

# Viewing Artificial Persons in the AI Age Through the Lens of History

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## Abstract

With talk of driverless companies and bots substituting for human beings on company boards either in part or completely, the spectre of a future controlled by entities devoid of human beings is upon us. But has the future been here for longer than we all realise; has the corporation really changed? In this chapter it is argued that the modern business corporation has been separate from human beings since the 17th century. Developments in the English East India Company during that century meant functional separation followed legal separation, as boards were charged to act in the interests of the capital of the shareholders rather than the shareholders themselves. In closely held corporations, and for periods through history, the functional separation has reduced for a time. The trend through history, though, is towards separation precisely because that separation, combined with boards constrained to act in their interests, means corporations grow and prosper at least financially. The shift to artificial legal persons being controlled by other artificial entities is not therefore as radical as it might appear to be. This chapter will discuss the challenges that artificial intelligence ('AI') presents for corporate governance and will set the context for specific issues examined in the chapters that follow.

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# Viewing Artificial Persons in the AI Age Through the Lens of History

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With talk of driverless companies and bots substituting for human beings on company boards either in part or completely, the spectre of a future controlled by entities devoid of human beings is upon us. But has the future been here for longer than we all realise; has the corporation really changed? In this chapter it is argued that the modern business corporation has been separate from human beings since the 17<sup>th</sup> century. Developments in the English East India Company during that century meant functional separation followed legal separation, as boards were charged to act in the interests of the capital of the shareholders rather than the shareholders themselves. In closely held corporations, and for periods through history, the functional separation has reduced for a time. The trend through history, though, is towards separation precisely because that separation, combined with boards constrained to act in their interests, means corporations grow and prosper at least financially. The shift to artificial legal persons being controlled by other artificial entities is not therefore as radical as it might appear to be. This chapter will discuss the challenges that artificial intelligence ('AI') presents for corporate governance and will set the context for specific issues examined in the chapters that follow.

## I THE DRIVERLESS CORPORATION OF OUR FUTURE

In 'Self-Driving Corporations?', John Armour and Horst Eidenmueller examine today's AI, where machine learning is used to assist in human decision-making, and tomorrow's AI, which envisages a system where AI eliminates the necessity of humans in corporate decision-making through 'self-driving subsidiaries' and then 'fully self-driving corporations'.<sup>1</sup>

Considering tomorrow's AI, the authors refer to 'unsupervised-learning', which relies on the machine itself to identify patterns in the data rather than training the model, and 'reinforcement

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<sup>1</sup> John Armour and Horst Eidenmueller, 'Self-Driving Corporations?' (Working Paper No 475/2019, European Corporate Governance Institute, August 2019) <<https://ssrn.com/abstract=3442447>>.

learning’, in which the machine learns by trial and error.<sup>2</sup> The authors consider self-driving subsidiaries as an intermediate step to AI replacing humans and suggest piercing the veil as a mechanism for liability when abuses occur.<sup>3</sup> In the context of self-driving subsidiaries and self-driving corporations, goal setting is considered a central issue as algorithms pursue goals.<sup>4</sup> Though machines can pursue their goals too rigorously, the authors stress the importance of correct calibration of corporate goals as well as corporate control and liability regimes to address algorithmic failure.<sup>5</sup> Assuming no human directors, the authors then consider modes of regulatory control, such as ensuring corporations autonomously controlled by algorithms must act within certain stipulations, and argue that liability for algorithmic failure should lie with the company rather than third party AI vendors,<sup>6</sup> with the company required to take out liability insurance to account for algorithmic failure.<sup>7</sup>

In ‘The Implications of Modern Business-Entity Law for the Regulation of Autonomous Systems’, Shawn Bayern applies legal personhood to autonomous systems.<sup>8</sup> Autonomous systems are not legal persons under current law, but the author comments on the flexibility of the modern business structure to suggest that autonomous systems could achieve personhood status under the current US system: ‘[G]iven that the legal system already has legally recognized entities like corporations and harmonized that recognition with other areas of law, recognizing and harmonizing such entities as robots may prove to be an easier challenge...’.<sup>9</sup> The author recognises that a business corporation itself may be said to be an autonomous system of sorts which has legal personhood.<sup>10</sup>

Is the modern corporation already an autonomous system; when we talk of driverless corporations, are we there yet? The book *Robot Rules: Regulating Artificial Intelligence* offers

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<sup>2</sup> Ibid 12.

<sup>3</sup> Ibid 25–27.

<sup>4</sup> Ibid 29.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid 31.

<sup>7</sup> Ibid 33.

<sup>8</sup> Shawn Bayern, ‘The Implications of Modern Business-Entity Law for the Regulation of Autonomous Systems’ (2015) 19(1) *Stanford Technology Law Review* 93.

<sup>9</sup> Ibid 96.

<sup>10</sup> Ibid.

extensive coverage of AI's legal implications for the world of corporate law,<sup>11</sup> settling on the definition of AI as the ability of a non-natural entity to make choices by an evaluative process.<sup>12</sup> The definition could easily be applied to decision-making in a modern company even though it is Human Intelligence (HI) rather than AI that drives decision-making. Given the constraints and imperatives that the human intelligences on boards currently operate under, will AI substituting for HI really make much difference?

Viewed reductively, the modern company is a legal fiction that operates as an artificial legal person to capture, extract, and transact for forms of value. Current conceptualisations of the corporation tend to view it through an economic lens looking at the flow and transfer of value. People work for corporations; economically the corporation extracts forms of value from those people, and legally that value is held by the artificial legal person.

Employees or others connected to the corporate legal entity may not view their corporations so clinically. As former Delaware Chancellor William Allen put it:

[W]hile these entities are surely economic and financial instruments, they are, as well, institutions of social and political significance. The story of the contending conceptions of the corporation reflects that fact. Indeed, it may not be an exaggeration to imagine that this story resonates with an elemental tension that our society has endured since the days of the industrial revolution. That tension arises from the longing for stability and community in the liberal society. Business corporations may strike you as a pale, perhaps even pathetic, source of the meaning and identity people achieve through community membership and interaction.<sup>13</sup>

## II WHAT IS CORPORATE PERSONALITY?

Corporate personality or personhood is a legal fiction. Lon Fuller (in the seminal *Legal Fictions*) terms a fiction as either '(1) a statement propounded with a complete or partial consciousness of its falsity, or (2) a false statement recognised as having utility.'<sup>14</sup>

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<sup>11</sup> Jacob Turner, *Robot Rules: Regulating Artificial Intelligence* (Palgrave Macmillan, 2019).

