

# ARTIFICIAL INTELLIGENCE V. INTUITIVE DECISION MAKING: HOW FAR CAN IT TRANSFORM CORPORATE GOVERNANCE?

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*Given the current economic instability caused by the COVID-19 pandemic, directors are now faced with the responsibility of making a slew of complex decisions to keep their businesses afloat. Noticeably, AI is permeating through every aspect of human life today and is set to penetrate corporate boardrooms in the near future as a result of its rapid technological growth. Thus, with the ability to process and analyze enormous quantities of complex data the application of AI in the boardroom necessitates a thorough study. However, the very notion of integrating AI in the corporate sphere raises a slew of concerns as to its legal permissibility, the presence of adequate safeguards and its potential effect on corporate governance. With the help of a doctrinal and an analytical method, a systematic probe into these queries has been made in the study. This paper takes a trajectory that begins with an assessment of the legislative permissibility to adopt AI in the Indian boardroom. This has been evaluated in light of the applicable legal provisions concerning a director's qualifications, powers, and duties. The various modes of implementing AI have also been studied in order to determine the degree to which human dependence on AI is viable. Further, this is accompanied by a critical examination of the advantages and limitations of implementing AI vis-à-vis the tenets of corporate governance. Finally, the study examines the key problems and conflicts, and makes suitable recommendations.*

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## I. INTRODUCTION

As of 2021, the world is in the midst of an unprecedented global pandemic and although the COVID-19 pandemic started as a public health crisis, today, it has rapidly morphed into an economic and financial crisis of epic proportions.<sup>1</sup> The reverberations of this pandemic can be felt in all aspects of daily life — from the way people interact with each other and carry out their daily functions, and to the way a company interacts with another and carries out its daily functions. Today, companies not only face a challenge to keep their businesses afloat but also to comply with their legal obligations outlined in a multitude of statutes. Consequently, amidst this market of uncertainty induced by the pandemic, there is an increased sense of responsibility that has been placed upon the board of directors (“BODs”) of a company, who have been faced with the task of taking a slew of tough decisions. Since the BODs have faced an array of challenges in keeping their company and business afloat and in profit during this period, the need for sound decision-making has been paramount.

Decisions with regards to issuing dividend payments to shareholders, which would typically entail no serious introspection and only a consideration of historical practice and the corporation’s profits, now necessitate the weighing and balancing of many variables in light of the looming uncertainty about the frequency and magnitude of the COVID crisis.<sup>2</sup> Furthermore, decisions relating to investment strategies made by the board have become crucial, as businesses could be under

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<sup>1</sup> OECD, *The Impact of the Coronavirus (COVID-19) Crisis on Development Finance, OECD Policy Responses to Coronavirus (2020)*, <https://www.oecd.org/coronavirus/policy-responses/the-impact-of-the-coronavirus-covid-19-crisis-on-development-finance-9de00b3b/>.

<sup>2</sup> Suranjali Tandon, *Covid-19 and Dividends in India: To Distribute or Not to?*, BLOOMBERGQUINT (Apr. 20, 2020), <https://www.bloombergquint.com/coronavirus-outbreak/covid-19-and-dividends-in-india-to-distribute-or-not-to>.

financial stress.<sup>3</sup> This has considerably augmented the importance of the decisions made by the BODs, and as a result, the amount of time spent by the BODs in making these decisions has increased. Fragmented policies<sup>4</sup>, increased economic uncertainty<sup>5</sup>, and the increasing pressure from all stakeholders — all of these factors require BODs to consider a wider and more comprehensive range of inputs and experiences before making a decision. Thus, these labyrinthine variables have made the decision-making process even more complicated and dynamic, making it difficult for boards to “make good decisions in the absence of intelligent systems.”<sup>6</sup>

Artificial intelligence (“AI”) has altered the fundamental tenets of human dialogue and decision-making in the modern era. From telling us the weather to mapping human genomes — AI is infiltrating our everyday lives in multifarious ways. Although its presence in our daily lives is apparent, the consequences of integrating AI in the corporate world are uncertain, especially in this era when the relevance of good corporate governance is being emphasized more than ever.

In 2015, in a survey conducted by the World Economic Forum’s Global Agenda Council on the Future of Software and Society aimed at estimating the time span in which significant technological advances would manifest in everyday life, 45% of the respondents believed that the first AI model will be on the BODs of a company by 2025.<sup>7</sup> Furthermore, although the inclusion of an AI director in the boardroom may seem to be a novel idea, it is not the first time it has been implemented — in 2014, long before the market was encumbered

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<sup>3</sup> Rongeeet Poddar, *The Prospect of AI in the ‘Virtual’ Corporate Boardroom*, INDIA CORP. L. (May 12, 2020), <https://indiacorplaw.in/2020/05/the-prospect-of-ai-in-the-virtual-corporate-boardroom.html>.

