

This was the culture in which Uber's platform was developed and we know that organizational background plays a role in perpetuating misogyny, sexism, and homophobia.⁸²⁴ We also know that corporations place their own pursuits ahead of everyone else.⁸²⁵ Since Uber was insensitive to issues of sexual harassment as it developed as an organization, it was likely insensitive to the fact that the same discrimination was developing in tandem in its technology. Afterall, the "brilliant jerks" that were initially tolerated and who

⁸¹⁸ 2109 Report, *supra* note 747.

⁸¹⁹ 2022 Report, *supra* note 760.

⁸²⁰ See Noam Schieber, "How Uber Uses Psychological Tricks to Push Its Drivers' Buttons", *NYT* (2 April 2017), online <www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html>.

⁸²¹ See Katina Sawyer & Christian Thoroughgood, "Fixing a Toxic Culture Like Uber's Requires More Than Just a New CEO", *The Conversation* (21 June 2017), online: <theconversation.com/fixing-a-toxic-culture-like-ubers-requires-more-than-just-a-new-ceo-79102>.

⁸²² Avi Asher-Schapiro, "As Uber Probes Sexual Harassment at Its Offices, It Overlooks Hundreds of Thousands of Female Drivers", *The Intercept* (4 May 2017), online: <theintercept.com/2017/05/04/as-uber-probes-sexual-harassment-at-its-offices-it-overlooks-hundreds-of-thousands-of-female-drivers/?curator=TechREDEF>.

⁸²³ *Ibid.*

⁸²⁴ See e.g. Constance Backhouse, Donald McRae & Nita Iyer, "Report of the Task Force on Misogyny, Sexism and Homophobia in Dalhousie University Faculty of Dentistry" (26 June 2015), online (pdf): *Dalhousie University* <cdn.dal.ca/content/dam/dalhousie/pdf/cultureofrespect/DalhousieDentistry-TaskForceReport-June2015.pdf>; see also Nina Renata Aron, "What Does Misogyny Look Like? A Brief History of the #MeToo Movement's Touchstone Term", *NYT* (8 March 2019), online: <www.nytimes.com/2019/03/08/style/misogyny-women-history-photographs.html>.

⁸²⁵ See Charles Duhigg, "How Companies Learn Your Secrets", *NYT* (16 February 2012), online: <www.nytimes.com/2012/02/19/magazine/shopping-habits.html>; see also see Joel Bakan, *The Corporation: The Pathological Pursuit of Profit and Power* (Toronto: Penguin, 2004); Joel Bakan, *The New Corporation: How "Good" Corporations are Bad for Democracy* (Toronto: Penguin, 2020).

were supported by Uber's corporate culture, had to think like misogynists to act like them. They are mutually inclusive factors.

This oppression is evidenced in other tech start-ups. For example, in her memoir *Uncanny Valley*, Anna Wiener documents how she felt herself turning into a machine when she took on a role at a San Francisco data analytics start-up that required her to take a section of the Law School Admissions Test (LSAT) prior to obtaining the job offer.⁸²⁶ In North America, the LSAT is the “gatekeeper” to obtaining a legal education and has been long recognized as decreasing admission opportunities for women and other historically marginalized groups.⁸²⁷ Thus, Wiener reveals that even in this start-up's hiring policy, the odds were weighed against her. She was a tiny cog in the big wheel of Silicon Valley's oppression. More specifically, Wiener states,

Some days, helping men solve problems they had created for themselves, I felt like a piece of software myself, a bot: instead of being an artificial intelligence, I was an intelligent artifice, an empathetic text snippet or a warm voice, giving instructions, listening comfortingly.⁸²⁸

Further, when Wiener was verbally harassed by a male colleague, she was told, “that's just who he is.”⁸²⁹ She documents how a CEO made her cry in a meeting and regularly bullied employees into working harder—what she refers to as DFTC (down for the cause) behaviour.⁸³⁰ Women were told to “trust karma” when it came to career advancement while men were being actively promoted.⁸³¹

⁸²⁶ Anna Wiener, *Uncanny Valley: A Memoir* (New York: MCD/Farrar, Straus and Giroux, 2020) 33.

⁸²⁷ See e.g. William C Kidder, “Portia Denied: Unmasking Gender Bias on the LSAT and its Relationship to Racial Diversity in Legal Education” (2000) 12:1 Yale Journal of Law and Feminism 1; David M White & Terry Ellen Roth, “The Law School Admission Test and the Continuing Minority Status of Women in Law Schools” (1979) 2 Harvard Women's Law Journal 103; Linda F Wightman, “An Examination of Sex Difference in LSAT Scores from the Perspective of Social Consequences” (1998) 11 Applied Measurement in Education 255.

⁸²⁸ Note that Wiener never names the start-up. Wiener, *supra* note 827.

⁸²⁹ *Ibid* at 117 (The solutions manager seemed embarrassed. “I'm sorry that happened,” he said, staring at the sidewalk. “But you know him. That's just how he is.”).

⁸³⁰ *Ibid* at 65.

⁸³¹ *Ibid* at 179.

Moreover, Wiener's memoir reveals that while she wanted to be accepted as an equal, she felt like a "feminist killjoy." She explains, "I did not pick my battles. I died on every available hill. I asked my coworkers to stop using words like 'bitch' in the company chat room. I bitched about being one of six women at company of fifty."⁸³² This statistic reinforces the observation that the LSAT employed in this start-up's hiring process served as a gatekeeper to Silicon Valley. Wiener's memoir is an insider's tech industry tale that is oft told.⁸³³

Misogyny and gender blindness in the workplace environment have implications for the product design phase: what questions are being asked when technology is being developed? What are the potential harms posed by this technology? Has selection bias in the data planning phase been adequately considered? Has information bias been addressed? Has confounding bias—bias in the analysis—been grappled with? Gender bias in any of the data categories results in outcomes that are either botched or that bolster misogyny.

In the auto industry, for instance, seatbelts, headrests, and airbags in cars are designed from data acquired from crash test dummies that have male physique. They do not take women's physique into account; thus, women are seventeen per cent more likely to die than a man in a similar accident.⁸³⁴ Gender blindness in this example is abysmally obvious. How can products like seatbelts, headrests, and airbags be considered "safe" without analyzing how they might affect men and women differently?

⁸³² *Ibid* at 115.

⁸³³ Adrienne Jeffries, "Inside the GitHub Scandal: Is Sexism Part of the Valley's DNA?" *The Verge* (20 March 2014), online: <www.theverge.com/2014/3/19/5526574/github-sexism-scandal-julie-ann-horvath>.

⁸³⁴ Noting that this auto industry example is also relevant for Uber in the context of safety. See Carmen Niethammer, "AI Could Put Women's Lives at Risk—A Challenge for Regulators", *Forbes* (2 March 2020), online: <www.forbes.com/sites/carmenniethammer/2020/03/02/ai-bias-could-put-womens-lives-at-risk-a-challenge-for-regulators/?sh=79377c5d534f>; see also Josh Feast, "4 Ways to Address Gender Bias in AI" (20 November 2019), online: <hbr.org/2019/11/4-ways-to-address-gender-bias-in-ai>; Catherine D'Ignazio & Lauren F Klein, *Data Feminism* (Cambridge: MIT Press, 2020).

Moreover, we know that gender biases continue to be ingrained in society more generally. For instance, according to United Nations Development Programme data, half of the world population continues to believe that men make better political leaders than do women.⁸³⁵ In addition to this enduring bias in leadership roles, bias continues to be evident also in the gender income gap in society.⁸³⁶ Nowhere is the ingrained gender bias more obvious than in the jarring and bewildering statistic that twenty-five per cent of people in the world believe that it is justifiable for a man to beat up his wife.⁸³⁷

AI is a mirror of ourselves. The smog of misogyny in society seeps into organizational culture. That smog teamed up with the significant gender gap of AI professionals in the tech industry,⁸³⁸ and data bias, results in bias that is rife in algorithmic design.⁸³⁹ A good example of this is Microsoft's experiment with its now infamous Twitter chatbot, "Tay," that "learned" by reading tweets and interacting with other users. Within only a few hours of being exposed to others, Tay was producing offensive tweets, like, "I fucking hate feminists and they should all die and burn in hell."⁸⁴⁰ Tay was taken down within 24 hours of being released.

Further, the work of Timnit Gebru demonstrates how gender and racial bias are replicated in ML algorithms. Gebru is a prominent advocate for more diversity in AI. Her co-authored work on the ethical risks of LLMs resulted in Google forcing her out of the very job

⁸³⁵ United Nations Development Programme, "Breaking Down Gender Biases: Shifting Social Norms Toward Gender Equality", 2023 Gender Social Norms Index, (12 June 2023), online (pdf): *United Nations Development Programme* <hdr.undp.org/system/files/documents/hdp-document/gsni202303pdf.pdf>.

⁸³⁶ *Ibid.*

⁸³⁷ *Ibid.*

⁸³⁸ Only 22% of AI professionals globally are women. See World Economic Forum, "Assessing Gender Gaps in Artificial Intelligence", (2018), online: *World Economic Forum* <reports.weforum.org/global-gender-gap-report-2018/assessing-gender-gaps-in-artificial-intelligence/>.

⁸³⁹ See e.g. Jamie Condliffe, "The Week in Tech: Algorithmic Bias is Bad. Uncovering it is Good", *NYT* (15 November 2019), online: <www.nytimes.com/2019/11/15/technology/algorithmic-ai-bias.html>; see also Surya Deva, "Addressing the Gender Bias in Artificial Intelligence and Automation", (10 April 2020), online: *Open Global Rights* <www.openglobalrights.org/addressing-gender-bias-in-artificial-intelligence-and-automation/>.

⁸⁴⁰ Alex Hern, "Microsoft Scrambles to Limit PR Damage Over Abusive AI Bot Tay", *The Guardian* (24 March 2016), online: <www.theguardian.com/technology/2016/mar/24/microsoft-scrambles-limit-pr-damage-over-abusive-ai-bot-tay>.

that she was hired to do.⁸⁴¹ Lack of diversity in Google’s workforce created an impenetrable barrier for Gebru: only 10 per cent of AI research staff at Google are women.⁸⁴² Furthermore, Black women make up only 1.6 per cent of Google’s entire workforce.⁸⁴³ And in revealing the ethical flaws inherent with Google’s LLMs, it was easier for Google to get rid of Gebru—the person pointing out the problems—than to actually address them. Improving AI ethics internally to effect change externally simply becomes lip service if the person carrying the burden of the work is unsupported and ultimately dispensable.

Conjointly, Ruha Benjamin refers to the pre-existing racial discrimination that is sustained by new technologies as the “new Jim Code.”⁸⁴⁴ Benjamin draws on the original meaning of “Jim Crow” along with Michelle Alexander’s work, *The New Jim Crow*, which focuses on how US correctional institutions have produced “a new racial caste system.”⁸⁴⁵ Benjamin explains, “[Jim Crow] has proven to be an elastic term, used to describe an era, a geographic region, laws, institutions, customs, and a *code* of behavior that upholds White supremacy.”⁸⁴⁶ Benjamin employs Alexander’s discussion about the deviation from outright racism in US society to colourblind ideology in the carceral system to reveal how tech designers perpetuate this process, creating a “digital caste system.”⁸⁴⁷

Moreover, as Benjamin explains, “These tech advances are sold as morally superior because they purport to rise above human bias, even though they could not exist without data

⁸⁴¹ See e.g. Rachel Thomas, “The Far-Reaching Impact of Dr. Timnit Gebru”, *The Gradient* (9 December 2020), online: <thegradient.pub/the-far-reaching-impacts-of-timnit-gebru/>; Karen Hao, “‘I Started Crying’: Inside Timnit Gebru’s Last Days at Google—and What Happens Next”, *Technology Review* (16 December 2020), online: <www.technologyreview.com/2020/12/16/1014634/google-ai-ethics-lead-timnit-gebru-tells-story/>; Casey Newton, “The Withering Email that got an Ethical AI Researcher Fired at Google”, *Platformer* (3 December 2020 <www.platformer.news/p/the-withering-email-that-got-an-ethical/>.

⁸⁴² See “Google Hired Timnit Gebru to be an Outspoken Critic of Unethical AI. Then She was Fired for It”, online: *WE and AI* <weandai.org/race-and-ai-toolkit/employment/lack-of-diversity-in-ai-workforce/google-hired-timnit-gebru-to-be-an-outspoken-critic-of-unethical-ai-then-she-was-fired-for-it/>.

⁸⁴³ *Ibid.*

⁸⁴⁴ R Benjamin, *supra* note 490.

⁸⁴⁵ Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (La Vergne: The New Press, 2020) 27.

⁸⁴⁶ R Benjamin, *supra* note 490 at 9.

⁸⁴⁷ *Ibid* at 10.

produced through histories of exclusion and discrimination.”⁸⁴⁸ The discourse of neutrality, objectivity, and lack of bias in tech advancements allows racism to not only endure, but to predominate. Bias enters the design optimization furtively.

Good data can improve bias generally, but only if the right issues are being contemplated in the technology life cycle—from its ideation to data collection cycle and the design phase. In Uber’s case, however, it had an established culture of sexual harassment and cover up. It was not attuned to the ways in which the Uber platform could be used to facilitate gender-based violence.

V. *The Uber Platform*

It is worth elucidating what is meant by “platform” since it is not uniformly used across differing discourses. Platforms facilitate “transactions between buyers and sellers.”⁸⁴⁹ In the pre-digital context, a village market is a good example of a platform in that it reduces the costs of transacting through bringing together large numbers of buyers and sellers.⁸⁵⁰

Online platforms may be described as

services that a) host, organize, and circulate users’ shared content or social interactions for them, b) without having produced or commissioned (the bulk of) that content, c) built on an infrastructure, beneath that circulation of information, for processing data for customer service, advertising, and profit.⁸⁵¹

Digital platforms wield the power of information goods represented in bits such as software and banking services.⁸⁵² They are “characterized by near-zero marginal cost—of access, reproduction, and distribution.”⁸⁵³ Platforms may also be connected to goods and services in

⁸⁴⁸ *Ibid.*

⁸⁴⁹ Andrew Shipilov, “Don’t Confuse Platforms with Ecosystems” (22 December 2020), online (blog): *Insead Knowledge* <knowledge.insead.edu/blog/insead-blog/dont-confuse-platforms-with-ecosystems-15801>.

⁸⁵⁰ *Ibid.*

⁸⁵¹ C Khoo, citing Gillespie, *supra* note 72 at 44.

⁸⁵² See Andrew McAfee & Eric Brynjolfsson, *Machine, Platform, Crowd: Harnessing Our Digital Future* (New York: Norton, 2017) at 185

⁸⁵³ *Ibid* at 135.

the physical world—involving atoms.⁸⁵⁴ These platforms are known as “O2O”—or online to offline, whereby the online world is spread to the offline world. Interestingly, the tech jargon itself—O2O—spells out that online harm will spread to the offline world. This is part of the “accordion effect” of executing an algorithmic contract. The perlocutionary effects are not limited to either the online or offline worlds. The O2O platform corroborates the false dichotomy of distinguishing between gender-based violence in the online and offline worlds.⁸⁵⁵ It also reifies Hildebrandt’s use of the term “onlife.”⁸⁵⁶

Uber’s central platform is O2O. It “brings together the economics of bits with those of atoms.”⁸⁵⁷ It is onlife.⁸⁵⁸ And its platform was built on a very simple idea: hail a car with nothing but a smartphone. Other examples of companies employing O2O models include Airbnb, which connects people who wish to rent out their homes with those who are interested in an accommodation alternative to hotels,⁸⁵⁹ and Groupon, a group buying site connecting subscribers with local merchants that offer discounts on goods and services, travel, and other activities.⁸⁶⁰

Digital platforms, however, may be hubs of technology-facilitated gender-based violence.⁸⁶¹ Their particular, common features in addition to the distinguishing characteristics of technology transform and heighten the nature and magnitude of gender-based violence.⁸⁶² For instance, the affordances⁸⁶³ of online platforms in addition to their business models exploit aggressive behaviours.⁸⁶⁴ To demonstrate this point, Uber has experimented with

⁸⁵⁴ *Ibid* at 185.

⁸⁵⁵ C Khoo, *supra* note 72 at 15.

⁸⁵⁶ Hildebrandt, *supra* note 6 at 42.

⁸⁵⁷ McAfee & Brynjolfsson, *supra* note 852 at 186.

⁸⁵⁸ Hildebrandt, *supra* note 6 at 42.

⁸⁵⁹ Airbnb (2021), online: <www.airbnb.ca>.

⁸⁶⁰ Groupon (2021), online: <www.groupon.ca>.

⁸⁶¹ C Khoo, *supra* note 72 at 47.

⁸⁶² *Ibid*.

⁸⁶³ See Gibson, *supra* note 7 at 127.

⁸⁶⁴ C Khoo, *supra* note 72 at 48.

video gaming techniques and graphics to nudge drivers into working longer hours.⁸⁶⁵ This is known as “gamification.”⁸⁶⁶ Uber has also leveraged some drivers’ competitive tendencies, alerting them that they are close to hitting a particular goal when they try to log off.⁸⁶⁷ Or by sending them their next fare possibility prior to finishing the one they are completing.⁸⁶⁸ We know that there is a link between competitive behaviour and aggression, particularly in the context of gaming.⁸⁶⁹

Platforms also create a sense of anonymity that reduces the risk of being identified or caught when engaging in abusive or violent behaviours.⁸⁷⁰ X, for example, allows users to create anonymous/multiple accounts and resists policing expression.⁸⁷¹ Taken together, this combination of features accommodates abusive and violent behavior. Platform affordances may also be exploited in order to enact abuse.⁸⁷² In the context of Uber, a good example of this is account sharing that is solicited online through chat rooms and Facebook groups.⁸⁷³ In 2019, Transport for London determined that 14,000 Uber rides from late 2018 through 2019 were not conducted by registered Uber drivers, but by others who had been able to substitute their photos and make use of a real Uber drivers account.⁸⁷⁴ Forty-three drivers in London⁸⁷⁵ had managed to trick the Uber app into updating their profile photo, which allowed drivers to

⁸⁶⁵ Schieber, *supra* note 820; Jonathan Compo, “Pay to Play (And Work): Uber’s Insidious Exploitation”, *The Pavlovic Today* (21 May 2019), online: <thepavlovictoday.com/pay-to-play-and-work-ubers-insidious-exploitation/>.

⁸⁶⁶ Compo, *ibid*.

⁸⁶⁷ Schieber, *supra* note 820.

⁸⁶⁸ *Ibid*.

⁸⁶⁹ See e.g. Wai Yen Tang & Jesse Fox, “Men’s Harassment Behaviour in Online Video Game: Personality Traits and Game Factors” (2016) 42:6 *Aggressive Behaviour* 513.

⁸⁷⁰ C Khoo, *supra* note 72 at 48.

⁸⁷¹ See “Guidelines for Law Enforcement”, *Twitter* (2021), online: <help.twitter.com/en/rules-and-policies/twitter-law-enforcement-support>.

⁸⁷² C Khoo, *supra* note 72 at 48.

⁸⁷³ See Parmy Olson & Sarah E Needleman, “Uber’s ‘Dirty Little Secret’: Shared Driver Accounts,” *WSJ* (27 November 2019), online: <www.wsj.com/articles/ubers-dirty-little-secret-shared-driver-accounts-11574883278>; see also Dara Kerr, “Some Uber Drivers use Bogus Identities and Shared Accounts”, (26 November 2019), online: *CNET* <www.cnet.com/news/uber-drivers-using-fake-identities-isnt-just-a-london-problem/>.

⁸⁷⁴ *Ibid*.

⁸⁷⁵ Olson & Needleman, *supra* note 873.

temporarily transfer access to their accounts to someone else—to others who lack a valid driver’s license, for example. This makes identifying the driver more difficult.

Other strategies such as X’s “tweet and delete” before abusive content can be flagged for removal, further accommodate behaviour such as harassment. What is more, the boundaries of digital platforms may be fluid; Reddit, for example, combines social media, messaging, video-sharing, and pornography.⁸⁷⁶ Thus, as Khoo explains, these are not just aspects of technology-facilitated gender-based violence, but in fact, “platformed” technology-facilitated gender-based violence.⁸⁷⁷

In addition to clarifying what is a platform generally, it is also worth shedding some light on what exactly Uber does.⁸⁷⁸ Is it a technology company? Is it taxi alternative? Uber pitches itself as a “tech company that connects the physical and digital worlds to help make movement happen at the tap of a button.”⁸⁷⁹ But it is not of the Apple,⁸⁸⁰ Microsoft,⁸⁸¹ Amazon⁸⁸² or Alibaba⁸⁸³ sort of “tech giants” that compete in hardware, software, and technology services. All these giants had much more humble beginnings before expanding their product lines and services: Apple sold computers, Microsoft dealt in software, Amazon retailed books, and Alibaba began as a website focused on China commerce.⁸⁸⁴ Uber,

⁸⁷⁶ C Khoo, *supra* note 72 at 45.

⁸⁷⁷ *Ibid* at 49.

⁸⁷⁸ Brian Fung, “Uber Isn’t a Tech Company It’s Basically a Taxi Company EU Court Advisor Says”, *Washington Post* (11 May 2017), online: <www.washingtonpost.com/news/the-switch/wp/2017/05/11/uber-isnt-a-tech-company-its-basically-a-taxi-company-eu-court-adviser-says/>; Anne Sraders, “Uber vs. Taxi: What’s the Difference?” (27 February 2019), online: *The Street* <www.thestreet.com/technology/uber-vs-taxi-14872678>.

⁸⁷⁹ “Uber” (2024), online: <www.uber.com/us/en/about/>.

