

Democracy, Discourse, and the Artificially Intelligent Corporation

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Does the ascendance of the artificially intelligent corporation threaten the integrity and legitimacy of democracy? The question seems particularly important as the 2024 presidential election approaches. Hardly a day passes without a new report regarding the disruptive impact of harnessing artificial intelligence (“AI”) technologies. A cascading cadre of academics, business leaders, and politicians warn that unchecked development and dissemination of AI could irreparably damage vital institutions of civil society. Despite the warnings about existential threats AI poses to human agency and democratic processes, reliance on AI technologies proliferates at break-neck speed.

The concern about AI’s destructive impact gets exacerbated by the increasing dominance of corporations in politics. Following the decision in Citizens United v. FEC, corporations enjoy essentially the same speech rights as sentient human beings. With increasing zeal, corporations attempt to dominate the political realm in an effort to enhance the bottom line. Because extant law generally does not require disclosure of corporate political expenditures, corporations clandestinely manipulate voters to increase sales or secure a more favorable regulatory environment.

This Article argues that the proliferation of AI combined with the increasing dominance of corporations in our society calls for revamping basic principles of corporate governance. In particular, the Article examines whether interpreting corporate fiduciary duties through the lens of political “discourse theory” could better ensure corporate practices meaningfully align with the preferences of shareholders and other corporate stakeholders. Considering some of the most important decisions governing our daily lives already get made behind boardroom doors rather than in the public sphere, the rapid integration of AI into corporate decision making and operations threatens the very legitimacy of our democratic society. Without reinvigorating governance structures around democratic discourse, we might surrender political sovereignty to artificially intelligent corporations.

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TABLE OF CONTENTS

I. INTRODUCTION	954
II. ASCENDANCE OF THE ARTIFICIALLY INTELLIGENT CORPORATION.....	959
A. <i>Defining AI</i>	962
B. <i>Redefining the Corporation</i>	966
1. <i>Operations</i>	966
2. <i>Communication</i>	970
3. <i>Management</i>	973
4. <i>Politics</i>	977
C. <i>Existential Threats</i>	982
1. <i>Human Agency</i>	983
2. <i>Democracy</i>	984
III. THE FIDUCIARY FRAMEWORK FOR CORPORATE GOVERNANCE	986
A. <i>Prevailing Standards</i>	986
B. <i>Competing Concepts</i>	987
C. <i>Profits, Citizens, and Social Responsibility</i>	989
IV. FIDUCIARY DUTIES THROUGH THE LENS OF DISCOURSE THEORY	990
A. <i>Tenets of Discourse Theory</i>	990
B. <i>Discourse Theory and the Firm</i>	993
V. IMPLICATIONS OF JUST CORPORATE DISCOURSE.....	998
A. <i>Efficient Engagement</i>	998
B. <i>Managerial Competence</i>	1000
C. <i>Corporate Citizenship</i>	1002
D. <i>Democratic Legitimacy</i>	1003
VI. CONCLUSION.....	1006

I. INTRODUCTION

Does the ascendance of the artificially intelligent corporation threaten the integrity and legitimacy of democracy? The question seems particularly important as the 2024 presidential election approaches. Hardly a day passes without a new report regarding the disruptive impact of harnessing artificial intelligence (“AI”) technologies.¹ A cascading cadre of academics, business

¹ See, e.g., Andrew Ross Sorkin et al., *The White House Pushes Tech Leaders to Get Tough on A.I. Safety*, N.Y. TIMES (July 21, 2023), <https://www.nytimes.com/2023/07/21/business/biden-ai-safety-meta-openai-google-microsoft.html> (on file with the *Ohio State Law Journal*); Farnaz Fassihi, *U.N. Officials Urge Regulation of Artificial Intelligence*, N.Y. TIMES (July 18, 2023), <https://www.nytimes.com/2023/07/18/world/un-security-council-ai.html> (on file with the *Ohio State Law Journal*); Alyssa Lukpat, *AI Poses ‘Risk of Extinction’ on Par with Pandemics and Nuclear War, Tech Executives Warn*, WALL ST. J. (May 30, 2023),

leaders, and politicians warn that unchecked development and dissemination of AI could irreparably damage vital institutions of civil society.² Despite the warnings about existential threats AI poses to human agency and democratic processes, reliance on AI technologies proliferates at break-neck speed.³

In the political arena, AI technologies have already been deployed to manipulate public opinion and voting behavior.⁴ In the 2016 presidential election, both Cambridge Analytica⁵ and the Russian Internet Research Agency⁶ used AI tools to cajole vulnerable voters by using fake social media personas. Despite concerns regarding the use of data exchanges in elections, both major presidential campaigns relied on AI technology to develop election strategies

<https://www.wsj.com/articles/ai-threat-is-on-par-with-pandemics-nuclear-war-tech-executives-warn-39105eeb> [<https://perma.cc/PCL5-5CM4>].

² See, e.g., Kevin Roose, *A.I. Poses 'Risk of Extinction,' Industry Leaders Warn*, N.Y. TIMES (May 30, 2023), <https://www.nytimes.com/2023/05/30/technology/ai-threat-warning.html> (on file with the *Ohio State Law Journal*). For a survey of academic views regarding the threats AI poses to human agency, see JANNA ANDERSON & LEE RAINIE, PEW RSCH. CTR., *THE FUTURE OF HUMAN AGENCY* 4–5 (Feb. 2023), <https://www.pewresearch.org/internet/2023/02/24/the-future-of-human-agency/> [<https://perma.cc/5Q39-YFXM>].

³ See *Generative AI to Become a \$1.3 Trillion Market by 2032, Research Finds*, BLOOMBERG (June 1, 2023), <https://www.bloomberg.com/company/press/generative-ai-to-become-a-1-3-trillion-market-by-2032-research-finds/> [<https://perma.cc/CP25-D9WJ>].

⁴ See Jeff Berkowitz, *The Evolving Role of Artificial Intelligence and Machine Learning in US Politics*, CTR. FOR STRATEGIC & INT'L STUDS.: STRATEGIC TECHS. BLOG (Dec. 21, 2020), <https://www.csis.org/blogs/technology-policy-blog/evolving-role-artificial-intelligence-and-machine-learning-us-politics> [<https://perma.cc/YV5G-CEYR>] (“Gone are the days of political buttons, guessing about voter preferences, and the mass distribution of pamphlets about the positions of candidates for the highest offices in the country. The emergence of artificial intelligence (AI), machine learning (ML), and big data have fundamentally changed how politicians engage the American electorate and will continue to challenge centuries of political and intrapersonal norms surrounding voter enfranchisement.”).

⁵ See Nicholas Confessore, *Cambridge Analytica and Facebook: The Scandal and the Fallout So Far*, N.Y. TIMES (Apr. 4, 2018), <https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html> (on file with the *Ohio State Law Journal*); John Gapper, *Opinion, Cambridge Analytica Exploited Facebook Data with Style*, FIN. TIMES (Mar. 21, 2018), <https://www.ft.com/content/bb24f946-2918-11e8-b27e-cc62a39d57a0> (on file with the *Ohio State Law Journal*).

⁶ Elizabeth Dwoskin, Craig Timberg & Adam Entous, *Russians Took a Page from Corporate America by Using Facebook Tool to ID and Influence Voters*, WASH. POST (Oct. 2, 2017), https://www.washingtonpost.com/business/economy/russians-took-a-page-from-corporate-america-by-using-facebook-tool-to-id-and-influence-voters/2017/10/02/681e40d8-a7c5-11e7-850e-2bdd1236be5d_story.html [<https://perma.cc/9F2D-D2P9>]; see Adrian Chen, *The Agency*, N.Y. TIMES MAG. (June 2, 2015), <https://www.nytimes.com/2015/06/07/magazine/the-agency.html> (on file with the *Ohio State Law Journal*).

and disseminate political messaging.⁷ In the upcoming 2024 election cycle, experts predict AI will permeate political discourse, most notably with the use of “deep fake” videos that falsely depict humans doing something that did not in reality occur.⁸

The concern about AI’s destructive impact gets exacerbated by the increasing dominance of corporations in politics. Following the decision in *Citizens United v. FEC*, corporations enjoy essentially the same speech rights as sentient human beings.⁹ With increasing zeal, corporations attempt to dominate the political realm in an effort to enhance the bottom line.¹⁰ Because extant law generally does not require disclosure of corporate political expenditures, corporations clandestinely manipulate voters to increase sales or secure a more favorable regulatory environment.¹¹

Despite a long history of corporate attempts to influence politics,¹² the proliferation of AI technologies within the corporate realm creates new and incredibly dangerous risks. In virtually all aspects of business operations, strategic planning, communication, and decision-making, corporations increasingly rely on AI technologies.¹³ Fueled by “big data” processing capabilities and predictive analytic prowess,¹⁴ AI technologies out-perform

⁷ See Tate Ryan-Mosley, *The Technology That Powers the 2020 Campaigns, Explained*, MIT TECH. REV. (Sept. 28, 2020), <https://www.technologyreview.com/2020/09/28/1008994/the-technology-that-powers-political-campaigns-in-2020-explained/> [<https://perma.cc/GDU7-RPCY>].

⁸ See James Bickerton, *Deepfakes Could Destroy the 2024 Election*, NEWSWEEK (Mar. 24, 2023), <https://www.newsweek.com/deepfakes-could-destroy-2024-election-1790037> [<https://perma.cc/PVC7-LKR9>]; Jim Saksa, *AI Could Sway the 2024 Elections, Campaign Pros Say—But Not Like You Think*, ROLL CALL (May 25, 2023), <https://rollcall.com/2023/05/25/ai-could-sway-the-2024-elections-campaign-pros-say-but-not-like-you-think/> [<https://perma.cc/28JU-WBP8>]; Tiffany Hsu, *As Deepfakes Flourish, Countries Struggle with Response*, N.Y. TIMES (Jan. 22, 2023), <https://www.nytimes.com/2023/01/22/business/media/deepfake-regulation-difficulty.html> [<https://perma.cc/7NZH-WETY>].

⁹ See *Citizens United v. FEC*, 558 U.S. 310, 365 (2010).

¹⁰ See Michael R. Siebecker, *Political Insider Trading*, 85 FORDHAM L. REV. 2717, 2723–24 (2017) [hereinafter Siebecker, *Political*].

¹¹ See *id.*; Michael R. Siebecker, *The Incompatibility of Artificial Intelligence and Citizens United*, 83 OHIO ST. L.J. 1211, 1246–47 (2022) [hereinafter Siebecker, *Incompatibility*]; Dorothy S. Lund & Leo E. Strine, Jr., *Corporate Political Spending Is Bad Business*, HARV. BUS. REV., Jan.–Feb. 2022, at 133–34, <https://hbr.org/2022/01/corporate-political-spending-is-bad-business> [<https://perma.cc/WYS2-GCRY>].

¹² See, e.g., Lee Drutman, *How Corporate Lobbyists Conquered American Democracy*, ATLANTIC (Apr. 20, 2015), <https://www.theatlantic.com/business/archive/2015/04/how-corporate-lobbyists-conquered-american-democracy/390822/> [<https://perma.cc/S8HZ-69H9>].

¹³ See Siebecker, *Incompatibility*, *supra* note 11, at 1218–19.

¹⁴ See DAVID COURT, JESKO PERREY, TIM MCGUIRE, JONATHAN GORDON & DENNIS SPILLECKE, MCKINSEY & CO., *BIG DATA, ANALYTICS, AND THE FUTURE OF MARKETING & SALES* 1, 4 (Mar. 2015), <https://www.mckinsey.com/~media/McKinsey/>

humans in myriad ways.¹⁵ As a result, it should come as little surprise that AI technologies heavily influence if not control some of the most important decisions made within the corporation.¹⁶ In some corporations, AI entities even take on formal managerial roles and serve as functional members of the board of directors.¹⁷ As AI causes the very nature of the corporation to evolve, some suggest corporations will soon be wholly owned and operated by algorithmic entities without human oversight.¹⁸ The ultimate fear centers on the possibility that corporations will deploy AI technology to manipulate political opinion without detection and, in the process, destroy our confidence in democracy itself.

Without doubt, calls for restraining the rampant development and dissemination abound.¹⁹ President Biden recently persuaded some top developers of AI technologies (including Microsoft, Google, and OpenAI) to implement ethical guidelines in designing and deploying AI.²⁰ Of course, the voluntary nature of those pledges might not inspire confidence in their

[<https://perma.cc/NU4M-CHZ4>]; *Big Data and AI in Corporate Communications*, WEICHERTMEHNER (Aug. 17, 2022), <https://www.weichertmehner.com/en/insights/big-data-and-ai-in-corporate-communications/> [<https://perma.cc/K2FL-4Q7R>].

¹⁵ See Michael R. Siebecker, *Making Corporations More Humane Through Artificial Intelligence*, 45 J. CORP. L. 95, 104–13 (2019) [hereinafter Siebecker, *Making*].

¹⁶ See Tim Fountaine, Brian McCarthy & Tamim Saleh, *Building the AI-Powered Organization*, HARV. BUS. REV., Summer 2021, at 12, <https://hbr.org/2019/07/building-the-ai-powered-organization> [<https://perma.cc/7HP3-73EF>]; DENIS MCCAULEY, *THE GLOBAL AI AGENDA: PROMISE, REALITY, AND A FUTURE OF DATA SHARING* 5 (Claire Beatty ed., 2020), <https://mittrinsights.s3.amazonaws.com/AIagenda2020/GlobalAIagenda.pdf> [<https://perma.cc/VA49-CDQS>].

¹⁷ Florian Möslin, *Robots in the Boardroom: Artificial Intelligence and Corporate Law*, in RESEARCH HANDBOOK ON THE LAW OF ARTIFICIAL INTELLIGENCE 649, 658–60, 665–66 (Woodrow Barfield & Ugo Pagallo eds., 2019) (“Deep Knowledge Ventures . . . had appointed an algorithm named Vital . . . to its board of directors.”); see also Kalev Leetaru, *As AI Comes for Management Perhaps We Should Look Forward to Machines Taking Our Jobs*, FORBES (June 24, 2019), <https://www.forbes.com/sites/kalevleetaru/2019/06/24/as-ai-comes-for-management-perhaps-we-should-look-forward-to-machines-taking-our-jobs/?sh=7920d72624da> [<https://perma.cc/6GPX-ZJP3>]; Dan Schawbel, *How Artificial Intelligence Is Redefining the Role of Manager*, WORLD ECON. F. (Nov. 15, 2019), <https://www.weforum.org/agenda/2019/11/how-artificial-intelligence-is-redefining-the-role-of-manager/> [<https://perma.cc/6K46-DJ85>]; Vegard Kolbjørnsrud, Richard Amico & Robert J. Thomas, *How Artificial Intelligence Will Redefine Management*, HARV. BUS. REV. (Nov. 2, 2016), <https://hbr.org/2016/11/how-artificial-intelligence-will-redefine-management> [<https://perma.cc/JY8H-RX4D>].

¹⁸ See Shawn Bayern, *Are Autonomous Entities Possible?*, 114 NW. U. L. REV. ONLINE 23, 47 (2019) [hereinafter Bayern, *Autonomous*]; Lynn M. Lopucki, *Algorithmic Entities*, 95 WASH. U. L. REV. 887, 898–899 (2018).

¹⁹ See, e.g., Sorkin et al., *supra* note 1; Fassihi, *supra* note 1.

²⁰ See Sorkin et al., *supra* note 1; Michael D. Shear, Cecilia Kang & David E. Sanger, *Pressured by Biden, A.I. Companies Agree to Guardrails on New Tools*, N.Y. TIMES (July 21, 2023), <https://www.nytimes.com/2023/07/21/us/politics/ai-regulation-biden.html> [<https://perma.cc/5VKH-CPBP>].

longevity. Despite the potential ethical fickleness of corporations when profits hang in the balance, no comprehensive legislative fix seems forthcoming.²¹

In addition, the current fiduciary framework governing officers and directors remains utterly impotent to prevent AI from wreaking havoc on our social institutions in the name of increasing corporate profits. Even before the ascendance of AI, corporate executives and managers were regularly criticized for pursuing selfish ends rather than promoting the interests of shareholders.²² Recurring waves of corporate scandals persist,²³ perhaps as a result of ignoring corporate criminality,²⁴ using corporate funds to advance personal political ends,²⁵ dismissing interests of corporate stakeholders,²⁶ promoting managerial imperialism,²⁷ eschewing transparency,²⁸ or using the First Amendment to avoid accountability.²⁹ Beyond the failures the fiduciary framework already suffers, the duties of care and loyalty simply do not adequately address the changing nature of corporate decision-making in the era of AI. Rather than promoting a robust sense of trust between shareholders and corporate managers, an enfeebled fiduciary framework permits blind pursuit of wealth maximization often to the direct detriment of consumers, corporate stakeholders, and the communities corporations inhabit.

²¹ See Andrew Ross Sorkin et al., *Why Lawmakers Aren't Rushing to Police A.I.*, N.Y. TIMES (Mar. 3, 2023), <https://www.nytimes.com/2023/03/03/business/dealbook/lawmakers-ai-regulations.html> [https://perma.cc/L9XC-EBD2].

²² See, e.g., Brian R. Cheffins, *Corporate Governance and Countervailing Power*, 74 BUS. LAW. 1, 32–33 (2019).

²³ S. Burcu Avci, Cindy A. Schipani & H. Nejat Seyhun, *Do Independent Directors Curb Financial Fraud? The Evidence and Proposals for Further Reform*, 93 IND. L.J. 757, 557–58, 765 (2018); see, e.g., *A Sleuth's Guide to the Coming Wave of Corporate Fraud*, ECONOMIST (Nov. 7, 2022), <https://www.economist.com/business/2022/11/07/a-sleuths-guide-to-the-coming-wave-of-corporate-fraud> [https://perma.cc/QD89-782Z].

²⁴ See Michael R. Siebecker & Andrew M. Brandes, *Corporate Compliance and Criminality: Does the Common Law Promote Culpable Blindness?*, 50 CONN. L. REV. 387, 393 (2018).

²⁵ See Sarah C. Haan, *The CEO and the Hydraulics of Campaign Finance Deregulation*, 109 NW. U. L. REV. ONLINE 27, 29 (2014); Siebecker, *Political*, *supra* note 10, at 2739.

²⁶ See Michael R. Siebecker, *A New Discourse Theory of the Firm After Citizens United*, 79 GEO. WASH. L. REV. 161, 223 (2010) [hereinafter Siebecker, *New*].

²⁷ See Michael R. Siebecker, *Bridging Troubled Waters: Linking Corporate Efficiency and Political Legitimacy Through a Discourse Theory of the Firm*, 75 OHIO ST. L.J. 103, 109 (2014) [hereinafter Siebecker, *Bridging*].

²⁸ See Michael R. Siebecker, *Trust & Transparency: Promoting Efficient Corporate Disclosure Through Fiduciary-Based Discourse*, 87 WASH. U. L. REV. 115, 117 (2009) [hereinafter Siebecker, *Trust*].

²⁹ See Michael R. Siebecker, *Securities Regulation, Social Responsibility, and a New Institutional First Amendment*, 29 J.L. & POLS. 535, 541–42 (2014) [hereinafter Siebecker, *Securities*]; John C. Coates IV, *Corporate Speech & the First Amendment: History, Data, and Implications*, 30 CONST. COMMENT. 223, 265 (2015).

This Article argues that the proliferation of AI combined with the increasing dominance of corporations in our society calls for revamping basic principles of corporate governance. In particular, the Article examines whether interpreting corporate fiduciary duties through the lens of political “discourse theory” could better ensure corporate practices meaningfully align with the preferences of shareholders and other corporate stakeholders. As I have advanced in a number of prior works, a discourse theory of the firm would require directors to encapsulate shareholder and stakeholder interests through robust dialectic engagement.³⁰ Considering some of the most important decisions governing our daily lives already get made behind boardroom doors rather than in the public sphere, the rapid integration of AI into corporate decision making and operations threatens the very legitimacy of our democratic society.³¹ Without reinvigorating governance structures around democratic discourse, we might surrender political sovereignty to artificially intelligent corporations.

To make the case for refocusing the existing corporate fiduciary framework through the lens of political discourse theory, Part I of this Article describes the emerging dominance of AI technologies in the corporate realm and the potential existential threat to democracy that AI creates. Part II examines the shortcomings of the existing fiduciary framework for corporate governance, with profit maximization, corporate citizenship, and social responsibility pitted in irreconcilable tension. Part IV details how refocusing corporate fiduciary duties through the lens of discourse theory could provide a sufficiently robust governance framework to guide corporate managers in the era of AI. After describing the benefits of embracing discourse theory in the corporate realm, Part V addresses some possible hurdles to achieving just corporate discourse and suggests ways to overcome them. The Article concludes that the growing prevalence of AI in all areas of corporate decision making and operations requires refocusing existing fiduciary duties through the lens of political discourse theory. Without such a revitalization of corporate governance principles, the un-cabined proliferation of AI may rend apart the fundamental institutions of civil society.

II. ASCENDANCE OF THE ARTIFICIALLY INTELLIGENT CORPORATION

Appreciating the critical need to retool the fiduciary framework governing corporate behavior requires some understanding of how AI continues to ascend within the corporation.³² An extensive survey by the MIT Technology Review

³⁰ See Siebecker, *Incompatibility*, *supra* note 11, at 1272; Siebecker, *Making*, *supra* note 15, at 100; Siebecker, *New*, *supra* note 26, at 225; Siebecker, *Bridging*, *supra* note 27, at 127; Siebecker, *Trust*, *supra* note 28, at 121.