<sup>12</sup> *Ibid* 16.

<sup>13</sup> William T Allen, 'Our Schizophrenic Conception of the Business Corporation' (1992) 14(2) *Cardozo Law Review* 261, 280.

<sup>14</sup> Lon L Fuller, *Legal Fictions* (Stanford University Press, 1967) 9.

Fuller later writes:

Most of what has been written about the supposedly profound question of corporate personality has ignored the possibility that the question discussed might be one of terminology merely. No one can deny that the group of persons forming a corporation is treated, legally and extralegally, as a ‘unit’. ‘Unity’ is always a matter of subjective convenience. I may treat all the hams hanging in a butcher shop as a ‘unit’ — their ‘unity’ consists in the fact that they are hanging in the same butcher shop.<sup>15</sup>

If the unity that is the company is no more than terminology — what some commentators term a collective noun — how then do we explain away the clear sense of identity and meaning we attach to corporations? Fuller is suggesting that the modern company falls within the second category of legal fiction — ‘a false statement recognised as having utility’.<sup>16</sup> In this chapter it is argued that the corporation is in fact the first type of fiction identified by Fuller — ‘a statement propounded with a complete or partial consciousness of its falsity’.<sup>17</sup> Legally the company is a *persona ficta* or artificial legal person that exists separately from all natural persons. The fiction is our shared belief that the company in many ways is a real thing.<sup>18</sup>

Fictions enable a form of collective imagination with these shared beliefs giving us a unique ability for large groups to cooperate flexibly. Yuval Noah Harari talks about this type of legal fiction in *Sapiens: A Brief History of Humankind*<sup>19</sup> using as an illustration Peugeot, which in 2008 employed 200,000 people, mostly strangers to each other, manufactured 1.5 million cars and earned revenue of €55 billion:

In what sense can we say that Peugeot... exists? There are many Peugeot vehicles, but these are obviously not the company. Even if every Peugeot vehicle in the world were simultaneously junked and sold for scrap metal, Peugeot would not disappear. It would continue to manufacture new cars and issue its annual report. The company owns factories, machinery and showrooms, and employs mechanics, accountants, managers and secretaries, but all these together do not comprise Peugeot. A disaster might kill every single one of Peugeot’s employees, and go on to destroy all of its assembly lines and executive offices.

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<sup>15</sup> Ibid 13.

<sup>16</sup> Ibid 9.

<sup>17</sup> Ibid.

<sup>18</sup> Robin Cooke, *Turning Points of the Common Law* (Sweet & Maxwell, 1997) 11.

<sup>19</sup> Yuval Noah Harari, *Sapiens: A Brief History of Humankind* (Vintage Books, 2014).

Even then, the company could borrow money, hire new employees, build new factories and buy new machinery. Peugeot has managers and stockholders, but neither do they constitute the company. All the managers could be dismissed and all its shares sold, but the company itself would remain intact.<sup>20</sup>

Harari terms the idea behind companies as ‘among humanity’s most ingenious inventions’,<sup>21</sup> commenting:

How exactly did Armand Peugeot, the man, create Peugeot, the company, back in 1896? In much the same way that priests and sorcerers have created gods and demons throughout history ... In the case of Peugeot SA the crucial story was the French legal code, as written by the French parliament. According to the French legislators, if a certified lawyer followed all the proper liturgy and rituals, wrote all the required spells and oaths on a wonderfully decorated piece of paper, and affixed his ornate signature to the bottom of the document, then hocus pocus — a new company was incorporated. When in 1896 Armand Peugeot wanted to create his company, he paid a lawyer to go through all these sacred procedures. Once the lawyer had performed all the right rituals and pronounced all the necessary spells and oaths, millions of upright French citizens behaved as if Peugeot company really existed.<sup>22</sup>

Harari concludes:

Ever since the Cognitive Revolution, Sapiens have thus been living in a dual reality. On the one hand, the objective reality of rivers, trees and lions; and on the other hand, the imagined reality of gods, nations and corporations. As time went by, the imagined reality became ever more powerful, so that today the very survival of rivers, trees and lions depends on the grace of imagined entities such as the United States and Google.<sup>23</sup>

This understanding of corporations as a type of legal fiction existing in the abstract is the foundational principle of company law for common law jurisdictions. These artificial legal persons have been recognised as legally separate from human beings at least since Lord Macnaghten in *Salomon v A Salomon & Co Ltd* in the House of Lords stated:

The company is at law a different person altogether from the subscribers to the memorandum; and, though it may be that after incorporation the business is precisely the same as it was before,

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<sup>20</sup> Ibid 31.

<sup>21</sup> Ibid 32.

<sup>22</sup> Ibid 34.

<sup>23</sup> Ibid 36.

and the same persons are managers, and the same hands receive the profits, the company is not in law the agent of the subscribers or trustee for them.<sup>24</sup>

Why then, even before we have AI in the boardroom, is the reality that the corporation as a separate legal person is already close to being an autonomous system, separate from natural persons, not a truth universally acknowledged? Perhaps because two competing conceptions have always dominated our thinking on what a corporation or company is. Chancellor Allen termed them the property conception and the social entity conception.<sup>25</sup> The social entity conception is consistent with the company as an entity being an autonomous system, but the property conception is not.