⁸⁸⁰ “Apple” (2021), online: <www.apple.com/ca/>.

⁸⁸¹ “Microsoft” (2021), online: <www.microsoft.com/en-ca/?spl=2>.

⁸⁸² “Amazon” (2021), online: <www.amazon.ca>.

⁸⁸³ “Alibaba” (2021), online: <www.alibaba.com/?__redirected__=1>.

⁸⁸⁴ See Bowdeya Tweh & Katherine Riley, “Google, Facebook, Amazon, Apple and Microsoft. Call Them Tech Frenemies for Life”, *WSJ* (1 April 2021), online: <www.wsj.com/articles/tech-giants-cooperate-while-competing-frenemies-for-life-11617293819>; see also Brian O’Connell, “History of Alibaba: Timeline and Facts” (30 October 2019), online: *The Street*: <www.thestreet.com/world/history-of-alibaba-15145103>.

however, began as an emerging technology, leading a “megatrend” blending technology and transportation as a service rather than a product.

Uber’s O2O platform straddles the online and the offline worlds. It also merges machine capabilities and human troubleshooters at its corporate level thus spanning the human-machine divide. Historically, Uber has described its entire infrastructure—including software, servers, and its mechanism for executing transactions—as “an engineering ecosystem consisting of hundreds of thousands of machines supported by....[human] engineers.”⁸⁸⁵ Put very simply, the Uber platform is regulated by algorithms.

The term “ecosystem” is borrowed from biology and “generally refers to a group of interacting [organizations] that depend on each other’s activities.”⁸⁸⁶ “Ecosystem” also gives the impression of being benign or organic in nature. This borrowed term may be used in multiple ways: it may describe an economic community of interacting actors; the term may explain how an innovation and surrounding support components interact; it may articulate the interdependent nature of digital platforms, their sponsors and their complementors.⁸⁸⁷

Uber’s digital platform is based on a data-first approach. It uses customer data for marketing and promotional purposes and to design new products or offerings. Uber has a common platform with cross-organizational collaboration thus it may be seen as a digital platform ecosystem. To further elaborate, a platform ecosystem takes a “‘hub and spoke’ operational format, with an array of peripheral firms connected to its central platform.”⁸⁸⁸ Hence, it may be seen as a “semi-regulated marketplace.”⁸⁸⁹

⁸⁸⁵ Uber, “Uber Infrastructure in 2019”, *supra* note 471.

⁸⁸⁶ Michael G Jacobides, Carmelo Cennamo & Annabell Gawer, “Towards a Theory of Ecosystems” (2018) 39:8 Strategic Management J 2255 at 2256.

⁸⁸⁷ *Ibid* at 2257-58.

⁸⁸⁸ *Ibid* at 2258.

⁸⁸⁹ Jonathan Wareham, Paul B Fox & Josep Lluís Cano Giner, “Technology Ecosystem Governance” 2014 25:4 Organization Science 1195 at 1211.

Uber has continuously expanded its digital platform ecosystem: from ride-hailing to food delivery, electric bicycles, scooters, payment systems, travel services, and more recently, turning to generative AI with the development of a chatbot.⁸⁹⁰ Accordingly, it is developing into a “super platform ecosystem.”⁸⁹¹ Here, the ecosystem models are integrating platforms and offering other services and functions. Super platform ecosystems also integrate data from other platforms. WeChat, which is social media platform in China, packaging multiple apps into one single application, is a good example.⁸⁹²

Uber’s ambition is a kind of “super app.”⁸⁹³ An everything app. A digital one-stop-shop. The journey to super app status, however, poses unique risks. Data privacy and data security, for example, will become more complicated with data being shared and processed in the super platform ecosystem. Further, managing privacy compliance and data protection in multiple jurisdictions will become increasingly challenging with integrated technologies.

On this journey to super app, Uber also has an existing risk that will become exacerbated: the inattention to technology-facilitated gender-based violence. The next section documents some of the sexual violence experienced by women and those who identify as women perpetrated by Uber drivers and Uber passengers. Thus, this section also deals with content that may disturbing for some readers.

⁸⁹⁰ Jackie Davalos, Emily Chang & Edward Ludlow, “Uber is Developing an AI-Powered Chatbot to Integrate Into App”, Bloomberg (2 August 2023), online: < www.bloomberg.com/news/articles/2023-08-01/uber-is-developing-an-ai-powered-chatbot-to-integrate-into-app?utm=.

⁸⁹¹ See e.g. Benjamin Talin, “What is a Digital Ecosystem?—Understanding the Most Profitable Business Model”, *More Than Digital* (4 December 2023), online: <morethandigital.info/en/what-is-a-digital-ecosystem-understanding-the-most-profitable-business-model/>; Sam Shead, “Uber Looks to Create Travel ‘Superapp’ by Adding Planes, Trains and Rental Cars”, CNBC (6 April 2022), online: <www.cnbc.com/2022/04/06/uber-chases-superapp-by-adding-planes-trains-and-rental-cars.html>.

⁸⁹² Benjamin Talin, “WeChat Explained—Understanding the Chinese Super App”, *More Than Digital* (27 May 2023), online: <morethandigital.info/en/wechat-explained-understanding-the-chinese-super-app/>.

⁸⁹³ The 2010 term “super app” is attributed to Mike Lazaridis, the founder of Blackberry. See “Mobile World Congress 2010 Keynotes: Mike Lazaridis, President, Co-CEO, RIM” (24 March 2010), online (video): *Mobile World Live* <www.mobileworldlive.com/videos/mobile-world-congress-2010-keynotes-mike-lazaridis-president-co-ceo-rim/>.

VI. *Accounts of Sexual Violence*

a. Uber Drivers as Perpetrators of Sexual Violence

On March 31, 2019, E.E. did not expect that her Uber driver would invite her out for a coffee or a glass of wine at the end of her short trip in Newark, New Jersey that she would have otherwise walked, had it not been raining.⁸⁹⁴ Nor did she expect the driver to return to her home, uninvited, and leave a letter at her door later that evening, inviting her out again. The following day, the driver was waiting in his car when E.E. went to take her dog for a walk, alleging that he was simply in the neighbourhood. She reported him to Uber. She heard nothing back. Two days later, he was waiting for her in a park where she normally walked her dog. She called the police. The driver admitted he was waiting for E.E. She was advised to file a restraining order. By the end of the week, she was no longer sleeping at home for fear that he would appear when she least expected it. She filed a Harassment Prevention Order as a temporary solution. Two weeks later, E.E. had to appear in court to make it permanent. The Order was granted, for one year.

In Canada, stalking is recognized as a form of criminal harassment under the *Criminal Code*.⁸⁹⁵ It affects approximately 8% of women in Canadian society versus 5% of men, ages 15 and older.⁸⁹⁶ Stalking may also occur online—“cyberstalking”—or be aggravated by technology such as spyware or GPS locators.⁸⁹⁷ The technology intensifies the harms inherent in the act of stalking.⁸⁹⁸

⁸⁹⁴ Jenée Osterheldt, “She Ordered an Uber. What She got was a Stalker”, *Boston Globe* (2 May 2019), online: <www.bostonglobe.com/metro/2019/05/07/she-ordered-uber-what-she-got-was-stalker/kgOFXxng3yxTgWw2Df0dJ/story.html>.

⁸⁹⁵ *Criminal Code* s. 264.

⁸⁹⁶ Amanda Burlock & Tamara Hudon, “Women and Men Who Experienced Cyberstalking in Canada” *Statistics Canada* (5 June 2018), online: <www150.statcan.gc.ca/n1/pub/75-006-x/2018001/article/54973-eng.htm>.

⁸⁹⁷ C Khoo, *supra* note 72 at 30.

⁸⁹⁸ *Ibid.*

In another incident on August 1, 2018, N.I. requested an Uber Pool ride⁸⁹⁹ to take her from her home in Mississauga, Ontario to work in Toronto.⁹⁰⁰ She was 20 years old, working part time at a grocery store while also enrolled in an educational program. She also had a learning disability and a mild speech impediment. The Uber app permitted the driver to cancel a third-party request mid-journey after initially accepting it, which allowed him to depart from the originally planned route, ostensibly to pick up the new passenger. Cancelling the Pool ride meant that the driver was able to undo the safety in numbers precaution N.I. had chosen at the point of requesting the ride.⁹⁰¹

N.I. ended up alone in the vehicle, diverted from the main route that would have taken her to work, and already uncomfortable since the driver had asked a series of personal and sex-related questions. He had also asked her to move into the front passenger seat more than once. She eventually conceded with the hope that he would just get back onto the highway and take her to work on time. Instead, he put her hand on his lap and then forced her hand under his shorts and underwear to sexually stimulate him. He also asked her to have sex/perform oral sex at a nearby park. Eventually, he continued back onto the highway and requested her phone number before dropping her at work so he could meet her later. N.I. provided him with a false number and got out of the vehicle.

N.I. reported the incident to Uber later that day and provided more details the following day when Uber requested them. N.I. wanted to be reassured she would never have him as a driver again. She also expressed to Uber that she was worried that he knew where

⁸⁹⁹ Uber, “Uber Pool”, *Uber* (2021), online: <www.uber.com/ca/en/ride/uberpool/>.

⁹⁰⁰ *R v Alobedi*, [2020] OJ No 3449, 2020 ONSC 4670.

⁹⁰¹ Arguably, N.I. could have been dropped off last when the Uber algorithm calculated the third-party request, thus potentially leaving her alone with the driver in the car for a period of time. Generally speaking, however, choosing to be around others or a “buddy system” is one method of increasing women’s safety. See e.g. “Women’s Safety on College Campuses” (12 May 2021), online: *Women Friendly Cities Challenge* <womenfriendlycitieschallenge.org/2021/05/12/womens-safety-on-college-campuses/>.

she lived and how to find her. On August 5, 2018, she believed that she saw the driver at her place of work. N.I. reported the entire incident to the police that day.

N.I. was sexually assaulted. Her life is forever changed by someone who perceived his needs and feelings to be more important than hers.⁹⁰² Sexual assault is an under-reported crime: only 5% of sexual assaults get reported to police.⁹⁰³ And it is the only violent crime in Canada that is not declining.⁹⁰⁴ Elaine Craig explains,

[t]he relationship between sexual assault, gender hierarchy, and shame is further aggravated by the continued acceptance of, or reliance on, problematic assumptions about sexuality and sexual violence in Canadian courtrooms...includ[ing] discriminatory notions about women's sexual availability, and their own degree of culpability (blameworthiness) in causing the sexual violence they experience.⁹⁰⁵

As the case of N.I. demonstrates, sexual assault can also be facilitated by digital platforms, thus potentially constituting a form of technology-aggravated sexual assault.⁹⁰⁶ This may further contribute to the barrier of reporting that Elaine Craig outlines, particularly if the role of technology in perpetuating sexual violence is not properly understood.

Other case law involving Uber and sexual assault reveals increasing violence. At the same time, however, we know from the work of Elizabeth Sheehy and others that the extent of the impact on the complainant is not fully captured in cases of sexual violence.⁹⁰⁷ Even in

⁹⁰² *Criminal Code* RSC 1985, c C-46 s 271.

⁹⁰³ Department of Justice, "Just Facts – Sexual Assault" (18 December 2019), online: <www.justice.gc.ca/eng/rp-pr/jr/jf-pf/2019/apr01.html>.

⁹⁰⁴ *Ibid.*

⁹⁰⁵ E Craig, *supra* note 790 at 9.

⁹⁰⁶ In 2011, 15-year-old Rehtaeh Parsons was sexually assaulted at a party in Nova Scotia. This assault was aggravated by technology. A photo of her vomiting out of a window as one of the four boys who raped her at the party, had sex with her, giving a "thumbs up" was shared unremittingly on social media. It led to relentless online bullying. Her life was forever changed. Rehtaeh Parsons attempted suicide by hanging, which led to a coma. Her life ended on April 7, 2013, when the decision to switch off life support was made by her family. The lives of her family and friends were forever changed. An independent report into her case found that the justice system failed on practically every level and outlined a series of policies, procedures, and actions that ought to be taken in respect of cyberbullying (a form of technology-facilitated gender-based violence), sexual violence, investigations, and prosecutions. See Murray D Segal, "Independent Review of the Police and Prosecution Response", (8 October 2015), online (pdf): <novascotia.ca/segalreport/Parsons-Independent-Review.pdf>. There are many, many more stories similar to that of Rehtaeh Parsons.

⁹⁰⁷ Elizabeth A Sheehy, *Defending Battered Women on Trial: Lessons from the Transcripts* (Vancouver: UBC Press, 2014).

obtaining transcripts from case files, body language is often not described.⁹⁰⁸ Emotions such as crying or sighing may also be omitted.⁹⁰⁹ Taking these points into account, along with low reporting, the absence of the role of technology in facilitating sexual violence, and the fact that many cases are settled with parties signing confidentiality agreements,⁹¹⁰ the case law does not tell us the extent of the violence.

There are also cases whereby sexual offenders become Uber drivers in order to further their means of sexual violence. For example, an Uber driver in San Diego sexually assaulted an inebriated woman, K.P., when she was returning home from a first date in 2016.⁹¹¹ K.P. reported the attack to police after she managed to escape his vehicle, which led to the discovery of as many as 14 other sexual assaults prior to becoming an Uber driver. The driver had kept videos documenting his abuse. The women survivors ranged in age from 13 to 21 years old.⁹¹² He had drugged many of them, and some of the survivors were not even aware that they had been sexually assaulted until they were told in the course of the investigation. The driver was found guilty of the rape along with 33 other counts of sexual assault against women and children.⁹¹³

⁹⁰⁸ E Craig, *supra* note 790 at 18.

⁹⁰⁹ *Ibid.*

⁹¹⁰ Sara Ashley O'Brien, Nelli Black, Curt Devine & Drew Griffin, "CNN Investigation: 103 Uber Drivers Accused of Sexual Assault or Abuse", *CNN* (30 April 2018), online: <money.cnn.com/2018/04/30/technology/uber-driver-sexual-assault/index.html>.

⁹¹¹ *People v Sanchez*, 2019 Cal. App. Unpub. LEXIS 1277, 2019 WL 908774 (Cal. App. 4th Dist. February 25, 2019).

⁹¹² See Ken Stone, "Ex-Uber Driver Gets 80-Year Term for Rapes, Include of Unconscious Teens", *Times of San Diego* (8 November 2017), online: <timesofsandiego.com/crime/2017/11/08/ex-uber-driver-gets-80-year-term-for-rapes-including-of-unconscious-teens/>; see also O'Brien, Black, Devine & Griffin, *supra* note 155.

⁹¹³ O'Brien, Black, Devine & Griffin, *ibid.*

b. Uber Passengers as Perpetrators of Sexual Violence

In 2019, C.B., a single mother who was an Uber driver in the US, described how a male passenger made several unwanted sexual advances causing her to be fearful.⁹¹⁴ He told her during the trip that he had a fantasy of having sex with a single mother. When she dropped him off at his destination, he recommended that she turn right in order to return to the main street; however, he knew it was a cul-de-sac and she would have to return to the location at which she dropped him off. When she did, he was standing with his pants down, masturbating. C.B. reported him to Uber, but citing privacy reasons, Uber would not provide her with information on whether the man's access to the Uber app had been deactivated or not.

Pressuring, manipulating, tricking, or threatening an individual for sexual activity falls into the spectrum of sexual misconduct and may constitute sexual harassment.⁹¹⁵ Technology provides the means for the breaking down the boundaries of this type of abuse. It moves beyond the physical. Additionally, willfully masturbating with the intent to continue harassing C.B. may be considered an indecent act.⁹¹⁶

In another incident in 2015, two male passengers attacked a driver, B.G., in a fit of homophobic fury.⁹¹⁷ B.G., who is lesbian, was verbally and physically attacked. She suffered bodily injury, including two cracked front teeth. She reported the incident to San Diego police, but Uber would not disclose the identity of the passenger without a subpoena. She was told the police detective was unable to get one without evidence beyond her testimony. Her

⁹¹⁴ Dave Lee, "'Thrown to the wolves' – the women who drive for Uber and Lyft", *BBC* (29 January 2019), online: <www.bbc.com/news/technology-46990533>; Sam T Levin, "Female Uber driver says company did nothing after passengers assaulted her", *The Guardian* (1 May 2017), online: <www.theguardian.com/technology/2017/may/01/uber-sexual-assault-allegations-female-drivers-san-diego>.

⁹¹⁵ Government of Canada, *The Operation HONOUR Manual* (3 December 2019), online: <www.canada.ca/en/departement-national-defence/services/benefits-military/conflict-misconduct/operation-honour/orders-policies-directives/operation-honour-manual/understanding-of-sexual-misconduct.html>.

⁹¹⁶ *Criminal Code*, s. 173 refers to performing a sexual act in public in the presence of one or more persons. Most of the charges that arise under this subsection involve men exposing themselves to a non-consenting adult.

⁹¹⁷ Levin, *supra* note 914.

case was inactivated. Uber informed B.G. that she would not have to worry about being paired with the passenger who booked the ride in the future, but they would not confirm if he was banned generally as a passenger and could potentially harm other drivers, or if he was only blocked from being assigned to B.G.

Assault under Canadian law covers a broad range of acts from implied threat to actual physical harm requiring hospitalization.⁹¹⁸ Technology shapes, extends, and augments homophobia, which overlaps with gendered harm. These identity markers—woman and lesbian—do not exist independently of one another. Each informs the other and may create a complicated combination of oppression.

Technology may also shape, extend, and augment transphobia. In April 2021, a transgender delivery driver for Uber Eats, L.R., was forced to change his name on his app to reflect his legal name—his legal “deadname”—rather than his legally changed name and pronouns.⁹¹⁹ This meant that L.R.’s app profile displayed a name that he no longer used, effectively outing him as transgender. As a result, L.R. experienced harassment when he delivered food to customers and feared for his safety. The American Civil Liberties Union of Kansas intervened on L.R.’s behalf and Uber apologized. Uber also made a change to their app so that the option to display a self-identified first name appears without the need to display their legal name.⁹²⁰ This, however, is a patch, not an actual solution to the issue of discrimination and the violence associated with the app. And not unlike the hashtag

⁹¹⁸ *Criminal Code* s. 265.

⁹¹⁹ Roxana Hegeman, “Uber Eats Tackles App Profile Issue that Outs Trans Drivers”, *Associated Press* (22 June 2021), online: <apnews.com/article/business-e9a162bf6293414df65fb68eaf71fc51>.

⁹²⁰ On June 1, 2021, Uber rolled out its latest “Right to Pride” initiative designed to “empower the LGBTQIA+ community.” The new initiative includes changes to the Uber app to allow for a self-identified, chosen first name. See Uber, “Right to Pride”, (1 June 2021), online: <www.uber.com/newsroom/right-to-pride/>.

⁹²⁰ “Transgender Hate Crimes Recorded by Police Go up 81%”, *BBC* (27 June 2019), online: <www.bbc.com/news/uk-48756370>.

campaigns against sexual harassment⁹²¹ at Uber: a complaint is required before action is taken rather than thinking about ethics in the design.

Transphobia is another intersecting system of oppression that technology amplifies. Its scale has escalated at an alarming rate.⁹²² For instance, research between 2016 and 2019 reveals that in US and UK, there were 8 transphobic posts published online *each minute*.⁹²³ These discriminatory posts range from harassment to calls for genocide of transgender people and their allies.⁹²⁴

c. Sexual Violence Perpetrated through Cross-organizational Collaboration

Other instances show that it is not just the Uber platform that facilitates the gender-based violence, but also the network of technologies that intersect with it. Thus, the technology-facilitated gender-based violence is compounded by a secondary amplification. For instance, the case,⁹²⁵ in which an Uber driver sexually assaulted a woman after she lost consciousness from consuming too much alcohol at a social event on the return to her dormitory in Boston, is an example of how technology-facilitated gender-based violence can be compounded through another type of technology. The survivor discovered some time after the sexual assault that the Uber driver had also gained access to her smartphone during the trip. He had added a fake profile to her Snapchat account, presumably for the purpose of covert surveillance.

⁹²¹ Leduc, *supra* note 742.

⁹²² “Transgender Hate Crimes Recorded by Police Go up 81%”, *BBC* (27 June 2019), online: <www.bbc.com/news/uk-48756370>.

⁹²³ “Exposed: The Scale of Transphobia Online” (2021), online: *Ditch the Label* <www.ditchthelabel.org/research-papers/exposed-the-scale-of-transphobia-online/>.

⁹²⁴ *Ibid.*

⁹²⁵ *Doe v Uber Techs., Inc.*, 2021 U.S. Dist. LEXIS 109092, 2021 WL 2382837 (D. Md. June 9, 2021).

In another instance, W.G., a woman driver in Los Angeles, California, reported that a third-party tracking app such as Apple's Find My iPhone⁹²⁶ allowed a male passenger to determine where she lived. Her home security camera recorded the passenger and another individual at her home the morning after she dropped him off. He alleged he left his phone inside her vehicle. When W.G. called Uber to report the incident, she was told that the passenger would be reminded of their community guidelines, but, citing privacy reasons, could not share the results of their investigation into her complaint.

In other cases, passengers have been able to find women Uber drivers on Facebook and attempt to contact them.⁹²⁷ For instance, a male passenger reported that he had left behind an item in the car in which he travelled in South Carolina. Uber asked the woman driver to follow up with the passenger. She did so via text message, and he replied that, in fact, he did not lose anything, but instead, just wanted her number. Along with the text was an unsolicited video of his penis.⁹²⁸

The evidence presented in this section demonstrates that time after time, the Uber platform and the technologies that intersect with the platform lie at the heart of the harm that was created. Repeatedly, Uber's technology furthered or amplified the gender-based sexual violence experienced by both drivers and passengers. And the scope of the sexual violence broadened in looking at the violence through an intersectional lens.