³¹ See ANDERSON & RAINE, *supra* note 2; Drutman, *supra* note 12.

³² This part provides important context regarding the reach of AI within the corporate realm in order to frame more clearly the need to reshape the fiduciary duties governing officers and directors. In recent works, I provided a similar descriptive background to facilitate exploration of how AI could make corporate decision-making more humane and to

involving over 1,000 global business executives found that by the end of 2020, 97% of large corporations would put AI strategies into play.³³ Almost all executives confirmed AI investments brought returns that met or even exceeded their expectations.³⁴ Furthermore, AI's proliferation in practically every business area continues to skyrocket.³⁵ More than a novel tool for improving managerial efficacy, as McKinsey reports, companies using AI experience a paradigmatic shift in how they perceive basic organizational structures and business practices.³⁶

In virtually every business sector, and in so many operational functions, AI remains crucial to success.³⁷ Managers increasingly lean on AI tools to improve decision making³⁸ with some AI entities holding quasi management positions.³⁹ Shocking to many, algorithmic entities can now even own and operate businesses without human intervention.⁴⁰ Whether with respect to identifying new business strategies, conducting due diligence, improving workplace safety, managing human resources, mitigating risk, or any number of other essential

rethink our jurisprudential commitment to corporates as constitutional rights bearers. *See generally* Siebecker, *Incompatibility*, *supra* note 11, at 1227–41; Siebecker, *Making*, *supra* note 15, at 104–13.

³³ *See* MCCAULEY, *supra* note 16, at 2, 5.

³⁴ *Id.* at 8; *see also* Thomas H. Davenport & Randy Bean, *Companies Are Making Serious Money with AI*, MIT SLOAN MGMT. REV. (Feb. 17, 2022), <https://sloanreview.mit.edu/article/companies-are-making-serious-money-with-ai/> [<https://perma.cc/QJX7-4W4Z>] (“92% of large companies reported that they are achieving returns on their data and AI investments.”).

³⁵ *See* Jeremy Kahn, *A.I. Is Getting More Powerful, Faster, and Cheaper—And That’s Starting to Freak Executives Out*, FORTUNE (Mar. 9, 2021), <https://fortune.com/2021/03/09/a-i-is-getting-more-powerful-faster-and-cheaper-and-thats-starting-to-freak-executives-out/> [<https://perma.cc/R49Q-H9VU>]; *Embracing the Rapid Pace of AI*, MIT TECH. REV. (May 19, 2021), <https://www.technologyreview.com/2021/05/19/1025016/embracing-the-rapid-pace-of-ai/> [<https://perma.cc/B3US-6R3J>].

³⁶ *See* THOMAS MEAKIN, JEREMY PALMER, VALENTINA SARTORI & JAMIE VICKERS, MCKINSEY & CO., WINNING WITH AI IS A STATE OF MIND 2 (Apr. 2021), <https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/winning-with-ai-is-a-state-of-mind> [<https://perma.cc/RZ2S-AQHG>].

³⁷ *See* BEENA AMMANATH, SUSANNE HUPFER & DAVID JARVIS, DELOITTE, THRIVING IN THE ERA OF PERVASIVE AI 3, 8 (3d ed. 2020), https://www.deloitte.com/content/dam/assets-shared/legacy/docs/services/consulting/2022/DI_State-of-AI.pdf [<https://perma.cc/58ME-R4BZ>].

³⁸ *See* Sheryl Estrada, *Companies Are Turning to A.I., but C-Suite Collaboration Is Crucial for Success*, FORTUNE (Mar. 24, 2022), <https://fortune.com/2022/03/24/companies-ai-c-suite-collaboration-crucial-success/> [<https://perma.cc/W5HF-EWQT>]; *see also* Siebecker, *Making*, *supra* note 15, at 97.

³⁹ Martin Petrin, *Corporate Management in the Age of AI*, 2019 COLUM. BUS. L. REV. 965, 971–72 (2019); *see* Möslin, *supra* note 17, at 649 and accompanying text.

⁴⁰ *See* Siebecker, *Incompatibility*, *supra* note 11, at 1241–46.

functions,⁴¹ businesses large and small around the globe embrace AI.⁴² Moreover, a PwC study projected a remarkable worldwide spread of AI tech, contributing up to \$15.7 trillion to the global economy by the end of this decade.⁴³ Although predicting all applications of AI remains impossible, AI's impact on corporate practices will certainly endure.⁴⁴ Recognizing AI's untapped potential and its capacity for disruption underscores the need for revitalizing corporate governance principles to guide and direct the utilization of AI going forward.⁴⁵

⁴¹ *Id.* at 1221; see DUANE S. BONING ET AL., MCKINSEY & CO., TOWARD SMART PRODUCTION: MACHINE INTELLIGENCE IN BUSINESS OPERATIONS 9 (Feb. 2022), <https://www.mckinsey.com/~media/mckinsey/business%20functions/operations/our%20insights/toward%20smart%20production%20machine%20intelligence%20in%20business%20operations/toward-smart-production-machine-intelligence-in-business-operations-vf.pdf> [https://perma.cc/88ZP-HQTT].

⁴² See Dan Reilly, *How A.I. Is Being Used as a Tool for Innovation, Not Just Efficiency*, FORTUNE (June 8, 2022), <https://fortune.com/2022/06/08/artificial-intelligence-innovation-efficiency/> [https://perma.cc/86AS-8GSH]; Eric Reicin, *AI Can Be a Force for Good in Recruiting and Hiring New Employees*, FORBES (Nov. 16, 2021), <https://www.forbes.com/sites/forbesnonprofitcouncil/2021/11/16/ai-can-be-a-force-for-good-in-recruiting-and-hiring-new-employees/?sh=1ef504a01e16> [https://perma.cc/5FVU-JN5N]; Sophie Camp, *Why Everyone in the Boardroom Needs AI*, OUTSIDE INSIGHT, <https://outsideinsight.com/insights/why-everyone-in-the-boardroom-needs-ai/> [https://perma.cc/75YM-DRDF]; Jacques Bughin, Brian McCarthy & Michael Chui, *A Survey of 3,000 Executives Reveals How Businesses Succeed with AI*, HARV. BUS. REV. (Aug. 28, 2017), <https://hbr.org/2017/08/a-survey-of-3000-executives-reveals-how-businesses-succeed-with-ai> [https://perma.cc/J3V3-4L6F].

⁴³ ANAND S. RAO & GERARD VERWEIJ, PWC, SIZING THE PRIZE: WHAT'S THE REAL VALUE OF AI FOR YOUR BUSINESS AND HOW CAN YOU CAPITALISE? 3 (2017), <https://www.pwc.com/gx/en/issues/analytics/assets/pwc-ai-analysis-sizing-the-prize-report.pdf> [https://perma.cc/E656-UQFB]; see also JACQUES BUGHIN, JEONGMIN SEONG, JAMES MANYIKA, MICHAEL CHUI & RAOUL JOSHI, MCKINSEY & CO. GLOB. INST., NOTES FROM THE AI FRONTIER: MODELING THE IMPACT OF AI ON THE WORLD ECONOMY (Sept. 2018), <https://www.mckinsey.com/featured-insights/artificial-intelligence/notes-from-the-ai-frontier-modeling-the-impact-of-ai-on-the-world-economy> [https://perma.cc/96MS-HT2K] (estimating that AI will add \$13 trillion to the global economy over ten years).

⁴⁴ See Camp, *supra* note 42.

⁴⁵ See Françios Candelon, Rodolphe Charme di Carlo, Midas De Bondt & Theodoros Evgeniou, *AI Regulation Is Coming*, HARV. BUS. REV., Sept.–Oct. 2021, <https://hbr.org/2021/09/ai-regulation-is-coming> [https://perma.cc/4MK6-GRSP]; Fernanda Torre, Robin Teigland & Liselotte Engstam, *AI Leadership and the Future of Corporate Governance: Changing Demands for Board Competence*, in THE DIGITAL TRANSFORMATION OF LABOR: AUTOMATION, THE GIG ECONOMY AND WELFARE 116, 117 (Anthony Larsson & Robin Teigland eds., 2020) (“To date, the majority of activities by researchers and practitioners alike have focused on the implementation of AI at the operational level of firms. Few are investigating what impact AI will have on the governance of organizations and how corporate boards may need to develop their competence to successfully lead their organization in this new evolving AI-based era. This seems surprising as the governance of AI, and the ‘big data’ on which AI is based, is predicted to become one of the greatest board issues in the next ten years.” (internal citations omitted)). For a description of the need to

The following discussion simply provides a brief glimpse of some important AI applications to demonstrate how AI continues to radically transform business practices and corporate structures.

A. Defining AI

At the outset, defining what constitutes artificial intelligence remains an important yet difficult task.⁴⁶ Comprising a wide range of emerging technologies⁴⁷ and academic disciplines,⁴⁸ AI continues to evolve rapidly in unpredictable ways.⁴⁹ Some suggest adopting a static definition of AI remains not just elusive but unhelpful.⁵⁰ Instead, AI should be understood within the discrete and varying contexts in which the technology gets applied.⁵¹ In that

manage A.I. tools effectively, see Michael Ross & James Taylor, *Managing AI Decision-Making Tools*, HARV. BUS. REV. (Nov. 10, 2021), <https://hbr.org/2021/11/managing-ai-decision-making-tools> [<https://perma.cc/57CU-YR4E>].

⁴⁶ See Iria Giuffrida, Fredric Lederer & Nicolas Vermeys, *A Legal Perspective on the Trials and Tribulations of AI: How Artificial Intelligence, the Internet of Things, Smart Contracts, and Other Technologies Will Affect the Law*, 68 CASE W. RES. L. REV. 747, 752 (2018) (“[A]lthough AI is talked about in the media almost every day, there is still no generally accepted definition of the term. Individual definitions run the gamut from a super-intelligent, humanoid, sapient, world-conquering robot to an app that suggests that the weather justifies wearing a coat.”); Matthew U. Scherer, *Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, and Strategies*, 29 HARV. J. L. & TECH. 353, 359–62 (2016).

⁴⁷ See JACQUES BUGHIN ET AL., MCKINSEY GLOB. INST., *ARTIFICIAL INTELLIGENCE: THE NEXT DIGITAL FRONTIER?* 8 (June 2017), <https://www.mckinsey.com/~media/McKinsey/Industries> [<https://perma.cc/PUQ4-X2NV>] (“Trying to pin down the term more precisely is fraught for several reasons: AI covers a broad range of technologies and applications, some of which are merely extensions of earlier techniques and others that are wholly new. Also, there is no generally accepted theory of ‘intelligence,’ and the definition of machine ‘intelligence’ changes as people become accustomed to previous advances.” (internal citation omitted)).

⁴⁸ See STEFAN VAN DUIN & NASER BAKHSHI, DELOITTE, *ARTIFICIAL INTELLIGENCE 2* (Mar. 2018), <https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/deloitte-analytics/deloitte-nl-data-analytics-artificial-intelligence-whitepaper-eng.pdf> [<https://perma.cc/K7UD-RUS8>] (“AI refers to a broad field of science encompassing not only computer science but also psychology, philosophy, linguistics and other areas.”); see, e.g., Andrea M. Matwyshyn, *The Internet of Bodies*, 61 WM. & MARY L. REV. 77, 82 (2019).

⁴⁹ See generally Jack Krupansky, *Untangling the Definitions of Artificial Intelligence, Machine Intelligence, and Machine Learning*, MEDIUM (June 13, 2017), <https://medium.com/@jackkrupansky/untangling-the-definitions-of-artificial-intelligence-machine-intelligence-and-machine-learning-7244882f04c7> [<https://perma.cc/9LNA-TH85>].

⁵⁰ See Kevin Scott, *I Do Not Think It Means What You Think It Means: Artificial Intelligence, Cognitive Work & Scale*, 151 DAEDALUS 75, 77 (2022); Pei Wang, *On Defining Artificial Intelligence*, 10 J.A. GEN. INTEL. 1, 1 (2019); VAN DUIN & BAKHSHI, *supra* note 48, at 5.

⁵¹ Wang, *supra* note 50, at 28; see Darrell M. West, *The Role of Corporations in Addressing AI’s Ethical Dilemmas*, BROOKINGS (Sept. 13, 2018),

vein, constructing principles to guide the utilization of AI must remain tightly tethered to AI's particular applications and operational constructs.⁵² Such a compartmentalized approach to defining AI and guiding its development becomes less workable, however, as the speed and unpredictability of technological innovation causes application contexts to overlap unexpectedly.⁵³ As an example, an AI tool designed to enhance customer service might get deployed to influence election outcomes.⁵⁴

With AI applications becoming more diverse and fluid, many policy makers urge adopting a loose definition of AI, such as “machines that are capable of performing tasks that, if performed by a human, would be said to require intelligence.”⁵⁵ Such a broad definition, however, might not adequately capture the incredibly difficult challenges AI presents for governing corporate behavior and decision-making.

Somewhere between the specific and broad approaches to defining AI, PwC offers a description that might make clearer the need for retooling the existing fiduciary governance structure:

Artificial intelligence (AI) is an umbrella term for “smart” technologies that are aware of and can learn from their environments, enabling them to subsequently take autonomous action. Robotic process automation, machine learning, natural language processing, and neural networks all incorporate AI into their operations. What separates AI from general-purpose software is that it enable [*sic*] machines to respond autonomously to signals from the external world—signals that programmers do not directly control and therefore cannot always anticipate.⁵⁶

<https://www.brookings.edu/research/how-to-address-ai-ethical-dilemmas/> [<https://perma.cc/4UXE-4UEL>].

⁵² See West, *supra* note 51.

⁵³ See Scherer, *supra* note 46, at 359–62 (defining “artificial intelligence” in light of evolving technology); see also Sara Castellanos, *What Exactly Is Artificial Intelligence?*, WALL ST. J. (Dec. 6, 2018), <https://www.wsj.com/articles/what-exactly-is-artificial-intelligence-1544120887> [<https://perma.cc/B8V6-TCG8>].

⁵⁴ See, e.g., Archon Fung & Lawrence Lessig, *How AI Could Take Over Elections—And Undermine Democracy*, SCI. AM. (June 7, 2023), <https://www.scientificamerican.com/article/how-ai-could-take-over-elections-and-undermine-democracy/> [<https://perma.cc/2WQA-TBYZ>].

⁵⁵ See Scherer, *supra* note 46, at 362; Shlomit Yanisky Ravid & Xiaoqiong (Jackie) Liu, *When Artificial Intelligence Systems Produce Inventions: An Alternative Model for Patent Law at the 3A Era*, 39 CARDOZO L. REV. 2215, 2224 (2018).

⁵⁶ See Chris Curran & Anand Rao, *Briefing: Artificial Intelligence*, PWC: NEXT IN TECH (Jan. 22, 2018), <https://web.archive.org/web/20180303022326/http://usblogs.pwc.com/emerging-technology/briefing-ai> (on file with the *Ohio State Law Journal*).

Delving into the technological state of the art involving robotic process automation,⁵⁷ machine learning,⁵⁸ natural language processing,⁵⁹ artificial neural networks,⁶⁰ deep learning,⁶¹ and general AI⁶² remains unnecessary. Instead, the PwC definitional approach sufficiently reveals not only the dynamic evolution of AI technologies⁶³ but the impending, if not inescapable, growth in

⁵⁷ See Anand Kannan, *RPA in Manufacturing—Automate Monotonous Tasks for Better Productivity & Outcomes*, ELEVANT (Feb. 19, 2018), <https://www.eleviant.com/insights/blog/rpa-in-manufacturing/> [<https://perma.cc/E8C8-LVPY>] (“RPA [Robotic Process Automation] is a set of concepts and technologies designed to intelligently automate repetitive business, industrial, and other tasks. RPA has little to do with what we commonly understand as ‘robots’ in the conventional sense of the word. Rather, RPA is defined by algorithms that are built to enhance return on investment (ROI), boost execution speed, and improve the quality of business results.”).

⁵⁸ See MICHAEL CHUI, VISHNU KAMALNATH & BRIAN MCCARTHY, MCKINSEY & CO., AN EXECUTIVE’S GUIDE TO AI 1 (2020), <https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/McKinsey%20Analytics/Our%20Insights/An%20executives%20guide%20to%20AI/An-executives-guide-to-AI.ashx> [<https://perma.cc/465X-8ANM>] (“Machine-learning algorithms detect patterns and learn how to make predictions and recommendations by processing data and experiences, rather than by receiving explicit programming instruction. The algorithms also adapt in response to new data and experiences to improve efficacy over time.”).

⁵⁹ See VAN DUIN & BAKHSHI, *supra* note 48, at 14 (“Natural Language Processing, or NLP in short, is a term for everything from speech recognition to language generation, each requiring different techniques . . . [including] Part-of-Speech tagging, Named Entity Recognition, and Parsing.”).

⁶⁰ See *id.* at 13 (“Animals are able to process (visual or other) information from their environment and react adaptively to a changing situation. They use their nervous system to perform such behavior. Their nervous system can be modeled and simulated and it should be possible to (re)produce similar behavior in artificial systems. Artificial Neural Networks (ANN) can be described as processing devices that are loosely modeled after the neural structure of a brain.”).

⁶¹ See CHUI, KAMALNATH & MCCARTHY, *supra* note 58, at 6 (“Deep learning is a type of machine learning that can process a wider range of data resources, requires less data preprocessing by humans, and can often produce more accurate results than traditional machine-learning approaches. In deep learning, interconnected layers of software-based calculators known as ‘neurons’ form a neural network. The network can ingest vast amounts of input data and process them through multiple layers that learn increasingly complex features of the data at each layer. The network can then make a determination about the data, learn if its determination is correct, and use what it has learned to make determinations about new data.”).

⁶² See VAN DUIN & BAKHSHI, *supra* note 48, at 6 (“The holy grail of AI is a General AI, a single system that can learn about any problem and then solve it. This is exactly what humans do: we can specialize in a specific topic, from abstract maths to psychology and from sports to art, we can become experts at all of them.”).

⁶³ See CHUI, KAMALNATH & MCCARTHY, *supra* note 58, at 1; Craig S. Smith, *A.I. Here, There, Everywhere*, N.Y. TIMES (Feb. 23, 2021), <https://www.nytimes.com/2021/02/23/technology/ai-innovation-privacy-seniors-education.html> (on file with the *Ohio State Law Journal*); Ravid & Liu, *supra* note 55, at 2228–29.

AI's autonomous decision-making capabilities.⁶⁴ Some fear that as technology firms race to develop a workable “quantum computer” with processing power 158 million times faster than the most sophisticated supercomputer that exists today,⁶⁵ AI could supplant humans as sovereign. Already, the vast proliferation of AI in so many managerial roles⁶⁶ suggests an urgent need to reexamine the vitality of corporate governance principles and to shepherd a healthy relationship between humans and algorithmic entities.⁶⁷ As AI becomes more autonomous, the role of human managers will undoubtedly shift and arguably recede.⁶⁸ Whether with respect to sustaining democracy in our polity or preserving the environment we inhabit,⁶⁹ cabinining AI within appropriate jurisprudential guardrails remains necessary to protect human agency and dominion over our collective lives.

⁶⁴ See BYRON REESE, *THE FOURTH AGE: SMART ROBOTS, CONSCIOUS COMPUTERS, AND THE FUTURE OF HUMANITY* 87–89 (2018); NICK BOSTROM, *SUPERINTELLIGENCE: PATHS, DANGERS, STRATEGIES* 4–5 (2014).

⁶⁵ See Mark Smith, *Quantum Computing: Definition, Facts & Uses*, LIVE SCI. (Mar. 18, 2022), <https://www.livescience.com/quantum-computing> [<https://perma.cc/LJY5-LCLV>]; Robert Hackett, *IBM Plans a Huge Leap in Superfast Quantum Computing by 2023*, FORTUNE (Sept. 15, 2020), <https://fortune.com/2020/09/15/ibm-quantum-computer-1-million-qubits-by-2030/> [<https://perma.cc/W2L5-8UVU>]; See John Russell, *PsiQuantum's Path to 1 Million Qubits*, HPCWIRE (Apr. 21, 2022), <https://www.hpcwire.com/2022/04/21/psiquantums-path-to-1-million-qubits-by-the-middle-of-the-decade/> [<https://perma.cc/2E8T-CYQW>]; MATTEO BIONDI ET AL., MCKINSEY & CO., *QUANTUM COMPUTING: AN EMERGING ECOSYSTEM AND INDUSTRY USE CASES* 24 (Dec. 2021), <https://www.mckinsey.com/~/media/mckinsey/business%20functions/mckinsey%20digital/our%20insights/quantum%20computing%20use%20cases%20are%20getting%20real%20what%20you%20need%20to%20know/quantum-computing-an-emerging-ecosystem.pdf> [<https://perma.cc/QH3V-4QAV>]; Max G. Levy, *Machine Learning Gets a Quantum Speedup*, QUANTA MAG. (Feb. 4, 2022), <https://www.quantamagazine.org/ai-gets-a-quantum-computing-speedup-20220204/> [<https://perma.cc/QP8K-J6QN>].

⁶⁶ See DORIAN PYLE & CRISTINA SAN JOSÉ, MCKINSEY & CO., *AN EXECUTIVE'S GUIDE TO MACHINE LEARNING* 9 (June 2015), <https://www.mckinsey.com/industries/high-tech/our-insights/an-executives-guide-to-machine-learning> [<https://perma.cc/W5D5-6NNN>] (“If distributed autonomous corporations act intelligently, perform intelligently, and respond intelligently, we will cease to debate whether high-level intelligence other than the human variety exists. In the meantime, we must all think about what we want these entities to do, the way we want them to behave, and how we are going to work with them.”).