The property conception considers the corporation as the private property of shareholders. As Chancellor Allen terms it, '[t]he corporation's purpose is to advance the purposes of these owners (predominantly to increase their wealth), and the function of directors, as agents of the owners, is faithfully to advance the financial interests of the owners'.<sup>26</sup> Allen notes that the contractual model is currently the dominant academic paradigm of the corporation, and that 'in its most radical form, the corporation tends to disappear, transformed from a substantial institution into just a relatively stable corner of the market in which autonomous property owners freely contract'.<sup>27</sup> Allen continues:

The [social entity] conception sees the corporation not as the private property of stockholders, but as a social institution. According to this view, the corporation is not strictly private; it is tinged with a public purpose. The corporation comes into being and continues as a legal entity only with governmental concurrence. The legal institutions of government grant a corporation its juridical personality, its characteristic limited liability, and its perpetual life. This conception sees this public facilitation as justified by the state's interest in promoting the general welfare. Thus, corporate purpose can be seen as including the advancement of the general welfare. The board of directors' duties extend beyond assuring investors a fair return, to include a duty of loyalty, in some sense, to all those interested in or affected by the corporation. This view could be labeled in a variety of ways: the managerialist conception, the institutionalist conception, or the social entity conception. All would be descriptive, since the corporation is seen as distinct

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<sup>24</sup> *Salomon v A Salomon & Co Ltd* [1897] AC 22, 51.

<sup>25</sup> Allen (n 13), 264.

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*

from each of the individuals that happens to fill the social roles that its internal rules and culture define. The corporation itself is, in this view, capable of bearing legal *and* moral obligations.<sup>28</sup>

As Allen concludes: ‘To law and economics scholars, who have been so influential in academic corporate law, this model is barely coherent and dangerously wrong’.<sup>29</sup>

Allen considered that these two apparently inconsistent conceptions have dominated our thinking about corporations since the evolution of the large integrated business corporation in the late 19<sup>th</sup> century.<sup>30</sup> In fact, the two conceptions emerged much earlier, with their origins in the two antecedent forms of the company discussed below that were first truly integrated in the chartered joint stock corporations of the 17<sup>th</sup> century. Our modern form of company is a hybridised form that shares characteristics with those two antecedent forms. The modern company is in its form an entity, an artificial legal person, in which shareholders have property rights in what can be termed the capital fund held by the entity. Both conceptions of the company set out by Allen are therefore, it is suggested, correct; they simply view the company from two different perspectives.

### **III THE PRIVATE PROPERTY CONCEPTION AND SOCIAL ENTITY CONCEPTION THROUGH HISTORY<sup>31</sup>**

The private property conception views the company from the perspective of its shareholders. It is derived from the joint stock companies that emerged in the Tudor period in England. A company was originally a collective or association of natural persons: most famously, Shakespeare was part of a company of players. In a joint stock company an association of natural persons were united in a common endeavour, sharing in their ownership of joint stock. The idea of joint stock as a shared form of value is another legal fiction that is one of the foundations of modern capitalism. This early form of joint stock company was not an autonomous system that was a separate legal entity, as the stockholders comprised the

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<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid 264.

<sup>31</sup> See also Sergio Alberto Gramitto Ricci, ‘Artificial Agents in Corporate Boardrooms’ (2020) 105(3) *Cornell L Rev* 869 (comparing AI developments with Roman law).

company. Although they contained joint stock, the form of these companies was akin to partnerships — as a matter of law they did not have separate legal personality.

In the time of Elizabeth I, ‘the outline of an incorporation of traders beg[a]n to be fixed’.<sup>32</sup> The Crown endowed grantees with the old incidents of incorporation.<sup>33</sup> It is in these chartered corporations that we find the origins of the (social) entity conception.

The Charter for the Mines Royal in 1568 is an early and illustrative example of such a charter. Recognising that the Mines Royal’s mineral works were ‘to the likely benefit and commodity of this our Realm of England and subjects of the same’, the Queen through the Charter ratified and confirmed the organisation’s privileges in perpetuity.<sup>34</sup> Crucially, the Charter also granted corporate status:

But also for the better and more advancement of the said Mineral Works ... and by these presents for US our heirs and successors do give and grant, to the aforementioned [names] that they by the name of *Governor Assistants and Commonalty for the Mines Royal* shall be from henceforth forever one body politic in itself incorporate and a perpetual society of themselves both in deed and name.<sup>35</sup>

The individuals named in perpetuity remained both a ‘society of themselves’ and became ‘one body politic’. From the wording of the grant, the corporation is itself a legal entity (body politic). Juridical personality and perpetual life, two of the three characteristics of the social entity Allen describes,<sup>36</sup> thus existed in the earliest form of chartered business corporation.

The apparent contradiction of the corporation as a legal form that both includes its constituents as part of the perpetual society and is separate from them as one body politic is one of the paradoxes of corporate law that has persisted to the present. From a 16<sup>th</sup> century perspective, the concept of a corporation that was separate from natural persons and also comprised of natural persons in their corporate capacities as members of a society was not a conceptual stretch. In municipal corporations, people were members of a city; tradespeople were admitted

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<sup>32</sup> Cecil T Carr, *Select Charters of Trading Companies A.D. 1530-1707* (Selden Society, 1913) xiii.

<sup>33</sup> *Ibid* xiv.

<sup>34</sup> The monarch, acting ‘for US our heirs and successors’ bestowed privileges ‘to be construed and taken beneficially in the favour of the said *Thomas Thurland, Danyell Houghsetter*, their heirs and assigns and of the assigns of them and of every of them ...’: *ibid* 5.

<sup>35</sup> *Ibid* 5–6.

<sup>36</sup> Allen (n 13), 265.

to a guild. Yet those citizens and tradespeople also operated outside their corporate capacity and their own personal assets were not considered to be the property of the city or the guild. Corporations were legal persons. Only legal persons existed in the legal world of the Middle Ages. A legal or juridical person is capable of bearing rights and duties<sup>37</sup> (although legal persons do not automatically have rights and duties). A legal person did not need to be natural persons; it could be a *persona ficta* or artificial legal person that could exist in the abstract. The legal historian F W Maitland was careful to term *persona ficta* ‘the Italian Theory of the Corporation’, recognising that this concept did not develop until the Middle Ages, perhaps with Pope Innocent IV.<sup>38</sup> It was then transplanted into the common law by Sir Edward Coke CJ. In his report on *The Case of Sutton’s Hospital*,<sup>39</sup> Coke CJ clearly considered a corporation to be *persona ficta*. In the statement most often quoted from *Sutton*, Coke CJ said that the corporation was ‘invisible, immortal and rest[ing] only in intendment and consideration of the law’.<sup>40</sup> The legal fiction concept of the corporation that operated as an artificial legal person entered the common law.