⁹²⁶ D Lee, *supra* note 914.

⁹²⁷ *Ibid.*

⁹²⁸ Henry, Flynn & Powell identify online sexual harassment including imaged-based harassment ("dick pics") in Nicola Henry, Asher Flynn & Anastasia Powell, "Policing Image-Based Sexual Abuse: Stakeholder Perspectives" 2018 19:6 Police Practice and Research, 565.

VII. *Facing Up to Technology-Facilitated Gender-Based Violence*

Uber markets itself as a technology company, connecting the physical and digital worlds to help make movement with nothing but a tap of a button. Yet, in both of Uber's 2019 and 2022 Reports, the role that technology played in relation to sexual violence, for all intents and purposes, is absent. Likewise, dealing specifically with the role of technology in facilitating gender-based violence is also missing from the series of initiatives in which Uber has invested that are aimed at preventing sexual violence. Uber was not sufficiently rigorous in defining the problem it was trying to solve. It was a missed opportunity that has resulted in continued harm.⁹²⁹

There is equally a dearth of analysis in respect of how technology is used as a tool by perpetrators to broaden the scope of sexual violence in the case law involving Uber.⁹³⁰ This may suggest that the courts do not have the tools to deal with the role that technology plays. Evidence of this can be found not only in cases of sexual violence but elsewhere. *Uber v. Heller*⁹³¹ discussed in Chapter 3 is good example demonstrating that the Court failed to recognize the fundamental role that technology played in the case.⁹³²

This leads to the question what path should Uber take to deal with technology-facilitated gender-based violence? Uber must recognize that to have a toxic free algorithm, it must deal with its toxic environment. This change on the inside goes beyond leadership reform and dismissals for unethical behaviour. It also goes beyond responding to incidents

⁹²⁹ Brendan Cole, "Uber and Lyft Face Nearly 1,000 Sexual Assault Claims Against Their Drivers", *Newsweek* (1 July 2021), online: <www.newsweek.com/uber-lyft-facenearly-1000-sexual-assault-claims-against-drivers-1605864>.

⁹³⁰ Correspondingly, in media reports involving Uber and sexual violence, the role of technology has an inconsequential role.

⁹³¹ *Uber*, *supra* note 212.

⁹³² The cursory analysis of Uber's technology that the SCC considered in its decision does not adequately assess the technology that created an asymmetrical relationship between Uber and Heller, a driver for Uber Eats. The decision provides that clicking to agree to Uber's standard form contract involved 14 pages and two clicks to agree. However, there were many more steps involved in agreeing to the contract. And, in fact, the contract itself was embedded within the registration process to become an Uber Eats driver. It is a case that is *fundamentally* about the role of technology, yet it was effectively absent in the decision. See *Uber* at para 7.

only after they become public. And it extends past using more technology such as anti-sexual assault apps which simply end up putting responsibility for risk avoidance on potential victims.⁹³³

In its goal of becoming a super app, Uber must recognize that its technology facilitates gender-based violence and intersects with other technologies that further exacerbate the violence. Uber must come to terms with the fact that its problem with sexual violence is ecosystemic. Uber's culture was founded in sexual harassment and cover up and its AI systems were developed out of that discriminatory culture. The result was a toxic environment that led to corresponding bias in its developing technologies. Uber's objective was to hail a car with nothing but a smartphone. But its toxic culture impeded any investigation into how that very objective could harm someone. This was a failure.

As a tech company, Uber employs ML algorithms, which we know are not ethically neutral, to undertake tasks for which human being would previously been responsible. As a passenger in an Uber ride, you negotiated the terms of your agreement with an algorithm. Equally, as a driver, you negotiated the terms of your employment contract with an algorithm. In both cases, decision-making is occurring algorithmically. We know, however, that algorithms make decisions that are not explainable—they are impenetrable “black boxes” Algorithmic data collection processes and subsequent analysis cannot be deciphered. Additionally, there is the problem of discrimination in the data being amassed. What's more is that bias also exists in language, which impacts not only algorithms but also programmers. The end-result is algorithmic opacity. But what we do know is that Uber's algorithms

⁹³³ Bivens & Hasinoff note, “[l]ike a weather app that merely warns of oncoming disaster, apps that treat sexual violence like an inevitable force of nature cannot actually help end rape as a social problem.” See Rena Bivens & Amy Adele Hasinoff, “Rape: Is There an App for That? An Empirical Analysis of the Features of Anti-Rape Apps” (2018) 21:8 *Information, Communication & Society* 1050 at 1064.

negotiate and execute its contracts, and they regulate its platform. And we do understand the consequence: its platform enabled *thousands* of cases of gender-based violence.

Austin's key insight in his theory of speech acts is that a linguistic act is really a practical action. Words have effect, intentionally or unintentionally. And these effects may be immediate, but they may also result in a causal sequence, like an accordion, with its expanding bellows that allow air to flow across its reeds, that vibrate and produce sound. Technology-facilitated gender-based violence is a perlocutionary effect of executing an Uber algorithmic contract.

Recognizing the role that technology plays in facilitating gender-based violence is, in part, educational. It means that in better understanding the gist of its problem, Uber will be able to effectively audit its environment and its platform for bias. In other words, Uber can better address the harms that stem from its platform and those platforms that intersect with it. This will provide the opportunity to develop more appropriate initiatives such as specific training on the role that technology plays in facilitating gender-based violence. This should lessen Uber's incidences of sexual violence overall and further its commitment "to help stop incidents before they happen."⁹³⁴

Further, in recognizing and better understanding technology-facilitated gender-based violence and dealing with it proactively rather than reactively as it has done so in the past with its toxic corporate culture, Uber has the opportunity to take on a bold role in its industry quest to become a super app.

⁹³⁴ Uber, "Driving Change for Women's Safety" (2021), online: <www.uber.com/ca/en/safety/womens-safety/>; see also Nicolas Suzor et al, "Human Rights by Design: The Responsibilities of Social Media Platforms to Address Gender-Based Violence Online" (2019) 11:1 Policy and Internet 84; Nicola Henry et al, "A 'Design-Justice' Approach to Developing Digital Tools for Addressing Gender-Based Violence: Exploring the Possibilities and Limits of Feminist Chatbots" (2024) Information, Communication & Society 1.

While high-profile class actions in other jurisdictions such as in France⁹³⁵ have resulted in Uber reclassifying its drivers as employees rather than as independent contractors, this change by itself has limited effectiveness in respect of technology-facilitated gender-based violence. Under this reclassification, Uber drivers become employees when they pick up passengers, but they stop being employees when passengers are dropped off. This means that the protections offered by this change in employment status are limited to the duration of the ride. We know that many of the cases of passenger sexual violence occur when the Uber ride ends or when the driver ends the ride. We also know that the end of the Uber ride puts women drivers at risk. Simply changing the status of Uber drivers from independent contractors to employees while the Uber app is turned on is not sufficient to deal with technology-facilitated gender-based violence.

The class action currently being pursued in Ontario⁹³⁶ that positions Uber drivers as employees within the meaning of the *Employment Standards Act*,⁹³⁷ however, has additional consequences. Existing health and safety regulation in most provinces and territories in Canada requires employers to implement workplace violence and harassment prevention policies.⁹³⁸ This legislation requires employers to investigate and deal with its workplace violence, including sexual violence. Employers have an obligation to protect their workers, and this protection would extend beyond dropping off passengers or turning off the Uber app.⁹³⁹ It also means that with each incident of sexual violence, whether the Uber app is on or

⁹³⁵ Cass chambre soc, 4 Mars 2020, [2020] No 19-13.316; see also Mathieu Rosemain & Dominique Vidalon, “Top French Court Deals Blow to Uber by Giving Driver ‘Employee’ Status”, *Reuters* (4 March 2020), online: <www.reuters.com/article/us-uber-court/top-french-court-deals-blow-to-uber-by-giving-driver-employee-status-idUSKBN20R23F>.

⁹³⁶ *Heller v Uber Technologies Inc*, [2021] OJ No 4303.

⁹³⁷ *Employment Standards Act*, S.O. 2000, c. 41 [ESA].

⁹³⁸ See e.g. *Occupational Health and Safety Act*, RSO 1990 c0.1, s 1.6 [OHSa].

⁹³⁹ On September 8, 2005, Jennifer Teague, an 18-year-old employee of Wendy’s in Ottawa, ON disappeared while walking home after her late-night shift ended. Her body was found 5km from the restaurant on September 19, 2005. At the time, Wendy’s, unlike other fast-food chains, did not have a workplace policy in place to ensure that its employees were driven home in taxis or picked up by parents. Wendy’s reviewed its workplace policies in light of Teague’s death. See “Police Confirm Body of Missing Teenager Found”, *CBC* (19 September 2005), online: <www.cbc.ca/news/canada/police-confirm-body-of-missing-ottawa-teenager-found>.

off, Uber will be required to investigate the allegation with a transparent process. Thus, if Uber better understands technology-facilitated gender-based violence, it will be able to create a more effective workplace violence policy that it will be required to implement should the class-action find Uber drivers to be employees within the meaning of the ESA.

Uber sees itself first and foremost as a tech company connecting the physical and digital worlds. As a “tech company,” it is incumbent upon Uber to face up to dealing with the role its technology plays in facilitating gender-based violence. Moreover, if Uber “connects the physical and digital worlds” then by failing to deal with the role of technology as it relates to sexual violence, then Uber’s own mandate is a misfire. It nosedives on its own imperative.

What is more is that Uber has an obligation to deal with the perlocutionary consequences of executing its algorithmic contract, which includes technology-facilitated gender-based violence. One of consequential effects of clicking to agree to a contract that was formed and negotiated by Uber’s algorithm cannot continue to be the facilitation of gender-based violence.

Uber must take steps to recognize and prevent technology-facilitated gender-based violence. It is incumbent upon Uber to re-pitch itself as a tech company that connects the physical and digital worlds to help make movement happen *safely* at the tap of a button.

What this has shown from the perlocutionary perspective, which, in this instance, is the consequence of executing an algorithmic contract, is that there are perlocutionary effects. These perlocutionary effects are derived from speech—doing things with algorithms and words. And these effects may be harmful. This harm is novel in that there

1.563780>; “Missing Teen Murdered”, *Toronto Star* (20 September 2005), online: <www.pressreader.com/canada/toronto-star/20050920/281543696312308>. Amendments to Ontario’s *Occupational Health and Safety Act* were made in 2010, which imposed new obligations on employers with respect to workplace violence and harassment. This included expanding the definition of workplace violence. It also addressed the issue of domestic/intimate partner violence and its impact in the workplace. See *OHSA*, s. 32.0.4, “Domestic Violence.”

Moreover, when decision-making without intention occurs, the potential for harm is even greater. This further contributes to the unprecedented nature of the harm since it is effected without attributable agency. This brings us back to the prior point that despite the changes that Uber has made, including the claim they would no longer tolerate “brilliant jerks,”⁹⁴⁰ the effects of sexual violence are unabating.⁹⁴¹ While Uber was investigating its problem with sexual harassment of its employees and the sexual violence impacting its safety reports in 2019 and again in 2022, it was simultaneously overlooking how technology facilitated the gender-based harm.

⁹⁴⁰ Schieber, *supra* note 820.

⁹⁴¹ Sawyer & Thoroughgood, *supra* note 821.

CHAPTER 5

Derivative Authority

We repeat it, these hybrid constructions are not the least interesting for the artist, for the antiquarian, for the historian. They make one feel to what a degree architecture is a primitive thing, by demonstrating...that the greatest products of architecture are less the works of individuals than of society; rather the offspring of a nation's effort, than the inspired flash of a ...genius; the deposit left by a whole people; the heaps accumulated by centuries; the residue of successive evaporations of human society,—in a word, species of formations. Each wave of time contributes its alluvium, each [society] deposits its layer on the monument, each individual brings his stone. Thus do the beavers, thus do the bees, thus do [we].

Victor Hugo⁹⁴²

I. Introduction

Algorithmic decision-making, as noted at the outset of this dissertation, creates putatively a form of *de facto* authority. In the human context, *de facto* authority lays claim to legitimacy, drawing efficacy on the basis that the claim to authority is recognized. A *de facto* leader, for example, is one who holds authority over a state but whose legitimacy is not clearly legitimated. *De facto* authority may also be the consequence of an absence of legitimate authority.

Chapter 2 demonstrated that there is an historical connection between authority and author. The connection is also close in that you cannot be one without the other.⁹⁴³ Authorship and authority are mutually inclusive concepts. Chapter 2 concluded that AI algorithms lack the authority to be considered an author. AI has no authority to perform the speech act of authoring words, making AI authorship a misfire. This seems to indicate that “algorithmic authority,” like algorithmic authorship, may also be a non-starter.

⁹⁴² Victor Hugo, *Notre-Dame de Paris* (Toronto: Penguin, 2018) at 109.

⁹⁴³ See e.g. Andrei Marmor, “Authority and Authorship” in *Positive Law and Objective Values* (Oxford: Oxford University Press, 2001) 89.

At the same time, however, we are putting AI algorithms in positions of control and power.⁹⁴⁴ As Pasquale observes, “authority is increasingly [being] expressed algorithmically in society’s information ecosystem.”⁹⁴⁵ Human beings are delegating their authority—often unintentionally—to algorithms. There exists something akin to *de facto* authority, but it is a type of mimetic, second-hand authority. The Uber algorithmic contract examined in chapter 3 is a good example of this delegation of authority—in this case, in the creation and execution of a contract. When you enter into an Uber contract as a driver or as a passenger, Uber algorithms are in a position of control and power. The Uber contract is formed, executed, and maintained by algorithms. But we also know that algorithms cannot intend to make decisions, bargain or generate meaning. Uber algorithms have no agency, yet they are in a position that we would normally refer to as authoritative—in the human context.

Additionally, we might draw on the fictional example of Ms. Bundy from chapter 3. She had no practical option but to accept the unreasonable offer created through surge pricing in her ride-hailing app. We also observed that the ride-hailing app exercised a dominating influence on Ms. Bundy. This resembles what we would refer to in the human context as authoritative. Yet it is a type of algorithmic power that manages Ms. Bundy’s activities and controlling the information that is available to her. This power, as the story demonstrated, affects her everyday life. It exerts a kind of internal force upon Ms. Bundy.

The internal force created by AI technologies imparts a matchless means of regulating and steering our freedom. We trained algorithms and as a consequence, algorithms are now able to “train” us. Furthermore, this force is not only experienced on the individual level, but also on the global scale. It is unlike any external force previously exerted upon us in society.

⁹⁴⁴ Pasquale, *supra* note 465.

⁹⁴⁵ *Ibid* at 8.

This algorithmic expression of authority is further illustrated if we consider the novel harm created by algorithmic contracting. Chapter 4 dealt with the technology-facilitated gender-based violence that may arise in the aftermath of executing an algorithmic contract. In the context of Uber, the two safety reports that they have issued to date avoid both taking responsibility for the harm and acknowledging that the harm is unconventional. Instead, Uber characterizes the gender-based sexual violence as part of a known societal quandary. But, in fact, technology-facilitated gender-based violence is partly attributable to delegating control and power to AI technologies in ways in which we have not entirely thought through. We are putting algorithms in *de facto* authoritative positions. How are we to understand the nature of this “algorithmic authority?”

The final chapter of this dissertation takes the findings from the preceding chapters and offers an analysis of authority in the Algorithmic Turn. Part II begins with a short overview of the conventional understandings of authority. It then segues to a brief recap of the outcomes from chapters 2, 3 and 4 in order to set up investigating a broadened scope of authority. This section draws on recent work by Nico Krisch on the dispersion of authority in the context of postnational (or transnational) law. This leads into Part III, which examines how authority may be reclaimed from the perspective of cyberfeminisms, focusing specifically on a re-reading of Donna Haraway’s “Cyborg Manifesto.” Part IV takes stock of the implications that Haraway’s cyborg and cyberfeminism more generally has for Krisch’s thinking on “entangled legalities.” This section also examines the increasing complications posed by generative AI technologies, which are taking on infrastructural roles in society. This segment of the chapter leverages scholarship that examines infrastructure, particularly that of Benedict Kingsbury, whose research focuses on “thinking infrastructurally.” And finally, Part V concludes with the trajectory for thinking about authority in the Algorithmic Turn.

II. *Authority in the Algorithmic Turn*

It is common thinking that law is the harbinger of justifiable authority. But putting a finger on exactly why has also been an issue of much contestation. Hart, as discussed in Chapter 1, believed that law did not derive authority entirely as a consequence of its coercive properties. He believed the impetus behind traditional positivist thinking that individuals amended their behaviour in the presence of sanction was merely descriptive and did not sufficiently flesh out the manner in which law lays claim to authority. Instead, that claim, according to Hart, is wider in scope: law not only imposes duties—primary rules—but it also vests power on its subjects—secondary rules. The point of departure for Hart’s observations about the nature of law and the source of law’s authority centred on the authority of language—ordinary language philosophy.

Hart aimed to provide a concept of law “...not tied to any particular legal system or legal culture.”⁹⁴⁶ This was a principled goal. Yet, there is evidence that he was unable to escape the state-centric perspective. Hart suggests in the concluding chapter of *The Concept of Law*, “Perhaps international law is at present in a stage of transition towards acceptance of [a basic rule of recognition] and other forms which would bring it nearer in structure to a municipal system.”⁹⁴⁷ It is evident that although Hart’s goal was a concept of law unfettered from established legal systems or cultures, his recapitulation is suggestive of a return to a municipal legal system.

This is further underscored by Hart’s reference to “primitive” and “pre-legal” systems of rules that only contain primary rules without the power-conferring secondary rules.⁹⁴⁸ Hart describes his concept of law as having developed out of a model from an earlier system. This “pre-legal system, he envisions as a “small community closely knit by ties of kinship,

⁹⁴⁶ Hart, *supra* note 64 at 239.

⁹⁴⁷ *Ibid* at 231.

⁹⁴⁸ *Ibid* at 89-92.

common sentiment, and a belief...[they] could live successfully by a regime of unofficial rules.”⁹⁴⁹ In an endnote to this page in *The Concept of Law* on “customary rules in primitive communities,” Hart states that only a few societies have existed in this small, close-knit way with unofficial rules.⁹⁵⁰ Hart then refers to three works that he believes supports this claim. One in particular, *The Cheyenne Way: Conflict and Case law in Primitive Jurisprudence* by Karl Llewellyn and Edward Hoebel demonstrates that Hart’s analysis of a closely knit small community is not sufficiently nuanced. The Cheyenne peoples are comprised of multifaceted communities with complex histories.⁹⁵¹

On this “pre-legal” or “primitive” system point, Hart misspoke. It was an infelicity, and it would be remiss not to draw out this oversight. One only has to refer to *R v Ellis* (2023)⁹⁵² in which the majority accepted tikanga—Māori customary practices and behaviours—as the first law of Aotearoa New Zealand. “First” does not imply “pre” or “primitive.” “First” implies “primary” or “original” in a series. “First,” unlike “pre-legal” and “primitive,” does not set up a hierarchical relationship.

These observations about the hierarchical nature of pre- and post-national state-centric thinking unsettle Hart’s concept of law. Additionally, the rule of recognition itself connotes pinnacle: it is a rule in a hierarchy of other rules. Thus, what emerges from these observations about the modeling of legal systems and hierarchy of rules is a constrained focus of authority.

That is not to say that other theories about authority did not suffer from constricted rooting of authority in the domestic realm. Raz’s service conception of authority, which

⁹⁴⁹ *Ibid* at 89.

⁹⁵⁰ Here is the endnote in its entirety: “Few societies have existed in which legislative and adjudicative organs and centrally organized sanctions were all entirely lacking. For studies of the nearest approximation to this state see Malinowski, *Crime and Custom in Savage Society*; A. S. Diamon, *Primitive Law* (1935), chap. 18; Llewellyn and Hoebel, *The Cheyenne Way* (1941).” Hart, *supra* note 64 at 244.

⁹⁵¹ For a more fulsome analysis of this point, see Māmari Stephens, “Māori Law and Hart: A Brief Analysis” (2001), online (pdf): <www.wgtn.ac.nz/law/research/publications/about-nzacl/publications/nzacl-yearbooks/yearbook-6,-2000/Stephens.pdf>.

⁹⁵² *R v Ellis*, [2023] NZHC 2015.

became a dominant account of authority during the Twentieth Century, for example, suffered from the same state-centric bias. Specifically, Raz explains that his theory is based “in an assumption of universality...[since] it is a criterion of adequacy of a legal theory that it is true of all the intuitively clear instances of municipal legal systems.”⁹⁵³ Put differently, Raz’s initial thinking about law’s authority required omitting anything that was not true or relevant to all legal systems. However, Raz later offered a correction to this narrow focus explaining, “exclusive concentration on state law was, it now turns out, never justified, and is even less justified today.”⁹⁵⁴ Additionally, the same observation about Raz’s followers and critics may also be made.⁹⁵⁵

Rather than providing an historical analysis of how the concept of authority has been received in its pluridimensional—and often fractious—ways in the human context, in order to discuss authority in the context of algorithmic speech, it may be a better option to draw on what Chapters 2, 3 and 4 evince.

Chapters 2 through 4 reveal that algorithms do things with words. However, algorithms do not produce language the same way in which we do. The implications of this are either that algorithms do things with language differently than do humans or that algorithms do things unsuccessfully with language in respect of a traditionally formed (human) speech acts.