<sup>4</sup> Lynn S. Paine, *Covid-19 is Rewriting the Rules of Corporate Governance*, HARV. BUS. REV. (Oct. 6, 2020), <https://hbr.org/2020/10/covid-19-is-rewriting-the-rules-of-corporate-governance> (hereinafter ‘Paine’).

<sup>5</sup> *Need to Prepare for Greater Economic Uncertainty Due to COVID-19 Second Wave: NITI Aayog VC*, BUSINESS TODAY (Apr. 18, 2021), <https://www.businesstoday.in/current/economy-politics/need-to-prepare-for-greater-economic-uncertainty-due-to-covid-19-second-wave-niti-aayog-vc/story/436940.html>.

<sup>6</sup> Barry Libert et al., *AI in the Boardroom: The Next Realm of Corporate Governance*, MITSLOAN MGMT. REV. (Oct. 19, 2017), <https://sloanreview.mit.edu/article/ai-in-the-boardroom-the-next-realm-of-corporate-governance/>.

<sup>7</sup> WORLD ECONOMIC FORUM’S GLOBAL AGENDA COUNCIL ON THE FUTURE OF SOFTWARE AND SOCIETY, REPORT ON DEEP SHIFT — TECHNOLOGY TIPPING POINTS AND SOCIETAL IMPACT 21 (2015).

with these pandemic induced challenges, Deep Knowledge Ventures (“DPV”), a venture capital company appointed an AI named Validating Investment Tool for Advancing Life Sciences (“Vital”) to its BODs.<sup>8</sup> In fact, the company even credits this AI for saving it from the brink of bankruptcy.

Ergo, in the midst of the perilous situation in which Indian companies find themselves, the introduction of AI in the boardroom necessitates a thorough analysis. This also allows for a radical reconsideration of the current corporate practice in order to prepare them for any complex challenges that may arise in the future. Thus, using a doctrinal approach, this paper examines the extent to which human directors should be permitted – or required – to rely on AI in relation to the Indian corporate law and further, analyses its ramifications on corporate governance. Part I of this paper sets forth the main rationales offered for the implementation of AI in boardrooms for decision making. Acknowledging that Indian law in its present form is tailored to human directors, Part II of this paper provides a descriptive comment on the law governing the qualifications, powers, and duties of the board of directors. Carrying on from this understanding, the chapter seeks to examine whether or not the incorporation of an AI director is legally permissible. Part III of this paper sets forth the different models through which human directors can place reliance on AI to determine the most suitable model for implementation. Consequently, Part IV of this paper analyses the benefits and limitations of adopting such a model in India vis-à-vis its ramifications on corporate governance. Lastly, Part V makes a case for reform, along with suggestions to adapt to the challenges posed by such remodeling.

## II. THE LEGAL RAMIFICATIONS OF INDUCTING AI

Companies have been endowed with some distinguishing features under the realm of corporate law. Among these are: *first*, a separate legal personality<sup>9</sup> – the identity of the company is distinct from that of its

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<sup>8</sup> Ellie Zolfagharifard, *Would You Take Orders from a Robot? An Artificial Intelligence Becomes the World's First Company Director*, DAILY MAIL (May 19, 2014), <https://www.dailymail.co.uk/sciencetech/article-2632920/Would-orders-ROBOT-Artificial-intelligence-world-s-company-director-Japan.html> (hereinafter ‘Zolfagharifard’).

<sup>9</sup> *Salomon v. A. Salomon and Co. Ltd.*, 1897 AC 22 : 1896 UKHL 1 (UK).

managers, employees, and shareholders, now although a company is a person in contemplation of law, it is an artificial being with no physical existence (it does not have a brain or body of its own). As a result, it can only function with the help of some form of human agency, which is why, *second*, the function of managing a company has been delegated to BODs elected by the shareholders.<sup>10</sup> BODs are fundamental to its decision-making and governance process because they are given primary authority to oversee the company's affairs<sup>11</sup> and since they are in charge of the management of the day-to-day affairs of the company<sup>12</sup>, the decisions undertaken by them are often complex. Consequently, it would only be prudent for AI to be employed in this role to aid in taking these complex decisions.

Thus, it is crucial, at the outset, to understand the specific angles at which AI can intersect with Indian corporate law in its current form. This necessitates a quick overview of the governing legal framework.

#### A. Legal Qualifications

Section 2(10) of the Companies Act 2013 ("Companies Act" or "the Act") defines BODs as "collective body of the directors of the company".<sup>13</sup> Section 2(34) of the Act states that a director "means a director appointed to the Board of a company."<sup>14</sup>

Now, while these definitions identify who a director is, they do not precisely define who a director is. In the context of Section 149 of the Act, only an individual is eligible to be appointed as a director in a company,<sup>15</sup> this is because it is often difficult to assign liability to a specific individual in the case of an artificial person.<sup>16</sup> Another requirement to be appointed as a director is to obtain a Director Identification Number<sup>17</sup> ("DIN") issued by the Central Government of

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<sup>10</sup> Companies Act, 2013, § 149, No. 18, Acts of Parliament, 2013 (India).