Chartered corporations that had joint stock funds were a type of corporation. In common with all corporations and in terms of the grants given in the charters, people were members of a society. Stockholders also owned shares in joint stock funds; the property component of joint stock corporations of the 17<sup>th</sup> century like the English East India Company (‘EEIC’). It was only in 1657 that the EEIC’s charter mandated a permanent joint stock or capital.<sup>41</sup> Before that time, chartered joint stock corporations could have multiple joint stock funds that terminated after a voyage or series of voyages.<sup>42</sup> Different members of the corporation held shares in different or multiple joint stock funds in their capacities as stockholders.<sup>43</sup> At times during the 17<sup>th</sup> century, several joint stocks operated in parallel in the EEIC.<sup>44</sup> In a sense, therefore, before 1657 numerous joint stock companies (comprising different groupings of members of the EEIC

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<sup>37</sup> P W Duff, *Personality in Roman Private Law* (Cambridge University Press, 1938) 1.

<sup>38</sup> Otto Gierke, *Political Theories of the Middle Ages*, tr F W Maitland (Cambridge University Press, 1900) xiv.

<sup>39</sup> *The Case of Sutton’s Hospital* (1613) 10 Co Rep 23a; (1613) 77 ER 960.

<sup>40</sup> (1613) 10 Co Rep 23a, 32b; (1613) 77 ER 960, 973.

<sup>41</sup> R C Dutt, A C Lyall and W Hunter, *History of India: From the First European Settlements to the Founding of the English East India Company* (Nabu Press, 2010) 282.

<sup>42</sup> See generally, R A Bryer, ‘The History of Accounting and the Transition to Capitalism in England. Part Two: Evidence’ (2000) 25(4-5) *Accounting, Organizations and Society* 327.

<sup>43</sup> *Ibid* 353–5.

<sup>44</sup> *Ibid*.

as shareholders in different joint stocks) existed *inside* the EEIC as a chartered corporation. When a permanent joint stock or capital fund was established in the charter of 1657, the requirement was soon added that all members of the EEIC hold shares in the joint stock.

Joint stock funds became perpetual in the same way corporations were perpetual. Joint stock or capital funds were therefore a legal fiction that was held by another legal fiction that was the *persona ficta* or artificial legal person — the chartered corporation.

The separation of joint stock funds from stockholders in 1657 was linked with and facilitated by the adoption of double-entry bookkeeping.<sup>45</sup> Double-entry bookkeeping was first used for forms of commercial partnership where the accounts of the firm were separated from the capital accounts of the capital partners.<sup>46</sup> The EEIC thus became a separate legal entity from its stockholders who were separated through double-entry bookkeeping from the stock they held shares in.

The relationship between boards and stockholders shifted. Directors (originally called committees or committee-men) controlled the capital fund with stockholders no longer able to control or countermand management decisions made by directors or to directly control the capital fund. The elected committee of governors made decisions for the artificial legal person separate from its stockholders/members in the same way a modern board makes decisions for modern companies. Separation of ownership and control, as identified later by Berle and Means,<sup>47</sup> took place in the EEIC. Boards were freed up to adopt a long-term perspective based on the perpetual life of the EEIC and its capital fund rather than based on the short-term perspective of current shareholders.

The EEIC was the first modern corporation. It dominated the world for 250 years.<sup>48</sup> Of the reasons given for that domination, which include monopoly, size and scale, the impact of the legal form usually appears well down the list. But it could be argued that it was its existence

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<sup>45</sup> Max Weber, *The History of Commercial Partnerships in the Middle Ages*, tr Lutz Kaelber (Rowman & Littlefield, 2003) 26–27.

<sup>46</sup> *Ibid.*

<sup>47</sup> Adolf A Berle and Gardiner C Means, *The Modern Corporation and Private Property* (Harcourt, 1968).

<sup>48</sup> Nick Robins, *The Corporation that Changed the World: How The East India Company Shaped the Modern Multinational* (Pluto Press, 2012).

as an entity separated from current stockholders and their short-term perspectives that gave the fiction of the EEIC life, and made size and scale possible.<sup>49</sup> The committee of governors, equating to the board of directors, were required to swear an oath to act in the interests of all stockholders,<sup>50</sup> with the reality then, as now, that those interests were held as capital in the entity separately from stockholders.

#### IV THE TWO CONCEPTIONS AND THE MODERN COMPANY

What about modern companies? At first the property conception dominated. Companies incorporated pursuant to the general incorporation statutes that came into force in England from the mid-19th century onwards were regarded as legally akin to the antecedent joint stock company and were treated by the law as forms of partnership;<sup>51</sup> shareholders were regarded as legally part of the companies.<sup>52</sup> Through the second half of the 19th century, understanding about the effect of incorporation shifted so that the modern company was increasingly viewed as a type of corporation that was a separate legal entity from its shareholders.

The process that led to that legal separation of shareholders from the entity is not discussed in detail in this chapter. Limited liability of shareholders and a consideration of the interests of creditors drove the removal of control of the joint stock fund from shareholders in order to protect creditors. The identification and separation of the corporate fund was facilitated by the invention of the debenture which floated over the corporate fund and, resultingly and increasingly, the development and improvement of accounting practices around companies.<sup>53</sup>

The concept of an artificial legal person derived from corporations law was applied to the modern company by Lord Macnaghten in *Salomon v Salomon & Co Ltd* so that the entity containing the joint stock or capital fund was regarded as the company rather than the

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<sup>49</sup> Alfred D Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (Belknap Press, 1990).

<sup>50</sup> East India Company, *Charter* (1661) [3]–[4].

<sup>51</sup> As reflected in the title of a leading textbook of the time: Nathaniel Lindley and Walter Lindley, *A Treatise on the Law of Companies Considered as a Branch of the Law of Partnership* (Sweet & Maxwell, 5<sup>th</sup> ed, 1889).

<sup>52</sup> See, e.g., *Foss v Harbottle* (1843) 2 Hare 461, 492; 67 ER 189, 203 (Wigram V-C referring to shareholders as ‘proprietors’).