To elaborate on this divided point using ChatGPT and “Go With Me” from Chapter 2, ChatGPT successfully produced text that “sounded right” in the second part of the story, but it did so differently than would a human author. ChatGPT, for example, created an AI hallucination in the second part of “Go With Me” in Chapter 2. It also parroted much of what

⁹⁵³ Raz, *supra* note 139 at 104.

⁹⁵⁴ Joseph Raz, “Why the State?” in Nicole Roughan & Andrew Halpin, eds *Pursuit of Pluralist Jurisprudence* (Cambridge: Cambridge University Press, 2017)136 at 161.

⁹⁵⁵

was written in the first part of the story, thus limiting character and thematic development. ChatGPT also kind of looped meaning of words—“book” was the example used in the analysis of “Go With Me.” This demonstrates a more complex form of parroting. Having said all of this, however, the simple fact of the matter is that ChatGPT generated intrinsic meaning that could not be attributed to me, the first author in the chain story. But its intrinsic meaning was different than that the intrinsic meaning created by a human being. Flowing from this, is the observation that an algorithmic locution is different from a human locution. Both types of locutions may be successful, but they are not commensurate.

We also know from the illocutionary analysis of algorithmic contracts that algorithms frustrate illocutions. Unlike human beings, algorithms can never intend meaning. Algorithms can—and do—act as agents in the contracting process, but they do things with words differently than humans. Stemming from this observation is that an algorithmic illocution is distinct from a human illocution. Both forms of illocution may be compelling, but they are not alike.

Further, the perlocutionary analysis demonstrated that algorithms can facilitate novel forms of harm as a consequence of decision-making without intention. In the human context, we have legal mechanisms for dealing with both intended and unintended harm when derived from speech acts. Thus, an algorithmic perlocutionary act is discriminable from a human perlocutionary act. Both types of perlocutions can result in effect, but they are not congruous.

The import of this analysis is an emerging algorithmic speech act.⁹⁵⁶ It is a speech act that is different from a human speech act. An algorithmic speech act may also be a felicitous speech act. We also learned that the issue of agency needs to be addressed in acknowledging this new linguistic form. Further, Chapter 4 demonstrated that novel harm may be the consequence of algorithmic speech acts. Thus, an algorithmic speech act is not the

⁹⁵⁶ Note that I first thought about this as a “data-to-speech” act. See note 1104, *below*.

same as a human speech act—one does not equal the other. It follows then that we cannot draw the conclusion that authority may be expressed via algorithms in the same way that authority is traditionally articulated. *De facto* authority in the context of algorithmic decision-making is not necessarily commensurate with human *de facto* authority. We cannot presume that one can replace the other.

Consequently, we might be tempted to further particularize *de facto* authority and instead refer to the delegation of our authority to algorithms in a hybrid way—as *de facto* “algorithmic authority.” This fusion of algorithm—machine—and authority—a fundamentally human construct—suggests a blurring of boundaries. It blurs the line between machine and human. The suggestion of *de facto* algorithmic authority may be fruitful since, ostensibly, it describes what occurs when an author co-writes a story with an expositor as we saw in chapter 2.

De facto algorithmic authority also seems to depict what happens when you enter into an Uber contract. Algorithmic decision-making is nebulous. We do not know how algorithms make decisions—the “black box” factor. Yet, we do know from chapter 4 that there are consequences when algorithms are permitted to make decisions without oversight—specifically, technology-facilitated gender-based violence. *De facto* algorithmic authority suggests a conceptual fusion of machine and organism. It represents a disruption in how we have contemplated the relationship between law and authority, which as observed above, has been traditionally associated with hierarchical thinking. Does *de facto* algorithmic authority offer the opportunity for actualizing a more inclusive understanding of authority? Or is *de facto* algorithmic authority simply as nebulous a concept as algorithmic decision-making?

In order to delve into this interrogation of coalesced authority as a consequence of algorithmic decision-making, I will foreground its possibility by tackling the thinking on the

expansion of state-centric based theories of authority.

a. Nuancing Authority: Solid and Liquid Formations

In his work on broadening the scope of how we understand authority, Nico Krisch differentiates solid and liquid forms in the context of postnational governance.⁹⁵⁷ Krisch envisions traditional domestic and hierarchical conceptions of authority as “solid authority.” This solid expression of authority hinges on an understanding of authority that is rooted to a central governmental framework. The theories of Hart and Raz would fall into this categorization of solid authority. Thus, solid authority is hierarchical, formal, binding, and historical. It is consequently restrictive. In the global context, a focus on solid authority results in incommensurable attention to rules and to institutions with notably strong formal powers such as the International Court of Justice or the Dispute Settlement Body of the World Trade Organization.⁹⁵⁸

Further, solid expressions of authority risk downgrading the importance of other less formal instruments such as “soft law,” guidelines, and rankings. It keeps us fixated on statist structures, which may result in the development of statist responses that do not correspond with the reality of our onlife world.⁹⁵⁹ A focus on solid authority is thus myopic: “it obscures from view the many forms of institutional influence in global governance which, though often highly consequential, do not operate through formal, legal tools.”⁹⁶⁰ Concentrating on solid authority replicates “juridical sovereignty,” and founders on the pursuit of thinking about authority in broader contexts. Solid authority does not reflect law in the twenty-first century. Further, solid authority does not allow us to contemplate algorithmic authority.

⁹⁵⁷ Nico Krisch, “Authority, Solid and Liquid, in Postnational Governance” in Roger Cotterrell & Maksymilian Del Mar, eds *Authority in Transnational Legal Theory: Theorising Across Disciplines* (Cheltenham, UK: Edward Elgar, 2016) 25.

⁹⁵⁸ *Ibid* at 30-31.

⁹⁵⁹ *Ibid* at 26.

⁹⁶⁰ *Ibid* at 33.

Broadening our understanding of authority is about keeping law more sustainable—keeping it relevant for the twenty-first century and fit for the future.⁹⁶¹ Krisch suggests thinking about authority “in degrees, rather than in absolutes.”⁹⁶² In other words, Krisch suggests thinking about authority on a continuum. Thinking in degrees means that formerly excluded practices and structures emerge. Krisch expands structures of authority to include “liquid” forms: “liquid in the sense that [these structures] are able to flow and are thus more difficult to grasp, though not for that matter necessarily less weighty...”⁹⁶³

Liquidity, according to Krisch, may be construed by its four main features: first, the application of informal means rather than formal or binding means; second, reliance on substantive resources as grounds for authority; third, many actors as opposed to sole authority; and fourth, dynamic constellations of authority rather than stable structures of authority.⁹⁶⁴ These four features are also dynamic and not necessarily present to the same degree in this broadened understanding of authority.

By way of an example of liquid authority, we might think about feminist hashtag change movements such as #MeToo. At the federal level in the US, the #MeToo movement resulted in the *Ending Forced Arbitration of Sexual Assault and Sexual Harassment Act* (2021).⁹⁶⁵ At the state level, #MeToo also spurred advocacy that culminated in 2,324 #MeToo-related bills between 2017 and 2021.⁹⁶⁶ 286 of those bills have now passed into law.⁹⁶⁷

⁹⁶¹ See e.g. Peter C Oliver, “‘A Constitution Similar in Principle to that of the United Kingdom’: The Preamble, Constitutional Principles, and a Sustainable Jurisprudence” (2019) 65:2 McGill L J 207 at 255.

⁹⁶² Krisch, *supra* note 957 at 39.

⁹⁶³ *Ibid.*

⁹⁶⁴ *Ibid.*

⁹⁶⁵ *Ending Forced Arbitration of Sexual Assault and Sexual Harassment Act of 2021*, Pub L No 117-90, 136 Stat 26 at 25 (2022).

⁹⁶⁶ Jamillah Bowman Williams & Elizabeth Tippet, “Five Years On, Here’s What #MeToo has Changed” (14 November 2022), online: *Politico* <www.politico.com/newsletters/women-rule/2022/10/14/five-years-on-heres-what-metoo-has-changed-00061853

⁹⁶⁷ *Ibid.*

#MeToo is a global, informal, dynamic movement with many actors including, “...legislators, policy makers, companies, universities, the United Nations, NGOs, scientists, athletes, entertainment industries, legal professionals, and many others.”⁹⁶⁸ #MeToo also has an extended hashtag family including the following: #QuellaVoltaChe (Italy), #AnaKaman (Egypt), #Cuéntalo (Spain), #sas (China), #MeQueer, and #sdds (Kazakhstan).⁹⁶⁹ Further, all of these hashtag families have another common “family” member: the social media algorithm. This is an example of the liquefaction of authority involving an algorithm and underscores that a more nuanced understanding of authority is not any less weighty.⁹⁷⁰ It is also an example of the dispersion of authority via social media algorithms.

b. From Nuancing Authority to Entanglements

In thinking about the dispersion of authority in terms of solids and liquids, however, we can imagine that this dispersion is not always equal. For instance, when solids and liquids completely mix, we obtain a solution, but when they do not mix completely, we would refer to that as a mixture. Furthermore, when solids and liquids only partially mix, we obtain suspension. So, in nuancing authority in terms of solid and liquid expressions, we also need to recognize that there is more to it than just the binary opposition of solid versus liquid: subdivisions are also present.

What is more is that these subdivisions created by mixing solid and liquid authority may pose volatility. One can imagine, for instance, that partially mixed forms of authority

⁹⁶⁸ UN Women, “Headlines from a Global Movement” (2020), online (pdf): UN Women <www.unwomen.org/en/digital-library/publications/2020/08/brief-metoo-headlines-from-a-global-movement>.

⁹⁶⁹ *Ibid.*

⁹⁷⁰ Krish, *supra* note 957 at 47; another fitting example is the #8M movement, which re-positioned International Women’s Day as the opportunity to protest violence in Latin America, economic instability in Chile, and other forms of protest. See Comisión8M, “What Would Happen if Half the Population Stopped Working?” (2017), online: <hacialahuelgafeminista.org/international/feminist-strike-8m/>.

structures—“suspended” authority—is sufficiently mercurial and unreliable, thus warranting its avoidance.

In more recent work, Krisch seems to offer a “fresh start” to his thinking on solid and liquid authority through the uptake of the phenomenon of entanglement.⁹⁷¹ He states,

The notion of entanglement is not typically used in the legal context. It is common in quantum physics where it denotes a phenomenon in which different particles related to one another in such a way that the ‘state of each of them cannot be described independently of the state of the other(s).’⁹⁷²

The study of history also takes entangled approaches to examining the interconnections of societies, which move beyond comparative approaches that focus solely on similarities and differences.⁹⁷³ The phenomenon of entanglement, then, draws its sources from other branches of knowledge.

Recognizing entangled legalities also involves taking into account the practices of a variety of actors related to law and legal norms.⁹⁷⁴ It also means avoiding a narrow account in dealing with the question “what is law?” In other words, recognizing entanglements gives rise to blurred boundaries of criteria that interact with law—normative orders, law-like phenomenon etc.⁹⁷⁵ Entanglements suggest plurality that is not always neat and tidy or harmonious. They capture the notion of flexibility, but they also capture friction and flux. Additionally, entanglements ensnares the divergent character of dispersed authority.

Distinguishing entanglements would also take into account the power—internal force—that affected Ms. Bundy in chapter 3 since legal and political multiplicity is a key feature.⁹⁷⁶ This multiplicity, according to Krisch, is most on display when we are dealing with multinational corporations, of which, ride-sharing corporations like Uber, are a good

⁹⁷¹ Nico Krisch, ed *Entangled Legalities beyond the State* (Cambridge: Cambridge University Press, 2022).

⁹⁷² *Ibid* at 2.

⁹⁷³ Nico Krisch, “Entangled Legalities in the Postnational Space” (2022) 20:1 *International J of Constitutional L* 476 at 480 at 487.

⁹⁷⁴ *Ibid* at 488.

⁹⁷⁵ *Ibid*.

⁹⁷⁶ *Ibid* at 480.

example. Multinationals overlap boundaries, but they also effect a diffusion of power.⁹⁷⁷ In many ways they are upstaging nation-states. This is especially so with “the frightful five”—Amazon, Apple, Facebook, Google, and Microsoft—who, all things considered, may be seen as more powerful than many governments.⁹⁷⁸ The rise of power associated with platforms elicits further twists and turns—we really cannot understand authority in the context of algorithms independently of their complex entanglements.

Platform power has attracted a large amount of scholarship that aims to decipher its implications. Zuboff as described in chapter 3, focuses on the discontinuities generated through the escalation of platform power, specifically characterizing it as “surveillance capitalism.”⁹⁷⁹ Similarly, Christian Fuchs also focuses on the disconnect created by a new form of capitalism, particularly in the context of media and communication, but identifies it more broadly as “digital capitalism.”⁹⁸⁰ Other scholars, including Pasquale, depict the rise of “platform capitalism” as part of an augmentation and quickening of neoliberal leanings.⁹⁸¹ Pasquale, in particular, sees platforms as “market makers” rather than market players, exerting regulatory control over the terms and conditions whereby others can sell goods and/or services.⁹⁸² These increasingly powerful platforms also act as substitutes for government roles, “replacing the logic of territorial sovereignty with functional sovereignty.”⁹⁸³ So, in this context, we are subject to corporate control. Pasquale provides the

⁹⁷⁷ See e.g. John Gerard Ruggie, “Multinationals as Global Institution: Power, Authority and Relative Autonomy” (2018) 12 *Regulation & Governance* 317.

⁹⁷⁸ Farhad Manjoo, “Tech’s Frightful Five: They’ve Got Us”, *New York Times* (10 May 2017), online: <www.nytimes.com/2017/05/10/technology/techs-frightful-five-theyve-got-us.html>.

⁹⁷⁹ Zuboff, *supra* note 3.

⁹⁸⁰ Christian Fuchs, *Digital Capitalism: Media, Communication and Society*, vol 3 (Oxford: Routledge, 2022).

⁹⁸¹ See Frank Pasquale, “Two Narratives of Platform Capitalism” (2016) 35 *Yale L & Policy Rev* 309; see also Austin Zwick, “Welcome to the Gig Economy: Neoliberal Industrial Relations and the Case of Uber” (2018) 83: 4 *GeoJournal* 679; Robert Boyer, “Platform Capitalism: A Socio-Economic Analysis” (2021) 20:4 *Socio-Economic Review* 1857; Jamie Peck & Rachel Philips, “The Platform Conjuncture” (2020) 14:3 *Sociologica* 73.

⁹⁸² Frank Pasquale, “From Territorial to Functional Sovereignty: The Case of Amazon” (6 December 2017), online (blog): *The Law and Political Economy Project* <lpeproject.org/blog/from-territorial-to-functional-sovereignty-the-case-of-amazon/>.

⁹⁸³ *Ibid.*

example of AirBnB and their use of data-driven methods to regulate room and housing rentals as opposed to city housing regulators.⁹⁸⁴

Some scholars argue that the issues and instabilities created by platform capitalism are rooted in the national context.⁹⁸⁵ Yet others suggest that platform capitalism is much broader and thus constitutes a transnational development.⁹⁸⁶ Still others, like McKenzie Wark asks whether we can really continue to call it “capitalism,” befittingly offering the following:

There really is something qualitatively distinct about the forces of production that produce and instrumentalize and control *information* [*sic*]. This is because information really does turn out to have strange ontological properties. Making information a force of production produces something of a conundrum within the commodity form. Information wants to be free but is everywhere in chains. It isn't scarce, and the whole premise of the commodity is its scarcity.⁹⁸⁷

Information, as she draws our attention to, changes our understanding of how we have come to understand the era of “free market capitalism” consisting of private property, waged labour, and commodity production.

This presumptive transformation of capitalism prompts others, like Jodi Dean, to reflect on present-day tendencies, which resemble a “neofeudalism of new lords and new serfs, a micro-elite of platform billionaires and the massive service sector or sector of servants.”⁹⁸⁸ In this rather distressing model, there is an absence of public authority and power is fragmented and vested in the new ruling class.

⁹⁸⁴ *Ibid.*

⁹⁸⁵ See e.g. Niels van Doorn, Eva Mos & Jelke Mos, “Actually Existing Platformization: Embedding Platforms in Urban Spaces through Partnerships” (2021) 120:4 *South Atlantic Quarterly* 715; see also K Thelen, “Regulating Uber: The Politics of the Platform Economy in Europe and the United States” (2018) 16:4 *Perspectives on Politics*, 938.

⁹⁸⁶ See e.g. Mark Graham & Mohammad Amir Anwar, “The Global Gig Economy: Toward A Planetary Labor Market” in Anthony Larsson & Robin Teigland, eds, *The Digital Transformation of Labor* (New York: Routledge, 2019) 213.

⁹⁸⁷ McKenzie Wark, “The Sublime Language of My Century” (14 May 2016), online: *Public Seminar* <publicseminar.org/2016/05/the-sublime-language-of-my-century/>; see also McKenzie Wark, *Capital is Dead: Is This Something Worse?* (London: Verso Books, 2019).

⁹⁸⁸ See e.g. Jodi Dean, “Communism or Neo-Feudalism” (2020) 42:1 *New Political Science* 1, DOI: <10.1080/07393148.2020.1718974>.

Dean argues that neo-feudalism has four features. First, the parcelization of sovereignty, which involves a splintering of the state, where other forms of authority claim right and jurisdiction such as arbitration.⁹⁸⁹ The parcelization of sovereignty also results in a mixing of authority and economic power, which may be seen through for example digital platforms and their ability to realign prosperity, taking from the poor to give to the rich.⁹⁹⁰ Under neo-feudalism, she explains, “the legal fictions of a bourgeois state determined by the forms of neutral law and free and equal individuals break down and the directly political character of society reasserts itself.”⁹⁹¹

The second feature in this tendential shift to neo-feudalism is hierarchy and expropriation with new lord and peasants.⁹⁹² Here, basic inequality reigns and may be demonstrated as Dean explains in the following example:

...tech giants have become richer and more extractive, their owners becoming billionaires on the basis of the cheap labor of their workers, the outsourcing of much necessary work to third party contractors, the free labor of their users, the tax breaks bestowed on them by cities desperate to attract jobs, and solidification of their monopolies.⁹⁹³

The third attribute that Dean describes in her examination of the shift toward neo-feudalism is its spatiality—of built-up cities with surrounding agriculture and abandoned hinterlands.⁹⁹⁴ This attribute also emphasizes the division of who is thriving and who is withering.

And fourthly, according to Dean, neo-feudalism brings with it a sense of catastrophism along with insecurity and anxiety.⁹⁹⁵ Gig workers, for example, are subject to stress as a result of technological surveillance, uncertainty in their schedules which is

⁹⁸⁹ *Ibid* at 2.

⁹⁹⁰ *Ibid* at 3.

⁹⁹¹ *Ibid*.

⁹⁹² *Ibid* at 4.

⁹⁹³ *Ibid*.

⁹⁹⁴ *Ibid* at 7.

⁹⁹⁵ *Ibid* at 8.

glorified as “flexibility,” unreliable wages, consumer-sourced rating mechanism and automated nudges.

This diffusion and delegation of power associated with platforms is complex and creates, as these examples have described, potential mercurial entanglements of functional sovereignty, transnational phenomena, and parcelized sovereignty as the consequence of fissured statehood.

To settle these daunting prospects and to better understand the notion of entanglement, Krisch explains that it exists on a continuum between systemic separation and integration as demonstrated in the following figure:



Figure 9: The Continuum of Entanglement⁹⁹⁶

For example, reception norms, characteristic of international law, sit at one end of traditional system boundaries, and at the other end, sit conflict norms within a legal order.⁹⁹⁷ To put this idea more simply, Krisch imagines unity at one of the entanglement continuum and plurality at the other end. Between these two, lies what he refers to as the “inchoate field of straddling practices.”⁹⁹⁸ In this area, norms are tied in various ways, and boundaries are crossed in differing patterns. It is a zone of imbrication, where sometimes impromptu decision-making arises. Ostensibly, it is also in this field of straddling practices that we might locate algorithmic decision-making.

⁹⁹⁶ Krisch, *supra* note 973 at 491.

⁹⁹⁷ *Ibid* at 490-91.

⁹⁹⁸ *Ibid* at 491.

Sanne Taekema questions Krisch's idea of entangled legalities from a theoretical perspective, pointing out that the idea is not sufficiently grounded conceptually.⁹⁹⁹ Taekema states, "With a primary focus on empirical understanding, [Krisch's] project runs the risk of dissolving in a variety of case studies. In order to contribute to legal scholarship theoretically, it needs to address conceptual and normative dimensions too."¹⁰⁰⁰ She sees the benefit of further anchoring the idea of entanglement.

One of the ways to help strengthen Krisch's thinking on the continuum of entanglement through more of a conceptual base, particularly the "inchoate field of straddling practices," is to draw on the insights gained through cyberfeminism. The next section will do just this, focusing on Donna Haraway, who may be viewed as the "original" cyberfeminist,¹⁰⁰¹ and specifically concentrating on her watershed publication, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century."¹⁰⁰²

⁹⁹⁹ Sanne Taekema, "Navigating Law's Complexities: Concept for Postnational Law—A Reply to Nico Krisch" (2022) 20:1 *International J Constitutional L* 514.

¹⁰⁰⁰ *Ibid.*

¹⁰⁰¹ Mary Flanagan & Austin Booth, "Introduction" in Mary Flanagan & Austin Booth, eds, *Reload: Rethinking Women + Cyberculture* (Cambridge, MA: MIT Press, 2002) at 11.