⁶⁷ See *id.* at 8 (“It’s true that change is coming (and data are generated) so quickly that human-in-the-loop involvement in all decision making is rapidly becoming impractical.”).

⁶⁸ See Bughin, McCarthy & Chui, *supra* note 42 (“And as AI continues to converge with advanced visualization, collaboration, and design thinking, businesses will need to shift from a primary focus on process efficiency to a focus on decision management effectiveness, which will further require leaders to create a culture of continuous improvement and learning.”).

⁶⁹ See West, *supra* note 51.

B. Redefining the Corporation

Given the power of AI in transforming business practices, a brief exploration of some prominent applications demonstrates how the very nature of the corporation itself will change in the era of AI. As AI technologies play an increasingly central role in business strategy, operations, and wealth creation,⁷⁰ one worldwide market intelligence firm forecasts the market for AI technologies will top \$500 billion in 2023.⁷¹ With respect to global business revenues, PwC predicts that AI will generate a \$15.7 trillion increase by 2030.⁷² Without doubt, the business case for AI utilization will ensure its enduring influence on the global economic landscape. The following discussion does not offer a comprehensive review of AI's impact on business methods or the influence corporations wield in society.⁷³ But even a brief survey of the increasing prevalence of AI suggests that existing governance principles might be unable to guide the radically evolving corporation in the era of AI.

1. Operations

One of the earliest applications of AI focuses on improving basic business operations to become more automated, data driven, and cost-effective. With the ability to learn from experience and nimbly adjust to granular data changes, AI plays an essential role in automation and manufacturing, quality assurance, supply chain logistics, and human resources, among many other aspects of corporate operations.⁷⁴

One of the earliest and most significant uses of AI occurs in automation and manufacturing.⁷⁵ With its adaptive capabilities and facility in leveraging micro process improvements, AI enhances manufacturing precision and efficiency.⁷⁶

⁷⁰ See AMMANATH, HUPFER & JARVIS, *supra* note 37, at 3; Davenport & Bean, *supra* note 34.

⁷¹ See Press Release, Bus. Wire, IDC Forecasts Companies to Increase Spend on AI Solutions by 19.6% in 2022 (Feb. 15, 2022), <https://www.businesswire.com/news/home/20220215005167/en/IDC-Forecasts-Companies-to-Increase-Spend-on-AI-Solutions-by-19.6-in-2022> [<https://perma.cc/TF5Q-XFSS>].

⁷² See RAO & VERWEIJ, *supra* note 43, at 3.

⁷³ For detailed insights into the myriad ways AI might permanently change society, for better or worse, see generally Paul R. Daugherty & H. James Wilson, *Human + Machine: Reimagining Work in the Age of AI*, HARV. BUS. REV., July–Aug. 2018, at 114 (2018); MAX TEGMARK, *LIFE 3.0: BEING HUMAN IN THE AGE OF ARTIFICIAL INTELLIGENCE* (2017); JOHN C. HAVENS, *HEARTIFICIAL INTELLIGENCE: EMBRACING OUR HUMANITY TO MAXIMIZE MACHINES* (2016); and BOSTROM, *supra* note 64.

⁷⁴ See Curran & Rao, *supra* note 56; Siebecker, *Incompatibility*, *supra* note 11, at 1235–36.

⁷⁵ See Siebecker, *Incompatibility*, *supra* note 11, at 1235.

⁷⁶ See Bernard Marr, *Artificial Intelligence in Manufacturing: Four Use Cases You Need to Know in 2023*, FORBES (July 7, 2023),

AI driven automation systems reduce human error and increase overall productivity.⁷⁷ For instance, multinational conglomerate General Electric uses AI in its manufacturing processes to enable rapid validation of parts, increase product yields, and instantly modify production processes to correct errors.⁷⁸

In a related area, AI technologies have revolutionized predictive maintenance and quality assurance. Using machine learning algorithms, corporations can predict potential equipment failures and schedule maintenance to prevent costly downtime.⁷⁹ Similarly, AI powered quality control systems can identify product defects with previously unthinkable accuracy and speed.⁸⁰ For example, many manufactures utilize AI to analyze assembly line images in real time to detect and quickly correct deviation from product standards.⁸¹

<https://www.forbes.com/sites/bernardmarr/2023/07/07/artificial-intelligence-in-manufacturing-four-use-cases-you-need-to-know-in-2023/?sh=62828d733bd8> [https://perma.cc/NSX3-X3K4].

⁷⁷ See Thomas H. Davenport, Matthias Holweg & Dan Jeavons, *How AI Is Helping Companies Redesign Processes*, HARV. BUS. REV. (Mar. 2, 2023), <https://hbr.org/2023/03/how-ai-is-helping-companies-redesign-processes> [https://perma.cc/G6FR-BMZX]; MCKINSEY DIGIT., TECH HIGHLIGHTS FROM 2022—IN EIGHT CHARTS 9 (Dec. 2022), <https://www.mckinsey.com/~media/mckinsey/business%20functions/mckinsey%20digital/our%20insights/tech%20highlights%20from%202022%20in%20eight%20charts/tech-highlights-from-2022-in-eight-charts.pdf> [https://perma.cc/JGE3-UKG9]; Bernard Marr, *The 4th Industrial Revolution: How Mining Companies Are Using AI, Machine Learning and Robots*, FORBES (Sept. 7, 2018), <https://www.forbes.com/sites/bernardmarr/2018/09/07/the-4th-industrial-revolution-how-mining-companies-are-using-ai-machine-learning-and-robots/?sh=2540bde4497e> [https://perma.cc/NL5R-C2EQ]; Eleftherios Charalambous, Robert Feldmann, Gérard Richter & Christoph Schmitz, *AI in Production: A Game Changer for Manufacturers with Heavy Assets*, QUANTUMBLACK (Mar. 7, 2019), <https://www.mckinsey.com/capabilities/quantumblack/our-insights/ai-in-production-a-game-changer-for-manufacturers-with-heavy-assets> [https://perma.cc/2E42-XUZQ].

⁷⁸ See *Industrial AI: Accelerating the Breadth & Depth of AI in a Physics+ World*, GE RSCH., <https://www.ge.com/research/initiative/industrial-ai> [https://perma.cc/698C-32QC].

⁷⁹ See Angus Loten, 'Predictive Maintenance' Tech Is Taking off as Manufacturers Seek More Efficiency, WALL ST. J. (Sept. 7, 2022), <https://www.wsj.com/articles/predictive-maintenance-tech-is-taking-off-as-manufacturers-look-for-more-efficiency-11662543000> [https://perma.cc/9LJT-3HZQ].

⁸⁰ See Emily Newton, *Artificial Intelligence Gives Auto Manufacturing a Boost*, AI MAG. (July 30, 2022), <https://aimagazine.com/technology/artificial-intelligence-gives-auto-manufacturing-a-boost> [https://perma.cc/ER6Q-ZRTU]; Davenport, Holweg & Jeavons, *supra* note 77; MICHAEL CHUI, BRYCE HALL, HELEN MAYHEW & ALEX SUKHAREVSKY, QUANTUMBLACK, THE STATE OF AI IN 2022—AND A HALF DECADE IN REVIEW 9 (Dec. 2022), <https://www.mckinsey.com/~media/mckinsey/business%20functions/quantumblack/our%20insights/the%20state%20of%20ai%20in%202022%20and%20a%20half%20decade%20in%20review/the-state-of-ai-in-2022-and-a-half-decade-in-review.pdf> [https://perma.cc/KD4W-XVMQ].

⁸¹ See Press Release, Google Cloud, Google Cloud's Visual Inspection AI Reinvents Manufacturing Quality Control (June 22, 2021), <https://www.prnewswire.com/news-releases/google-clouds-visual-inspection-ai-reinvents-manufacturing-quality-control-301317486.html> [https://perma.cc/LTH5-SVHS]; Georgia Wilson, *Top 10 Companies Using*

Supply chain management represents another important area in which AI technologies have significantly changed corporate practices.⁸² AI's ability to sift through vast amounts of complex data and forecast potential logistical hurdles enables corporations to avoid costly production delays and shortages.⁸³ To facilitate supply chain efficiency, AI can predict a vast array of unexpected and seemingly unrelated events including weather conditions, transportation interruptions, and labor strikes.⁸⁴ According to Rohit Tandon, a supply chain analytics expert at Deloitte, "AI can also enable dramatic improvements in other key supply chain areas, including demand forecasting, risk planning, supplier management, customer management, logistics, and warehousing."⁸⁵ As an example, BMW uses AI to predict product demand, maintain optimal inventory, and select efficient shipping routes for source materials and products.⁸⁶ While supply chain issues can cause disastrous ripple effects across business sectors,⁸⁷ AI technology helps prevent and mitigate those challenges.⁸⁸

With respect to human resources, AI technologies already play a prominent role in recruiting, hiring, and retention.⁸⁹ Beyond efficiently scouring candidate applications to determine basic fitness, AI tools can engage with potential

AI to Enhance Its Manufacturing, MEDIUM (June 5, 2020), <https://medium.com/manufacturing-global/top-10-companies-using-ai-to-enhance-its-manufacturing-92b3b13d61dd> [<https://perma.cc/JY4M-H4QD>].

⁸² See CHUI, HALL, MAYHEW & SUKHAREVSKY, *supra* note 80, at 3.

⁸³ See KNUT ALICKE ET AL., MCKINSEY & CO., *SUCCEEDING IN THE AI SUPPLY-CHAIN REVOLUTION 2* (Apr. 2021), <https://www.mckinsey.com/industries/metals-and-mining/our-insights/succeeding-in-the-ai-supply-chain-revolution> [<https://perma.cc/H4A5-YZVW>].

⁸⁴ See Bob Violino, *How Using Analytics and AI Can Help Companies Manage the Semiconductor Supply Chain*, CNBC (Oct. 19, 2022), <https://www.cnbc.com/2022/10/19/how-ai-can-help-companies-manage-the-semiconductor-supply-chain.html> [<https://perma.cc/PPJ5-CV67>].

⁸⁵ *Id.*

⁸⁶ Jeremy Bowman, *How Artificial Intelligence Is Used in Manufacturing*, MOTLEY FOOL (July 19, 2023), <https://www.fool.com/investing/stock-market/market-sectors/information-technology/ai-stocks/ai-in-manufacturing/> [<https://perma.cc/9Y46-X4TA>].

⁸⁷ See David Simchi-Levi, Feng Zhu & Matthew Loy, *Fixing the U.S. Semiconductor Supply Chain*, HARV. BUS. REV. (Oct. 25, 2022), <https://hbr.org/2022/10/fixing-the-u-s-semiconductor-supply-chain> [<https://perma.cc/UQ4E-6NYA>].

⁸⁸ See Joe McKendrick, *Artificial Intelligence: Not a Panacea for Supply Chain Issues, But Extremely Helpful*, FORBES (July 14, 2022), <https://www.forbes.com/sites/joemckendrick/2022/07/14/artificial-intelligence-not-a-panacea-for-supply-chain-issues-but-extremely-helpful/?sh=43e3396f5821> [<https://perma.cc/NYX6-X2LB>].

⁸⁹ See Sameer Maskey, *How AI Is Primed to Disrupt HR and Recruiting*, FORBES (Mar. 23, 2022), <https://www.forbes.com/sites/forbestechcouncil/2022/03/23/how-ai-is-primed-to-disrupt-hr-and-recruiting/?sh=6d530cf51078> [<https://perma.cc/3JF8-8ASU>]; Sara Castellanos, *HR Departments Turn to AI-Enabled Recruiting in Race for Talent*, WALL ST. J. (Mar. 14, 2019), <https://www.wsj.com/articles/hr-departments-turn-to-ai-enabled-recruiting-in-race-for-talent-11552600459> [<https://perma.cc/S7GQ-B2K6>].

employees to assess cognitive ability, career potential, professional demeanor, and a variety of other qualitative factors.⁹⁰ While traditional methods for evaluating potential employees suffer criticism for being excessively time consuming and inequitable, AI algorithms reduce human bias with more standardized processes.⁹¹ In addition, firms utilize AI technology for onboarding new employees, maintaining employee engagement, and even crafting performance evaluations.⁹² In a recent survey of more than 250 human resource executives, 92% indicated an intention to increase reliance on AI in the next year.⁹³ Some human resource experts even predict that by the end of 2024, 80% of the largest 2000 companies in the world will use “AI/ML-enabled digital managers” to conduct aspects of employee hiring, training, and firing.⁹⁴

Of course, AI continues to reshape corporate practices in myriad other areas, such as mergers & acquisitions, compliance, and risk management.⁹⁵ As AI reaches more deeply into so many aspects of business operations and production,⁹⁶ the role humans play will inevitably change. To the extent investment in AI enhances profitability, innovative utilization of AI technologies will continue to proliferate.⁹⁷ While initial investment might pose

⁹⁰ See Marcin Frackiewicz, *Emotion AI in Human Resources: Revolutionizing Employee Engagement*, TS2 SPACE (June 12, 2023), <https://ts2.space/en/emotion-ai-in-human-resources-revolutionizing-employee-engagement/> (on file with the *Ohio State Law Journal*); DIMPLE AGARWAL, JOSH BERSIN, GAURAV LAHIRI, JEFF SCHWARTZ & ERICA VOLINI, DELOITTE, *THE RISE OF THE SOCIAL ENTERPRISE* 74 (Mar. 2018), https://www2.deloitte.com/content/dam/insights/us/articles/HCTrends2018/2018-HCTrends_Rise-of-the-social-enterprise.pdf [<https://perma.cc/PT5S-KNCK>].

⁹¹ See Gem Siocon, *Ways AI Is Changing HR Departments*, BUS. NEWS DAILY, <https://www.businessnewsdaily.com/how-ai-is-changing-hr> [<https://perma.cc/XCK9-885X>].

⁹² See *id.*

⁹³ See *id.*

⁹⁴ See Amy Loomis et al., *IDC FutureScape: Worldwide Future of Work 2022 Predictions*, IDC (Nov. 18, 2021), <https://www.idc.com/research/viewtoc.jsp?containerId=US47290521> [<https://perma.cc/RM6Y-VSVZ>].

⁹⁵ See Siebecker, *Incompatibility*, *supra* note 11, at 1233–35, 1237–41.

⁹⁶ See Adam Uzialko, *How Artificial Intelligence Will Transform Businesses*, BUS. NEWS DAILY (Feb. 21, 2023), <https://www.businessnewsdaily.com/9402-artificial-intelligence-business-trends.html> [<https://perma.cc/W5V3-X9WK>]. For a description of efforts to expand AI robotics to nontraditional areas, see Greg Nichols, *DARPA Seeks “Non-Traditional” Robotics Innovators*, ZDNET (Nov. 18, 2015), <https://www.zdnet.com/article/darpa-seeks-non-traditional-robotics-innovators/> [<https://perma.cc/7CN9-DW2G>].

⁹⁷ See Ganes Kesari, *You’ve Invested in AI, But Are You Getting ROI from It?*, FORBES (Mar. 29, 2021), <https://www.forbes.com/sites/ganeskesari/2021/03/29/youve-invested-in-ai-but-are-you-getting-roi-from-it/> [<https://perma.cc/FV5Q-ECC6>]; SANJEEV VOHRA, AJAY VASAL, PHILIPPE ROUSIERE & LAN GUAN, ACCENTURE, *THE ART OF AI MATURITY: ADVANCING FROM PRACTICE TO PERFORMANCE* 30 (2022),

a significant hurdle,⁹⁸ market experts predict AI adoption could produce massive financial rewards.⁹⁹ With such a clear economic incentive, corporations will undoubtedly continue to integrate AI in business operations.

2. Communication

By revolutionizing communication methods and strategies, AI enables corporations to exert powerful influence over consumers, investors, corporate stakeholders, and the public.¹⁰⁰ Prior to AI's ascendance, corporate communication operated unidirectionally, as corporations disseminated information without opportunities for feedback or engagement.¹⁰¹ AI technology, however, enables dynamic exchanges between the corporation and various audiences and allows the corporation to tailor messages to particular groups or even individuals, often in real time conversations.¹⁰²

Regarding consumers, a leading digital consulting firm projects AI will manage 95% of customer interactions by 2025.¹⁰³ With the advent of generative

<https://www.accenture.com/content/dam/system-files/acom/custom-code/ai-maturity/Accenture-Art-of-AI-Maturity-Report-Global-Revised.pdf#zoom=40> [https://perma.cc/KE89-NNXY].

⁹⁸ See Oliver Rist, *Small Businesses Are Using AI—Sometimes*, PC MAG (Dec. 7, 2021), <https://www.pcmag.com/news/small-businesses-are-using-ai-sometimes> [https://perma.cc/D7GA-ZTXE].

⁹⁹ See YUVAL ATSMON ET AL., MCKINSEY & CO., *TIPPING THE SCALES IN AI: HOW LEADERS CAPTURE EXPONENTIAL RETURNS* 2, 4 (Apr. 2021), <https://www.mckinsey.com/~media/McKinsey/Industries/Technology%20Media%20and%20Telecommunications/High%20Tech/Our%20Insights/Tipping%20the%20scales%20in%20AI/Tipping-the-scales-in-AI-How-leaders-capture-exponential-returns.pdf> [https://perma.cc/7F8F-GN7A]; Davenport & Bean, *supra* note 34.

¹⁰⁰ See Avinash Chandra Das et al., *The Next Frontier of Customer Engagement: AI-Enabled Customer Service*, MCKINSEY & CO. (Mar. 27, 2023), <https://www.mckinsey.com/capabilities/operations/our-insights/the-next-frontier-of-customer-engagement-ai-enabled-customer-service> [https://perma.cc/9GN9-4Q5C]; Michael Pollack, *How Technology Is Changing Investor Relations*, FIN. & CORP. RELS. (Mar. 1, 2018), <http://www.fcr.com.au/technology-changing-investor-relations/> (on file with the *Ohio State Law Journal*) (“Innovation is paramount to the survival and relevance of investor relations. It is for this reason that many believe big data and artificial intelligence will be the main drivers influencing investor relations in the near future.”).

¹⁰¹ See, e.g., Pollack, *supra* note 100.

¹⁰² See Christopher Graves, *Generative AI Can Help You Tailor Messaging to Specific Audiences*, HARV. BUS. REV. (Feb. 16, 2023), <https://hbr.org/2023/02/generative-ai-can-help-you-tailor-messaging-to-specific-audiences> [https://perma.cc/75LR-ZE67]; *How Artificial Intelligence Will Change Corporate Communications*, SCH. OF MEANINGFUL EXPERIENCES (Jan. 14, 2023), <https://www.some.education/blog/how-artificial-intelligence-will-change-corporate-communications> [https://perma.cc/WU96-3GPQ].

¹⁰³ See Ed Lauder, *AI Will Power 95% of Customer Interactions by 2025*, AI BUS. (Mar. 10, 2017), https://aibusiness.com/document.asp?doc_id=760184 (on file with *Ohio State Law Journal*); Nupur Verma, *95% Consumer Interactions to Be Monitored by AI by 2025—Voice of Customer and Technology*, SG ANALYTICS (May 11, 2021),

AI and applications such as ChatGPT,¹⁰⁴ corporations now craft increasingly personalized messages for consumers and conduct sophisticated telemarketing conversations using artificial personas virtually indistinguishable from humans.¹⁰⁵ Leveraging the ability to gather and process highly granular personalized consumer data more efficiently, companies employ AI technologies to “understand, shape, customize, and optimize the customer journey.”¹⁰⁶ While traditional customer service delivered by humans often causes frustration,¹⁰⁷ companies now deploy AI virtual assistants to guide more smoothly consumer interactions that enhance, rather than undermine, brand loyalty.¹⁰⁸ For example, a recent job posting by Amazon suggests it has plans to harness generative AI in its product search platform to create a consumer-friendly, “conversational experience” for making purchases.¹⁰⁹ Whether by personalizing service,¹¹⁰ recommending individually tailored consumer purchases,¹¹¹ or facilitating easy resolution of consumer complaints,¹¹² AI

<https://us.sganalytics.com/blog/95-consumer-interactions-to-be-monitored-by-ai-by-2025-voice-of-customer-and-technology/> [https://perma.cc/RV2J-6TBC].

¹⁰⁴ See generally MICHAEL CHUI ET AL., MCKINSEY DIGIT., *THE ECONOMIC POTENTIAL OF GENERATIVE AI: THE NEXT PRODUCTIVITY FRONTIER* (June 2023), <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#/> [https://perma.cc/8V8S-MDLE].

¹⁰⁵ See *id.* at 19; RAO & VERWEIJ, *supra* note 72, at 16.

¹⁰⁶ See David C. Edelman & Mark Abraham, *Customer Experience in the Age of AI*, Mar.–Apr. 2022 HARV. BUS. REV., 116, 120 (2022).

¹⁰⁷ See VINAY GUPTA, MCKINSEY & CO., *CUSTOMER FIRST: PERSONALIZING THE CUSTOMER-CARE JOURNEY* 2 (Jan. 2019), <https://www.mckinsey.com/~media/mckinsey/business%20functions/operations/our%20insights/how%20to%20capture%20what%20the%20customer%20wants/customer-first-personalizing-the-customer-care-journey.pdf> [https://perma.cc/MTN8-Y5BU].