<sup>11</sup> MINISTRY OF CORPORATE AFFAIRS, REPORT OF THE EXPERT COMMITTEE ON COMPANY LAW ¶11 (2020).

<sup>12</sup> *Id.*

<sup>13</sup> Companies Act, 2013, § 2(10), No. 18, Acts of Parliament, 2013 (India).

<sup>14</sup> *Id.*, § 2(34).

<sup>15</sup> *Id.*, § 149.

<sup>16</sup> DR J.J. IRANI COMMITTEE, REPORT ON COMPANY LAW (2005).

<sup>17</sup> Companies Act, 2013, § 152(3), No. 18, Acts of Parliament, 2013 (India).

India.<sup>18</sup> In addition to this, one must not be disqualified to become a director (unsound mind, insolvency, conviction etc.).<sup>19</sup>

Here, although the Companies Act does not explicitly prescribe any qualifications for the appointment of a director<sup>20</sup>, the fact that the Act expressly specifies that only an individual may be named as a director precludes the induction of an AI director into the boardroom. On the other hand, the very idea behind the introduction of AI in the boardroom is to make more calculated decisions similar but better than those made by a human mind (retaining the mental element envisioned). While AI, unlike humans, is incapable of committing fraud, it can nonetheless be used to avoid liability by other human directors by conceding to a blanket reliance. Moreover, although the disqualifications under the Act are clearly designed for humans, the inability of an AI director to obtain a DIN would further hinder its eligibility.

## B. Duties And Powers

### i. Duties

The director's duties have been set out under Section 166 of the Companies Act.<sup>21</sup>

The first duty so outlined is to act in compliance with the articles of association ("AOA") of the company.<sup>22</sup> In the case of an AI director, if the requirements and considerations given in the AOA are converted into algorithmic data sets, an AI director will process such data before taking any actions, thereby ensuring compliance with the AOA. This will significantly minimize any uncertainty or inconsistency which can often be overlooked by the human mind.

Another duty is to "act in good faith"<sup>23</sup> in order to further the goals of the company. Under Section 166(2) of the Act, the director of a company

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<sup>18</sup> *Id.*, § 154.

<sup>19</sup> *Id.*, § 164.

<sup>20</sup> Companies Act does not expressly lay down any qualifications for being a director; it specifies certain disqualifications, *see id.*

<sup>21</sup> *Id.*, § 166.

<sup>22</sup> *Id.*, § 166(1).

<sup>23</sup> *Id.*, § 166(2).

must act in the best interests of the company and all the stakeholders.<sup>24</sup> Correspondingly, under Section 166(4) of the Act, directors are not permitted to make decisions or involve themselves in matters in which they have a direct or indirect interest which conflicts or may conflict with the interest of the company<sup>25</sup>; or under Section 166(5) acquire or attempt to acquire any undue gain or advantage to himself or his relatives.<sup>26</sup>

The very rationale behind introducing AI into the boardroom is to make the best possible decisions for the company. Actions taken by AI directors would be based on codes and algorithms, and therefore it can be configured to comply with not only the company's goals, but also the legal standards it is required to meet. Moreover, the violation of fiduciary duties by an AI director is extremely unlikely.<sup>27</sup> While human minds can be swindled into making decisions and are as ephemeral as a drop of water on a lily pod, AI cannot not be influenced by factors such as money or power and thus, will be less likely to divert corporate funds, assets, opportunities, or knowledge for personal benefit. However, at the same time, it is pertinent to acknowledge that not all decisions, particularly those involving the interests of employees, members, and other stakeholders of the company, necessitate logical thinking and reasoning; rather, they often necessitate emotional intelligence and intuitive thinking, which an AI may not be capable of.

Furthermore, Section 166(3) of the Act requires directors to exercise their "duties with due and reasonable care, skill and diligence"<sup>28</sup>, as well as to "exercise independent judgment"<sup>29</sup>. The algorithmic decisions made by an AI director are based on the integrity of the data fed to it. Since this data will be programmed by a human being, it is very likely for it to be tainted with human bias<sup>30</sup>, and will reflect in the decisions taken by

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<sup>24</sup> *Id.*, § 166(2).

<sup>25</sup> *Id.*, § 166(4).

<sup>26</sup> *Id.*, § 166(5).

<sup>27</sup> FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 90 (Harvard Univ. Press, 1991).

<sup>28</sup> Companies Act, 2013, § 166(3), No. 18, Acts of Parliament, 2013 (India).