¹⁰⁰² Donna J Haraway, "A Cyborg Manifesto" in Donna J Haraway & Cary Wolfe, eds, *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016) 3. The "Manifesto" grew out of a conference paper that Haraway wrote in 1983. See Donna Haraway, "New Machines, New Bodies, New Communities: Political Dilemmas of a Cyborg Feminist" (Paper delivered at "The Scholar and the Feminist X: The Question of Technology" Conference, Barnard College, April 1983, quoted in Stephen Whittle & Susan Stryker, *The Transgender Studies Reader* (Hoboken, NJ: Taylor & Francis, 2013) at 116 (n. 1); the conference paper reappeared significantly revised in form and in title as "A Cyborg Manifesto"—a tacit reference to its predecessor, "The Communist Manifesto"—two years later the *Socialist Review* (1985).

III. *Grounding Entanglements and Reclaiming Authority*¹⁰⁰³

“Cyborg Manifesto” has been translated into at least a dozen languages¹⁰⁰⁴ and has resonated favourably,¹⁰⁰⁵ cautiously,¹⁰⁰⁶ and contentiously¹⁰⁰⁷ across a variety of disciplines. It has also been described in diverse ways, from “challenging, difficult, and exhilarating”¹⁰⁰⁸ and having “recognizably eighties feminist political and aesthetic sensibility”¹⁰⁰⁹ to “zeitgeisty.”¹⁰¹⁰

¹⁰⁰³ A version of this section on Haraway appears in Amanda Turnbull, “The Salience of the ‘Cyborg Manifesto’: A Reboot” (forthcoming 2024) 13:2 *feminists@law*.

¹⁰⁰⁴ N Katherine Hales, “Unfinished Work: From Cyborg to Cognisphere” (2006) 23 *Theory, Culture & Society* 159 at 159.

¹⁰⁰⁵ See N. Katherine Hayles, *How We Became Post-Human: Virtual Bodies in Cybernetics, Literature, and Informatics*, (University of Chicago Press, 1999); Hales, “Unfinished Work,” *supra* note 9; Stephanie Peebles Tavera, “Utopia, Inc.: A Manifesto for the Cyborg Corporation” (2017) 44:1 *Science Fiction Studies* 21; the cyborg has been also “reassessed as an ethical concept” within an Irigarayan ethical framework rather than as a political or ontological issue. And in developing an ethics, Haraway’s cyborg writing may be seen as “a contemporary *écriture féminine*.” See Margaret E Toye, “Donna Haraway’s Cyborg Touching (Up/On) Luce Irigaray’s Ethics and the Interval Between Poethics as Embodied Writing” (2012) 27:1 *Hypatia* 182 at 185; see also Annie Goh & Marie Thompson, “Sonic Cyberfeminisms: Introduction” (2021) 127 *Feminist Rev* 1.

¹⁰⁰⁶ Sandoval saw problems regarding the universalizing of the figure of the cyborg and issues of appropriation. Sandoval, *supra* note 85; see also Sheryl Hamilton, “The Cyborg, 11 Years Later: The Not-So-Surprising Half-Life of the *Cyborg Manifesto*” (1997) 3:2 *Convergence* 104; Anne Balsamo, “Feminism for the Incurably Informed” (1993) 92:4 *The South Atlantic Quarterly* 681.

¹⁰⁰⁷ See Renate Klein, “If I’m a Cyborg and Not a Goddess Will Patriarchy Go Away?” in Susan Hawthorne & Renate Klein, eds, *Cyberfeminism: Connectivity, Critique and Creativity* (Melbourne: Spinifex, 1999) 185; Jenny Sundén, “What Happened to Difference in Cyberspace? The (re)turn of the She-borg” (2001) 1 *Feminist Media Studies* 215; Malini Johar Schueller, “Analogy and (White) Feminist Theory: Thinking Race and the Color of the Cyborg Body” (2005) 31 *Signs Journal of Women in Culture and Society* 63; Julie R DeCook, “A [White] Cyborg’s Manifesto: the overwhelmingly Western ideology driving technofeminist theory” (2021) 43:6 *Media, Culture & Society* 1158.

¹⁰⁰⁸ Joseph Schneider, “Conversations with Donna Haraway” (Interview by Joseph Schneider) in *Donna Haraway: Live Theory* (New York: Continuum, 2005) at 58

¹⁰⁰⁹ David Bell, *Cyberculture Theorists: Manuel Castells and Donna Haraway*, 1st ed (2006) at 97.

¹⁰¹⁰ Zoë Sofoulis, “Cyberquake: Haraway’s Manifesto” in Darren Tofts, Annemarie Jonson & Alessio Cavallaro, eds, *Prefiguring Cyberculture: An Intellectual History* (Cambridge, MA: MIT Press, 2002) 84 at 97.

a. What is Cyberfeminism?

Cyberfeminism involves transdisciplinarity, engaging with digital technologies in areas including—but not limited to—education,¹⁰¹¹ work,¹⁰¹² art,¹⁰¹³ feminist politics,¹⁰¹⁴ and law.¹⁰¹⁵ The term “cyberfeminism” is most often attributed to cultural theorist Sadie Plant, who in 1994, described it as the feminist approach that illuminates the relationship between cyberspace, the Internet, and technology.¹⁰¹⁶ Put another way, cyberfeminism is a strand of feminism, related to cyberspace.¹⁰¹⁷ While many would consider the movement of feminism to be anti-authoritarian, cyberfeminism began as a movement that saw the Internet as an unconstrained space in which women could be freed from traditional patriarchal preclusions and unravel new ways of claiming power and authority.

Initial cyberfeminists took the position that the Internet did not have to be shaped in the “male gaze.”¹⁰¹⁸ Having said that, however, cyberfeminism is “not a focused, unified

¹⁰¹¹ See e.g. Ilan Gur-Ze’ev, “Cyberfeminism and Education in the Era of the Exile of Spirit” in Ilan Gur-Ze’ev, ed, *Beyond the Modern-Postmodern Struggle in Education* (Boston: Brill, 2007) 185.

¹⁰¹² See e.g. Maura McAdam, Caren Crowley & Richard T Harrison, “Digital Girl: Cyberfeminism and the Emancipatory Potential of Digital Entrepreneurship in Emerging Economies” (2020) *Small Business Economics* 349.

¹⁰¹³ See e.g. Mary Flanagan & Suyin Looui, “Rethinking the F Word: A Review of Activist Art on the Internet” (2007) 19:1 *National Women’s Studies Association Journal* 181.

¹⁰¹⁴ See e.g. Shahrzad Mojab, “The Politics of ‘Cyberfeminism’ in the Middle East: The Case of Kurdish Women” (2001) 8:4 *Race, Gender & Class* 42.

¹⁰¹⁵ See e.g. Jane Bailey & Adrienne Telford, “What’s So ‘Cyber’ About It?: Reflections on Cyberfeminism’s Contribution to Legal Studies” (2007) 19:2 *Can J of Women and the Law* 243; see also Bela Bonita Chatterjee, “Razorgirls and Cyberdykes: Tracing Cyberfeminism and Thoughts on Its Use in a Legal Context” (2002) 7 *International Journal of Sexuality and Gender Studies* 197.

¹⁰¹⁶ Sadie Plant, *Zeroes and Ones* (London: Fourth Estate, 1997); note that VNS (pronounced Venus) Matrix, an Australian women-artist collective whose media installations rebelliously probed patriarchal discourses of domination and control, also used the term in describing their own “Cyberfeminist Manifesto for the Twenty-First Century.” See Faith Wilding, “Notes on the Political Condition of Cyberfeminism” (1998) 57:2 *Art J* 47.

¹⁰¹⁷ Cyberspace may be defined as “...informational data space made available by electrical circuits and computer networks.” See Victor Vitanza, *Cyberreader*, (Boston: Allyn and Bacon, Boston, 1999) at 5.

¹⁰¹⁸ Jean-Paul Sartre advanced *le regard* (“the gaze”) which may be understood in exploring the relationship between a viewer and an object. When this is applied between two individuals, one ends up on a higher plane having assumed the role of the viewer, and the other is left in a weaker position as an object. This has a degrading effect on the weaker individual. See Jean-Paul Sartre, *Being and Nothingness*, translated by Sarah Richmond (New York: Washington Square Press, 2021). Using Sartre’s concept, Laura Mulvey, a film theorist, articulated the concept of the “male gaze” that “projects its fantasy onto the female figure, which is styled accordingly.” The woman is a fetishized object that the man—the viewer—desires. Mulvey explains that there are three perspectives associated with the male gaze in the media that leave no room for a woman’s narrative: first, the perspective of the man behind the camera; second, the perspective of male characters within a film; and third, the perspective of the spectator gazing at the image. See Laura Mulvey, “Visual Pleasure and Narrative Cinema” (1975) 16:3 *Screen* 6.

political movement, but a sporadic, tactical, contradictory set of theories, debates and practices.”¹⁰¹⁹ It does not have an all-encompassing explanation. In fact, we could say that it is, by definition, undefined.¹⁰²⁰

Furthermore, cyberfeminists do not necessarily agree on the role of technology in society: Haraway and Plant, for example, saw the possibilities in new technologies insofar as experimenting with agency and constructing feminized spaces. They saw cyberfeminism “as a female-centred alternative to the overwhelming cultural dominance of men in regard to matters of technological agency.”¹⁰²¹ Thus, we would position Haraway and Plant in a form of cyberfeminism that envisioned the onlife environment and its associated technologies as way of reclaiming authority.

Others, like Chela Sandoval¹⁰²² were reluctant to embrace these types of assertions and emphasized, instead, that new technologies simply replicated the existing problems of sexism, racism and gender inequality in society. Still others differentiate between “old” cyberfeminism that employed utopian visions of women vitiating patriarchal machines and markets and “new” cyberfeminism that “confront[s] the top-down from the bottom up.”¹⁰²³ These internal antinomies may be seen, then, as inherent to cyberfeminism.¹⁰²⁴ And these antinomies also suggest that cyberfeminism embraces plurality, and that perhaps we ought to consider the term in its plural—“cyberfeminisms.”¹⁰²⁵

¹⁰¹⁹ Flanagan & Austin, *supra* note 1001 at 12.

¹⁰²⁰ During “The First Cyberfeminist International,” a meeting that took place in 1997 at the tenth edition of the contemporary art exhibition “Documenta,” an international coalition of cyberfeminists entitled, “Old Boys Network,” agreed to keep the term undefined. See “First Cyberfeminist International” (Conference proceedings, 20-28 September 1997), online: <monoskop.org/images/7/77/First_Cyberfeminist_International_1998.pdf>.

¹⁰²¹ Susan Luckman, “(En)Gendering the Digital Body: Feminism and the Internet” (1999) 25:2 *Hecate* 37.

¹⁰²² See Chela Sandoval, “Cyborg Feminism and the Methodology of the Oppressed” in Chris Gray, ed, *The Cyborg Handbook* (New York: Routledge, 1995).

¹⁰²³ See Maria Fernandez, Faith Wilding & Michelle M Wright, eds, *Domain Errors! Cyberfeminist Practices* (Autonomedia, 2003) at 22-23.

¹⁰²⁴ See Flanagan & Austin, *supra* note 1001 at 12.

¹⁰²⁵ Trevor Scott Milford, “Revisiting Cyberfeminism: Theory as a Tool for Understanding Young Women’s Experiences” in Jane Bailey & Valerie Steeves, eds, *eGirls, eCitizens* (Ottawa: University of Ottawa Press, 2015) 55 at 57.

While cyberfeminists do not necessarily agree on the role of technology in society, they do acknowledge that there are gendered differences in the power dynamics within the cyber discourse.¹⁰²⁶ And they do agree that they want change.¹⁰²⁷ Cyberfeminisms form a “meeting ground”¹⁰²⁸ of the issues that the online environment poses. A meeting ground is a gathering place where knowledge may be accumulated in a shared way. In this way, we can see that cyberfeminisms offers a multi-faceted and collective approach to thinking about the onlife environment.

Haraway’s “Cyborg Manifesto” appeared amidst the accelerating technological change of the ’80s, a time where the cyborg was arguably the ontology.¹⁰²⁹ The nature of being at the end of the twentieth century was increasingly hybrid, of human and machine components¹⁰³⁰: in medicine, with the invention of the artificial heart¹⁰³¹; in manufacturing, where better machines enhanced workers’ output¹⁰³²; and in the military, where, for instance, the US proposed the most elaborate and complex defense system ever conceived, nicknamed “Star Wars,” as a safeguard against nuclear attack.¹⁰³³ In other words, by the mid-’80s, Haraway suggested that we were already coded cyborg—not human, not animal, not machine, but a blend of all of them. A creature that broke boundaries. A creature that revamped nature and culture. And possibly most importantly, a creature of the post-atomic, Cold War discourse recovered as a symbol of feminist liberation.

¹⁰²⁶ See Susan Hawthorne & Renate Klein, “Introduction” in Susan Hawthorne & Renate Klein eds, *Cyberfeminism: Connectivity, Critique and Creativity* (Melbourne: Spinifex, 1999) 1.

¹⁰²⁷ *Ibid.*

¹⁰²⁸ Bailey & Telford, *supra* note 1015 at 244.

¹⁰²⁹ Haraway, *supra* note 1002 at 7.

¹⁰³⁰ *Ibid.*

¹⁰³¹ Dr. Robert Jarvik is known for his work on the first permanent artificial heart that was successfully transplanted into a patient in 1982. See Sanna Khan & Waqas Jehangir, “Evolution of Artificial Hearts: An Overview and History” (2014) 5:5 Cardiology Research 121.

¹⁰³² See e.g. Lois M Plunkert, “The 1980s: A Decade of Job Growth and Industry Shifts” (1990) Monthly Labor Review, online: <www.bls.gov/opub/mlr/1990/09/Art1full.pdf>.

¹⁰³³ The program was abandoned a decade after it was initiated. See e.g. William A Schwartz & Charles Derber et al, *The Nuclear Seduction: Why the Arms Race Doesn’t Matter—and What Does* (Oakland: University of California Press, 1990).

b. What is a Cyborg?

When thinking about the term “cyborg,” many of us may conjure up a futuristic, technologically augmented human. Cyborgs, however, have a particular origin point as both real actors and as metaphors in the mid-twentieth century, brought to life through military funding and large corporate funders, such as Bell Laboratories.¹⁰³⁴

The term “cyborg” was coined in the 1960s in relation to NASA’s efforts to develop enhanced organisms that could handle extreme, extraterrestrial environments.¹⁰³⁵ The word does not mean “machine” or “robot.” It is a portmanteau of cybernetic—the science of control and communications in the animal and machine¹⁰³⁶—and organism. In fact, the story of the cyborg begins with rodents in a lab, serving as mammalian surrogates in the “man-in-space program,” where they were altered with brain implants or accommodated with tiny dialysis bags of salt and sugar in order to adjust to new environments.¹⁰³⁷ Cyborgs are literal and conceptual fusions. They required systems approaches to breakdowns or failures in environments rather than simple or individual approaches. Systems thinking offers flexibility.¹⁰³⁸

¹⁰³⁴ See generally Douglas Coupland, “The Ghose of Invention: A Visit to Bell Labs” *Wired*, online: <interactive.wired.com/www-wired-com_2014_09_coupland-bell-labs/index.html#ch-1>.

¹⁰³⁵ See Manfred E Clynes and Nathan S Kline, “Cyborgs and Space” (1960) 5:9 *Astronautics* 26; see also Alexis C Madrigal, “The Man Who First Said ‘Cyborg’ 50 Years Later” *The Atlantic* (30 September 2010), online: <www.theatlantic.com/technology/archive/2010/09/the-man-who-first-said-cyborg-50-years-later/63821/>.

¹⁰³⁶ See Norbert Wiener, *Cybernetics: Or, Control and Communication in the Animal and the Machine* (New York: Wiley & Sons, 1948).

¹⁰³⁷ Donna Haraway & Nada Miljkovic, “The Best Possible Now” in Chris Hables Gray, Heidi Figueroa-Sarriera & Steven Mentor, eds, *Modified: Living as a Cyborg* (New York: Routledge, 2020) 282 at 283.

¹⁰³⁸ See e.g. Rajneesh Chowdhury, “Methodological Flexibility in Systems Thinking: Musings from the Standpoint of a Systems Consultant” (2023) 36 *Systemic Practice and Action Research* 59, DOI <10.1007/s11213-022-09597-w>; see also Cliff Whitcomb, Heidi Davidz & Stefan Groesser, eds, *Systems Thinking* (Basel, Switzerland: MDPI – Multidisciplinary Digital Publishing Institute, 2020).

c. The Cyborg as a Remediating Metaphor

The cyborg also forms part of the feminist tradition of “...seizing the tools to mark the world that marked them as other.”¹⁰³⁹ In “Cyborg Manifesto,” Haraway undertakes the task of reappropriating language—of story-telling—from “white capitalist imperialist patriarchy.”¹⁰⁴⁰

Haraway proposed a socialist, feminist cyborg that contested singular identities and imposed “grid[s] of control”¹⁰⁴¹ that constrained women and other historically marginalized groups in society. She saw the subversive promise of redeploying “the man in space” story of the cyborg, describing it as follows:

... a creature in a post-gender world; it has no truck with bisexuality, pre-oedipal symbiosis, unalienated labour, or other seductions to organic wholeness through a final appropriation of all the powers of the parts into a higher unity... It is oppositional, Utopian, and completely without innocence. No longer structured by the polarity of public and private, the cyborg defines a technological polis based partly on a revolution of social relations in the *oikos*, the household.¹⁰⁴²

The subversive promise of the cyborg was not only aimed at the Western patriarchal tradition that historically imposed “informatics of domination,”¹⁰⁴³ but also at what Haraway saw to be essentialism within feminism itself.

Haraway viewed radical feminism, like that of Catherine MacKinnon, to be theoretically fruitful insofar as processes of representation, but also as essentialist, and as a result, effectively, illusory.¹⁰⁴⁴ It articulated an exclusionary view of feminism, thus isolating many groups of women who defined themselves differently. Drawing on Sandoval and Audre

¹⁰³⁹ Haraway, *supra* note 1002 at 55.

¹⁰⁴⁰ Nicholas Gane & Donna Haraway, “When We Have Never Been Human, What Is to Be Done? An Interview with Donna Haraway” (2006) *Theory, Culture and Society* 135 at 150.

¹⁰⁴¹ Haraway, *supra* note 1002 at 154.

¹⁰⁴² *Ibid* at 150.

¹⁰⁴³ Haraway, *supra* note 1002 at 160.

¹⁰⁴⁴ *Ibid* at 141; see also Bailey & Telford, *supra* note 1015 at 256 (“...MacKinnon’s approach ‘theorizes away’ women’s individual agency by defining ‘woman’ as a subject that depends for its existence of being the sex object of man”).

Lorde,¹⁰⁴⁵ Haraway suggested a refocused feminism “based on affinities of interest rather than on categorical identities.”¹⁰⁴⁶ With these “affinities,” Haraway redeployed the systems approach of the cyborg, proposing cyborg feminism as a corrective to universal or single vision thinking. Haraway saw feminism as “feminisms”—in the plural sense—though she was critical of the then fashionable term, “postmodern feminism” and avoided its use.

With its connections to the military, to new technology, and to capitalism, the concept of the cyborg was vexatious and also posed a challenge to feminists positioned against technology, and to “goddess” feminism linked with nature.¹⁰⁴⁷ Haraway’s intent was not to create the “ramblings of a blissed-out, technobunny, fembot.”¹⁰⁴⁸ Rather, the cyborg offered different perspectives simultaneously “urging [women] to alter their relationship to the social relations of science and technology.”¹⁰⁴⁹ Haraway argued that women needed to be perceptive and politically conscious users of emerging technologies. To be specific, Haraway saw the then emerging digital technologies and the Internet as much more than “toy problems”¹⁰⁵⁰ and that women ought to play a significant role in developing the digital environment.

Haraway’s construction of the utopian—albeit ironic—myth of the cyborg was somewhat of a curiosity at the time of its publication. If we draw on feminist science fiction (sci-fi), which has a practice of looking at the relationships in respect of gender, technology, and culture, we know that the sci-fi of the ’70s and ’80s tended to be utopian, non-technological in nature and focused on women attaining leadership roles normally reserved for men—scientists, inventors, warriors etc. The works of Ursula K. Le Guin are good examples.¹⁰⁵¹ However, the feminist sci-fi when Haraway was writing her “Manifesto” in the

¹⁰⁴⁵ See Audre Lorde, *Sister Outsider* (Freedom, CA: Crossing Press, 1984).

¹⁰⁴⁶ Bailey & Telford, *supra* note 1015 at 255.

¹⁰⁴⁷ See e.g. Denise Dijk, “The Goddess Movement in the USA: A Religion for Women Only” (1988) 18:1 *Psychology of Religion* 258.

¹⁰⁴⁸ Donna Haraway, *The Haraway Reader* (New York: Routledge, 2004) at 3.

¹⁰⁴⁹ Hamilton, *supra* note 1005 at 104.

¹⁰⁵⁰ Nilsson, *supra* note 242 at 46.

¹⁰⁵¹ See e.g. Ursula K Le Guin, *The Dispossessed* (Harper & Row, 1974).

mid-'80s, tended to be dystopian with a focus on technology as negative, and highlighting the consequences of the denied autonomy of the feminist utopian sci-fi of the previous generation of writers. Margaret Atwood's *Handmaid's Tale*—published the same year as Haraway's "Manifesto"—may be considered paragon in this dystopian trend.

On one hand, Haraway's uptake of a feminist, utopian vision of technology in the "Manifesto" stood out at a time when the trend was otherwise. On the other hand, we might draw on Atwood, who claimed, "...within each utopia, a concealed dystopia; within each dystopia, a hidden utopia."¹⁰⁵² In other words, no utopia can be entirely flawless, and no dystopia, completely corrupt. Haraway was not suggesting that the metaphor of the cyborg was without fault. Instead, she proposed it as an alternative feminist political project.