¹⁰⁸ See Steve Lohr, *Ending the Chatbot’s ‘Spiral of Misery,’* N.Y. TIMES (Mar. 3, 2022), <https://www.nytimes.com/2022/03/03/technology/ai-chatbot.html> (on file with the *Ohio State Law Journal*).

¹⁰⁹ See Matt Day, *Amazon Plans to Add ChatGPT-Style Search to Its Online Store*, TIME (May 16, 2023), <https://time.com/6280051/amazon-artificial-intelligence-product-search-jobs/> [https://perma.cc/CYN6-MKQA].

¹¹⁰ See Nisreen Ameen, Ali Tarhini, Alexander Reppel & Amitabh Anand, *Customer Experiences in the Age of Artificial Intelligence*, 114 COMPUTS. HUM. BEHAV., 106548, at 1, 5 (2021), <https://www.sciencedirect.com/science/article/pii/S0747563220302983> [https://perma.cc/S9WF-L3C7]; H. James Wilson & Paul R. Daugherty, *Collaborative Intelligence: Humans and AI Are Joining Forces*, HARV. BUS. REV. July–Aug. 2018, at 123 (2018) (“Providing customers with individually tailored brand experiences is the holy grail of marketing. With AI, such personalization can now be achieved with previously unimaginable precision and at vast scale.”).

¹¹¹ See Thomas H. Davenport, Abhijit Guha & Dhruv Grewal, *How to Design an AI Marketing Strategy*, HARV. BUS. REV., July–Aug. 2021, <https://hbr.org/2021/07/how-to-design-an-ai-marketing-strategy> [https://perma.cc/L5WW-X2ZU].

¹¹² See Ameen, *supra* note 110, at 4; Rahul Sharma, *How Artificial Intelligence Is Changing Customer Service Forever*, TECHGENIX (Sept. 18, 2018), <http://techgenix.com/ai-customer-service/> (on file with the *Ohio State Law Journal*).

technology has radically changed how corporations communicate with consumers.¹¹³

With respect to investors, AI technologies enable companies to communicate more strategically with existing and potential shareholders by considering preferences regarding the timing and content of corporate communications.¹¹⁴ Investor relations firms employ AI to scour vast amounts of corporate communications to identify new investment opportunities and monitor existing shareholder sentiment.¹¹⁵ Some AI technologies purportedly evaluate emotions in historical and real-time discourse between corporate representatives and shareholders to predict volatility in share trading.¹¹⁶ According to one prominent investor relations firm, “[t]his capability will open up the way in which investor relations teams shape their message and provide information to investors, including perhaps what kinds of data they share with investors at key points throughout the year.”¹¹⁷ In that way, companies could provide a degree of individual personalization to shareholder communication that resembles the approach in communications with consumers.¹¹⁸ In the end, using AI to redesign the communication landscape allows corporations to promote investor confidence and market stability.

¹¹³ See Cristina Ledro, Anna Nosella & Andrea Vinelli, *Artificial Intelligence in Customer Relationship Management: Literature Review and Future Research Directions*, 37 J. BUS. & INDUS. MKTG. 48, 48 (2022); Mengmeng Song, Xinyu Xing, Yucong Duan, Jason Cohen & Jian Mou, *Will Artificial Intelligence Replace Human Customer Service? The Impact of Communication Quality and Privacy Risks on Adoption Intention*, 66 J. RETAILING & CONSUMER SERVS. 102900, at 1 (2022), <https://www.sciencedirect.com/science/article/pii/S0969698921004665> [<https://perma.cc/MGN5-58FF>].

¹¹⁴ See Tim Human, *IROs Urged to Monitor AI Adoption by Investors*, IR MAG. (May 19, 2020), <https://www.irmagazine.com/technology-social-media/iros-urged-monitor-ai-adoption-investors> [<https://perma.cc/64MH-3QU3>].

¹¹⁵ See Liron Hadar, *How AI Helps Investor Relations Be More Proactive*, IDX: INV. RELS. BLOG (Mar. 21, 2023), <https://www.investisdigital.com/blog/investor-relations/how-ai-helps-ir-stay-proactive> [<http://perma.cc/G5YV-TTNU>].

¹¹⁶ See *id.*

¹¹⁷ JESSICA LEE HOLLAND, FIN. & CORP. RELS., *HOW TECHNOLOGY IS CHANGING INVESTOR RELATIONS* 2 (Mar. 1, 2018).

¹¹⁸ See SAM LEVENSON ET AL., NAT’L INV. RELS. INST., *ARTIFICIAL INTELLIGENCE IN INVESTOR RELATIONS* 8 (2020), https://www.niri.org/NIRI/media/Protected-Documents/PD/NIRI_ThinkTank_Report_2020_FINAL.pdf [<http://perma.cc/4BZ9-LL5G>]; Anthony Petrucci, *How Artificial Intelligence Will Impact Corporate Communications*, FORBES (Apr. 20, 2018), <https://www.forbes.com/sites/forbescommunicationscouncil/2018/04/20/how-artificial-intelligence-will-impact-corporate-communications/#678194da1dc6> [<https://perma.cc/879H-B3LV>] (“AI will be the method through which a new concept called identity-based corporate communications will emerge. The precision will be impressive, with communications customized to each individual.”).

3. Management

The proposition of AI entities owning and operating businesses without human intervention might seem startling, but it's increasingly becoming a reality, signaling a major evolutionary shift in the nature of the corporation. Already, AI entities now take on significant management roles,¹¹⁹ in addition to assisting humans in virtually all aspects of business operations and communication.¹²⁰ For instance, Deep Knowledge Ventures, a Hong Kong-based venture capital firm, appointed AI software, Vital, to its board in 2014.¹²¹ Even though local law prohibited conferring formal board member status, Vital participated in decision-making¹²² and successfully guided the firm through a financial crisis.¹²³ Another AI, Alicia T, was recently enlisted as a voting member of the management team of the European company Tieto.¹²⁴

In many domestic and international jurisdictions, AI entities may legally serve as corporate officers and board members.¹²⁵ While some U.S. states, including Delaware, require corporate directors to be “natural persons,” other jurisdictions permit any “person” or “legal entity” (such as another company) to serve as full board voting members.¹²⁶ In the face of rapid advancements in AI decision-making capabilities and market competition, experts suggest an inevitable shift towards regulatory structures that accept AI entities as corporate

¹¹⁹ See Möslin, *supra* note 17, at 649–50.

¹²⁰ See AMMANATH, HUPFER & JARVIS, DELOITTE, *supra* note 37, at 3.

¹²¹ See Camp, *supra* note 42.

¹²² See Möslin, *supra* note 17, at 650.

¹²³ See Camp, *supra* note 42 (“Vital at Deep Knowledge Ventures is credited with rescuing the company when it was on the brink of bankruptcy. The venture capital fund was investing in too many ‘overhyped’ projects in the biotech industry, a notoriously difficult one for investors with its very high failure rate. With Vital, they were able to analyse big data that revealed patterns of risk for their investments.”).

¹²⁴ Press Release, Bus. Wire, Tieto the First Nordic Company to Appoint Artificial Intelligence to the Leadership Team of the New Data-Driven Businesses Unit (Oct. 17, 2016), <https://www.businesswire.com/news/home/20161016005092/en/Tieto-the-First-Nordic-Company-to-Appoint-Artificial-Intelligence-to-the-Leadership-Team-of-the-New-Data-Driven-Businesses-Unit> [<https://perma.cc/QNE9-LXJ6>] (“Tieto . . . has appointed Artificial Intelligence as a member of the leadership team of its new data-driven businesses unit. The AI, called Alicia T, is the first AI to be nominated to a leadership team in an OMX-listed company. AI will help the management team to become truly data-driven and will assist the team in seeking innovative ways to pursue the significant opportunities of the data-driven world.”).

¹²⁵ See Möslin, *supra* note 17, at 649, 657–66 (“Deep Knowledge Ventures . . . had appointed an algorithm named Vital . . . to its board of directors.”).

¹²⁶ See *id.* at 664–65. See generally Shawn Bayern, *The Implications of Modern Business-Entity Law for the Regulation of Autonomous Systems*, 7 EUR. J. RISK REG. 297, 302 (2016) [hereinafter Bayern, *Implications*] (discussing the legal possibility of a fully autonomous entity).

officers and directors.¹²⁷ That AI entities will increasingly supplant humans in managing the corporate affairs and operations seems all but inevitable.¹²⁸ The paramount concern centers on whether corporate governance principles will sufficiently adapt to accommodate AI's expanding role.¹²⁹

Beyond assisting humans in management, many scholars, technologists, and business experts increasingly assert that businesses could be entirely owned and operated by AI entities.¹³⁰ For instance, Professor Shawn Bayern presents a strategy involving dual limited liability companies (LLCs) that can take ownership interests in each other, both controlled by an AI entity.¹³¹ These AI owned LLCs, therefore, could operate without human oversight and own any property, including corporate stocks.¹³² Bayern asserts that neither the uniform LLC statute nor any state LLC laws in the U.S. prevent nonhuman membership or artificial entity management.¹³³ Even though Delaware's corporate law initially requires directors to be natural persons, this requirement can be waived in the corporate charter,¹³⁴ and many other jurisdictions don't have such a

¹²⁷ See Möselein, *supra* note 17, at 665–66; John Armour & Horst Eidenmüller, *Self-Driving Corporations?*, 10 HARV. BUS. L. REV. 87, 106 (2020) (“At some point, we may see humans on boards of corporations being replaced by algorithms.”).

¹²⁸ See Mohammad Hossein Jarrahi, Mareike Möhlmann & Min Kyung Lee, *Algorithmic Management: The Role of AI in Managing Workforces*, MIT SLOAN MGMT. REV. (Apr. 5, 2023), <https://sloanreview.mit.edu/article/algorithmic-management-the-role-of-ai-in-managing-workforces/> [<https://perma.cc/V8KP-5U94>].

¹²⁹ See Petrin, *supra* note 39, at 1029–30 (“With software and machines in charge, the need for a collective board will vanish, which will be replaced with a single ‘fused’ corporate management function. The shift from human to AI-based management will equally necessitate changes to the system of managerial liability. . . . [I]t seems clear that there will be a need for legal reform to accommodate changes brought about by new technologies. These reforms should be both enabling—facilitating the efficiencies and other beneficial effects of AI management—but also restrictive, protecting society from potential negative impacts, loss of employment, and other harmful actions by rogue AI entities.”).

¹³⁰ See Bayern, *Autonomous*, *supra* note 18, at 47; Lopucki, *supra* note 18, at 903; PYLE & SAN JOSÉ, *supra* note 66, at 8 (“Looking three to five years out, we expect to see far higher levels of artificial intelligence, as well as the development of distributed autonomous corporations. These self-motivating, self-contained agents, formed as corporations, will be able to carry out set objectives autonomously, without any direct human supervision. Some DACs will certainly become self-programming.”); Thomas Burri, *Free Movement of Algorithms: Artificially Intelligent Persons Conquer the European Union’s Internal Market*, in RESEARCH HANDBOOK ON THE LAW OF ARTIFICIAL INTELLIGENCE 537, 537–40 (Woodrow Barfield & Ugo Pagallo eds., 2018).

¹³¹ See generally Shawn Bayern, *Of Bitcoins, Independently Wealthy Software, and the Zero-Member LLC*, 108 NW. U. L. REV. ONLINE 257 (2014) [hereinafter Bayern, *Of Bitcoins*]; Bayern, *Implications*, *supra* note 126, at 302; Shawn Bayern et al., *Company Law and Autonomous Systems: A Blueprint for Lawyers, Entrepreneurs, and Regulators*, 9 HASTINGS SCI. & TECH. L.J. 135, 138 (2017) [hereinafter Bayern, *Company Law*].

¹³² See Bayern, *Autonomous*, *supra* note 18, at 26–28.

¹³³ See *id.* at 36–40.

¹³⁴ See Armour & Eidenmüller, *supra* note 127, at 106.

requirement at all.¹³⁵ Despite some academic skepticism,¹³⁶ barring any clear future legal prohibitions, the step towards AI ownership and operation of businesses seems assured.

Moving in the direction of algorithmic independence, a growing number of jurisdictions are legally recognizing decentralized autonomous organizations (“DAOs”) and crypto companies that operate with minimal or no human oversight.¹³⁷ For instance, Wyoming’s DAO statute, based on the state’s LLC statute, permits entities to operate with a purely algorithmic manager.¹³⁸ As of June 2022, there were approximately 6,000 DAOs in the U.S., with combined assets exceeding \$20 billion.¹³⁹ This emerging acceptance of AI-run businesses marks a significant evolutionary step in corporate law and practice.

Regardless of whether AI entities autonomously manage and own a business structured as an LLC or a corporation, the primary concern targets the soundness of granting constitutional rights to entities that lack human oversight.¹⁴⁰ Before the ascendance of AI in the corporate sector, many scholars and politicians advocated for disconnecting constitutional personhood from corporations and other business entities.¹⁴¹ Nevertheless, just like sentient human beings, corporations and LLCs enjoy a variety of constitutional rights and protections, including equal protection and due process of law under the 14th Amendment, protections against unreasonable searches and seizures, freedom of association, religious freedom, and rights to political speech.¹⁴²

¹³⁵ See *id.*; see also Bayern, *Company Law*, *supra* note 131, at 138–39.

¹³⁶ See generally, e.g., Matthew U. Scherer, *Of Wild Beasts and Digital Analogues: The Legal Status of Autonomous Systems*, 19 NEV. L.J. 259 (2018).

¹³⁷ See SARAH HUBBARD, DECENTRALIZED AUTONOMOUS ORGANIZATIONS AND POLICY CONSIDERATIONS IN THE UNITED STATES HARV. KENNEDY SCH. BELFER CTR. FOR SCI. & INT’L AFFS. 6, 18 (May 2023), https://www.belfercenter.org/sites/default/files/files/publication/Policy%20Brief_TAPP_DecentralizedAutOrgPolCons_v4.pdf [<https://perma.cc/HGW3-SM2U>]; Jordan Teague, *Starting a DAO in the USA? Steer Clear of DAO Legislation*, DEFIANT (June 7, 2022), <https://thedefiant.io/starting-a-dao-in-the-usa-steer-clear-of-dao-legislation/> [<https://perma.cc/JD2H-8XKU>].

¹³⁸ See Decentralized Autonomous Organization Supplement, WYO. STAT. ANN. § 17-31-104(e) (2021); BUS. DIV., WYO. SEC’Y OF STATE, DECENTRALIZED AUTONOMOUS ORGANIZATION (DAO): FREQUENTLY ASKED QUESTIONS 1 (Mar. 2022), https://sos.wyo.gov/Business/Docs/DAOs_FAQs.pdf [<https://perma.cc/N7CL-4AYP>].

¹³⁹ HUBBARD, *supra* note 137, at 3.

¹⁴⁰ See Burri, *supra* note 130, at 540, 556–58; Robert van den Hoven van Genderen, *Legal Personhood in the Age of Artificially Intelligent Robots*, in RESEARCH HANDBOOK ON THE LAW OF ARTIFICIAL INTELLIGENCE 213, 217–19 (Woodrow Barfield & Ugo Pagallo eds., 2018).

¹⁴¹ See Saru M. Matambanadzo, *The Body, Incorporated*, 87 TUL. L. REV. 457, 464–68 (2013); Elizabeth Pollman, *Reconceiving Corporate Personhood*, 2011 UTAH L. REV. 1629, 1650 (2011).

¹⁴² See Matambanadzo, *supra* note 141, at 471–72. See generally Brandon L. Garrett, *The Constitutional Standing of Corporations*, 163 U. PA. L. REV. 95, 96 (2014).

As AI technologies quickly permeate so many economic, social, and political institutions, debates about what status AI should enjoy remains of paramount importance.¹⁴³ Numerous scholars and ethicists support the idea of robotic rights,¹⁴⁴ while others advocate for a more cautious stance,¹⁴⁵ primarily due to concerns about the potential adverse effects of autonomous entities on human society. Nonetheless, in 2017, the European Parliament deliberated legislation offering “electronic personhood” status to AI entities,¹⁴⁶ while Saudi Arabia took the remarkable step of granting formal citizenship to an AI-powered robot, Sophia, in the same year.¹⁴⁷

With the rapid evolution of AI technologies and their prevalence in so many facets of corporate organization, AI has begun to change the very nature of the corporation. The impact of AI in the corporate realm extends far beyond enhancing organizational efficiency, product quality, service delivery, and ultimately, corporate profitability.¹⁴⁸ As AI entities start to occupy managerial and potentially ownership roles, the institutional identity of the corporation shifts significantly.¹⁴⁹ And with that changed identity, the role corporations play in society needs reconsideration. Adhering to a philosophically obsolete construct of corporations as rights-bearing persons seems rather dangerous, as AI continues to ascend in directing corporate policy and behavior. Especially if the artificially intelligent corporation continues to enjoy such a wide range of constitutional protections, tailoring governance structures to the evolutionary leap in corporate identity remains essential to preserving the environment humans and nonhumans share.

¹⁴³ See generally, e.g., Kate Darling, *Extending Legal Protection to Social Robots: The Effects of Anthropomorphism, Empathy, and Violent Behavior Towards Robotic Objects*, in ROBOT LAW 213 (Ryan Calo, A. Michael Froomkin & Ian Kerr eds., 2016); Iria Giuffrida, *Liability for AI Decision-Making: Some Legal and Ethical Considerations*, 88 FORDHAM L. REV. 439, 440 (2019); Gerhard Wagner, *Robot, Inc.: Personhood for Autonomous Systems?*, 88 FORDHAM L. REV. 591, 593 (2019); Mark A. Lemley & Bryan Casey, *Remedies for Robots*, 86 U. CHI. L. REV. 1311 (2019).

¹⁴⁴ See generally JOSHUA C. GELLERS, RIGHTS FOR ROBOTS: ARTIFICIAL INTELLIGENCE, ANIMAL AND ENVIRONMENTAL LAW 16–18 (2021); SVEN NYHOLM, HUMANS AND ROBOTS: ETHICS, AGENCY, AND ANTHROPOMORPHISM 3 (2020).

¹⁴⁵ See, e.g., RYAN ABBOTT, THE REASONABLE ROBOT: ARTIFICIAL INTELLIGENCE AND THE LAW 4 (2020); Nadia Banteka, *Artificially Intelligent Persons*, 58 HOUS. L. REV. 537, 542 (2021).

¹⁴⁶ See Alex Hern, *Give Robots ‘Personhood’ Status, EU Committee Argues*, GUARDIAN (Jan. 12, 2017), <https://www.theguardian.com/technology/2017/jan/12/give-robots-personhood-status-eu-committee-argues> [<https://perma.cc/MU3Z-M5RS>].

¹⁴⁷ See Olivia Cuthbert, *Saudi Arabia Becomes First Country to Grant Citizenship to a Robot*, ARAB NEWS (Oct. 26, 2017), <https://www.arabnews.com/node/1183166/saudi-arabia> [<https://perma.cc/697B-2S28>].

¹⁴⁸ See Armour & Eidenmüller, *supra* note 127, at 96.

¹⁴⁹ See *id.* at 91; van Genderen, *supra* note 140, at 228; Möslin, *supra* note 17, at 655–67.

4. Politics

With increasing influence over corporate operations, communication, and management,¹⁵⁰ AI technologies will inevitably direct corporate political activity as well. Blithely acquiescing to AI's increasing influence in politics could threaten the legitimacy and basic viability of democratic institutions. Regardless of the harms AI might cause, a confluence of factors suggests AI could ascend to a position of political dominance.

In the wake of *Citizens United*, corporations persist in a continuous quest to dominate the political landscape.¹⁵¹ The clear goal of corporate political activity remains enhancing corporate profits,¹⁵² as corporations realize that manipulating individuals' views could not only produce a more favorable business climate but motivate consumer spending, as well.¹⁵³ For example, some recent reports tie an increase in gun sales to the promotion of certain political views involving distrust in government, racial discord, and social unrest.¹⁵⁴ No matter the particular product or service at stake, corporations expend vast resources shaping political views to secure monetary gain.¹⁵⁵ In political lobbying alone, corporations currently spend over \$4 billion per year.¹⁵⁶ Moreover, corporate interests were responsible for the vast majority of the \$8.5 billion spent on political advertising in the 2019–2020 presidential

¹⁵⁰ See Camp, *supra* note 42.

¹⁵¹ See Siebecker, *Political*, *supra* note 10, at 2720–28.

¹⁵² See *id.* at 2746.

¹⁵³ See Lund & Strine, *supra* note 11, at 133.

¹⁵⁴ See Marc Fisher, Miranda Green, Kelly Glass & Andrea Eger, 'Fear on Top of Fear': Why Anti-Gun Americans Joined the Wave of New Gun Owners, WASH. POST (July 10, 2021), <https://www.washingtonpost.com/nation/interactive/2021/anti-gun-gun-owners/> [https://perma.cc/AGL4-R33Q]; Ben Winck, Gun Manufacturer Stocks Rise After Weekend Mass Shootings and Renewed Calls for Tougher Firearm Laws, BUS. INSIDER (Aug. 5, 2019), <https://markets.businessinsider.com/news/stocks/gun-stocks-rise-after-dual-weekend-shootings-calls-for-laws-2019-8-1028418220> [https://perma.cc/DSG7-5ART]. See generally RUKMANI BHATIA, CTR. FOR AM. PROGRESS, GUNS, LIES, AND FEAR: EXPOSING THE NRA'S MESSAGING PLAYBOOK (Apr. 2019), <https://www.americanprogress.org/wp-content/uploads/sites/2/2019/04/NRA-report.pdf> [https://perma.cc/VT6Z-GS9Q].