<sup>53</sup> See Susan Watson, ‘The Corporate Legal Entity as a Fund’ [2018] *Journal of Business Law* 467.

subscribers to the memorandum, the shareholders.<sup>54</sup> Shareholders ultimately benefitted by retaining their property rights in the joint stock or capital.

A similar evolutionary process took place in the US.<sup>55</sup> Once perfected again, the integrated form worked well for business. By 1911, Nobel Prize winner and President of Columbia University Nicholas Murray Butler was able to assert that the ‘limited liability corporation is the greatest single discovery of modern times ... Even steam and electricity ... would be reduced to comparative impotence without it’.<sup>56</sup> Professor Gower in the leading UK work on company law similarly commented: ‘Unquestionably the limited liability company has been a major instrument in making possible the industrial and commercial development which have occurred throughout the world’.<sup>57</sup>

Following Allen’s taxonomy therefore the modern company or corporation is an entity. But shareholders through their ownership of shares have property rights in the capital fund found in modern companies. Counterintuitively, and contrary to the strictures of agency theory,<sup>58</sup> current shareholders, by ceding control of their property rights in the capital fund held by the corporation, ultimately prosper because boards, by acting in the interests of the capital fund, act in the interests of shareholders. Boards can focus on the long term; and with separation of ownership from control, size and scale become possible.<sup>59</sup>

## V THE ROLE OF THE BOARD

The board directly controls the capital fund in the corporate entity. Many US scholars equate the rise in the importance of the board with the development of the managerialist corporation at the end of the 19th century.<sup>60</sup> Certainly, recognition of the board’s powers as original and

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<sup>54</sup> *Salomon v A Salomon & Co Ltd* [1897] AC 22, 51.

<sup>55</sup> See generally, Herbert Hovenkamp, *Enterprise and American Law, 1836–1937* (Harvard University Press, 1991).

<sup>56</sup> Quoted in William M Fletcher, *Cyclopedia of the Law of Corporations* (Callaghan, 1917) vol 1, 43.

<sup>57</sup> L C B Gower, *Principles of Modern Company Law* (Sweet & Maxwell, 5<sup>th</sup> ed, 1992) 70.

<sup>58</sup> Michael C Jensen and William H Meckling, ‘The Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure’ (1976) 3(4) *Journal of Financial Economics* 305.

<sup>59</sup> Chandler, above n 499.

<sup>60</sup> See, eg, Stephen M Bainbridge, ‘Director Primacy: The Means and Ends of Corporate Governance’ (2003) 97(2) *Northwestern University Law Review* 547, 598–99.

undelegated happened at that time in the US.<sup>61</sup> But the board or its equivalent has always been a central and core element of the corporation in all of its forms.<sup>62</sup> Crucially, the legal relationship of the board to shareholders shifted in the EEIC in 1654 and again in the second half of the 19<sup>th</sup> century.

Accepting that the role of the board relates to the capital fund rather than directors acting as economic and legal agents of current shareholders, as a pure property perspective would hold, provides clarity around purpose for boards. Corporate governance scholarship about the role of the board is bifurcated between those scholars who consider that the role of the board is to maximise value for current shareholders, sometimes called shareholder capitalism, and those scholars who consider that the role of the board is to consider the interests of all corporate stakeholders, sometimes called stakeholder capitalism.<sup>63</sup> Conceptualising the company as an entity containing a capital fund that shareholders have property rights in offers a middle ground in the debate. On incorporation the company has a capital fund of financial capital. As it operates in the world as a legal person, the company acquires financial and other forms of value that become part of the capital fund. Combinations of the forms of value also generates value.

The board in its decision-making will therefore seek to maximise value captured by the corporate legal entity in its capital fund. In doing so, the board may make decisions that favour the interests of the providers of those forms of value such as employees and consumers; interest groups that are often termed stakeholders. A social entity conceptualisation of the company might therefore appear to prevail. But such an understanding must be qualified. Although the board may appear to favour the interests of stakeholders, these interests will be legitimately accommodated only to the extent that the board considers they will ultimately cause a net increase in the overall value of the capital fund. In the end that increase in value will benefit shareholders, who have property rights in the capital fund in two ways; first, through the conversion of the value to dividends, and secondly, through the increase in the forms of value

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<sup>61</sup> Morton J Horwitz, 'Santa Clara Revisited: The Development of Corporate Theory' (1985) 88(2) *West Virginia Law Review* 173, 215–16; William W Bratton, 'The New Economic Theory of the Firm: Critical Perspectives from History' (1989) 41(6) *Stanford Law Review* 1471, 1487–1491.

<sup>62</sup> Franklin A Gevurtz, 'The Historical and Political Origins of the Corporate Board of Directors' (2004) 33(1) *Hofstra Law Review* 89. Gevurtz traces the history of the board through all of the forms of the corporation.

<sup>63</sup> See Lucian A Bebchuk and Roberto Tallarita, 'The Illusory Promise of Stakeholder Governance' (2020) *Cornell Law Review* (forthcoming) (which explores, and further contributes to, the shareholder capitalism / stakeholder capitalism debate).

captured by the entity leading to the overall growth in value of the capital fund. Failure to maximise the value of the capital fund over the long term may lead to the removal of the board by the shareholders, or to the shareholders' property rights in the capital fund being acquired by new owners through changes in corporate control like a takeover.