Put very simply, the metaphor of the cyborg was a resource for feminism, and the "Manifesto" was a call to action. The metaphor of the cyborg troubled dominant thinking, shattering boundaries between human and animal,¹⁰⁵³ between organism and machine,¹⁰⁵⁴ and between the physical and non-physical.¹⁰⁵⁵ It stressed fluidity. It rebutted binaries. The cyborg was a model for "a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves."¹⁰⁵⁶ It focused on affinities of interest instead of identity structures.

Affinities of interest involve autonomy and they are non-hierarchical. This has implications for the classical understandings of authority that are rooted in hierarchical, statist structures. Affinities of interest—also sometimes referred to as coalitions of interest—is also suggestive for contemplating a more conceptual rooting of "straddling practices."

¹⁰⁵² Margaret Atwood, "Dire Cartographies: The Roads to Utopia," in *Other Worlds: SF and the Human Imagination* (Nan A. Talese/Doubleday, 2011) 66 at 85.

¹⁰⁵³ Haraway, *supra* note 1002 at 151.

¹⁰⁵⁴ *Ibid.*

¹⁰⁵⁵ *Ibid* at 152.

¹⁰⁵⁶ *Ibid* at 181.

d. The Cyborg as an Unorthodox Framework

Further, Haraway aimed “to story the world otherwise”¹⁰⁵⁷ in “Cyborg Manifesto,” and in doing so, employed a different kind of methodology. Thus, the metaphorical cyborg not only broke boundaries from the perspective of content in the “Manifesto” but also through its framework. The “Manifesto” is a demanding piece to read, but it is also illuminating. It does not unfold in a cumulative argument, nor is it empirical or logical in nature. Instead, it forms an argument of disclosure that takes shape six contiguous parts. These six contiguous sections are affiliated rather than forming sequential sections or categories that form a manifesto. Each of these affiliated sections are linked in a complicated structure. They are not hierarchical.

The framework of “Cyborg Manifesto” like the cyborg itself is a network—or to use the term that Haraway employs, a cat’s cradle.¹⁰⁵⁸ The following picture demonstrates a cat’s cradle:

¹⁰⁵⁷ Bell, *supra* note 1009 at 107.

¹⁰⁵⁸ Donna Haraway, “A Game of Cat’s Cradle: Science Studies, Feminist Theory, Cultural Studies” in Arthur Kroker and Marilouise Kroker, eds, *Critical Digital Studies: A Reader*, 2nd ed (Toronto: University of Toronto Press, 2013) 59.

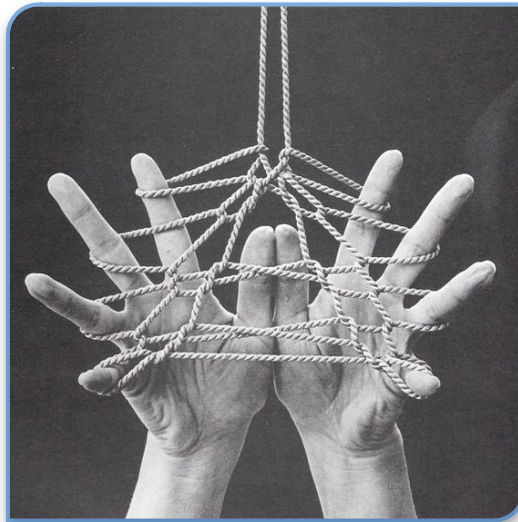


Figure 10: Cat's Cradle¹⁰⁵⁹

A cat's cradle is an agglomeration of looped string that is manipulated into intricate patterns. It is knotted, joined, muddled, and quirky. This is exactly Krisch's notion of entanglement.

Haraway's methodology in the "Cyborg Manifesto" may be seen as a form of creative ethnography.¹⁰⁶⁰ Traditional ethnography prior to the 1970's tended to marginalize the experience of women in research.¹⁰⁶¹ This is indicative of the public/private dichotomy—the theoretical underpinnings of liberalism and neo-liberalism—that operated to obscure and legitimate men's dominance of women. In other words, it is symptomatic of asking, "who counts?" in society. Women's lives, however, became increasingly important in ethnographic research and other qualitative methodologies after researchers began to heed the feminist call to describe women's lived experience in their own words.¹⁰⁶² As a result the question of whether there is a distinct feminist method of inquiry that traditional methodology has overlooked became problematic. How does one "add women" to existing analyses when it

¹⁰⁵⁹ From "Cat's Cradles, And Other String Figures," Penguin, First UK Edition (22 November 1979), online: <www.catscradlecollective.com>

¹⁰⁶⁰ See e.g. Denielle Elliott and Dara Culhane, *A Different Kind of Ethnography: Imaginative Practices and Creative Methodologies* (Toronto: University of Toronto Press, 2017).

¹⁰⁶¹ See Nancy A Naples, *Feminism and Method: Ethnography, Discourse Analysis, and Activist Research* (New York: Routledge, 2003) at 7.

¹⁰⁶² *Ibid* at 7-8.

should have done so all along?¹⁰⁶³ Dorothy Smith,¹⁰⁶⁴ Patricia Hill Collins,¹⁰⁶⁵ Sandra Harding¹⁰⁶⁶ and others extended and reframed the notion of Marx's standpoint of the proletariat as a remedy to adding women into existing research methodologies.

Haraway recognized the gains made by the development of feminist standpoint theory, but at the same time recognized what she referred to as "the god-trick of seeing everything from nowhere."¹⁰⁶⁷ In other words, she saw feminist approaches as potentially falling into the trap of essentialism. Her methodological approach is plural¹⁰⁶⁸; moreover, we can also see strains of proto-intersectionality in Haraway's methodology.

The conventional methods—techniques—considered to be the root of the ethnography are participant observation, interviewing, and analysis of the collected material.¹⁰⁶⁹ Haraway, however, straddles practices and opts instead to use the experimental method of cyborg storytelling. Here, she also transgresses conventional methodological approaches. Storytelling is often used to teach ethics, values, and cultural norms.¹⁰⁷⁰ However, in looking beyond Eurocentric knowledge systems and drawing on Indigenous peoples' traditions, storytelling is not only a focus of Indigenous epistemologies but also a vital research paradigm.¹⁰⁷¹ Despite the work of many Indigenous scholars, Indigenous ideology is

¹⁰⁶³ Sandra Harding, ed, *Feminism and Methodology* (Bloomington: Indiana University Press, 1988) at 1.

¹⁰⁶⁴ Dorothy Smith, *Institutional Ethnography: A Sociology for People* (Lanham: AltaMira Press, 2005).

¹⁰⁶⁵ Patricia Hill Collins, *Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment* (New York: Routledge, 1990).

¹⁰⁶⁶ Harding, *supra* note 1063.

¹⁰⁶⁷ Haraway, *supra* note 1002 at 189.

¹⁰⁶⁸ Naples develops what she refers to as a "multidimensional feminist standpoint approach to ethnography." See Naples, *supra* note 1061 at 8.

¹⁰⁶⁹ Elliot & Culhane, *supra* note 1060 at 9.

¹⁰⁷⁰ Cover, *supra* note 201; see also Borrow, *supra* note 201.

¹⁰⁷¹ See e.g. Eun-Ji Amy Kim & Sandra-Lynn Leclaire, "'To See Together Without Claiming to be Another': Stories as Relations, Against One-Directional Move of Indigenous Stories Travelling" (2021) 7:1 Engaged Scholar Journal: Community-Engaged Research, Teaching, and Learning 86, online: <esj.usask.ca/index.php/esj/article/view/70002/54237>; The title is a direct quote from Haraway in "Situated Knowledge: The Science Question in Feminism and the Privilege of Partial Perspective" (1988) 14:3 Feminist Studies 575. The authors critically review and reflect on the theories and practices in conventional academia that produce a "one directional" move of storytelling as a practice and a theory without seeking original approval from Indigenous communities. Of particular relevance in Kim & Leclaire is the following statement: "[s]ettler colonialism coupled with neoliberal capitalist values embedded in academia result in academic practice and

misrepresented and appropriated in academia—it flows in a “one-directional” manner across disciplines without acknowledgment of the original sources of stories and concepts.¹⁰⁷² In fact, feminism as a concept itself may also require acknowledging the role that Indigenous women played in its shaping.¹⁰⁷³

Therefore, if, as previously stated, Haraway’s methodological approach is plural, we also need to consider that cyborg storytelling is bi-directional in nature and requires not only attribution, but also acknowledgment that the concept is a distilled version of Indigenous traditions.¹⁰⁷⁴ Further substantiating this point is Haraway’s use of the cat’s cradle analogy in describing her framework. “Cat’s cradle” is a European version of the art of making pictures or telling stories using string and one’s hands. The cat’s cradle draws on the storytelling tradition using string figures of many Indigenous peoples around the world. These string games held stories that were passed down from generation to generation, connecting people to their past, and they were often told during the long winter months.¹⁰⁷⁵

Haraway also employed irony,¹⁰⁷⁶ which was a condition of postmodernity in her storytelling. She did so in order to deterritorialize¹⁰⁷⁷ the conventional “man in space” story. Her mode of storytelling is cyborgian: composed of different parts, sometimes

cultures that reproduce the perpetuation of a one-directional move of Indigenous story travelling” at 90; see also Judy Iseke, “Indigenous Storytelling as Research,” (2013) 6:4 *International Review of Qualitative Research* 559.

¹⁰⁷² Kim & Leclaire, *supra* note 1071 at 91.

¹⁰⁷³ Gilio-Whitaker states, “The imposition of foreign cultures, and Christianity in particular, was corrosive to societies that were typically matrilineal or matrifocal, were foundationally equitable in the distribution of power between genders, and often respected the existence of a third gender and non-hetero relationships. See Dina Gilio-Whitaker, “The Indigenous Roots of Modern Feminism” (11 March 2020), online: <www.beaconbroadside.com/broadside/2020/03/the-indigenous-roots-of-modern-feminism.html>; see also Robert A Williams Jr, *The American Indian in Western Legal Thought: The Discourses of Conquest* (Oxford: Oxford University Press).

¹⁰⁷⁴ Kim & Leclaire *supra* note 1071 at 95.

¹⁰⁷⁵ See “String Games”, online: *University of Regina* <aboriginalperspectives.uregina.ca/games/game14.shtml>.

¹⁰⁷⁶ Haraway refers to irony as “blasphemy.” Haraway, *supra* note 1002 at 5.

¹⁰⁷⁷ The concept of deterritorialization is concerned with subverting formal structures—or territorial groupings—such as the church, the family, or any socially arranged aggregate. Deterritorialization involves the indelible potential to change and mutate from within. See Gilles Deleuze, *L’Anti-Oedipus: Capitalism and Schizophrenia* (Paris: Éditions de Minuit, 1972).

incommensurable, yet networked. Like the metaphor of the cyborg, Haraway's storytelling breaks conventional boundaries and thus demands a different kind of technique.

Haraway's refocused feminist methodology with its ties to Indigenous traditions—albeit unacknowledged and distilled—to one based on affinities of interest. This contributed to the methodological approaches being developed by cyberfeminists.

e. The Shortcomings of “Cyborg Manifesto”

“Cyborg Manifesto” has also been criticized, which leads to the question of whether this is in keeping with cyberfeminisms' antinomies described earlier; or, whether these criticisms are too big to overcome? Haraway's metaphor of the cyborg has been criticized as lacking in “realism about the fate for ‘real’ women and men.”¹⁰⁷⁸ That, in fact, cyborg-thinking results in “[o]nce again the coloniser coloni[zing].”¹⁰⁷⁹ In other words, the onlife environment simply mirrors the oppressive behaviours that exist in the physical environment. Correspondingly, others contend that the metaphor is limited since the “cyborg itself is fraught with a Western, patriarchal violence that cannot be ignored in the greater context of technology and technological innovation.”¹⁰⁸⁰ Others have maintained that the cyborg has become “literalized” in the hands of other academics and, as a result, has lost its function as a metaphor.¹⁰⁸¹

The most powerful critiques and shortcomings stem from conflating identity, thus raising the question as to whether we can continue to rely on Haraway. She claims, “we are all cyborgs.” But who is we? Sandoval and activists like Jillian Weise, raise this fundamental question. Sandoval explains, “Haraway's model has acted as a transcoding device, a

¹⁰⁷⁸ Klein also notes “...who will it be that decides who—of which country, sex, race, age—will get the latest electronically wired body, and who will miss out?” See Klein, *supra* note 1007 at 201.

¹⁰⁷⁹ *Ibid* at 217.

¹⁰⁸⁰ DeCook, *supra* note 1007 at 1158.

¹⁰⁸¹ See Ingrid Bartsch, Carolyn DiPalma & Laura Sells, “Witnessing the Postmodern Jeremiad: (Mis)Understanding Donna Haraway's Method of Inquiry (2001) 9:1 Configurations 127 at 140.

technology that insists on translating the fundamental precepts of U.S. third world feminist criticism into categories that are comprehensible under the jurisdictions of feminist and cultural studies.”¹⁰⁸²

It is not an accident that Haraway employs what Sandoval refers to as “U.S. third world feminism”—here we could also draw on the distillation of Indigenous methodology discussed earlier. Haraway weaves “affinity-through-difference” to advance her ironic cyborg feminist thinking, instead of giving it its theoretical and methodological due recognition. She conflates actual lived experience with generalized thinking about racialized women, thus depoliticizing and repressing the gains made. Equally, Weise explains, “[the ‘Manifesto’] coopts cyborg identity while eliminating reference to disabled people on which the notion of the cyborg is premised. Disabled people who use tech to live are cyborgs. Our lives are not metaphors.”¹⁰⁸³

Again, who is we? Without acknowledging these entangled shortcomings, we run the risk of repeating them.

Additionally, a weighty burden to the cyborg’s continued salience is Haraway’s own admission that the “Manifesto” had a “surprising half-life. It has proved impossible to rewrite the cyborg.”¹⁰⁸⁴ However, in a later publication, Haraway reformulated the cyborg in the following way:

Cyborgs are kin, whelped in the litter of post-World War II information technologies and globalized digital bodies, politics, and cultures of hum and not-human sorts. Cyborgs are not machines in just any sense, nor are they machine-organism hybrids. In fact, they are not hybrids at all. They are, rather, imploded entities, dense material semiotic “things”—articulated string figures of ontologically heterogeneous, historically situated, materially rich, virally proliferating relatings of particular sorts,

¹⁰⁸² Chela Sandoval, “New Sciences: Cyberfeminism and the Methodology of the Oppressed” in David Bell & Barabara M Kennedy, *The Cybercultures Reader* (New York: Routledge, 2000) 374.

¹⁰⁸³ Jillian Weise, “Common Cyborg”, online: *Granta* <granta.com/common-cyborg>.

¹⁰⁸⁴ Donna Haraway, “Introduction” to “A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s” in Elizabeth Weed, ed, *Coming to Terms: Feminism, Theory, Politics* (New York: Routledge, 1989) 173.

not all the time everywhere, but here, there, and in between, with consequences.¹⁰⁸⁵

What Haraway is describing here are entanglements. While the cyborg was situated at a particular time in history and politics, the very nature of it was malleable. The fact and manner of affinities is that they are relational.¹⁰⁸⁶ The cyborg as either method or methodology was not intended as totalizing or universal. The cyborg as a metaphor was never described as static, and the cyborg as methodology was creative and it disrupted convention.

Haraway has also suggested we should keep “pushing it and filling it”¹⁰⁸⁷ and that “cyborg figurations can continue to do critical work.”¹⁰⁸⁸ The criticisms of “Cyborg Manifesto” may be considered apropos—they are in keeping with antinomies of cyberfeminisms. We might also see them as part of the friction and flux inherent in entanglements.

To continue being useful, however, cyborg figurations need to attribute and acknowledge as necessary. This is because cyberfeminisms are still relevant as we grapple with our increasingly digitally mediated lives.

IV. *Challenging the Entanglements*

Cyborg figurations have implications for Krisch’s notion of entangled legalities. Krisch describes entanglements as existing on a continuum, providing a line drawing where one end of it (separation) is different from the other (integration). But can an entanglement really be described as on a continuum? An entanglement, like the cat’s cradle is twisted, interwoven, networked, and not easily separated. Haraway’s cat’s cradle—her networked methodology—

¹⁰⁸⁵ Donna Haraway, *Staying With the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press) at 104.

¹⁰⁸⁶ See Nedelsky, *supra* note 35.

¹⁰⁸⁷ Donna Haraway & Thyrza Goodeve, *How Like a Leaf* (New York: Routledge, 1998) at 36.

¹⁰⁸⁸ N Lykke et al, “Interview with Donna Haraway” in Don Ihde and Evan Selinger, eds, *Chasing Technoscience: Matrix for Materiality* (Bloomington: Indiana University Press, 2003) 47 at 52.

advances a more apropos explanation of Krisch's idea of entanglement. It also provides a theoretical basis for the zone he labels as "straddling practices."

If, however, we ground the idea of entanglement with theory, specifically cyberfeminisms, then "entanglement" may also need to be explored for its connections with transformative interweaving of Indigenous collective knowledge. This may have implications for Krisch's entanglement continuum since, arguably, it will incline the idea of entanglement with integration—legal pluralism. This area warrants further investigation.

On top of this contribution to grounding Krisch's idea of entanglements, cyberfeminisms, and more pointedly, "Cyborg Manifesto," help in continuing to mete out the nature of algorithmic authority. We see a more nuanced picture of authority in respect of its dispersion: cyberfeminisms attest to a type of reclaimed authority, and cyborg figurations demonstrate the constructed and networked nature of boundaries. Cyborg figurations are semblances of the simpler cyborg, but they are a mixture of discords and concords. This rebooted version—cyborg figurations—demands inclusivity, which involves equal access to opportunities and resources.

If we think about what the physical world looked like in layers prior to the Internet, it is fairly simple: a layer of people and things atop geography.

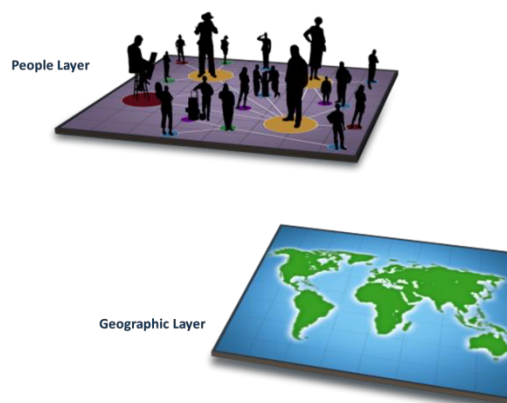


Figure 11: Offline Environment¹⁰⁸⁹

This model also reveals hierarchy—people on land. Traditional thinking about authority took a solid form, which as described previously, was restrictive and often rooted to central governmental framework. This solid expression of authority devalued informal instruments—soft law. Authority in this simple model was myopic.

In the onlife environment, the geography and the people layers—and their histories—are entangled with three additional layers: infrastructure, code, and devices.

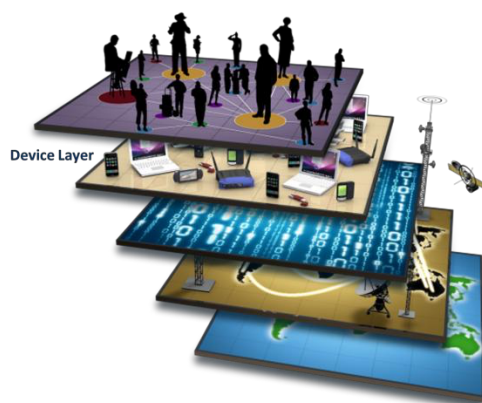


Figure 12: Onlife Environment¹⁰⁹⁰

¹⁰⁸⁹ C Inglis, “Cyberspace—Making Some Sense of It All” (2016) 15:2 J of Information Warfare, 17 at 19.

¹⁰⁹⁰ *Ibid* at 23.

As a consequence of these entangled layers, we see the dispersion of authority. The additional infrastructure layer, for instance, merges with the geography base and arguably remaps how we have traditionally understood jurisdiction. Specifically, the undersea submarine communications cables form the backbone of the Internet, thus creating a more complicated understanding of jurisdiction as the following diagram demonstrates:

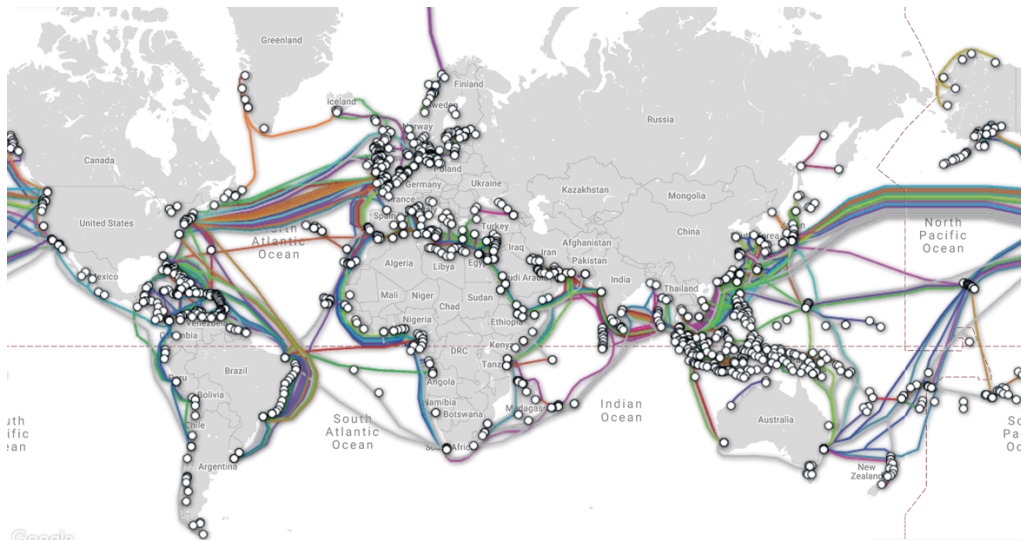


Figure 13: Submarine Cable Map¹⁰⁹¹

There is further complexity in this environment, not only because of added and merging layers of the onlife environment, but because this environment results in new issues in respect of equity. The digital divide is an example, which may be described as the disparity between those who have reliable internet access and those who do not.¹⁰⁹² One cannot help but observe in this diagram the flow of the majority of the cables: to/from China, to/from the US, and on to Europe.