¹⁵⁵ See Siebecker, *Political*, *supra* note 10, at 2723, 2732–36.

¹⁵⁶ See Total Lobbying Spending U.S. 1998–2022, STATISTA (Apr. 5, 2023), <https://www.statista.com/statistics/257337/total-lobbying-spending-in-the-us/> [https://perma.cc/8G64-3X68].

election cycle.¹⁵⁷ With dogged determination, corporations relentlessly wage a sort of hostile takeover of American politics in order to secure greater profits.¹⁵⁸

A lack of transparency in corporate political activity compounds that attempt to manipulate voter preferences.¹⁵⁹ Perhaps bowing to market pressure from large institutional investors, many public companies disclose voluntarily at least some of their political expenditures.¹⁶⁰ Nonetheless, current laws generally permit boards of directors to spend undisclosed corporate funds to advance secret political agendas.¹⁶¹ Such a lax framework for accountability inevitably tempts individual board members to engage in a sort of “political insider trading” by using corporate assets to advance personal political goals.¹⁶² Persistent legislative and administrative failures to require greater transparency regarding corporate political activity,¹⁶³ however, make clandestine corporate spending a nettlesome norm.¹⁶⁴ In the 2020 election, corporations contributed an estimated \$1 billion to “dark money”¹⁶⁵ political action groups that do not

¹⁵⁷ See Howard Homonoff, *2020 Political Ad Spending Exploded: Did It Work?*, FORBES (Dec. 8, 2020), <https://www.forbes.com/sites/howardhomonoff/2020/12/08/2020-political-ad-spending-exploded-did-it-work/?sh=312610863ce0> [https://perma.cc/6MAT-VWEF]; *Business-Labor-Ideology Split in PAC & Individual Donations to Candidates, Parties, Super PACs and Outside Spending Groups*, OPENSECRETS, <https://www.opensecrets.org/elections-overview/business-labor-ideology-split?cycle=2020> [https://perma.cc/KFC6-RZMM].

¹⁵⁸ Some suggest corporate political spending might actually enhance public discourse. See Jill E. Fisch, *Frankenstein’s Monster Hits the Campaign Trail: An Approach to Regulation of Corporate Political Expenditures*, 32 WM. & MARY L. REV. 587, 589 (1991) (opposing “prohibition of corporate political speech” and emphasizing “the rationale that corporate political speech adds to the open marketplace of ideas protected by the first amendment”).

¹⁵⁹ See Caroline Crenshaw & Michael E. Porter, *Transparency and the Future of Corporate Political Spending*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Mar. 15, 2021), <https://corpgov.law.harvard.edu/2021/03/15/transparency-and-the-future-of-corporate-political-spending/> [https://perma.cc/9NH4-B7RU] (“[W]ell-accepted management theory shows why the role of American business in politics has become so counterproductive: the short-term rewards of socially destructive lobbying are too tempting for executives under constant pressure to maximize earnings.”); LIZ KENNEDY, DEMOS, 10 WAYS CITIZENS UNITED ENDANGERS DEMOCRACY (Jan. 2012), https://www.demos.org/sites/default/files/publications/CU_TopTen_1.pdf [https://perma.cc/92K5-6NXK].

¹⁶⁰ See DAN CARROLL ET AL., 2022 CPA-ZICKLIN INDEX OF CORPORATE POLITICAL DISCLOSURE AND ACCOUNTABILITY 30–33 (Oct. 2022), <https://www.politicalaccountability.net/wp-content/uploads/2022/10/2022-CPA-Zicklin-Index.pdf> [https://perma.cc/A8R7-GGRJ] (reporting that 293 companies in the S&P 500 “disclosed some or all” of their political spending in 2021).

¹⁶¹ See Lund & Strine, *supra* note 11, at 133–34.

¹⁶² See Siebecker, *Political*, *supra* note 10, at 2717, 2730.

¹⁶³ See CARROLL ET AL., *supra* note 160, at 19.

¹⁶⁴ See Siebecker, *Political*, *supra* note 10, at 2720.

¹⁶⁵ For a description of “dark money” compared to other types of political spending, see *Dark Money Basics*, OPENSECRETS, <https://www.opensecrets.org/dark-money/basics> [https://perma.cc/2MKX-SUPH].

need to disclose their source of funding.¹⁶⁶ Considering less than half of S&P 500 companies disclose contributions to political action groups, some suggest actual corporate expenditures far exceeded that estimate.¹⁶⁷ By shielding the corporation from accountability through a lack of disclosure, corporate boards can reap the benefits from manipulating politics without suffering any market backlash.¹⁶⁸

As AI entities increasingly control corporate communication, the domination of corporations in politics and the lack of transparency regarding corporate political activity becomes especially problematic.¹⁶⁹ Recognizing the

¹⁶⁶ See Kenneth P. Vogel & Shane Goldmacher, *Democrats Decried Dark Money. Then They Won with It in 2020*, N.Y. TIMES (Aug. 21, 2022), <https://www.nytimes.com/2022/01/29/us/politics/democrats-dark-money-donors.html> [https://perma.cc/QEJ4-PS3H]; Anna Massoglia & Karl Evers-Hillstrom, *'Dark Money' Topped \$1 Billion in 2020, Largely Boosting Democrats*, OPENSECRETS (Mar. 17, 2021), <https://www.opensecrets.org/news/2021/03/one-billion-dark-money-2020-electioncycle/> [https://perma.cc/66XH-STEN]; Rey Mashayekhi, *Companies Face Calls to Bring 'Dark Money' Political Spending into the Light*, FORTUNE (Mar. 12, 2021), <https://fortune.com/2021/03/11/corporate-dark-money-political-spending-disclosure-citizens-united-esg-investing/> [https://perma.cc/S2VJ-GYNH]; Anna Massoglia, *Corporations Rethinking PACs Leave the Door to 'Dark Money' Open*, OPENSECRETS (Jan. 15, 2021) [hereinafter Massoglia, *Corporations*], <https://www.opensecrets.org/news/2021/01/corporations-rethinking-corporate-pacs-leave-dark-money-open/> [https://perma.cc/YMF2-VAUV].

¹⁶⁷ See Massoglia, *Corporations*, *supra* note 166. For a discussion of how corporations use “dark money” contributions to flout election laws, see Julie Bykowicz, *Supreme Court's 'Dark Money' Rulings Anchor Defense in Ohio Political Corruption Trial*, WALL ST. J. (Mar. 7, 2023), <https://www.wsj.com/articles/supreme-courts-dark-money-rulings-anchor-defense-in-ohio-corruption-trial-d0f2f045> [https://perma.cc/GS84-WDBA].

¹⁶⁸ See *Citizens United and Dark Money*, CTR. FOR POL. ACCOUNTABILITY, <https://www.politicalaccountability.net/about-us/citizens-united-and-dark-money/> [https://perma.cc/8UUY-4ECA] (“‘Dark money’ refers to contributions that can be made without disclosure. In the decade since *Citizen’s United*, corporations have donated millions to trade associations and ‘social welfare’ organizations that don’t have to disclose their donors. The dark money they contribute can then be spent by the organization to influence elections and promote special interests. Nevertheless, anonymity is never a guarantee—and the money trail often leads straight to the boardroom door. The outsized capacity of a small group of economic elites to so heavily influence politics and policy raises grave issues in a democracy. At a minimum, such actions should be visible, so shareholders, employees, and customers—not to mention citizens and their elected representatives—can judge for themselves. The bottom line? Dark money and money spent without paying attention to consequences not only undermines our democracy, but also poses serious legal, reputation, and business risks to companies.”).

¹⁶⁹ See *Big Data and AI in Corporate Communications*, WEICHERTMEHNER (Aug. 17, 2022), <https://www.weichertmehner.com/en/insights/big-data-and-ai-in-corporate-communications/> [https://perma.cc/ASK7-E2HZ].

connection between political engagement and enhanced profits,¹⁷⁰ AI could grossly manipulate political discourse to enhance shareholder wealth.¹⁷¹

Such a development should come as no surprise considering AI already occupies a prevalent role in politics. For instance, in the 2016 presidential election, both Cambridge Analytica and the Russian Internet Research Agency utilized AI-enabled fake profiles on social media to sway malleable voters.¹⁷² Notwithstanding AI's potential to disrupt the electoral system, mainstream political candidates also embrace AI to direct some of the most important aspects of their campaigns. In Hillary Clinton's 2016 presidential campaign, an AI algorithm, known as Ada, directed "virtually every strategic decision Clinton aides made" including candidate appearances, television advertising placements, and event staging.¹⁷³ In the 2020 presidential election, both campaigns used AI technology to create individually targeted messaging strategies based on vast amounts of data regarding individual voter preferences, practices, and other demographic characteristics.¹⁷⁴ On Facebook messaging alone, the combined campaigns spent \$200 million.¹⁷⁵

Moreover, the prevalence and deceptive sophistication of "deep fake" videos¹⁷⁶ (digitally manipulated footage making individuals appear to say or do things they never did) poses a serious threat to legitimate political discourse.¹⁷⁷

¹⁷⁰ See Adam Andrzejewski, *How the Fortune 100 Turned \$2 Billion in Lobbying Spend into \$400 Billion of Taxpayer Cash*, FORBES (May 14, 2019), <https://www.forbes.com/sites/adamandrzejewski/2019/05/14/how-the-fortune-100-turned-2-billion-in-lobbying-spend-into-400-billion-of-taxpayer-cash/?sh=785e19fa54ff> [https://perma.cc/UM9B-C98Z]. But see Lund & Strine, *supra* note 11, at 137.

¹⁷¹ See Hannah Murphy, *The New AI Tools Spreading Fake News in Politics and Business*, FIN. TIMES (May 9, 2020), <https://www.ft.com/content/55a39e92-8357-11ea-b872-8db45d5f6714> [https://perma.cc/DT5E-MMXT].

¹⁷² See *supra* notes 5–6 and accompanying text.

¹⁷³ See John Wagner, *Clinton's Data-Driven Campaign Relied Heavily on an Algorithm Named Ada. What Didn't She See?*, WASH. POST (Nov. 9, 2016), <https://www.washingtonpost.com/news/post-politics/wp/2016/11/09/clintons-data-driven-campaign-relied-heavily-on-an-algorithm-named-ada-what-didnt-she-see/> [https://perma.cc/R4DT-BJVU].

¹⁷⁴ Ryan-Mosley, *supra* note 7.

¹⁷⁵ See Berkowitz, *supra* note 4.

¹⁷⁶ See Geoffrey A. Fowler, *Anyone With an iPhone Can Now Make Deepfakes. We Aren't Ready for What Happens Next*, WASH. POST (Mar. 25, 2021), <https://www.washingtonpost.com/technology/2021/03/25/deepfake-video-apps/> [https://perma.cc/LD34-C2BT]; Ian Sample, *What Are Deepfakes—And How Can You Spot Them?*, GUARDIAN (Jan. 13, 2020), <https://www.theguardian.com/technology/2020/jan/13/what-are-deepfakes-and-how-can-you-spot-them> [https://perma.cc/M4Q5-DVPX].

¹⁷⁷ See Fowler, *supra* note 176; Adam Satariano & Paul Mozur, *The People Onscreen Are Fake. The Disinformation Is Real*, N.Y. TIMES (Feb. 7, 2023), <https://www.nytimes.com/2023/02/07/technology/artificial-intelligence-training-deepfake.html> [https://perma.cc/DX85-XCJW]; Soojin Jeong, Margaret Sturtevant & Karis Stephen, *Responding to Deepfakes and Disinformation*, REGUL. REV. (Aug. 14, 2021), <https://www.theregreview.org/2021/08/14/saturday-seminar-responding-deepfakes-disinformation/>

For instance, a deep fake video of Ukrainian President Volodymyr Zelenskyy spread across various social media platforms in March 2022, urging surrender of Ukrainian soldiers to the Russian army.¹⁷⁸ In a variety of foreign countries, such as China, Russia, and Kuwait, government agencies openly utilize deep fake news anchors to disseminate political propaganda.¹⁷⁹ In the United States, a recent viral deep fake video depicts Democrat Hillary Clinton endorsing Republican Ron DeSantis for president, stating “You know, people might be surprised to hear me saying this, but I actually like Ron DeSantis a lot. Yeah, I know. I’d say he’s just the kind of guy this country needs, and I really mean that. If Ron DeSantis got installed as president, I’d be fine with that.”¹⁸⁰ As recently reported in the Wall Street Journal, millions of deep fake videos already infect social media and their spread will undermine confidence in the truthful exchange of ideas necessary for democracy to flourish.¹⁸¹ Although stemming the use of deep fakes to mislead voters remains a top concern of state officials in the 2024 presidential election,¹⁸² many political consultants and election experts predict deep fake videos will saturate the upcoming election.¹⁸³

Extending the problem of deep fakes to the corporate world, the obvious concern is that corporations will use AI generated deep fake communications to

[<https://perma.cc/4YAU-BPUQ>]; Chris Hamilton, Opinion, *The Immortal Trump*, WASH. POST (July 5, 2022), <https://www.washingtonpost.com/opinions/2022/07/05/trump-avatar-metaverse-ai/> [<https://perma.cc/K895-PNP7>].

¹⁷⁸ See Bobby Allyn, *Deepfake Video of Zelenskyy Could Be ‘Tip of the Iceberg’ in Info War*, *Experts Warn*, NPR (Mar. 16, 2022), <https://www.npr.org/2022/03/16/1087062648/deepfake-video-zelenskyy-experts-war-manipulation-ukraine-russia> [<https://perma.cc/JBL9-QMRV>]. For another example involving how deep fake communication is being used in the Ukrainian war, see Philip Oltermann, *European Politicians Duped into Deepfake Video Calls with Mayor of Kyiv*, GUARDIAN (June 25, 2022), <https://www.theguardian.com/world/2022/jun/25/european-leaders-deepfake-video-calls-mayor-of-kyiv-vitali-klitschko> [<https://perma.cc/MSL5-UV69>] (“The mayors of several European capitals have been duped into holding video calls with a deepfake of their counterpart in Kyiv, Vitali Klitschko.”).

¹⁷⁹ See Jordan Richard Schoenherr, *It’s Not Just the Puffy-Jacket Pope—Different Countries Are Creating Deepfakes to Spread Propaganda*, FORTUNE (Apr. 14, 2023), <https://fortune.com/2023/04/14/deepfakes-ai-state-propaganda/> [<https://perma.cc/QY3Y-6PUT>].

¹⁸⁰ See *Fact Check—Video of Hillary Clinton Endorsing Ron DeSantis Is AI-Generated*, REUTERS (Apr. 17, 2023), <https://www.reuters.com/article/fact-check-video-of-hillary-clinton-endo/fact-check-video-of-hillary-clinton-endorsing-ron-desantis-is-ai-generated-idUSL1N36K1UJ> [<https://perma.cc/A9VX-APH7>].

¹⁸¹ Daniel Byman, Chris Meserole & V.S. Subrahmanian, *The Deepfake Dangers Ahead*, WALL ST. J. (Feb. 23, 2023), <https://www.wsj.com/articles/the-deepfake-dangers-ahead-b08e4ecf> [<https://perma.cc/HYH3-D7NK>].

¹⁸² See Christina A. Cassidy, *Misleading AI-Generated Content a Top Concern Among State Election Officials for 2024*, PBS NEWS HOUR (July 15, 2023), <https://www.pbs.org/newshour/politics/misleading-ai-generated-content-a-top-concern-among-state-election-officials-for-2024> [<https://perma.cc/8PX3-9XUV>].

¹⁸³ See sources cited *supra* note 8.

steer political sentiment in a direction that secures greater profits without any care for the integrity of democratic processes. Moreover, in light of the political speech rights afforded under *Citizens United*, AI technology could strategically imbue consumer marketing with just enough political messaging to create an amalgam of politically tinged corporate speech immune from regulation or liability under the First Amendment.¹⁸⁴ In that way, corporations could use the guise of political participation to commit consumer or investor fraud.¹⁸⁵

This short survey of some important trends in AI advancement sheds light on how corporations increasingly rely on AI in business operations, communication, management, and political engagement. The radical evolution of corporate practices in just those areas, however, underscores the paramount importance of ensuring robust corporate governance principles exist to guide corporate managers in shaping the development and adoption of AI. Absent that effort, our growing dependence on AI's power could produce disastrous repercussions.

C. Existential Threats

Despite the manifold benefits AI might produce for society, AI poses substantial existential threats if improperly guided.¹⁸⁶ AI lacks any moral sensitivity, empathy, or appreciation for human rights that could serve as an internal check against pursuing strategies with incredibly destructive social ramifications.¹⁸⁷ Particularly as harnessed in the corporate realm, in the

¹⁸⁴ See Michael R. Siebecker, *Corporate Speech, Securities Regulation, and an Institutional Approach to the First Amendment*, 48 WM. & MARY L. REV. 613, 616–21 (2006) (“When laws place civil or criminal penalties on certain instances of commercial speech, companies have a strong incentive to escape the ambit of those regulations by claiming political protection under the First Amendment.”).

¹⁸⁵ See *id.*

¹⁸⁶ See Henry A. Kissinger, *How the Enlightenment Ends*, ATLANTIC (June 2018), <https://www.theatlantic.com/magazine/archive/2018/06/henry-kissinger-ai-could-mean-the-end-of-human-history/559124/> [<https://perma.cc/MFL3-FGX9>]; Sara Castellanos, *Microsoft AI Ethicist Guides Businesses on Responsible Algorithm Design*, WALL ST. J. (Oct. 18, 2018), <https://blogs.wsj.com/cio/2018/10/18/microsoft-ai-ethicist-guides-businesses-on-responsible-algorithm-design/> [<https://perma.cc/2PSW-W5W4>].

¹⁸⁷ For example, the MIT Media Lab and the Berkman Klein Center for Internet & Society at Harvard University launched an Ethics and Governance of Artificial Intelligence initiative that studies the effect of AI technologies on “fairness, human autonomy, and justice.” See ETHICS & GOVERNANCE OF ARTIFICIAL INTEL. INITIATIVE, <https://aiethicsinitiative.org/> [<https://perma.cc/6FFH-UHBG>]; see also Darrell M. West & John R. Allen, *How Artificial Intelligence Is Transforming the World*, BROOKINGS (Apr. 24, 2018), <https://www.brookings.edu/research/how-artificial-intelligence-is-transforming-the-world/> [<https://perma.cc/4B5Q-ZNAH>] (“[T]hese developments raise important policy, regulatory, and ethical issues. For example, how should we promote data access? How do we guard against biased or unfair data used in algorithms? What types of ethical principles are introduced through software programming, and how transparent should designers be about their choices? What about questions of legal liability in cases where algorithms cause

unabashed pursuit of greater profits, AI could irreparably injure the bedrock institutions and values necessary to sustain our communal existence.¹⁸⁸

1. Human Agency

Notwithstanding all the benefits AI might provide society, many fear increased reliance on AI will significantly undermine human autonomy.¹⁸⁹ Free choice and the ability to act independently remains essential for humans to exercise dominion over their individual and communal lives. The very legitimacy of our collective decisions regarding shared legal, moral, and societal structures depends on authentic self-determination.¹⁹⁰ Absent a robust sense that humans remain responsible for their choices and actions, the basic rule of law crumbles.¹⁹¹ Accountability becomes irrelevant and morality a meaningless trope. As AI continues to manipulate not just our purchasing opinions but our political and social views as well, we increasingly surrender to AI as architect of our environment.¹⁹²

Similarly, within the corporate realm, the threat to human agency calls into question the viability of existing governance structures. As described above, AI already increases operational efficiency, streamlines communication, promotes strategic decision-making, and even enhances the impact of corporate political engagement.¹⁹³ But the fiduciary framework governing the corporate actions makes less sense as reliance on AI continues to expand. Few actors within the corporate setting possess even a basic understanding of the definition of AI.¹⁹⁴

harm?”); James Vincent & Russell Brandom, *Axon Launches AI Ethics Board to Study the Dangers of Facial Recognition*, VERGE (Apr. 26, 2018), <https://www.theverge.com/2018/4/26/17285034/axon-ai-ethics-board-facial-recognition-racial-bias> [https://perma.cc/U4UL-V7PB].

¹⁸⁸ See Berkowitz, *supra* note 4; Elaine Kamarck, *Malevolent Soft Power, AI, and the Threat to Democracy*, BROOKINGS (Nov. 29, 2018), <https://www.brookings.edu/research/malevolent-soft-power-ai-and-the-threat-to-democracy/> [https://perma.cc/KV9U-U62K].

¹⁸⁹ See, e.g., Karl Manheim & Lyric Kaplan, *Artificial Intelligence: Risks to Privacy and Democracy*, 21 YALE J.L. & TECH. 106, 109–11 (2019); Dirk Helbing et al., *Will Democracy Survive Big Data and Artificial Intelligence?*, SCI. AM. (Feb. 25, 2017), <https://www.scientificamerican.com/article/will-democracy-survive-big-data-and-artificial-intelligence/> [https://perma.cc/VL2S-8ZZ7]; Jamie Bartlett, *How AI Could Kill Off Democracy*, NEW STATESMAN, 17–23 Aug. 2018, at 30.

¹⁹⁰ See Raymond H. Brescia, *Social Change and the Associational Self: Protecting the Integrity of Identity and Democracy in the Digital Age*, 125 PENN ST. L. REV. 773, 780–84 (2021).