## VI DECISION-MAKING IN THE ARTIFICIAL LEGAL PERSON

Boards currently make decisions for corporations by controlling the corporate fund held in the artificial legal person. Soon it will be possible for AI to make decisions for corporate entities. Algorithms will set the parameters for those decisions. AI will, therefore, have the potential to replace boards of natural persons. Florian Möslein distinguishes between three forms of artificial intelligence: assisted intelligence and augmented intelligence (which are used to support human directors) and autonomous artificial intelligence (which is used as a replacement for human directors).<sup>64</sup> Referring to assisted/augmented intelligence, Möslein notes that directors have the authority to delegate tasks to AI, but ultimately must always maintain core management function and must supervise the outcome of delegated tasks.<sup>65</sup> This supervision requires directors to have a basic understanding of how these autonomous systems operate.<sup>66</sup> The legal appointment of autonomous AI in the boardroom, by contrast, would require changes to the rules surrounding appointment of directors.<sup>67</sup> Legal strategies to govern autonomous AI will focus on *ex ante* control of algorithms rather than *ex post* control of behaviour as robo-directors can be made to comply with specific legal rules.<sup>68</sup>

In 'Corporate Management in the Age of AI', Martin Petrin comments on the growing role of AI in corporate management with emphasis on the change it will enact on corporate leadership by gradually replacing the human board of directors.<sup>69</sup> This will lead to 'fused boards' in which all the roles of the collective human directors, officers and managers are incorporated into a

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<sup>64</sup> Florian Möslein, 'Robots in the Boardroom: Artificial Intelligence and Corporate Law' in Woodrow Barfield and Ugo Pagallo (eds), *Research Handbook on the Law of Artificial Intelligence* (Edward Elgar, 2018) 649, 657.

<sup>65</sup> *Ibid* 659.

<sup>66</sup> *Ibid* 660.

<sup>67</sup> *Ibid* 664.

<sup>68</sup> *Ibid* 666–67.

<sup>69</sup> Martin Petrin, 'Corporate Management in the Age of AI' [2019] (3) *Columbia Business Law Review* 965.

comprehensive single algorithm which manages the company.<sup>70</sup> There is disagreement as to whether AI will be able to take over both the administrative and judgement tasks involved in human corporate management, with the latter requiring more complex creative, analytical and emotional capacity,<sup>71</sup> though the conclusion is that eventually AI will be able to fully replace human directors and managers.<sup>72</sup> This transition will require legal reform of board composition to allow business to incorporate AI in the boardroom.<sup>73</sup> It will also cause changes in liability, such as the artificial entities themselves having the capacity to be sued as well as developers and providers of AI management software.<sup>74</sup>

Once AI makes decisions for the corporation, the corporation will clearly become an autonomous system or fully automated entity. We fear that we will be harmed by automated entities: that AI will make decisions detrimental to human beings. In a Philip K Dick short story, post-nuclear war humans have to contend with a mega-corporation called Autofac.<sup>75</sup> Operated by AI, its factories continue to pollute the environment producing goods no longer needed by customers.<sup>76</sup> In *Terminator*, a machine pursues humans,<sup>77</sup> as does a robodog in the *Black Mirror* episode *Metalhead*.<sup>78</sup> Dystopian scenarios like these are thought experiments by auteurs who identify our deep and visceral fear of entities and robotic beings controlled by AI. Even though human beings are perfectly capable of harming each other and frequently do, the fear is caused by concerns that automated entities and beings will lack that most human of attributes, a conscience. Without a moral compass, powerful entities could do harm to us and the world without any form of compunction and without our ability to control them and prevent harm. But as the discussion in this chapter demonstrates, corporations are already almost automated entities: AI in the boardroom, may be no more than a final small step in the transition to a world with fully automated entities.

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<sup>70</sup> Ibid 1002–8.

<sup>71</sup> Ibid 983–985.

<sup>72</sup> Ibid 993–96.

<sup>73</sup> Ibid 997–1002.

<sup>74</sup> Ibid 1013–18.

<sup>75</sup> Philip K Dick, *Autofac* (Galaxy, 1955).

<sup>76</sup> Ibid.

<sup>77</sup> *The Terminator* (Hemdale Film Corporation, 1984).

<sup>78</sup> ‘Metalhead’, *Black Mirror* (80 Hertz Studios, 2017).

The clarity provided by the hybrid social entity/property conceptualisation of the company may compel us to face up to the limitations of the modern company as a force for good beyond wealth generation. Setting objectives for AI that extend beyond short-term profit maximisation to growing all the forms of value held in the capital fund in the entity may neither worsen nor improve the status quo. What would we really lose in a shift from HI to AI in the boardroom?

Can corporations with boards of human directors operate with conscience in a way that a board controlled by AI could not? Conscience is a person's moral sense of right and wrong, viewed as acting as a guide to one's behaviour. It can be defined as: 'Senses involving consciousness of morality or what is considered right' and as '[t]he internal acknowledgement or recognition of the moral quality of one's motives and actions; the sense of right and wrong as regards things for which one is responsible; the faculty or principle which judges the moral quality of one's actions or motives' and also as the 'practice of, or conformity to, what is considered right or just, equity; regard to the dictates of conscience'.<sup>79</sup>

The definitions, therefore, require that there be an awareness of morality that an entity can perceive. In a corporate setting it would require a sense of morality, of right and wrong. Conscience must develop in some form of context; for human beings, although some form of conscience may be inherent, conscience is often fostered and developed by upbringing. Conscience also requires a locus for that morality to be perceived and acted upon; in human beings it is the mind or, perhaps, the soul.

We might think that a board of human beings has a conscience in a way that a board driven by decision making by AI may not. But how possible is it for boards driven by HI to operate with conscience? Plenty of evidence exists to show that people behave differently when they are part of an organisation.<sup>80</sup> Morality within a corporation is different from individual morality. An individual human being does not bring their whole selves to their role within a corporation. The total span of their knowledge, and also their values and morality, cannot be attributed or

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<sup>79</sup> Oxford University Press, *Oxford English Dictionary* (online) (at 18 August 2020).

<sup>80</sup> See J M Darley, 'How Organizations Socialize Individuals into Evildoing' in D M Messick and A E Tenbrunsel (eds), *Codes of Conduct: Behavioral Research into Business Ethics* (Russel Sage Foundation, 1996) 13.

imputed to the company. So, as suggested by group agency theorists List and Pettit, the corporate mind and morality may be more or less than the sum of its parts.<sup>81</sup>

A form of corporate conscience may exist and find its form most completely in the board. But it will not be a conscience that has the potential to operate in the same way as the conscience of a human being. As well as lacking complete knowledge, the board as corporate conscience is hampered by being part of a group in an organisation, and by internal constraints on decision-making, such as fiduciary obligations owed to maximise the value of the capital fund held in the entity. Perceived imperatives driven by norms like shareholder primacy appear to mandate profit maximisation for current shareholders. If we accept an internal dimension to a company that human beings are part of only some of the time and where their decision-making is constrained by their corporate roles and by their own perceptions of the limitations and obligations of their roles, we can see how a corporate conscience residing in the board, even a board of human beings, that is akin to a human conscience, becomes impossible.