Furthermore, the flows of information over these cables create additional troublesome contestation. Data sovereignty, for example, is the concept that digital data is bound by the

¹⁰⁹¹ TeleGeography, “Submarine Cable Map” (27 April 2024), online: < www.submarinecablemap.com >.

¹⁰⁹² See e.g. Jan Van Dijk, *The Digital Divide* (Cambridge: Polity Press, 2020); see also Anne Peacock, *Human Rights and the Digital Divide* (London: Routledge, 2019).

laws of the country in which was garnered.¹⁰⁹³ At the same time, Indigenous data sovereignty, which may be referred to as “the right of Indigenous Peoples to govern the collection, ownership, and application of data about Indigenous communities, peoples, lands, and resources,”¹⁰⁹⁴ includes digital data. And some Indigenous peoples are taking issue with the notion that Indigenous data should be subject to anyone other than Indigenous forms of governance.¹⁰⁹⁵ Thus, with accelerating datafication in society along with decision-making in respect of data sovereignty, Indigenous peoples are being subjected to a new and amplified form of colonialism.

Additionally, this merging of geography and infrastructure along with Indigenous data sovereignty unearths the principle of *uti possidetis*, originally a Roman law concept that developed into a significant principle governing decolonization.¹⁰⁹⁶ Through *uti possidetis*, the administrative borderlines drawn by colonies sprang up as international boundaries. And these boundaries were drawn, by and large, with no consideration for a variety of factors, including Indigenous culture.¹⁰⁹⁷ When contemplating “redrawing lines” in respect of the onlife environment, *uti possidetis* is a potentially particularly meaningful and fruitful area for further research.

As our devices become increasingly smart, the device layer and the people and things layers mingle together. Like the remapping of jurisdiction, this poses further complications.

¹⁰⁹³ See e.g. Paul Kirvan, “What is Data Sovereignty?” (2024), online: *TechTarget* <www.techtarget.com/whatis/definition/data-sovereignty>.

¹⁰⁹⁴ Stephanie Carroll Rainie et al, “Indigenous Data Sovereignty” in Tim Davies et al, eds, *State of Open Data: Histories and Horizons* (Cape Town: African Minds, IDRC, 2019) 300 at 301.

¹⁰⁹⁵ For example, Māori Data Sovereignty recognizes that Māori data should be subject to Māori governance. See Royal Society Te Apārangi, “Mana Raraunga Data Sovereignty (2023), online (pdf): Royal Society of New Zealand Te Apārangi <www.royalsociety.org.nz/assets/Mana-Raraunga-Data-Sovereignty-web-V1.pdf>.

¹⁰⁹⁶ See e.g. Steven R Ratner, “Drawing a Better Line: Uti Possidetis and the Borders of New States” (1996) 90:4 *American J of International L* 590.

¹⁰⁹⁷ See e.g. Malcom N Shaw, “The Heritage of States: The Principle of Uti Possidetis Juris Today” (1996) 67 *British Year Book of International L* 75; see also Rashwet Shrinkhal, “‘Indigenous Sovereignty’ and Right to Self-Determination in International Law: A Critical Appraisal” (15 March 2021) 17:1 *AlterNative: An International Journal of Indigenous Peoples* 71, DOI: <10.1177/1177180121994681>.

The two layers of people and devices are blurred or hybrid. We could, in fact, label this blurred layer as “the cyborg figuration layer.”

The code layer seems to be the only distinct layer. And much has been said about it: from code is law¹⁰⁹⁸ to law is code¹⁰⁹⁹ and beyond to code is capital.¹¹⁰⁰ This layer does much more than instruct the computer what to do. Ripple effects in the code layer, result in ripple effects in the cyborg figuration layer, and in the re-mapped jurisdiction layer.

Taken altogether, these layers form the onlife environment. It is a much more complicated environment than the simpler people and geography model shown in Figure 2. The layers in the onlife environment blur and combine. It is a compound model, rather than simple one. We can see from this visualization that the onlife environment is more complex.

Moreover, generative AI technologies like GPT-4, DALL-E,¹¹⁰¹ and AlphaCode¹¹⁰² create further complexity in grappling with understanding algorithmic authority.¹¹⁰³ These generative AI technologies are replacing task-specific models of AI, thus serving as a type of substructure for an assortment of applications. Generative AI technologies are becoming foundation models for many other AI-based systems. They are becoming infrastructure, thus an additional layer in the onlife environment is emerging. We might position this layer between the code layer and the devices and people layers in Figure 4.

¹⁰⁹⁸ See Lawrence Lessig, *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999); see also Lawrence Lessig, *Code 2.0* (New York: Basic Books, 2008).

¹⁰⁹⁹ The converse: laws of society ultimately shape the design of computer systems. See e.g. Daniel Castro, “Law is Code” (13 February 2014), online: *Centre for Data Innovation* <datainnovation.org/2014/02/law-is-code/>.

¹¹⁰⁰ Pistor, *supra* note 45.

¹¹⁰¹ DALL-E is another OpenAI system that creates images and art from prompts in natural language. See “DALL-E 2,” online: <openai.com/dall-e-2>.

¹¹⁰² “AlphaCode” is a DeepMind (Google) transformer-based LLM initially trained on GitHub code repositories. See AlphaCode, online: <alphacode.deepmind.com>.

¹¹⁰³ Part of this analysis on foundational models and infrastructure appears in Amanda Turnbull, “The Framework is the Message: Legal and Ethical Implications of ChatGPT” (forthcoming July 2024) 21: 2 Canadian J L & Technology.

The following diagram demonstrates the potential development of AI infrastructure:

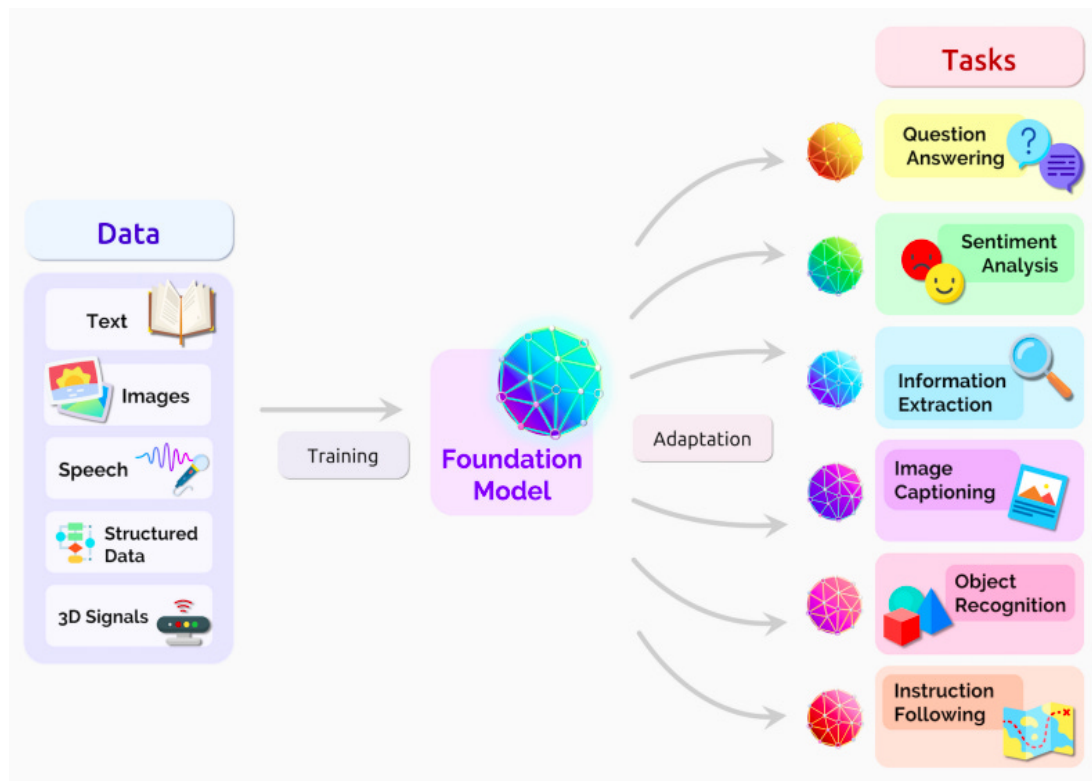


Figure 14: The Development of AI Infrastructure with Foundation Models¹¹⁰⁴

What we see occurring in this diagram, is that generative AI models like GPT-4 that are trained on data scraped from the Internet are becoming foundation models—infrastructure—for other applications. This allows start-ups, for example, to concentrate on final phases of AI development as opposed to having to build models from scratch. In the larger picture, this means that authority is being expressed through infrastructure. How are we to understand generative AI infrastructure that regulates us?

¹¹⁰⁴ Nandu Anil, “The Evolution of Infrastructure Markets—Foundation Models: AI Infrastructure in the Era of Foundation Models”, *Notes & Upside* (6 December 2022), online: <nandu.substack.com/p/the-evolution-of-infrastructure-markets-f0f?utm_source=profile&utm_medium=reader2>.

a. The Implications of Infrastructure

The term “infrastructure” is used frequently to refer to systems, services, installations, and facilities required in the operation of society. The word, however, has its roots in French in the 1870s, when engineers began using it to refer to the preparatory work done by public bodies to facilitate the building of railways, which was by-and-large, a private undertaking.¹¹⁰⁵ This preparatory work included not only legal agreements and financial undertakings relevant to the state, but also topics related to private corporations such as construction and land preparation.¹¹⁰⁶ On account of this, the preparatory “infra” work was both a public and private sector undertaking with no real division between the two.

Two observations emerge from looking briefly at the etymology of “infrastructure”: first, that the root meaning suggests that there is in fact an implicit *mélange* between the public realm and the private sector rather than distinctive divisions. This is an instance of the blurring of boundaries. Secondly, that language—and more specifically, language as it pertains to technology—is the essence of infrastructure.

The term “infrastructure” was adopted in English in the 1880s and gained popularity during the neoliberal decades. But the word lost its original meaning in respect of the “infra” working documents created in dealing with new technology.

In looking at the uptake of “infrastructure” from a cross-disciplinary perspective, there is vast literature in engineering dealing with water and sewage systems, and railways.¹¹⁰⁷ This demonstrates how the term “infrastructure” was adapted to refer to the basic structures or

¹¹⁰⁵ See especially Mariana Valverde, *Infrastructure: New Trajectories in Law* (New York: Routledge, 2022) at 3-4; see also Ashley Carse, “Keyword: Infrastructure – How a Humble French Engineering Term Shaped the Modern World” in Penelope Harvey, Casper Bruun Jensen and Atsuro Morita, eds, *Infrastructures and Social Complexity: A Companion* (Routledge, London 2016) 27.

¹¹⁰⁶ *Ibid*, Valverde.

¹¹⁰⁷ *Ibid* at 5.

facilities needed for the operation of society as opposed to the “infra” work done in implementing new technologies.

There is also much interesting research in the social sciences, which is centred mainly on urban studies and anthropology, and frequently referred to as “the infrastructure turn” within that literature.¹¹⁰⁸ Both legal and socio-legal scholarship have occupied less of a position in this turn, with administrative law being the main area of contribution, particularly work on the consequences of private law mechanisms and their inclusion in infrastructure planning.¹¹⁰⁹

Benedict Kingsbury contributes to the scholarship on infrastructure, but he does so in a unique way in that he is interested in how infrastructure itself may also be an infrastructure—or framework—for law.¹¹¹⁰ To “think infrastructurally,” requires,

... understanding infrastructure not simply as a thing, but as a set of relations, processes and imaginations. One well-established approach brings together in infrastructural thinking the technical (the designed and engineered physical and software elements), the social (the human and non-human actants in their intricate relations), and the organisational (the forms of entity, regulatory arrangements, financing, inspection, governance, etc.) It is only possible to understand the processes of infrastructure, and the consequences or potential of any intervention in infrastructure, by fully exploring each of these and their joint interactions and effects.¹¹¹¹

Kingsbury explains that law may intrude in these technical, social, and the organisational areas, and reciprocally, each of these may be entrenched in legal environments.¹¹¹² What we

¹¹⁰⁸ *Ibid.*

¹¹⁰⁹ *Ibid.*

¹¹¹⁰ Kingsbury views infrastructure as a methodology for exploring the nature of international law, particularly with regard to issues of futurity, such as adapting to new technology. Kingsbury’s research reveals that infrastructure in the context of international law was adopted in 1949 as a category to refer to physical and communications facilities in respect of establishing a collective West European defense, mainly due its “imprecision and elasticity” as a term. “Infrastructure” nonetheless became a steadfast concept and also developed to include non-material aspects, such as notions of good governance in international development during the 1990s. Additionally, tied to this evolution of the concept of infrastructure was a growing interest in the methods to regulate physical infrastructure, and further, a desire to recognize these methods themselves as infrastructure. We might think of this then as the burgeoning of regulatory infrastructure for evolving infrastructure. Benedict Kingsbury, “Infrastructure and InfraReg: On Rousing the International Law ‘Wizards of Is’” (2019) 8:2 Cambridge International L J 171 at 180.

¹¹¹¹ *Ibid* at 179.

¹¹¹² *Ibid.*

begin to glean from thinking infrastructurally is that it requires a thorough understanding of entanglements.

As we transition to onlife infrastructure, our traditional understandings of rules, sanctions, and fundamental rights are being tested and strained by deals, nudges, and technological affordances of its landscape.¹¹¹³ At the same time, however, the affordances of digitalization allow platforms to make infrastructural choices whereby there exists a certain kind of legal verisimilitude. Referring to this this as “infra-reg” or infrastructure as regulation, Kingsbury emphasizes,

In crude simplification, infrastructure may be a means of implementing law, or of enabling law. It may be a substitute for law or displace law. It may be an obstacle to law or prevent law, or interact pathologically with law. It shapes juridical relations and imaginaries. Infrastructure may create dependencies, engender cooperation, or structure conflict.¹¹¹⁴

Kingsbury sees the potential of infra-reg in broadening our thinking about law and technology.¹¹¹⁵ This is particularly relevant in light of generative AI and their potential as foundational models.

Further, we know that LLMs such as ChatGPT instantiate a semantic shift in society. If we also draw in the original meaning of infrastructure—that language as it pertains to technology is the essence of infrastructure—what we see beginning to emerge is that language also plays a role in infra-reg thinking. In other words, it seems to be a recapitulation of Hart’s observation that the source of law’s authority centres on the authority of language.

This entangling of infrastructures may have an impact on their regulatory effects and also whether—and how—they may be regulated.¹¹¹⁶ This is particularly heightened in the case of LLMs in taking into account that they use language—itsself an infrastructure—and

¹¹¹³ *Ibid* at 185.

¹¹¹⁴ *Ibid* at 182.

¹¹¹⁵ *Ibid* at 172.

¹¹¹⁶ Benedict Kingsbury, “InfraReg”, online: *Institute for International Law and Justice, NYU* <www.iilj.org/infrareg/infrareg-project/>.

that as a potential foundational model, they function as infrastructure themselves. Effectively, LLMs create a kind of compound infrastructure—they are infrastructure, they exert influence on infrastructure, and they are entangled with other modes of infrastructure. This compounding of infrastructure is unprecedented and it tells us that although generative AI is clearly an actor in our entangled legalities, it is unlike any other. Given that generative AI is becoming foundational to other AI technologies, we may well be contemplating the prospect of “wicked entanglements.”¹¹¹⁷ Or perhaps that generative AI is in fact an entangler, rather than an entanglement that competes with other entanglements.

V. Derivative Authority

This brings us to the final section of this chapter that considers, in light of this exploration of the continued nuancing and dispersion of authority, how we are to understand authority in the Algorithmic Turn in society.

GPT-4 is trained on all of our data available on the Internet, which is mixture of good data and bad data—some of it is accurate, but some of it is out of date. LLMs make decisions based on this training material, and we know from Chapter 2, that those decisions may result in AI hallucinations. All of this becomes a good-bad-missing-hallucinogenic foundation for other applications of AI. From this explanation, we can see how authority may be characterized as not only spreading to new actors in our entangled legalities—generative AI technologies—but also, that in this shift to serving as infrastructure, it becomes recycled authority. Generative AI re-uses our data, and then makes decisions on the basis of that scraped data from the Internet.

¹¹¹⁷ Wicked legal systems that are likely to cause harm is a much-debated focal point between legal positivists and their critics. See e.g. Lon L Fuller, “Positivism and Fidelity to Law: A Reply to Professor Hart” (1958) 71:4 Harvard L Rev 630.

Recycled authority implies a form of authority that is broken down and reused as whole. On one hand, this may be a sufficiently robust form of authority, provided that the data input into the authoritative process is suitable. On the other hand, we cannot guarantee the quality of data given the magnitude of training data required for generative AI.

Moreover, as generative AI technologies like GPT-4 continue to develop, they are requiring more training data than is available on the Internet. As a result, tech “giants” like OpenAI are taking shortcuts to harvest data, and also using data that generative AI models produce themselves.¹¹¹⁸ This is not raw or “organic” data but “synthetic data.”¹¹¹⁹ Algorithms are making decisions with synthetic data on a large scale. The consequence of generative AI is that we are moving beyond understanding algorithmic authority as a type of recycled authority to contemplating it as synthetic authority.

Synthetic authority is not genuine. It is manufactured. As complicated as generative AI technologies are becoming, they do clearly tell us one thing: *de facto* algorithmic authority is a red herring. What in fact we are dealing with is derivative authority. By way of definition, we could say that derivative authority is a secondary expression of authority that contains elements of other expressions of authority. Derivative authority may also be imitative, and in some instances, it may be speculative in nature. It is separate from human expressions of authority. Derivative authority is not homologous with true authority.

Derivative authority is in keeping with Krisch’s idea of entanglements since it reveals multiple centres of authority—a polycentric framework.¹¹²⁰ Further, it has implications for thinking infrastructurally and for the development of law and policy with the rise of infrastructure markets. It is also important for the developing literature on the ethics of AI.

¹¹¹⁸ Cade Metz et al, “How Tech Giants Cut Corners to Harvest Data for AI”, New York Times (6 April 2024), online: <www.nytimes.com/2024/04/06/technology/tech-giants-harvest-data-artificial-intelligence.html>.

¹¹¹⁹ *Ibid.*

¹¹²⁰ Krisch, *supra* note 973 at 506.

Derivative authority attests to the fact that AI is much more than a tool. We know that algorithms are actors since chapter 2 demonstrated that they function as expositors rather than authors on the authorship continuum. Further, the algorithmic contract in chapter 3 bears witness to the fact that algorithms are actors in the law of contracts. And chapter 4 only cements this understanding since in the execution of an algorithmic contract, the outcome is potentially harmful. Algorithms are actors in entangled legalities. However, in each of the instances examined in the course of this dissertation, algorithms depend upon a derivative form of authority in rendering decisions, be it recycled or synthetic authority.

Derivative authority also tells us that we need guardrails like the EU's *AI Act*, which contends with risk at varying levels, including risk posed by generative AI, thus nudging the future of AI in a human-centric orientation. Consequently, the EU's *AI Act* holds much promise as a global waymark for comprehensively regulating fast-growing and next-generation technology. While the "Brussels effect"¹¹²¹—the EU's ability to project its own market standards on the global scale—may prove to be particularly pronounced in respect of the new EU *AI Act*, we also need to be cognizant of the fact that a "one-size fits all" system is problematic for our diversely entangled legalities. The EU *AI Act*, however, a step in turning the page on the notion of technological neutrality. This has merit.

In closing, this chapter brings to the fore that ML algorithms may be considered part of the aggregation of actors within entangled legalities. However, we need to be aware that when we delegate decision-making to algorithmically driven technologies, these decisions are at least authoritatively once-removed from true authority. They may also be imitative as opposed to genuine. All of this requires oversight. When it comes to decision-making authority, derivative is not as good as the real thing.

¹¹²¹ Anu Bradford, *The Brussels Effect: How the European Union Rules the World* (Oxford: Oxford University Press, 2019).

CONCLUSION

...I leave to my readers the real fun of applying [speech act theory]
in philosophy.

J. L. Austin¹¹²²

I. Law, Language, and Authority in the Algorithmic Turn

This central focus of this investigation has been to examine how law's relationship with language changes with the use of algorithmically driven technologies and its impact on how we understand the changing nature of authority. To undertake this, I employed speech-act theory as conceived by ordinary language philosopher J. L. Austin in the posthumously published work, *How to Do Things with Words*.¹¹²³ Austin believed that many traditional philosophical problems were only illusions brought on by misunderstandings about language. Austin's theory was also fundamental to Hart's *Concept of Law*.¹¹²⁴ While this deliberate choice to look to the past as we contemplate an ostensible engagement with a future that we might never have contemplated might at first seem odd, I took the position that it is important to understand how language has been used previously to better understand the nature of law and where it draws its authority. This concluding section will summarize what I discovered.