¹⁹¹ See *id.* at 783–84.

¹⁹² See Helbing et al., *supra* note 189.

¹⁹³ See AMMANATH, HUPFER & JARVIS, *supra* note 37, at 3.

¹⁹⁴ Leslie Gaines-Ross, *What Do People—Not Techies, Not Companies—Think About Artificial Intelligence?*, HARV. BUS. REV. (Oct. 24, 2016), <https://hbr.org/2016/10/what-do-people-not-techies-not-companies-think-about-artificial-intelligence> [https://perma.cc/A9AG-T7MJ].

Fewer still comprehend the detailed technological processes animating AI, especially considering how quickly AI applications spread into new corners of corporate practice and decision-making.¹⁹⁵ As a result, increasing reliance on AI effectively erodes the authority of directors, officers, and shareholders to determine what path a corporation should take. Such blind reliance on AI could result in corporate actions that harm the communities we inhabit, especially considering AI lacks any moral compass.¹⁹⁶ But the more fundamental fear is that the responsibility for decisions within the corporate setting will migrate from humans to algorithmic entities.¹⁹⁷ As that shift takes place, the governing fiduciary framework that depends on a robust trust among corporate managers and shareholders quickly becomes obsolete.

2. Democracy

While a loss of agency adulterates human dignity on an individual level, as corporations increasingly rely on AI in their hostile takeover of American politics, the viability of our democratic institutions remains at risk.¹⁹⁸ The wealth and power that corporations wield in our economic, political, and social lives expands continuously.¹⁹⁹ Incredibly important issues affecting our individual and communal lives no longer get debated in the public square but instead are determined clandestinely in corporate boardrooms. As a result, restoring democratic legitimacy remains inextricably connected to robust transparency regarding corporate political activity.²⁰⁰ *Citizens United* explicitly tethered democratic accountability, however, to the ability of citizens to assess whether elected officials were effectively corrupted by corporate funding.²⁰¹ With corporations playing such an integral role in shaping our political values and social goals, “the integrity of [the corporation’s] organizational structure significantly affects, if not controls, the confidence in our democratic processes. If special interests, managerial imperialism, or other antidemocratic values dominate corporations, we will realize a diminished sense of citizenship within

¹⁹⁵ *Id.*

¹⁹⁶ See, e.g., Cade Metz, *Can a Machine Learn Morality*, N.Y. TIMES (Nov. 19, 2021), <https://www.nytimes.com/2021/11/19/technology/can-a-machine-learn-morality.html> [<https://perma.cc/WGR2-VPQH>].

¹⁹⁷ See Armour & Eidenmüller, *supra* note 127, at 90–91.

¹⁹⁸ See Manheim & Kaplan, *supra* note 189, at 111–12 (“We do not underestimate the productive benefits of AI, and its inevitable trajectory, but feel it necessary to highlight its risks as well . . . Humans may not be at risk as a species, but we are surely at risk in terms of our democratic institutions and values.”).

¹⁹⁹ See Siebecker, *New*, *supra* note 26, at 164.

²⁰⁰ See generally Siebecker, *Political*, *supra* note 10.

²⁰¹ See *Citizens United v. FEC*, 558 U.S. 310, 370 (2010).

our polity.”²⁰² Without sufficient transparency regarding the role corporations play in politics, democracy cannot flourish.²⁰³

Increased reliance on AI could horribly exacerbate the lack of transparency we already suffer. Well before the ascendance of AI, a persistent lack of transparency regarding corporate political activity prevented consumers, investors, and other corporate stakeholders from holding corporations accountable for their political activities.²⁰⁴ In the wake of *Citizens United*, corporations often hide behind the First Amendment to avoid regulation or liability while still manipulating public opinion for profit.²⁰⁵ To the extent secrecy enables corporations to influence political sentiment without suffering accountability, AI will naturally pursue communication strategies that reduce risk to the corporate bottom line.²⁰⁶ Whether through deep fake videos, individually targeted messaging on social media, or a host of other communication strategies, corporations will attempt to shape public sentiment in the shadows.²⁰⁷ As AI masterfully manages clandestine corporate domination of politics, the value in human civic engagement declines.²⁰⁸

Perhaps more troubling, AI driven corporate communication in politics could undermine the appreciation for discourse and trust in democratic institutions. Considering some governments already use AI to disseminate propaganda and stifle opposition,²⁰⁹ why wouldn’t corporations employ similar communication strategies? But for corporations, the soundness of the political sentiments stirred remains irrelevant as long as enhanced profits result.²¹⁰ Quite

²⁰² See Siebecker, *Bridging*, *supra* note 27, at 152.

²⁰³ See Ciara Torres-Spelliscy, *Transparency for Democracy’s Sake*, BRENNAN CTR. FOR JUST. (Dec. 21, 2020), <https://www.brennancenter.org/our-work/analysis-opinion/transparency-democracys-sake> [<https://perma.cc/9PSB-EQED>].

²⁰⁴ See Siebecker, *Political*, *supra* note 10, at 2724–28; Siebecker, *Bridging*, *supra* note 27, at 109.

²⁰⁵ See Siebecker, *Making*, *supra* note 15, at 126–27.

²⁰⁶ See Siebecker, *Political*, *supra* note 10, at 2764.

²⁰⁷ See, e.g., Saksa, *supra* note 8; Murphy, *supra* note 171.

²⁰⁸ See JANNA ANDERSON & LEE RAINIE, PEW RSCH. CTR., *MANY TECH EXPERTS SAY DIGITAL DISRUPTION WILL HURT DEMOCRACY* 4–5 (Feb. 2020), <https://www.pewresearch.org/internet/2020/02/21/concerns-about-democracy-in-the-digital-age/> [<https://perma.cc/W58C-WSTK>]; Manheim & Kaplan, *supra* note 189, at 111.

²⁰⁹ See, e.g., Daron Acemoglu, *AI’s Future Doesn’t Have to Be Dystopian*, BOS. REV. (May 20, 2021), <http://bostonreview.net/forum/science-nature/daron-acemoglu-redesigning-ai> [<https://perma.cc/JNK4-AXVT>]. For a comprehensive study of ways in which the U.S. government can direct the research, development, and deployment of AI, see generally SOPHIE-CHARLOTTE FISCHER ET AL., *AI POLICY LEVERS: A REVIEW OF THE U.S. GOVERNMENT’S TOOLS TO SHAPE AI RESEARCH, DEVELOPMENT, AND DEPLOYMENT* (Mar. 2021), <https://www.fhi.ox.ac.uk/wp-content/uploads/2021/03/AI-Policy-Levers-A-Review-of-the-U.S.-Governments-tools-to-shape-AI-research-development-and-deployment-%E2%80%93-Fischer-et-al.pdf> [<https://perma.cc/HKM7-BP6H>].

²¹⁰ See Crenshaw & Porter, *supra* note 159.

simply, AI chips away at the value of discourse in society generally.²¹¹ With growing awareness of AI's ability to manipulate and the inability to detect its use, rather than engaging in collective discussions of the common good, we become isolated and shrink from public discourse.²¹² Democratic institutions become vehicles for sowing discord.²¹³ Absent trust in the value of discourse, a commitment to democracy itself fades away.²¹⁴

III. THE FIDUCIARY FRAMEWORK FOR CORPORATE GOVERNANCE

With the ascendance of the artificially intelligence corporation, the feeble fiduciary framework currently in place needs refocusing through the lens of discourse theory. Rather than adopting a wholly new governance structure, existing principles can be easily reshaped to accommodate the transforming nature of the corporation in the AI era. That retooling involves engaging more sensibly with the basic notion of trust that underpins the fiduciary framework. By understanding how trust depends on continual discourse and engagement, the fiduciary framework gains a renewed strength capable of guiding AI driven decision-making.

A. Prevailing Standards

The fiduciary duties of care and loyalty form the backbone of corporate governance. Memorialized in the common law and state statutes, the duties create an essential agency relationship aimed at ensuring actions of directors and officers sufficiently align with the interests of those they serve.²¹⁵ By definition, fiduciary obligations entail relationships of trust.²¹⁶ Because trust

²¹¹ See Mark Ryan, *In AI We Trust: Ethics, Artificial Intelligence, and Reliability*, 26 SCI. & ENG'G ETHICS 2749, 2749, 2767 (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7550313/> [https://perma.cc/Z2WG-YLCQ].

²¹² See ANDERSON & RAINIE, *supra* note 208. See generally Philip Pettit, *Republican Theory and Political Trust*, in TRUST & GOVERNANCE 295 (Valerie Braithwaite & Margaret Levi eds., 1998) (discussing the significant role of trust in republican systems of government).

²¹³ See Maria Pawelec, *Deepfakes and Democracy (Theory): How Synthetic Audio-Visual Media for Disinformation and Hate Speech Threaten Core Democratic Functions*, 1 DIGIT. SOC'Y 19 (2022), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9453721/pdf/44206_2022_Article_10.pdf [https://perma.cc/8TXA-KSEJ].

²¹⁴ See generally M. Kent Jennings, *Political Trust and the Roots of Devolution*, in TRUST & GOVERNANCE 218, 221–22, 239–41 (Valerie Braithwaite & Margaret Levi eds., 1998).

²¹⁵ See Siebecker, *Trust*, *supra* note 28, at 136–38.

²¹⁶ See *id.* at 136.

represents a rather amorphous philosophical concept, the content of the fiduciary duties remains similarly vague.²¹⁷

Nonetheless, the duty of care requires directors and officers to act with the level of care that a reasonably prudent person would employ under similar circumstances.²¹⁸ The duty requires directors to stay informed and make decisions in good faith, based on a reasonable belief regarding what constitutes the best interests of the corporation.²¹⁹ At first blush, the duty of care imposes fairly clear affirmative obligations.²²⁰ But in determining compliance, courts apply the “business judgment rule,” a legal presumption that corporate managers have comported with their duty absent allegations of fraud, conflicts of interest, gross negligence, or wholly wasteful conduct.²²¹ As a result, violations of the duty of care remain rare, except in the most egregious cases.²²²

The duty of loyalty mandates that directors and officers act in the best interest of the corporation and to place shareholder interests above their own.²²³ In that regard, the duty prohibits self-dealing, usurping corporate opportunities, competing with the corporation, and directing corporate assets to personal ends.²²⁴ Subsumed within the duty of loyalty is the component duty of oversight that requires directors to implement an information gathering and reporting system for ferreting out corporate wrongdoing.²²⁵ With a limpness similar to the business judgment rule, under prevailing common law standards, oversight liability will only arise if directors “utterly fail to attempt to implement” a reliable information and reporting system.²²⁶ As a result, rampant criminal corporate conduct may go undetected, as the unrelenting spate of corporate scandals clearly confirm.²²⁷

B. Competing Concepts

Although these two fiduciary duties of care and loyalty provide the foundation for corporate governance, they remain incredibly vague and fail to

²¹⁷ See *id.* at 139–41; MICHAEL P. DOOLEY, FUNDAMENTALS OF CORPORATION LAW 610 (1995) (suggesting fiduciary standards remain extremely vague in corporate law); Deborah A. DeMott, *Beyond Metaphor: An Analysis of Fiduciary Obligation*, 1988 DUKE L.J. 879, 879 (1988) (describing trust based fiduciary duties as “elusive concepts”).

²¹⁸ See Michael R. Siebecker, *The Duty of Care and Data Control Systems in the Wake of Sarbanes-Oxley*, 84 CHI.-KENT L. REV. 821, 825 (2010).

²¹⁹ See *id.* at 825–26.

²²⁰ See *id.*

²²¹ See *id.*

²²² For a discussion of how the business judgment rule insulates directors from liability, see *id.* at 826, and Jonathan R. Macey, *Corporate Law as Myth*, 93 S. CAL. L. REV. 923, 950 (2020).

²²³ See Siebecker, *Trust*, *supra* note 28, at 136–37.

²²⁴ See *id.* at 139.

²²⁵ See *In re Caremark Int’l Inc. Derivative Litig.*, 698 A.2d 959, 970 (Del. Ch. 1996).

²²⁶ *Stone v. Ritter*, 911 A.2d 362, 370 (Del. 2006); *In re Caremark*, 698 A.2d at 970.

²²⁷ See Siebecker & Brandes, *supra* note 24, at 403–08.

specify whether a corporation should prioritize shareholders, directors, or other stakeholders.²²⁸ As a result of that ambiguity, competing viewpoints exist regarding how to frame fiduciary obligations in order to provide better guidance to corporate managers.²²⁹ Scholars advance a number of competing theories of corporate organization to shed light on how the prevailing fiduciary framework might steer and constrain decision-making.

One perspective, known as the director primacy model, posits that directors, not shareholders, should be the sole locus of corporate control.²³⁰ Prof. Stephen Bainbridge, the leading proponent of this model, argues that because fiduciary duties sufficiently bind directors to act in the best interests of the corporation, shareholder interference in decision-making undermines corporate effectiveness.²³¹ With greater expertise and better access to information, directors remain uniquely equipped to make decisions in the best interest of the corporation.²³²

In stark contrast to director primacy, the shareholder primacy model asserts that directors and officers should prioritize the interests of shareholders over all other stakeholders.²³³ Proponents such as Milton Friedman, contend shareholder wealth maximization should be the sole purpose of the corporation, as shareholders own the corporation and bear its residual risk.²³⁴ Far away from a profit maximization model, stakeholder theory argues that corporations should consider the interests of all corporate constituencies, including shareholders, employees, consumers, and members of the communities that corporations inhabit.²³⁵ Advocates of the stakeholder model suggest a more ethical and socially mindful manner of decision-making results.²³⁶

The point here is not to advocate adopting any particular theory of the corporation. Instead, the very existence of these competing constructs suggests that the fiduciary principles themselves remain unworkably vague without some additional theoretical framework for their application.

²²⁸ See Siebecker, *Trust*, *supra* note 28, at 129–30.

²²⁹ See, e.g., Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 547–50 (2003).

²³⁰ *Id.* at 550–51.

²³¹ See *id.* at 592.

²³² See *id.* at 563.

²³³ See Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 24 J. CORP. L. 751, 751 (1999); D. Gordon Smith, *The Shareholder Primacy Norm*, 23 J. CORP. L. 277, 278–82 (1998).

²³⁴ See Milton Friedman, *A Friedman Doctrine—The Social Responsibility of Business Is to Increase Its Profits*, N.Y. TIMES MAG. (Sept. 13, 1970), <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html> [https://perma.cc/SS9A-ZUVX].

²³⁵ See Amir N. Licht, *The Maximands of Corporate Governance: A Theory of Values and Cognitive Style*, 29 DEL. J. CORP. L. 649, 722 (2004).

²³⁶ See Siebecker, *Trust*, *supra* note 28, at 121.

C. Profits, Citizens, and Social Responsibility

Absent an adequate understanding of the trust that animates corporate fiduciary duties, the very goal of corporate organization remains in flux. Profit maximization, corporate citizenship, and social responsibility exist in constant tension.²³⁷ Many assert that the prevailing standards do not provide clear guidance on how corporations should balance profit-making with broader societal obligations.²³⁸ This lack of clarity may lead to corporations narrowly focusing on shareholder wealth maximization at the expense of other important societal considerations.

Even as a growing number of corporate executives publicly embrace corporations as citizens within the larger community, the current framework largely ignores the expanding role that corporations play in society. In August 2019, the Business Roundtable published an open letter (signed by nearly 200 corporate executives) acknowledging that corporations must look beyond maximizing shareholder wealth and promote the interests of employees, suppliers, customers, the environment, and other stakeholders within communities the corporations inhabit.²³⁹ Despite that public proclamation, the business judgment rule requires no such recognition of the role corporations play in shaping public opinion, directing political outcomes, or affecting the environment.²⁴⁰ Although the business judgment rule might permit consideration of broader societal impacts, the gross negligence threshold does not require seeking the input of employees, customers, or other corporate stakeholders.²⁴¹ As a result, both the director primacy and shareholder primacy models largely ignore the role corporations play as citizens in the communities they inhabit.

Even stakeholder theory, which seeks to address broader social concerns along with shareholder interests, provides inadequate guidance.²⁴² How corporate managers should weigh and balance the competing interests of different stakeholders remains wholly unclear.²⁴³ Moreover, it remains

²³⁷ See, e.g., Friedman, *supra* note 234; Siebecker, *Trust*, *supra* note 28, at 129.

²³⁸ See Macey, *supra* note 222, at 944 (“The myth that the law requires managers to maximize firm value is the most well-documented and intensely debated myth analyzed here.”).

²³⁹ Press Release, Bus. Roundtable, Business Roundtable Redefines the Purpose of a Corporation to Promote ‘An Economy That Serves All Americans’ (Aug. 19, 2019), <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans> [<https://perma.cc/XYV4-QMNQ>].

²⁴⁰ See Lori McMillan, *The Business Judgment Rule as an Immunity Doctrine*, 4 WM. & MARY BUS. L. REV. 521, 565 (2013).

²⁴¹ See Siebecker, *Bridging*, *supra* note 27, at 132.

²⁴² See, e.g., Licht, *supra* note 235, at 726.

²⁴³ See Siebecker, *Bridging*, *supra* note 27, at 105 (discussing shareholder value maximization theory); Licht, *supra* note 235, at 722 (discussing stakeholder theory); Siebecker, *Trust*, *supra* note 28, at 123 (discussing corporate social responsibility).

uncertain to which interest groups corporations remain accountable and who might possess standing to enforce any fiduciary breaches.²⁴⁴

Ultimately, the current fiduciary framework seems incapable of addressing the complex interplay between corporate decision-making, AI, and societal impacts.²⁴⁵ As corporations increasingly incorporate AI into their operations, communication, management, and political engagement, there is a pressing need for a more nuanced and holistic approach to corporate governance that places continual discourse at its core.²⁴⁶

IV. FIDUCIARY DUTIES THROUGH THE LENS OF DISCOURSE THEORY

Interpreting the existing fiduciary governance structure through the lens of discourse would more effectively guide corporate decision-making in the era of AI. Under the lax prevailing fiduciary framework, corporations continue to exploit AI to maximize shareholder value.²⁴⁷ But the relentless pursuit of profit threatens to undermine the foundations of democratic society.²⁴⁸ Current corporate theories centered on wealth maximization fail to attend to the evolving nature of corporations as AI plays an increasingly prominent role in corporate organization and practices and causes the dominance of corporations in society to grow almost exponentially.²⁴⁹ The evolution of the artificially intelligent corporation requires a paradigmatic shift in corporate governance principles. To that end, applying democratic discourse theory to the prevailing fiduciary framework seems necessary to avoid the existential threats AI poses.

A. Tenets of Discourse Theory

Discourse theory, as a philosophical framework, explores how embracing just rules for discussion and engagement can improve organizational structures and lend legitimacy to institutional decisions.²⁵⁰ Based on the political philosophy of Jürgen Habermas, applying discourse theory in the corporate setting would require adopting rules and incentives that encourage independent expression of ideas, fair participation of corporate constituencies in decision-making, respectful consideration of diverse viewpoints, and the ability to revise

²⁴⁴ See Siebecker & Brandes, *supra* note 24, at 429.

²⁴⁵ See Siebecker, *Making*, *supra* note 15, at 100.

²⁴⁶ See *id.* at 129.

²⁴⁷ See *id.* at 137.

²⁴⁸ See *id.* at 129.

²⁴⁹ See *id.*

²⁵⁰ See WILLIAM OUTHWAITE, HABERMAS: A CRITICAL INTRODUCTION 120 (1994); R. Randall Rainey & William Rehg, *The Marketplace of Ideas, the Public Interest, and Federal Regulation of the Electronic Media: Implications of Habermas' Theory of Democracy*, 69 S. CAL. L. REV. 1923, 1957–58 (1996).

positions through reflective discourse.²⁵¹ Because in prior articles I detailed fully the philosophical architecture of a new discourse theory of the firm,²⁵² a brief recap of its key principles should suffice as a background for exploring the legal standards and methods of discourse required in the artificially intelligent corporation.

First, at the foundation of discourse theory lies a distinction between communicative action and strategic behavior. Communicative action involves discourse aimed at achieving common goals,²⁵³ while strategic behavior entails pursuing selfish outcomes through manipulation or coercion.²⁵⁴ Engaging in communicative action requires a commitment to refrain from promoting personal interests and to adhere to ground rules that foster open, fair, and rational discussions among involved parties.²⁵⁵ Although Habermas primarily focuses on deliberation within formal government institutions, communicative action also plays a significant role in non-governmental institutions, including corporations.²⁵⁶

Second, the “discourse principle”, which guides deliberation within any instance of communicative action, requires recognizing the rights of affected

²⁵¹ See JÜRGEN HABERMAS, BETWEEN FACTS AND NORMS 166–67 (William Rehg trans., MIT Press 1996) (1992) [hereinafter HABERMAS, BETWEEN FACTS]; JÜRGEN HABERMAS, MORAL CONSCIOUSNESS AND COMMUNICATIVE ACTION 89 (Christian Lenhardt & Shierry Weber Nicholsen trans., MIT Press 1990) (1983) [hereinafter HABERMAS, MORAL CONSCIOUSNESS]. See generally 1 JÜRGEN HABERMAS, THE THEORY OF COMMUNICATIVE ACTION, REASON AND THE RATIONALIZATION OF SOCIETY (Thomas McCarthy trans., Beacon Press 1984) (1981) [hereinafter HABERMAS, COMMUNICATIVE ACTION VOL. 1]; 2 JÜRGEN HABERMAS, THE THEORY OF COMMUNICATIVE ACTION, LIFEWORLD AND SYSTEM: A CRITIQUE OF FUNCTIONALIST REASON (Thomas McCarthy trans., Beacon Press 1987) (1981); JÜRGEN HABERMAS, ON THE PRAGMATICS OF COMMUNICATION (Maeve Cooke ed., 1998).