The profit maximisation imperative driven by the pure property conception of the company may affect behaviour by individuals within the corporation. Whether generated internally by the nature of groups or externally mandated by the perceived requirement to maximise profits, corporations may be constitutionally incapable of operating with fully functioning consciences as moral entities.

The picture may not be as bleak as painted. First, the perceived profit maximisation imperative is weakening. Increasing numbers of investors, either individually or through ethical investment funds, require corporations to consider social and environmental issues as well as profit maximisation.<sup>82</sup> Environmental, social and governance ('ESG') imperatives recognise other forms of value held in the capital fund. The profit maximisation imperative is based on a purely property conceptualisation of the company that may harm those wider interests. That fact may be increasingly recognised as the pendulum swings back towards the social entity

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<sup>81</sup> Christian List and Philip Pettit, *Group Agency: The Possibility Design and Status of Corporate Agents* (Oxford University Press, 2011).

<sup>82</sup> Rakhi Kumar, Nathalie Wallace and Carlo Funk, 'Into the Mainstream: ESG at the Tipping Point' on *Harvard Law School Forum on Corporate Governance* (13 January 2020) <<https://corpgov.law.harvard.edu/2020/01/13/into-the-mainstream-esg-at-the-tipping-point/>> (at 27 August 2020).

conception focussed on the interests of stakeholders, most recently referred to as stakeholder capitalism.<sup>83</sup>

Secondly, the autonomy given to the board through the recognition of business judgment rules or equivalent in different jurisdictions gives scope for boards to move beyond agentic decision-making. Boards will be pressured or influenced by corporate constituents. But recognising that the primary role of the board relates to growing all the different forms of value in the capital fund, rather than relating directly to current shareholders, provides scope to overtly legitimise decision making by boards that not is not driven by the short-term profit maximisation imperative assumed of current shareholders.

Modern corporate governance increasingly focuses on corporate purpose and on societal stakeholder concerns, with the focus by investors on sustainability and on ESG aspects inevitably influencing the weight boards put on those factors in their decision-making.<sup>84</sup> But can we say companies ‘care’ about, say, sustainability? Boards may develop relationships with constituents and may address constituent concerns, but that may be only as far as the ultimate purpose or end of maximising the forms of value in the capital fund. Doing good by prioritising ESG factors will be considered legitimate and be tolerated by shareholders to the extent it enhances the reputation of the corporate legal person, encourages investment, and maximises value of the capital fund. Boards may also consider sustainability issues when assessing risk, but if the focus is on capital fund value maximisation, the risks to the entity brought about by externalities may be discounted, and the effect of these externalities on the outside world ignored. So boards may consider ESG concerns to the extent they maximise the forms of value the corporation holds in its capital fund. Moving beyond myopic focus on profit maximisation will make companies less bad but it will not make them completely good.

## **VII LIABILITY FOR CORPORATE WRONGS**

Whether corporations are operating as almost automated entities controlled by constrained boards of human beings or as fully automated entities controlled by AI, who should be liable for corporate wrongs? The notion of AI making decisions for the artificial legal person may

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<sup>83</sup> Bebchuk and Tallarita (n 633).

<sup>84</sup> Ibid. See also Kumar, Wallace and Funk (n 82).

compel us to re-think the roles of the human beings who operate in, around and behind the corporation. And accepting that the change in decision-making from HI to AI may be less a shift than a final transition may force a clear-eyed assessment of decision-making and liability in modern corporations. We might think only the board should be liable for corporate wrongs. But the structure of corporations highlights a problem with corporate responsibility being imposed on the board. Corporate wrongs are often brought about by a failure to put appropriate systems in place. Rarely do boards and senior management get confronted with a choice between the wrong thing to do and the right thing to do. Instead, boards will have a range of options to consider with the failure that leads to the wrong often being an omission more than a conscious choice. As Bayless Manning puts it, most board activity ‘does not consist of taking affirmative action on individual matters; it is instead a continuing flow of supervisory process, punctuated only occasionally by a discrete transactional decision’.<sup>85</sup> Mitchell and Gabaldon also highlight the separation of the decision-maker from the consequences of the decision as militating against moral development and against accountability.<sup>86</sup>

If we accept that modern corporations are already artificial persons, it could be argued that for all corporations, including the AI-controlled corporations of the future, human beings connected with the corporation should be liable for the wrongs the corporation commits. Liability would extend to the board but also those who form part of the hierarchy of the corporation as its employees.

List and Pettit argue that it follows from the ability of human beings as group agents to operate in the world of obligations as artificial legal persons that we should accept that those group agents are fit to be made responsible for what they do and ‘positioned to make normative judgments about the options they face and have the necessary control to make choices based on those judgments’.<sup>87</sup> List and Pettit argue that group agents are institutional persons capable of forming and enacting a single mind and having desires and beliefs and, therefore, are capable

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<sup>85</sup> Bayless Manning, ‘The Business Judgment Rule and the Director’s Duty of Attention: Time for Reality’ (1984) 39(4) *Business Lawyer* 1477, 1494.

<sup>86</sup> Lawrence E Mitchell and Theresa A Gabaldon, ‘If I Only Had a Heart: Or, How Can We Identify Corporate Morality’ (2002) 76 *Tulane Law Review* 1645, 1665.

<sup>87</sup> List and Pettit (n 81)81 176.

of self-regulation.<sup>88</sup> Commercial corporations in particular, with minimal controls in place, are enormously powerful. List and Pettit argue further:

One reason why it is important to recognise the reality of group agents is that this lets us discern the true contours of the moral and political world we inhabit. Swaddled in glib conviction that the only social agents are individual human beings, we can look right through the organizational structures that scaffold group agency and not see anything there. We can live in an illusory world in which the comforting mantras on individualistic thought make corporate power invisible'.<sup>89</sup>

This limited form of 'performative' personhood put forward by List and Pettit is based on what the group agent *does* rather than what it intrinsically *is*. The performative conception of personhood is thus a legal one rather than a philosophical one – it developed first in the introduction of the *persona ficta* concept into the common law discussed earlier in this chapter. It allows that a legal entity is an artificial legal person capable of legal transactions and vested with legal rights and legal duties. The corporation is not intrinsically a person but was able to operate extrinsically as a legal entity in legal space.<sup>90</sup> In other words, we accept that the corporation as a legal fiction can operate in the world.