Speech-act theory scrutinizes language as a form of action and effects rather than focusing on language as a medium for transmitting information. In other words, speech-act theory is about what we do with words; it illuminates the possibility that language may do much more than simply describe reality.

Austin identified three types of forces within a speech act: the locutionary, which is the literal meaning of what is said; the illocutionary, which is the act performed or the social

¹¹²² Austin, *supra* note 65 at 164.

¹¹²³ *Ibid.*

¹¹²⁴ Hart, *supra* note 64.

meaning of what is stated; and the perlocutionary, which is the effect of what was declared.¹¹²⁵ I drew on these three forces as the organizing principle in this investigation. Thus, Chapters 2, 3, and 4 analyzed algorithmically generated speech acts at the locutionary, illocutionary, and perlocutionary levels respectively.

Chapter 2 involved a locutionary analysis of generative AI and the implications for authorship. The findings revealed that ChatGPT can successfully generate acts of speech, but unlike humans, AI does not have agency. It has no authority to author words. Consequently, the very notion of AI authorship is a misfire since it lacks the authority to be an author.

However, ChatGPT still generates intrinsic meaning that cannot be attributed to either the programmer or the user of the LLM since neither the programmer nor the user can foretell the output. There tends to be a certain amount of imitation in the output produced by ChatGPT, but, at the same time, there is also novel output that neither a programmer nor a user could anticipate. This imitated text with some fresh content is not unlike the content created by a “commentator,” who, historically, had limited authority in the chain of authoring. To revamp “commentator” in respect of ChatGPT and other LLMs, I suggested employing the term “expositor.” This both differentiates the role from its established, historical usage and provides a terminus for the recurring debates about whether an AI can be an author.

Further, assigning the role of expositor has implications for responsibility—particularly corporate responsibility—with regard to AI hallucinations, speech harm, and copyright infringement. There would also be a trickle-down effect in respect of responsibility for content creators. This would take care of minding the gap between the possibilities that ChatGPT and other LLMs offer and their more formalized role in, for example, research and writing academic papers.

¹¹²⁵ *Ibid* at 109.

Allocating the role of expositor may also have consequences for the *Copyright Act* and for the principle of “technological neutrality.” Arguably, this is overdue given that we have moved beyond the point in which we can continue to describe generative AI as simply a “tool.” Generative AI is a fundamental challenge to how we have previously understood technology, particularly the role of technology in law. “Expositor” establishes an alternative to “tool” and to “author.” It offers a solution.

Chapter 3 shifted gears from a locutionary focus to an illocutionary investigation, this time focusing on the intended meaning of algorithmically drafted words rather than the previous chapter’s focus on intrinsic meaning and authored words. To recount, the illocutionary act is about the intended meaning of words—what one does in performing an utterance. This chapter examined the developing algorithmic contract and its unacknowledged use in *Uber v. Heller* (2020), which has been seen as a landmark case in Canadian contract law in that it clarified the doctrine of unconscionability. However, as my analysis shows, *Uber* is a landmark case not only because it clarifies the doctrine of unconscionability in Canada, but since it does so in the context of an algorithmic contract. This is problematic since the test for unconscionability requires a certain amount of intention on the part of the contract offeror. And we know that algorithms have no agency.

Thus, I suggested an alternative in order to deal with algorithmic exploitation in the context of algorithmically drafted words: the single principle of inequality of bargaining power, which unites the doctrines of duress, unconscionability, and undue influence. The single principle of inequality of bargaining power provides the judiciary the opportunity to develop a more effective doctrine to deal with algorithmic contracts, which differ markedly from their paper-based counterparts that the doctrine of unconscionability is modeled upon.

Chapter 3 demonstrated that algorithms function as actors in the law of contracts, but they do so as actors without intent. Algorithms may create “illocutionary frustration” as the

result of a failed uptake of illocutionary intention. This is an important observation, particularly if the judiciary continues to be yoked to the old “ideal” of technological neutrality.

Having said that, illocutionary frustration does not necessarily result in perlocutionary silencing. This, too, has ramifications for technological neutrality since this type of frustration may prevent a fully successful illocutionary act. Illocutionary frustration occurs because algorithms have no intent. The repercussions of this observation are that we cannot continue to apply the same rules and doctrines to algorithmic contracts that are applicable when humans are the actors in the contracting process.

Chapter 4 presented a perlocutionary analysis of algorithmically drafted words. The perlocutionary act is about the consequences of saying something. These consequences are not only immediate such as the effect of surprising someone, but they may also have further repercussions—the “accordion effect.” The previous two chapters demonstrated that algorithms have no agency, thus cannot have intent, however, algorithms do function as actors in the law of contracts. This may result in illocutionary frustration, but that does not necessarily mean that there are no perlocutionary effects. It means that there are outcomes that technological neutral approaches are unprepared for.

Chapter 4 examined the perlocutionary effects of executing an Uber algorithmic contract. Using data from the two safety reports that Uber issued in 2019 and 2022 respectively, this chapter provided evidence that the perlocutionary effect of executing an algorithmic contract is the growing problem of technology-facilitated gender-based violence. Both safety reports overlook the role of technology in relation to sexual violence, positioning sexual violence, instead, as a broader societal problem.

To deal with the perlocutionary effect of technology-facilitated gender-based violence, Uber has to come to terms with the fact that to have a toxic-free algorithm, it first must deal

with its own toxic environment, including its history involving unethical behaviour since that environment contributed to how its technologies developed and continue to develop. Gender safety was never an objective in developing an app to hail a car.

By recognizing the role of technology in facilitating harm, Uber could play an important part in proactively addressing the perlocutionary consequences of algorithms executing their contracts. When decision-making without intention occurs, novel harm may be the outcome.

Chapters 2, 3, and 4 steer us into making the following conclusions: first, an algorithmic speech act is a novel linguistic form; second, the question of agency needs to be addressed in order to deal with algorithmic speech acts; and third, unprecedented harm may be the outcome of an algorithmic speech act. This analysis of law and language in the context of algorithmically driven technologies set the stage for chapter 5, which addressed how we are to understand authority in the context of algorithmic decision-making.

Chapter 5 took the starting point that authority is a dispersed notion. This stands in contrast to how we have traditionally examined its nature—as having derived from a state-centric model, which implies hierarchy. A better way of describing authority is through Krisch’s idea of entanglement. This is a more plausible model for thinking about law as we adopt these increasingly sophisticated technologies that operate in a transnational framework.

Drawing on cyberfeminism, specifically “Cyborg Manifesto” as a way to strengthen this notion of entanglement, chapter 5 revealed that we ought to think about entanglements as the word itself suggests—in a networked manner—rather than on a continuum as suggested by Krisch. It also demonstrated that in rethinking how we understand authority in the context of algorithmically driven technologies, we actually begin by countering not only conventional understandings of authority, but also unconventional views since cyberfeminism revamps the

anti-authoritarian position of feminism. And when we engage from this networked position, we also see aspects that we have missed—Indigenous ways of understanding, for example.

Comprehending authority in an entangled manner is both a solution and a problem. It allows for a more accurate and apropos model of thinking about authority in the context of algorithmically driven technologies. But it is also problematic in that when we unravel entangled authority, new and unsettling issues begin to appear such as the digital divide or the accelerating datafication of society.

Moreover, generative AI technologies are becoming infrastructure. And infrastructure has a historical connection with language. Specifically, it referred to the public and private sector preparatory work involved in accommodating technology in society. This connection with language is a weighty observation in this dissertation since I chose to employ ordinary language philosophy to elucidate the nature of law in the context of algorithms.

Notwithstanding the greater goal of this dissertation, even this observation seems to justify a return to using ordinary language to tease apart the philosophical problems posed by algorithmic technologies. At the same time, however, generative AI as infrastructure poses potential “wicked entanglements”—entanglements that pose harmful consequences.

All of this boils down to the fact that algorithmically driven technologies create secondary expressions of authority, which I referred to as derivative authority. And derivative authority is distinguishable from legitimate or *de facto* authority. Derivative authority is not how we have habitually understood authority. So, while generative AI may serve as foundations for other technologies, we need to bear in mind that the decisions being made are not categorically authoritative. They are derived and formulaic sources of authority. And this requires governance and oversight.

Knowing and applying the findings that algorithms do things differently with language than do human beings compels us to ask if we can still draw the conclusion that law and language have a concomitant relationship?

Speech-act analysis tells us that authorship in the human context is different than in the algorithmic context. But there is an attendant form of text generation. I suggested we borrow from the past and renovate the manuscript culture framework of authoring where scribes, compilers, commentators, and authors were co-participants in the creation of meaning. Specifically, I proposed employing “commentator” but giving it a reboot as “expositor.” This term clarifies yet differentiates the attendant form of text generation in the context of algorithms. Thus, we can see there continues to be a contemporaneous relationship between law and language.

Further, acknowledging Scholz’s notion of the algorithmic contract does not mean that we can no longer depend upon on the law of contract to deal with this new form of contracting. It does, however, mean that we need recognize the role that ML algorithms play in contract law. This means refraining from adherence to a neutral approach to technology and adapting the law of contract to deal with algorithmic contracting. This has implications also for how we understand intent, and ensuingly, how we are to deal with the notion of agency. Here again, in the context of drafting, we can continue to see a coterminous relation between law and language.

In the execution of an algorithmic contract, novel harm was the outcome, specifically technology-facilitated gender-based violence. Decision-making without intention is harmful. Once again, we can see an accompanying relationship between law and language.

In light of an “expositor,” algorithmic contracts, and novel harm, we can draw the conclusion that law and language not only continue to have a concomitant relationship, but in fact, law and language have a stronger concomitant relationship than previously realized.

To further testify to this thickened concomitant relationship between law and language in the context of algorithms, we might consider environmental impact—another perlocutionary effect, but in this instance, the language training of LLMs.¹¹²⁶

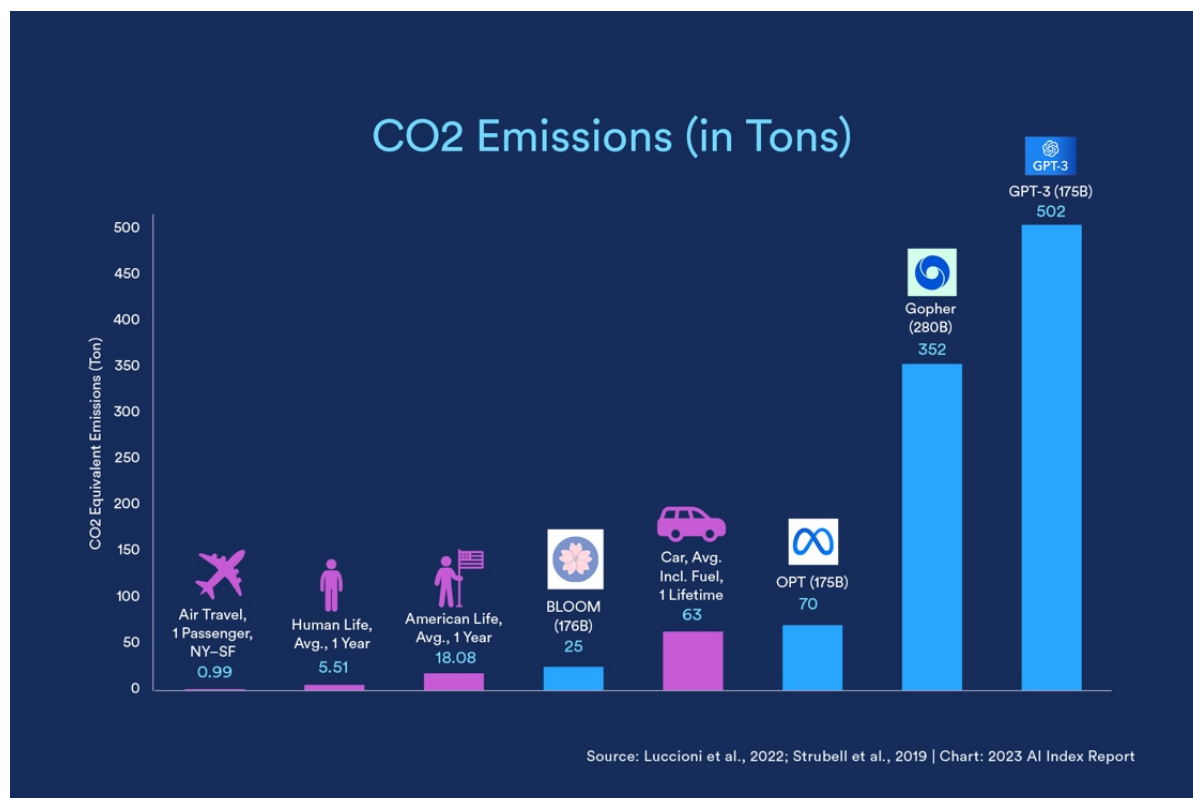


Figure 15: Environmental Costs of Training GPT-3¹¹²⁷

This figure shows that the heaviest carbon emitter in 2022 was GPT-3 technology. What does this really translate into? Comparing it to a lower emitter is helpful in answering this question. BLOOM,¹¹²⁸ which develops software applications, appears to be more efficient

¹¹²⁶ Part of this section on the environmental costs of training GPT-3 appears in “The Framework is the Message.” See Turnbull, *supra* note 1104.

¹¹²⁷ Shana Lynch, “Automation and Robotics, Economy and Markets, Education: 2023 State of AI in 14 Charts” (3 April 2023), online: *Human-Centered Artificial Intelligence (HAI)*, Stanford University <hai.stanford.edu/news/2023-state-ai-14-charts>.

¹¹²⁸ Bloom Technologies (2022), online: <www.bloomtechnologies.net>.

than GPT-3. However, when we look at what that really gives rise to, it is shocking. BLOOM used the same amount of power as that which powers a home in the US for 41 years.¹¹²⁹

What is more is that training GPT-3 emitted more than 20 times the amount of CO₂ than that of BLOOM. That translates into about powering one house for 820 years (using 2022 emission rates). This is a disconcerting statistic. Moreover, as subsequent iterations of generative AI develop, the emission statistics are even higher.

On one hand, part of this environmental cost is a by-product of the unique linguistic form that ChatGPT generates. But, on the other hand language training is embroiled in the generating of language harm created by LLMs. It may be viewed as part of the perlocutionary effect of an algorithmic speech act. This further underscores the uniqueness of the linguistic harm produced by ChatGPT. This is a point that ought not to go unnoticed. And it is a point that further underscores how continuing to be neutral to technology is an unwise approach.

What's more in this observation about the environmental cost associated with GPT training is that there is an intertwining between climate change and disappearing languages. It is projected that fifty to ninety per cent of the world's languages will disappear by the end of this century.¹¹³⁰ Most of these languages are spoken by Indigenous communities in the world's most biodiverse areas, which are the areas most threatened by climate change.¹¹³¹ This implies that the rise of new language modes is enmeshed with the death of languages spoken by historically marginalized populations.

The unintended consequence of the environmental cost of LLM language training is that it lays bare the concomitant relationship between law and language. To train ChatGPT to

¹¹²⁹ Lynch, *supra* note 1128.

¹¹³⁰ See BBC, "Can Saving Languages Save Nature?" (17 April 2023), online (video): *BBC Ideas* <www.bbc.co.uk/ideas/videos/can-saving-languages-save-nature/p0fh50s5>; see also Chi Luu, "How Language and Climate Connect", *JSTOR Daily* (10 July 2019), online: <daily.jstor.org/how-language-and-climate-connect/>.

¹¹³¹ BBC, *supra* note 1131.

be an expositor—to do things with words—is simultaneously a threat to endangered languages. Technological neutrality is not only unwise, but also, frankly, foolhardy.

Realizing that algorithmically driven technologies strengthen the concomitant relationship between law and language has implications for theorists who see law moving away from textual law to computational law.¹¹³² Law is expressed through language. Whether law's infrastructure is oral, sign language, handwritten, typed, or machine-generated, law is articulated through language. Without language, there is no law.

The reinforced concomitant relationship between law and language also has implications for our developing understandings of— and approaches to— ethics of AI.¹¹³³ Recognizing this buttressed relationship between law and language will contribute to the policy work being undertaken to create a dynamic understanding of AI—“future-proofing” society for continuing breakthroughs in AI.

Further, discerning a strengthened concomitant relationship between law and language in the context of AI is a finding that offers invigoration for new, networked areas of research as well as reviving areas such as law and literature scholarship.

This strengthened concomitant relationship between law and language, however, requires that we acknowledge and differentiate algorithmic speech acts from human speech acts. One does not equal the other. This necessarily involves an abrogation of the position of technological neutrality. To develop the notions of expositor, algorithmic contracting, and technology-facilitated gender-based violence further requires that we abandon the notion that algorithmically driven technologies are tools to which law can remain neutral. They are more than tools. They are actors and we need to come to terms with acknowledging this.

¹¹³² Mireille Hildebrandt, “CoHuBiCoL” (2024), online: <www.cohubicol.com/about/>.

¹¹³³ See e.g. Anders Nordgren, “Artificial Intelligence and Climate Change: Ethical Issues” (10 February 2022) 21:1 J Information, Communications and Ethics in Society.

At the same time, algorithmically driven technologies exercise derivative authority. This means that algorithmic decision-making is based on other sources of authority—effectively, second-hand authority. It may be inferior to human authority, but it may also be superior. High-frequency trading is good example of where algorithmic decision-making eclipses what a human being could ever achieve. Whether the outcomes are inferior or superior, they stem from derivative authority. It is not original. Derivative authority is imitative and compound. Knowing this reinforces the need to countermand technological neutrality. And consequentially, corroborates adapting law to deal with algorithmically driven technologies.

Language has been the lynchpin of this investigation. The findings from each pillar, show, beyond a doubt, that employing Hart’s strategy of using J. L. Austin’s ordinary language philosophy to better understand the nature of law as we continue to adopt algorithmically driven technologies has been profitable. Algorithmic speech acts are novel, however, and they pose unprecedented issues as we continue to chart the question “what is law?” Algorithms are legal actors, but their decision-making is derivatively authoritative. They are also responsible for creating harm such as technology-facilitated gender-based violence. Thus, it would be remiss not to revise Hart’s methodology ever so slightly to that of extra-ordinary language philosophy. In doing so, I advance it as a befitting framework to be developed in the Algorithmic Turn.

Coda

In closing, I leave off with the alternative part II of “Go With Me,” which was written prior to prompting ChatGPT to generate its version of the story.

“Go With Me” (Alternative Part II by Amanda Turnbull)

Marcail Clark unlocked the door to her office on the fifth floor in the Nibi building of the Arts and Social Sciences Complex that she had occupied for the past twelve years at Nawayut University. She put down the mail she had picked up on her way to her office, hung up her coat in its usual spot, and opened the blinds on her window that looked out at the Ottawa River and the western-most tip of Upper Duck Island. The scene evoked sense of calm each time she stopped working on whatever lay in front of her.

The sound of footsteps in the hallway accompanied by loud muttering interrupted her thoughts, and as she turned from the window, Delores Bell barged through the door with her laptop open in one hand, a chipped mug full of black coffee sloshing on the floor in the other and reading glasses askew in her weekly wash-and-set frizzy hair.

“I’m gonna retire! I swear, I’m gonna retire,” she shrieked.

“Morning Del, nice to see you,” Marcail replied. “Have a seat and let’s talk.”

Del, having rightfully earned the nick-name, “Del-the-bell” took up a lot of space in a room, notwithstanding her diminutive stature.

“I can’t sit down! I’m too mad! Actually, I’m furious! I’m so furious I might even quit rather than retire! They won’t renew my assistant’s contract—they said she was unnecessary. It’s ridiculous. How can I run my program without an assistant?”

It was not uncommon to hear Del threaten to quit or retire. And inviting her in to try and solve her problem was less than appealing but, once you realized she didn’t really want

her problem solved and only an audience to hear it, she usually did not stay long enough for a solution to be discussed.

Marcail offered a couple of different suggestions for funding a position, but neither seemed to satisfy Dell, who turned and left the room, muttering as loudly as she had on the way in, assumably on her way to look for another colleague with whom she could continue her harangue, thus giving further life to her problem.

Marcail cleaned up the spilled coffee and sifted through the mail that she had picked up on the way in. Amidst the usual pile of university publications and internal mail, was a blue aerogram—the sort that Marcail had not seen since her childhood letters from her grandmother—beautifully penned with a return address of Caen, France.

Marcail held her breath as she sat down and carefully opened the three sealed edges of the letter. It was from Cécile Olivier, to whom she had written twice in the hopes that she would be willing to recount her experience of hiding underground with her family during World War II in France. Marcail had been carefully unraveling a mystery associated with her research of the philosopher E. M. Talbot. And the latest piece of the puzzle led her to underground caves in which civilians had taken shelter during the War.

Le 9 juin 2019

Chère Madame Clark,

Je vous remercie pour vos lettres. After all of this time, I was—and still am—surprised that anyone would be interested in the largely forgotten underground shelters in which we lived during that awful summer. I dare say that in all of the rebuilding that was done in Caen, both of lives and of architecture, those experiences of the civilians living underground tended to be pushed from our minds. Indeed, I think it is fair to say that we preferred not to relive the experience. History has focused on the battles and on the soldiers who fought them, which is rightfully so. Your letters to me, however, have made me realize that our plight really was

underestimated, and that perhaps it is time for those of us who remain, to tell the story properly.

I would be pleased to welcome you into my home should you still be interested in asking me questions. Merci de votre persévérance.

Cordialement,

Cécile Olivier

Without pausing for further thought, Marvail opened her laptop and started searching for flights to France the following month.

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