²⁵² See Siebecker, *New, supra* note 26, at 198–208; Siebecker, *Bridging, supra* note 27, at 119–31.

²⁵³ HABERMAS, COMMUNICATIVE ACTION VOL. 1, *supra* note 251, at 307–08; see also Michel Rosenfeld, *Law as Discourse: Bridging the Gap Between Democracy and Rights*, 108 HARV. L. REV. 1163, 1168–69 (1995) (reviewing HABERMAS, BETWEEN FACTS *supra* note 251) (“In communicative action, on the other hand, actors are oriented toward reaching a common understanding rather than achieving personal success. The model for communicative action is that of an idealized community of scientists gathered together to ascertain the truth of a scientific hypothesis.”).

²⁵⁴ See HABERMAS, MORAL CONSCIOUSNESS, *supra* note 251, at 133–34.

²⁵⁵ *Id.* at 134; Rosenfeld, *supra* note 253, at 1169 (“Habermas argues that the very agreement to engage in communicative action implies a voluntary submission to certain normative constraints embedded in the discursive practice itself. Thus, given an equal opportunity to present argument and a genuine commitment to being persuaded only by the force of the better argument in a rational discussion, actors engaged in communicative action would only accept as legitimate those action norms upon which all those possibly affected would agree *together* to embrace on the basis of good reasons.” (emphasis in original)).

²⁵⁶ See Rainey & Rehg, *supra* note 250, at 1963–64; Siebecker, *New, supra* note 26, at 201.

parties to participate in discussions free of coercion.²⁵⁷ Under the discourse principle, participants must have the right to propose ideas, challenge viewpoints, and revise their stances through dynamic exchange.²⁵⁸ While the discourse principle sets an aspirational standard for ideal deliberation, it establishes important procedural mechanisms to ensure just outcomes.²⁵⁹

Third, transparency and accountability represent vital components of proper discourse. Secrecy in deliberation prevents parties affected by decision-making from effectively challenging propositions and offering reasoned alternatives.²⁶⁰ If the path of deliberation remains hidden, those who suffer the consequences of any decision remain wholly unaware of what arguments were considered, ignored, rejected, or embraced.²⁶¹ Additionally, accountability for deliberative failures remains impossible without transparency regarding the positions and strategies adopted by particular parties during the debate.²⁶²

Fourth, legitimacy holds a central position in discourse theory. Individuals engaged in communicative action must perceive themselves as active participants in creating the rules in order to accept the rules governing morally acceptable discourse.²⁶³ Even if the discourse produces outcomes opposed to an individual's ultimate preferences, the fairness of the process leading to those outcomes must be capable of universal acceptance.²⁶⁴ Legitimacy of decision-making remains inextricably connected to acceptance of the rules of discourse as just.²⁶⁵ When procedures for discourse inspire full, fair, and equal

²⁵⁷ JAMES GORDON FINLAYSON, HABERMAS: A VERY SHORT INTRODUCTION 43 (2005); HABERMAS, BETWEEN FACTS, *supra* note 251, at 108–09.

²⁵⁸ FINLAYSON, *supra* note 257, at 43; HABERMAS, MORAL CONSCIOUSNESS, *supra* note 251, at 89.

²⁵⁹ See FINLAYSON, *supra* note 257, at 44.

²⁶⁰ See AMY GUTMANN & DENNIS THOMPSON, DEMOCRACY AND DISAGREEMENT 100–02 (1996).

²⁶¹ See Renee M. Jones, *Legitimacy and Corporate Law: The Case for Regulatory Redundancy*, 86 WASH. U. L. REV. 1273, 1285 (2009).

²⁶² See *id.*

²⁶³ See HABERMAS, BETWEEN FACTS, *supra* note 251, at 454 (“The addressees of law would not be able to understand themselves as its authors if the legislator were to discover human rights as pre-given moral facts that merely need to be enacted as positive law.”).

²⁶⁴ See Michel Rosenfeld, *Can Rights, Democracy, and Justice Be Reconciled Through Discourse Theory? Reflections on Habermas’s Proceduralist Paradigm of Law*, 17 CARDOZO L. REV. 791, 805 (1996).

²⁶⁵ See *id.* (“[T]he legitimacy of law is to be gauged from the standpoint of a collectivity of strangers who mutually recognize one another as equals and jointly engage in communicative action to establish a legal order to which they could all accord their unconstrained acquiescence. By means of communicative action, a reconstructive process is established through which the relevant group of strangers need only accept as legitimate those laws which they would all agree both to enact as autonomous legislators and to follow as law abiding subjects.”).

participation among affected parties, a sense of legitimacy in the decision results.²⁶⁶

B. Discourse Theory and the Firm

Perceived through the lens of discourse theory, fulfilling the duties of care and loyalty depends on robust communicative action. Why? Fiduciary duties, by definition, represent bonds of trust.²⁶⁷ In the corporate setting, those duties serve to ensure corporate managers make decisions in the interests of shareholders and avoid using corporate assets or opportunities to advance their own interests.²⁶⁸

Fulfilling trust, however, requires dynamic engagement among corporate managers and shareholders. Within the context of corporate fiduciary duties, trust can only be realized if shareholders rationally expect corporate managers to consider and encapsulate shareholder interests when making any decision.²⁶⁹ Without some legal requirement or other incentive requiring corporate managers to robustly consider the interests of actual shareholders, no such rational expectation on the part of shareholders could exist.²⁷⁰

Rather than encouraging dynamic engagement between directors and the shareholders they serve, neoclassical law and economic theory assumes that shareholders solely desire the corporation to maximize wealth.²⁷¹ Construing shareholder preferences in such a simplistic way depends on an imaginary and increasingly discredited view of human rationality.²⁷² Shareholders—and

²⁶⁶ William E. Forbath, *Habermas's Constitution: A History, Guide, and Critique*, 23 L. & SOC. INQUIRY 969, 992 (1998) (reviewing HABERMAS, *BETWEEN FACTS* *supra* note 251).

²⁶⁷ See Richard N. Ottaway, *Defining Trust in Fiduciary Responsibilities*, in THE ETHICS OF ACCOUNTING AND FINANCE: TRUST, RESPONSIBILITY, AND CONTROL 3, 3 (W. Michael Hoffman, Judith Brown Kamm, Robert E. Frederick & Edward S. Petry eds., 10th ed. 1996) (“In some ways, there is no role in fiduciary relationships other than trust.”); Sarah Helene Duggin & Stephen M. Goldman, *Restoring Trust in Corporate Directors: The Disney Standard and the “New” Good Faith*, 56 AM. U. L. REV. 211, 256–64 (2006); Lawrence E. Mitchell, *The Importance of Being Trusted*, 81 B.U. L. REV. 591, 614–17 (2001) (discussing the essential nexus between trust and fiduciary relationships).

²⁶⁸ See JERRY W. MARKHAM, A FINANCIAL HISTORY OF MODERN U.S. CORPORATE SCANDALS: FROM ENRON TO REFORM 246–310 (2006) (discussing the history of corporate governance laws in response to violation of fiduciary duties); Melanie B. Leslie, *Trusting Trustees: Fiduciary Duties and the Limits of Default Rules*, 94 GEO. L.J. 67, 78–80 (2005) (discussing the evolution and basic role of fiduciary duties under corporate law).

²⁶⁹ See RUSSELL HARDIN, TRUST AND TRUSTWORTHINESS 11 (2002); Russell Hardin, *Do We Want Trust in Government?*, in DEMOCRACY AND TRUST 22, 26 (Mark E. Warren ed., 1999); Siebecker, *Bridging*, *supra* note 27, at 126.

²⁷⁰ See Siebecker, *Trust*, *supra* note 28, at 152–53 (discussing Hardin’s notion of competence as an essential component of the trust relationship).

²⁷¹ See Cynthia A. Williams, *A Tale of Two Trajectories*, 75 FORDHAM L. REV. 1629, 1657 (2006).

²⁷² See *id.*; Douglas A. Kysar, *Sustainability, Distribution, and the Macroeconomic Analysis of Law*, 43 B.C. L. REV. 1, 4–5 (2001).

human beings generally—consider a variety of nonmonetary interests (such as familial relationships, friendships, health, ethics, and moral values) in making decisions.²⁷³ As of 2022, investment managers of assets exceeding \$120 trillion have signed the United Nations Principles for Responsible Investment, an international compact whereby managers promise to screen investments based on various social, environmental, and governance issues.²⁷⁴ The very existence of the massive market for corporate social responsibility (“CSR”) makes abundantly clear, *real* shareholders value more than simple short-term wealth maximization.²⁷⁵ With growing regularity, shareholders (and consumers) take into account a variety of social, environment, ethical, and political criteria in deciding whether to purchase a company’s stock (or products).²⁷⁶ Of course, some shareholders might prefer short-term wealth gains.²⁷⁷ But characterizing all shareholders as similarly focused blatantly ignores market realities.²⁷⁸ If actual shareholders preferences often target the rights or concerns of other stakeholder groups, taking account of those ancillary stakeholder interests remains necessary to secure a rational expectation that corporate managers are taking real shareholder preferences into account.

In that way, corporate managers must engage in a kind of continual communicative due diligence to encapsulate shareholder interests.²⁷⁹ Of course, corporate managers do not need to heed every shareholder whim.²⁸⁰ But shareholders cannot rationally expect their interests will be taken into account by directors and officers without some meaningful effort to engage.²⁸¹ Rather than relying on some addled and ignorant view that all shareholders desire wealth maximization, corporate decision-makers must embrace the empirical reality that a growing number of shareholders possess multifaceted and perhaps even contradictory preferences.²⁸² A continual and dynamic dialogue between

²⁷³ See Williams, *supra* note 271, at 1657; see also Kysar, *supra* note 272, at 4–5.

²⁷⁴ PRINCIPLES FOR RESPONSIBLE INV., 2021–22 ANNUAL REPORT 36 (2022), https://dwtyzx6upklss.cloudfront.net/Uploads/b/f/m/pri_annual_report_2022_689047.pdf [<https://perma.cc/5HZM-3SW3>].

²⁷⁵ See Siebecker, *Bridging*, *supra* note 27, at 126; Siebecker, *Trust*, *supra* note 28, at 129–30.

²⁷⁶ See PRINCIPLES FOR RESPONSIBLE INV., *supra* note 274, at 35 (“We were delighted to welcome 1,069 new signatories in 2021/22, bringing the total to 4,902 by 31 March 2022, with an estimated total of AUM of US\$121.3 trillion.”); Siebecker, *New*, *supra* note 27, at 126.

²⁷⁷ See, e.g., Siebecker, *Bridging*, *supra* note 27, at 126; Siebecker, *Trust*, *supra* note 28, at 164.

²⁷⁸ See, e.g., Siebecker, *Bridging*, *supra* note 27, at 111; Siebecker, *Trust*, *supra* note 28, at 129.

²⁷⁹ See Siebecker, *Trust*, *supra* note 28, at 162–64.

²⁸⁰ See, e.g., *id.* at 121.

²⁸¹ See *id.* at 171.

²⁸² For a discussion of the need to assess the actual preferences and profiles of diverse stakeholders in corporate law, see Helen Anderson, *Creditors’ Rights of Recovery: Economic*

shareholders and the corporation must occur for the duties of care and loyalty to flourish in any meaningful way.²⁸³ Conceived in that way, sustaining those fiduciary duties requires communicative action that should adhere to the essential tenets of discourse theory.

But how could boards employ modes of discourse sufficient to satisfy such a reinvigorated fiduciary framework? A variety of communication strategies could robustly tether corporate decision-making to consideration of real shareholder preferences.²⁸⁴ For instance, boards could pursue “strategic CSR” that seeks to identify mutually beneficial gains for corporate managers, shareholders, and other stakeholders. Embracing some CSR practices could enhance brand image, increase stock price, reduce liability, and enable the company to command higher prices for products and services.²⁸⁵ Whether applied to current business practices, long term strategies, or societal engagements, the project involves identifying and implementing CSR practices that satisfy shareholder preferences while also enhancing profitability.²⁸⁶ Rather than wholly ignoring the cacophony of shareholder voices currently clamoring for attention, strategic CRS involves a parsing discourse with shareholders regarding their ostensibly nonmonetary preferences that could promote profitability as well.²⁸⁷

A related strategy involves stakeholder solicitation regarding corporate practices and policies. Every stakeholder is a potential shareholder, especially in light of the growing connectedness of the population to financial markets.²⁸⁸ As stakeholders become increasingly vocal about corporate practices regarding the environment, labor, supply chains, and political activity, gauging the dynamic relationship among consumer, shareholder, and stakeholder preferences allows corporate managers to more nimbly navigate ever-changing business landscapes, especially when crises arise.²⁸⁹

To facilitate engagement with shareholders and corporate stakeholders, intermediary organizations could also play an important role. An impressive array of business analytics firms and nonprofit entities provide communication services to promote effective dialogue among corporations and the variety of

Theory, Corporate Jurisprudence and the Role of Fairness, 30 MELB. U. L. REV. 1, 24 (2006).

²⁸³ See Siebecker, *Trust*, *supra* note 28, at 169–71.

²⁸⁴ In prior work, I detailed more extensively a panoply of communication strategies corporations might employ to promote full and fair discourse among corporate managers, shareholders, and other stakeholders. See Siebecker, *Bridging*, *supra* note 27, at 140–48.

²⁸⁵ See *id.* at 106, 116.

²⁸⁶ See Siebecker, *Trust*, *supra* note 28, at 123.

²⁸⁷ See Siebecker, *Bridging*, *supra* note 27, at 141–42.

²⁸⁸ See Jeffrey M. Jones, *What Percentage of Americans Own Stock?*, GALLUP (May 24, 2023), <https://news.gallup.com/poll/266807/percentage-americans-owns-stock.aspx> [https://perma.cc/8JSU-GSMN] (estimating that 61% of Americans own stock in corporations).

²⁸⁹ See Siebecker, *Bridging*, *supra* note 28, at 143–44.

constituencies affected by corporate actions.²⁹⁰ Whether to facilitate positive changes in business practices or to enhance managerial competence in quickly evolving environments, these intermediaries seek to promote robust ongoing discourse among corporate decision-makers and the communities corporations affect.²⁹¹

These represent just a few strategies corporations could pursue today to fulfill the duties of care and loyalty as interpreted through the lens of discourse theory. For only by engaging in a continual dialectic engagement with shareholders (and stakeholders about whom shareholders care) can the sense of encapsulated trust endure. Without that communicative effort at identifying the true interests of extant and potential shareholders, there could be no reasonable expectation that directors adequately account for the actual interests of those who ultimately own the corporation.

While AI might pose real existential threats, AI should make dialogue between corporations and their shareholders much more meaningful and efficient. AI communication technologies can sift through vast amounts of data and open new channels for creative engagement with shareholders and other groups.²⁹² As a result, indifference to actual shareholder preferences should dissipate and reliance on some false sensibility of shareholders as uniformly interested in short term wealth should wane as well.²⁹³ Although under the existing fiduciary framework, the business judgment rule tolerates managerial apathy to expressed shareholder preferences, fiduciary duties through the lens of discourse theory require much more.²⁹⁴ Rather than utilizing AI technologies simply to manipulate opinions and interests for profit, under a discourse theory of the firm, managers would be required to direct AI technologies towards gaining a better understanding of actual shareholder preferences and how the corporation might better serve the interests of its owners.²⁹⁵

In terms of how a discourse theory of the firm might redirect the corporate utilization of AI in a positive direction, a couple examples might help. As the next presidential election approaches, consider a hypothetical company that sells guns. An AI technology assisting the board suggests that gun sales should increase when social unrest pervades society. To that end, the AI entity develops a marketing strategy for social media that involves promoting certain political sentiments involving racial discord, animus towards police, and general distrust in democratic institutions. By culling through vast amounts of personal data and demographic information, the AI driven entity creates social media personas, indistinguishable from sentient humans, that are specially tailored to appeal to

²⁹⁰ See *id.* at 146–47.

²⁹¹ *Id.*

²⁹² See Siebecker, *Incompatibility*, *supra* note 11, at 1230.

²⁹³ For a full discussion of how AI could enhance corporate discourse in a manner that supports encapsulated trust, see Siebecker, *Making*, *supra* note 15, at 127–37.

²⁹⁴ See *id.* at 129.

²⁹⁵ See *id.* at 142.

individual platform users.²⁹⁶ Through continual engagement, including real time chat and sharing false video content, the personas would attempt to sway users' political views to create the dystopian environment predicted to enhance gun sales. Should the board follow the AI marketing strategy?

In addition, the AI entity suggests supporting political candidates whose policy preferences are predicted to promote the same social unrest. To that end, the AI entity urges using treasury funds to make massive clandestine donations to political action committees supporting the favored candidates. Moreover, the entity suggests creating a political advertising campaign using deep fake videos that depict false instances of police brutality, individuals tampering with voting machines, and fake military leaders advocating a return to segregation. The issue-based campaign urges individuals to protect their families in the face of impending social collapse. Should the board again pursue such political activity to promote profitability?

Within the existing feeble fiduciary framework, the duties of care and loyalty provide little restraint or guidance. After all, under *Citizens United* and prevailing disclosure laws, corporations possess essentially the same political speech rights as sentient humans and need not publicly reveal much of their political spending or activities.²⁹⁷ Even if the marketing strategy irreparably damages institutions of civil society, the fiduciary structure permits seeking enhanced profits over preserving our social fabric.²⁹⁸

Viewed through the lens of a discourse theory of the firm, the fiduciary duties of care and loyalty would almost certainly prohibit pursuing those strategies. Why? Recall that fulfilling the fiduciary obligation to shareholders requires continual shareholder engagement to promote a rational expectation that corporate boards encapsulate actual shareholder interests in pursuing any corporate action. That engagement depends on transparency and accountability, so no clandestine plan would be permissible.²⁹⁹ Moreover, unless shareholders revealed an extant animus towards society and government, the marginal increase in profits from promoting widespread unrest might not compensate for the injury to community and moral integrity. We all remain vulnerable to the excesses of AI when the guiding light for corporate managers is a laser singularly directed at profit maximization. But when democratic discourse theory animates the fiduciary framework, AI gets cabined in a way that could enhance humanity.

²⁹⁶ Jordan Richard Schoenherr, *The Disturbing Trend of State Media Use of Deepfakes*, CONVERSATION (Apr. 12, 2023), <https://theconversation.com/the-disturbing-trend-of-state-media-use-of-deepfakes-203368> [<https://perma.cc/2NJD-K583>].

²⁹⁷ See Siebecker, *Making*, *supra* note 15, at 126.

²⁹⁸ See *id.* at 124.

²⁹⁹ See *id.* at 142.

V. IMPLICATIONS OF JUST CORPORATE DISCOURSE

Embracing discourse theory to rehabilitate corporate governance principles could quell the existential threats that the proliferation of AI might otherwise create. Moreover, retooling fiduciary duties through the lens of enhanced discourse with shareholders and other corporate stakeholders would produce significant benefits to corporate organization and society.

A. *Efficient Engagement*

Refocusing fiduciary duties through the lens of discourse theory promotes corporate efficiency. In contrast, under the existing fiduciary structure, corporate boards seem perpetually at loggerheads with shareholder activists and other interest groups attempting to influence corporate behavior. Some market professionals and scholars consider shareholder voices nettlesome distractions at best, a cacophonous clamoring about labor practices, environmental impacts, governance issues, political engagement, transparency, or a host of other issues.³⁰⁰ Others go further by suggesting shareholder activism directly undermines corporate profitability and harms the economy.³⁰¹ Within the current fiduciary framework, boards face no duty to investigate or heed shareholder preferences.³⁰² Instead, boards may simply presume shareholder interests remain inextricably wedded to wealth maximization.³⁰³

Blind fidelity to an empirically incorrect view of shareholders as singularly focused on wealth maximization undermines corporate efficiency.³⁰⁴ Efficiency in corporate organization and practices reflects what managers, shareholders, consumers, and other corporate stakeholders would negotiate in a hypothetical

³⁰⁰ See generally Clive Crook, *The Good Company: A Survey of Corporate Social Responsibility*, ECONOMIST, Jan. 22, 2005, at 1–6 (discussing potential deleterious effects on business management and public welfare associated with compliance with stakeholder demands for CSR); Jack Hough, *Activist Investors Aren't Good at Fixing Companies. Or Investing*, BARRON'S (Feb. 5, 2023), <https://www.barrons.com/articles/activist-investing-disney-netflix-51675447951> [<https://perma.cc/7E3U-2PYE>].

³⁰¹ See, e.g., Alana Semuels, *Can America's Companies Survive America's Most Aggressive Investors?*, ATLANTIC (Nov. 18, 2016), <https://www.theatlantic.com/business/archive/2016/11/activist-investors/506330/> [<https://perma.cc/34HW-A776>] (suggesting shareholder activism could ruin the American economy); Martin Lipton, *Bite the Apple; Poison the Apple; Paralyze the Company; Wreck the Economy*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Feb. 26, 2013), <https://blogs.law.harvard.edu/corpgov/2013/02/26/bite-the-apple-poison-the-apple-paralyze-the-company-wreck-the-economy/> [<https://perma.cc/HWE4-83XF>].