Mitchell and Gabaldon argue that the 'organizational context changes the perceived moral framework for individual decision-making, and that powerful psychological forces push good people to turn bad without their even realizing it'.<sup>91</sup> John Darley considers that most evil is accomplished by people acting through corporations; a type of organisational pathology. Darley argues that it is often difficult to identify the individual person who perpetuates the evil as the wrong will often seem more like an organisational product.<sup>92</sup> In fact, when we identify the individual most closely connected with the wrong — 'the foreman who orders the workers down the dangerous mineshaft or the corporate executive who orders the marketing of a dangerous drug'<sup>93</sup> — we encounter the banality and ordinariness of the individual. 'But that person has been changed; through participation in the organization, the individual has

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<sup>88</sup> Ibid 177.

<sup>89</sup> Ibid 185.

<sup>90</sup> Ibid 171.

<sup>91</sup> Mitchell and Gabaldon (n 86), 1654.

<sup>92</sup> Darley, above n 80, 21.

<sup>93</sup> Ibid [13].

undergone a conversion process and become an autonomous participant in harmful actions'.<sup>94</sup> Darley in turn discusses the work of Milgram on the agentic state.

From a subjective standpoint, a person is in a state of agency when he defines himself in a social situation in a manner that renders him open to regulation by a person of higher status. In this condition the individual no longer views himself as responsible for his own actions but defines himself as an instrument for carrying out the wishes of others.<sup>95</sup>

In a corporate setting, an individual will consider him or herself responsible to those higher in the hierarchy and those highest in the hierarchy, the directors who comprise the board, may consider themselves responsible to the company. If a company is conceived of as the current shareholders as owners who, it is assumed, require the company to maximise profits in the short term, an agentic state that may limit conscience and morality will come into being. As Mitchell and Gabaldon put it, 'the profit motive and the complex interactions among organizational participants make it possible for any corporation to do harm'.<sup>96</sup> Even if the more moderate hybrid social entity/property conception of the company put forward in this chapter becomes the dominant conception, the longer-term interests of the capital fund of the company must still prevail, resulting in the less bad or almost good corporation discussed in the section above. It is only if Chancellor Allen's social entity conception prevails that human beings within the company will not be constrained in their decision-making. The social entity corporation operated for its constituent stakeholders rather than its investing shareholders – namely, the stakeholder corporation – will again become the shared understanding of what a corporation is; this will be the result of the swing of the pendulum that agency theory sought to remedy.<sup>97</sup>

Modern corporations may therefore have three characteristics that militate against conscience and doing good: first, the fragmentation of roles including the separation of ownership from control, and control from implementation and accountability, secondly, the moral hazard of

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<sup>94</sup> Ibid.

<sup>95</sup> Ibid [206]–[212] (referring to Stanley Milgram, *Obedience to Authority: An Experimental View* (Tavistock, 1974)).

<sup>96</sup> Mitchell and Gabaldon (n 86), 1653.

<sup>97</sup> Jensen and Meckling (n 58).

being a group and part of an organisation, and thirdly, internal constraints on moral decision-making including perceived profit maximisation or capital fund maximisation imperatives, and fiduciary obligations to the company. Substituting AI for HI on the board will neither improve nor worsen the potential for harm that exists with the corporate form.

Where ultimately should the buck stop? Armour and Eidenmuller suggest piercing the corporate veil as a mechanism for liability when abuses occur in driverless corporations operated using AI.<sup>98</sup> If so, why should shareholders of driverless corporations be liable for corporate wrongs when shareholders of corporations currently are not? As we have seen, group agents, whether boards or employees, are constrained by being compelled to act in the interests of shareholders either in the short term through profit maximisation or the long term through maximising the value of the capital fund. Shareholders launch and then keep the corporate vessel afloat. It could therefore be argued that the property rights of shareholders in the capital fund of the corporation carry with them concomitant obligations. Shareholders have long enjoyed limited liability to creditors of the company. But why should that limited liability necessarily protect shareholders from liability for corporate wrongs? The modern prevalence of widely diversified institutional investors as shareholders may make veil-piercing more palatable. Whether it is algorithms or constrained boards of directors that govern the legal fictions that are corporations should not alter our requirement that shareholders as the creators and perpetuators of the fictions be liable for the harms those corporations do in the world.<sup>99</sup>

## VIII CONCLUSION

Technology in the digital age does not advance incrementally; it moves forward in leaps and bounds. The future is arriving with the only limits our own imaginations and the only boundaries what we will not permit. Decision making for corporations being not just informed but actually made by Artificial Intelligence (AI) may seem a bridge too far. Our visceral fear is of nonhuman entities smarter and more powerful than us with the potential to do us harm. But what would AI really change? Corporations as a form are true legal fictions that have no existence beyond our collective imaginations. They contain capital funds that comprise

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<sup>98</sup>Armour and Eidenmuller (n 1), 25–27.

<sup>99</sup> Henry Hansmann and Reiner Kraakmann, ‘Towards Unlimited Shareholder Liability for Corporate Torts’ (1991) 100(7) *Yale Law Journal* 1879.

different forms of value and which are in themselves fictions. The combination of the capital fund with the corporate form makes corporations incredibly potent vehicles for capturing, transacting for, and creating value. Substituting constrained boards of directors acting in the interests of that corporate fund contained in the corporation with AI is an incremental change. Recognising the moral and ethical challenges with the AI-controlled corporation exist already with the HI-controlled corporation compels us to reconsider the responsibilities we place on those who set these value creators and aggregators in motion and the obligations of those who perpetuate their existence in the world. Questioning the extent to which the corporate veil protects shareholders is overdue.

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