³⁰² See *supra* Part III.C.

³⁰³ *Id.*

³⁰⁴ See Williams, *supra* note 271, at 1657; Anderson, *supra* note 282, at 12; Maurice E. Stucke, *Morality and Antitrust*, 2006 COLUM. BUS. L. REV. 443, 486 (2006); Kysar, *supra* note 272, at 6.

world of perfect information with zero transaction costs in bargaining.³⁰⁵ As preferences of any party shift, the result of the bargain would shift accordingly. The very existence of the \$120 trillion market for CSR demonstrates shareholder preferences regarding a host of corporate practices and policies remain untethered to increasing wealth.³⁰⁶ As a result, unyielding adherence to the conception of shareholders as solely interested in wealth maximization remains incompatible with promoting efficient corporate behavior.

A discourse theory lens for interpreting the content of corporate fiduciary duties follows a much more behavioral economic approach.³⁰⁷ Within a discourse theory approach, the sense of trust animating fiduciary duties becomes much more robust. Corporate decision-making processes must produce a rational expectation on the part of shareholders that directors and officers fully encapsulate shareholder interests. Without continual dialectic engagement with *actual* shareholders and other corporate stakeholders about whom shareholders care, no such rational expectation could arise. Fulfilling fiduciary duties through the lens of discourse depends on continual reflexive engagement. The emergence of so many AI communication tools makes that engagement much easier to conduct and process. Rather than directing those tools to manipulate, a discourse theory approach would require utilizing those AI technologies to make sure corporate policies and practices effectively align with expressed shareholder interests. In that way, discourse theory enhances the likelihood that corporate policies and practices promote an efficient outcome.³⁰⁸

But even with respect to profitability, the enhanced transparency required in a fiduciary framework predicated on discourse should produce monetary

³⁰⁵ See Siebecker & Brandes, *supra* note 24, at 439; Lawrence A. Hamermesh, *Calling Off the Lynch Mob: The Corporate Director's Fiduciary Disclosure Duty*, 49 VAND. L. REV. 1087, 1152–54 (1996) (noting fiduciary principles provide what stockholders want regarding corporate information and the duty of directors).

³⁰⁶ See PRINCIPLES FOR RESPONSIBLE INV., *supra* note 274, at 35.

³⁰⁷ For a description of the distinction between a neoclassical approach to human rationality and a behavioral economic sensitivity, see Robert A. Prentice, *Chicago Man, K-T Man, and the Future of Behavioral Law and Economics*, 56 VAND. L. REV. 1663, 1667 (2003) (“The essential inaccuracy of the rational man model has minimized the capacity of law and economics to generate useful insights in many areas of the law. Dissatisfaction with this state of affairs gave rise to a movement, variously called Behavioral Law and Economics (BLE), Behavioral Decision Theory (BDT), and Legal Decision Theory (LDT), that seeks to provide a more descriptively and predictively accurate account of human behavior; this is done by replacing the law and economics movement’s stylized rational man model with a more accurate model based on empirical research arising from psychology, cognitive science, behavioral biology, decision theory, and related fields.”).

³⁰⁸ See Kysar, *supra* note 272, at 4–5 (“In recent years, however, a group of scholars has devoted considerable insight and energy to the project of behavioral law and economics. This emerging subdiscipline fuses traditional neoclassical economic analysis with lessons drawn from cognitive psychology and decision theory research. The result is a law and economics grounded in assumptions that comport better with observed real-world behavior than the stylized rational actor model featured in conventional law and economics.”).

gains and stem market losses. Despite opposition to activist shareholders who seek to advance personal interests,³⁰⁹ consideration of various shareholder, stakeholder, and consumer viewpoints provide avenues for generating wealth.³¹⁰ The basic business case for CSR depends on a mutually beneficial bargain where consumers and investors reward companies that comply with CSR preferences by paying a premium in stock or product price. As long as the premium exceeds the cost of compliance, corporations gain along with socially minded consumers and investors.³¹¹ Of course, transparency regarding CSR practices remains essential to determine if corporations uphold their end of the bargain. Unfortunately, the current fiduciary framework does not require robust disclosure of CSR data. Although many companies produce CSR reports, the governance framework permits, if not encourages, a tragedy of transparency where corporations engage in a sort of strategic ambiguity in their communications, purporting to embrace CSR practices without implementation.³¹² Without the ability to trust the authenticity of corporate claims, the \$120 trillion market for CSR will eventually collapse.³¹³

The transparency required in a discourse theory approach would give the fiduciary framework much more bite and prevent the demise of CSR. After all, continual, transparent discourse remains essential to sustain fiduciary trust. Although few disclosure obligations exist under prevailing corporate common law, transparent disclosure of CSR data would clearly be an affirmative obligation under a revitalized duty of care. Obfuscation and secrecy remain anathema to just discourse, preventing a rational expectation that corporate decision-making encapsulates shareholder interests. Because failure to provide authentic corporate communications on CSR would constitute a clear fiduciary breach, a discourse theory approach to corporate governance would preserve the burgeoning market for CSR.

B. Managerial Competence

In addition to promoting efficiency, a fiduciary framework based on just discourse could enhance managerial competence. The prevailing governance framework largely ignores shareholder voices. Under the oft cited “Wall Street Rule,” if shareholders become discontent with corporate policies or practices, they can simply sell their shares.³¹⁴ Many scholars and market professionals

³⁰⁹ See Hough, *supra* note 300.

³¹⁰ See VALERIE KELLER, HARV. BUS. REV., THE BUSINESS CASE FOR PURPOSE 14 (Apr. 2016), https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/digital/ey-the-business-case-for-purpose.pdf [<https://perma.cc/YSV6-XGZ4>].

³¹¹ See Siebecker, *Bridging*, *supra* note 27, at 106.

³¹² See Siebecker, *Trust*, *supra* note 28, at 122; Crook, *supra* note 300, at 2.

³¹³ See Siebecker, *Trust*, *supra* note 28, at 122; PRINCIPLES FOR RESPONSIBLE INV., *supra* note 274, at 35.

³¹⁴ See Lucian A. Bebchuk, *The Myth of the Shareholder Franchise*, 93 VA. L. REV. 675, 716 (2007).

suggest paying greater attention to shareholder and stakeholder interests, however, would not only produce more responsible business practices but also enhance profitability.³¹⁵ Engagement based on a discourse theory model would require providing greater justification for corporate decisions, beyond simply establishing the absence of gross negligence under the prevailing business judgment rule. Moreover, robust discourse could improve risk management by bringing to light potential shareholder or consumer discontent regarding business practices before any market backlash occurs.³¹⁶ In that way, discourse would promote the ability of the corporation to manage its reputation and brand more effectively. Finally, authentically engaging the actual—rather than assumed—preferences of shareholders and stakeholders could refocus corporate boards to embrace practices that produce sustainable long-term value instead of quick profits.³¹⁷

The improvements in corporate decision-making through enhanced discourse mirror substantially the benefits potentially realized through a stakeholder theory of the firm or the more recent “enlightened shareholder value” model, where directors take into account stakeholder interests to enhance profits.³¹⁸ Nonetheless, the path to achieving those benefits remains distinct under a new discourse theory of the firm. Rather than requiring directors to take into account stakeholder preferences, whether as an end itself or as a means to enhance profits,³¹⁹ discourse theory focuses on process. As more fully explicated in prior works, and as Habermas originally articulated, promoting just discourse remains essential to the basic legitimacy of social, political, and economic institutions.³²⁰ So while those competing theories of corporate organization may produce similar benefits to stakeholders and society, the focus of the revitalized fiduciary framework advocated here remains discourse.

³¹⁵ See, e.g., REBECCA HENDERSON, REIMAGINING CAPITALISM IN A WORLD ON FIRE 9, 11 (2020); Leo E. Strine, Jr., *Restoration: The Role Stakeholder Governance Must Play in Recreating a Fair and Sustainable American Economy: A Reply to Professor Rock*, 76 BUS. LAW. 397, 430 (2021); Lisa M. Fairfax, *From Apathy to Activism: The Emergence, Impact, and Future of Shareholder Activism as the New Corporate Governance Norm*, 99 B.U. L. REV. 1301, 1345 (2019) (explaining why stakeholder engagement strategies are beneficial in the long term).

³¹⁶ See Virginia Harper Ho, “Enlightened Shareholder Value”: *Corporate Governance Beyond the Shareholder-Stakeholder Divide*, 36 J. CORP. L. 59, 83 (2010).

³¹⁷ See ARIEL BABCOCK, SARAH KEOHANE WILLIAMSON & TIM KOLLER, MCKINSEY & CO., HOW EXECUTIVES CAN HELP SUSTAIN VALUE CREATION FOR THE LONG TERM 2 (June 2021), <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-executives-can-help-sustain-value-creation-for-the-long-term> [<https://perma.cc/HFS8-WXXB>].

³¹⁸ For a description of the purported benefits and potential drawbacks of both approaches, see Lucian A. Bebchuk, Kobi Kastiel & Roberto Tallarita, *Does Enlightened Shareholder Value Add Value?*, 77 BUS. LAW. 731, 735 (2022), and Ho, *supra* note 316, at 61–62.

³¹⁹ See Bebchuk, Kastiel & Tallarita, *supra* note 318, at 747.

³²⁰ See Siebecker, *Bridging*, *supra* note 27, at 151.

In the end, the reflexive attention to evolving market preferences through discourse enhances managerial competence. Requiring dynamic engagement between the corporation and its constituencies not only enhances the legitimacy of corporate decisions but uncovers opportunities for wealth creation.³²¹ As preferences evolve, the content of corporate decisions should shift to accommodate the constituencies that corporate managers serve. Unlike the prevailing fiduciary framework, a new discourse theory of the firm requires continual recalibration of corporate decision-making to align with actual preferences of consumers, investors, and other stakeholders.³²² By reinvigorating fiduciary duties through the lens of democratic discourse, corporate managers and their constituencies reap mutual rewards.³²³

C. Corporate Citizenship

Requiring continual discourse between corporate managers, shareholders, and stakeholders should foster a deeper sense of corporate citizenship within society. Sustaining the enhanced sense of trust necessary to fulfill fiduciary obligations depends on taking into account a variety of viewpoints that extend far beyond mere wealth maximization. In essence, discourse theory inevitably heightens the prominence of moral and ethical considerations in corporate decision-making.³²⁴ Of course, enhanced discourse says nothing about the soundness of any moral position. But the process of discourse itself more directly focuses directors on the proper role corporations should play in society. Rather than casting aside considerations of negative externalities from corporate practices, corporate managers will become more keenly aware of their effects. By refocusing fiduciary duties around the tenets of democratic discourse, directors and officers will be required to assess and defend corporate practices in the public square rather than operate in the secrecy.

As a result, determining how to cabin and direct the proliferation of AI within the corporate realm will become a paramount concern for directors and officers. Although AI will certainly improve various aspects of business operations, management, and corporate communication, a discourse theory of the firm demands a continual consideration of the positive and negative societal effects resulting from increased reliance on AI. While some perceive AI as a tool for improving human performance, promoting social awareness, and enhancing the quality of human life,³²⁵ others fear AI might violently adulterate a respect for human rights and social institutions.³²⁶ A discourse theory

³²¹ See Siebecker, *New*, *supra* note 26, at 230–31; Ho, *supra* note 316, at 83.

³²² See Siebecker, *Trust*, *supra* note 28, at 119–20.

³²³ See Siebecker, *Bridging*, *supra* note 27, at 135.

³²⁴ See *id.* at 121–25; Siebecker, *Making*, *supra* note 15, at 139–43.

³²⁵ See DAUGHERTY & WILSON, *supra* note 73, at 118, 121; AGARWAL, BERSIN, LAHIRI, SCHWARTZ & VOLINI, *supra* note 90, at 74 (2018).

³²⁶ See, e.g., Manheim & Kaplan, *supra* note 189, at 116–17; Helbing et al., *supra* note 189; Bartlett, *supra* note 189, at 30.

approach does not provide any insight into the resolution of that ongoing debate. However, the prominence of the debate itself will require attention to those larger concerns regarding the proper utilization of AI as directors steer the corporation. Because so many moral and ethical concerns regarding AI are abound, discourse theory would prohibit simply casting aside those considerations in the pursuit of profits.³²⁷

Moreover, AI technologies should facilitate, rather than hinder, reflective deliberation. The predictive analytical power of AI permits corporate executives to more effectively understand the social, economic, and political impacts of corporate practices.³²⁸ As AI enhances managerial competence, the ability of directors to engage in a more civic minded reflection increases as well.

Within a discourse theory of the firm, AI could actually promote a more robust sense of corporate citizenship. After all, fiduciary duties interpreted through the lens of just discourse would require corporate directors to consider how any decision regarding AI development and deployment might affect the interests of shareholders and other stakeholders within the larger community that corporations inhabit. Rather than focusing myopically on short-term wealth maximization, directors would need to engage long-term concerns about the basic sustainability of the social, political, and economic environment in which the corporation operates. Under the current fiduciary framework, corporate managers could rather easily justify utilizing AI in ways that promote short-term profiteering without regard to potentially destructive impacts on social institutions. In contrast, a discourse theory approach requires sustaining the institutions of civil society that make ongoing discourse both possible and meaningful.

D. Democratic Legitimacy

Perhaps most important, a new discourse theory of the firm rejuvenates a sense of democratic legitimacy within the political realm.³²⁹ Even prior to the advent of AI, corporations exerted a startlingly strong influence over many important aspects of social, political, and economic life.³³⁰ That power may grow exponentially as the artificially intelligent corporation ascends. With constitutional rights and protections afforded by *Citizens United*, the artificially intelligent corporation seems poised to irreparably poison our democratic processes by manipulating public opinion and voting behavior to secure greater

³²⁷ See Siebecker, *Making*, *supra* note 15, at 128, 148–49.

³²⁸ See Martin Dewhurst & Paul Willmott, *Manager and Machine: The New Leadership Equation*, MCKINSEY & CO. (Sept. 1, 2014), <https://www.mckinsey.com/featured-insights/leadership/manager-and-machine> [<https://perma.cc/J5NR-FPZR>].

³²⁹ See FINLAYSON, *supra* note 257, at 112–13.

³³⁰ See Siebecker, *Political*, *supra* note 10, at 2721; Timothy K. Kuhner, *The Separation of Business and State*, 95 CALIF. L. REV. 2353, 2354–55, 2361–64 (2007); Arthur S. Miller, *Corporations and Our Two Constitutions*, in *CORPORATIONS AND SOCIETY: POWER AND RESPONSIBILITY* 241, 242 (Warren J. Samuels & Arthur S. Miller eds., 1987).

profits.³³¹ Absent a robust sense of transparency and accountability within the corporate setting, human sovereignty over the shape our polity takes remains uncertain.³³²

Refocusing corporate fiduciary duties around a new discourse theory, however, can bring us back from the brink. At the outset, the tenets of discourse theory require transparent engagement with the ability to hold all deliberators accountable for their views.³³³ Consumers, investors, and other corporate stakeholders simply could not hold corporate managers accountable without disclosure of corporate political activity.³³⁴ Under a discourse theory approach, corporations would not be able to secretly shape political opinion to enhance profits. Clandestine corporate spending to promote political causes or candidates would clearly constitute a fiduciary breach.³³⁵ As a result of mandatory disclosure of political activity, nefarious “political insider trading”—where directors and officers use the corporate treasury to pursue personal political agendas—should all but disappear.³³⁶

Moreover, the very decision to engage in the political realm would need to arise out of a reflective dialogue among corporate managers, shareholders, and stakeholders. For some companies, participation in politics could produce social benefits.³³⁷ Disney’s advocacy of LGBTQ+ rights in Florida might serve as an example.³³⁸ A discourse theory of the firm involves a much more searching and proactive approach to corporate political engagement than the prevailing fiduciary framework. While it may be prudent to consider potential market

³³¹ See Siebecker, *Political* at 2720–21; Forbath, *supra* note 266, at 986.

³³² See generally Jones, *supra* note 261, at 1285; Jay B. Kesten, *Shareholder Political Primacy*, 10 VA. L. & BUS. REV. 161, 225–26 (2016); Colleen A. Dunlavy, *Social Conceptions of the Corporation: Insights from the History of Shareholder Voting Rights*, 63 WASH. & LEE L. REV. 1347, 1386 (2006); Lucas E. Morel, Commentary, *The Separation of Ownership and Control in Modern Corporations: Shareholder Democracy or Shareholder Republic?*, 63 WASH. & LEE L. REV. 1593, 1595 (2006); Dalia Tsuk Mitchell, *Shareholders as Proxies: The Contours of Shareholder Democracy*, 63 WASH. & LEE L. REV. 1503, 1539 (2006).

³³³ See Siebecker, *Political*, *supra* note 10, at 2726; Siebecker, *Bridging*, *supra* note 27, at 121.

³³⁴ Siebecker, *Political*, *supra* note 10, at 2728–29, 2738.

³³⁵ *Id.* at 2738, 2747.

³³⁶ *Id.* at 2719–20, 2767.

³³⁷ See Rolf Brühl & Benedikt Kapteina, *Fighting for Democracy: The Case for Corporate Political Responsibility*, LONDON SCH. OF ECON. & POL. SCI.: BUS. REV. (May 6, 2022), <https://blogs.lse.ac.uk/businessreview/2022/05/06/fighting-for-democracy-the-case-for-corporate-political-responsibility/> [https://perma.cc/R989-ZEYY].

³³⁸ For a description of how Disney engaged in political discourse to combat anti-LGBTQ+ policies promoted by Florida’s governor, see Brooks Barnes, *Disney C.E.O. Says Company Is ‘Opposed’ to Florida’s ‘Don’t Say Gay’ Bill*, N.Y. TIMES (Mar. 9, 2022), <https://www.nytimes.com/2022/03/09/business/disney-ceo-florida-lgbtq-bill.html> [https://perma.cc/ZFY7-TLRX].

backlash from taking a political stand,³³⁹ discourse theory focuses on the legitimacy of the deliberative process that leads to political engagement. No corporate political activity could be justified unless a decision to engage emerged from robust discourse that encapsulated interests of shareholders and other stakeholders. While not granting shareholders and stakeholders decision-making authority, discourse theory enhances the legitimacy of corporate participation in politics.

Within the deliberative processes required by discourse theory, not just the content of the political viewpoint but also the manner of participation would be subject to discussion. Take the example of corporations harnessing AI to mold political views that correlate with increased product sales and profitability. That strategy could only pass fiduciary muster if it emerged out of a reflective engagement with shareholders and other stakeholders. Considering some AI strategies aimed at maximizing profits might have disastrous repercussions for civil society, it would seem almost inconceivable that such applications could be described as encapsulating extant shareholder and stakeholder interests.

Especially in the era of AI, a discourse theory of the firm brings about a renewed sense of democratic legitimacy. Due to the increasing dominance of corporations in politics, the integrity of corporate governance structures directly affects the trust we have in our democratic processes.³⁴⁰ The presence of special interests, managerial imperialism, or antidemocratic values within corporations can erode the sense of meaningful citizenship within our society.³⁴¹ To counteract corporate corruption of politics, a discourse theory of the firm aims to establish fair and just internal corporate structures. Even as corporate power grows, we can maintain faith in democratic processes as long as corporate governance principles require effective consideration of the voices of shareholders, consumers, and stakeholders. By ensuring a greater sense of democratic participation in the corporate realm, a discourse theory of the firm secures democratic legitimacy in the public sphere.

³³⁹ See Thomas A. Cole, *Business and Politics: When Should Companies Take a Public Position?*, HARV. L. SCH. F. ON CORP. GOVERNANCE (May 6, 2021), <https://corpgov.law.harvard.edu/2021/05/06/business-and-politics-when-should-companies-take-a-public-position/> [<https://perma.cc/54W2-LQ9B>]; Press Release, Conf. Board, Corporate America Faces Challenging Political Environment (Feb. 2, 2023), <https://www.conference-board.org/press/Corporate-Political-Activity-Press-Release> [<https://perma.cc/5W7A-R6E9>] (“78 percent of US corporations describe today’s political environment for companies as extremely challenging or very challenging, according to a new survey by The Conference Board ESG Center.”).

³⁴⁰ See Siebecker, *Political*, *supra* note 10, at 2764.

³⁴¹ See HABERMAS, BETWEEN FACTS, *supra* note 251, at 166–67 (“[N]on-neutralizable bargaining power should at least be disciplined by its equal distribution among the parties . . . [securing] all the interested parties with an equal opportunity for pressure . . . to influence one another in the actual bargaining, so that all the affected interests can come into play and have equal chances of prevailing.”); see also Forbath, *supra* note 266, at 985–86.

VI. CONCLUSION

Left unchecked, AI technologies could undermine the stability of social institutions, trust in the value of discourse, and the ability of humans to exercise dominion over our collective lives. To be sure, AI poses existential threats to human agency and democracy. Adopting a revitalized fiduciary framework for corporate governance remains essential to stave off those existential threats. Refocusing fiduciary duties through the lens of discourse theory could provide a governance structure strong enough to guide corporate managers within the artificially intelligent corporation. Focusing on continual engagement of shareholders and stakeholders, AI could actually be deployed to strengthen the fiduciary bond of trust that binds corporate managers to shareholders and ultimately to the communities that corporations inhabit. Refocusing fiduciary duties through the lens of democratic discourse would produce a necessary sense of transparency and accountability for our democratic institutions to thrive.