<sup>29</sup> *Id.*

<sup>30</sup> James Manyika et al., *What Do We Do about the Biases in AI?*, HARV. BUS. REV. (Oct. 25, 2019), <https://hbr.org/2019/10/what-do-we-do-about-the-biases-in-ai> (hereinafter 'Manyika').

an AI director. As a result, it will be incapable of exercising independent judgement. Additionally, while the AI director may be able to exercise its duties with “due and reasonable care” by systematically reviewing all necessary factors and making a decision, this can be used as a ploy by other directors to deflect accountability and avoid responsibility by claiming that the threshold of reasonable care has already been met due to the AI.

## ii. Powers

The powers of the BODs are outlined in Section 179 of the Companies Act.<sup>31</sup>

Among these is the BODs’ power to issue “calls on shareholders in respect of money unpaid on their shares.”<sup>32</sup> An AI can accurately determine whether it would be appropriate to claim unpaid share dues at a specific time under the terms and conditions laid down in the AOA in addition with the legal requirements. With AI’s ability to review for factual accuracy in seconds, the process of approval of financial statements and board reports<sup>33</sup> can be accelerated.

Further, investment decisions, as well as decisions involving the approval of “amalgamations, mergers, reconstructions”<sup>34</sup>, and takeovers<sup>35</sup> are extremely complicated — they involve a significant amount of money and risk. It also requires a careful consideration of various factors like risk analysis<sup>36</sup>, financial performance etc. AI data surveying can assist in highlighting any flaws that human surveying may miss. In fact, Vital — employed by DPV to its BODs — examined trends in datasets of companies operating in the same field to forecast profitable investments.<sup>37</sup> This aided the company in making for two major investment decisions.<sup>38</sup> Furthermore, with the internet becoming a data goldmine, investment and other decisions made by companies

<sup>31</sup> Companies Act, 2013, § 179, No. 18, Acts of Parliament, 2013 (India).

<sup>32</sup> *Id.*, § 179(3)(a).

<sup>33</sup> *Id.*, § 179(3)(g).

<sup>34</sup> *Id.*, § 179(3)(i).

<sup>35</sup> *Id.*, § 179(3)(j).

<sup>36</sup> David B. Hertz, *Risk Analysis in Capital Investment*, HARV. BUS. REV. (1979), <https://hbr.org/1979/09/risk-analysis-in-capital-investment>.

<sup>37</sup> ZOLFAGHARIFARD, *supra* note 8.

<sup>38</sup> *Id.*

(in the same field) are readily available. This data can be fetched to fuel business moves by including “web-scraping”<sup>39</sup> in the AI algorithm.<sup>40</sup>

### III. MODES OF IMPLEMENTATION

Although AI models can be programmed using various modes of machine learning and can take various forms, it is important, at the outset, to clarify that this paper does not examine the type of AI model to be used; rather, it discusses the level of reliance that companies must place on any such AI model.

Presently, there are three ways of inducting AI into the boardroom: assistance, augmentation, and automation.<sup>41</sup> The distinction between these forms stems from the division of decision-making power between man and machine, and the choice of implementation can be answered through a simple question — to consult, to rely, or to replace?

#### A. Assistance

Assisted intelligence is generally used to automate simple processes and activities by using “big data, the cloud, and data science”<sup>42</sup> to help in decision-making. It enables people to do more in-depth tasks by doing more mundane tasks. Assisted intelligence, which requires constant human input and intervention, can only function with clearly specified inputs and outputs. The primary aim of assisted intelligence is to improve what individuals and organizations are already doing; therefore, while AI can apprise an individual about a situation, the final decision is left in the hands of end users.<sup>43</sup>

<sup>39</sup> Jennie Murack, *Introduction to Web Scraping with Python*, MIT LIBRARIES (Sept. 21, 2017), <https://libraries.mit.edu/news/introduction-scraping/25843/>.

<sup>40</sup> Kimberley Mok, *MIT’s New AI Data Extraction System Teaches Itself by Surfing the Web*, THE NEW STACK (Jan. 11, 2017), <https://thenewstack.io/mits-new-ai-data-extraction-system-teaches-surfing-web/>.

<sup>41</sup> Allison Ryder, *Augmentation Versus Automation: AI’s Utility in the Workplace*, MITSLOAN MGMT. REV. (June 19, 2017), <https://sloanreview.mit.edu/article/augmentation-versus-automation-ais-utility-in-the-workplace/>.

<sup>42</sup> Derek Rice, *Assisted Intelligence vs. Augmented Intelligence and Autonomous Intelligence*, FEDTECH MAGAZINE (Jan. 21, 2020), [https://fedtechmagazine.com/article/2020/01/assisted-intelligence-vs-augmented-intelligence-and-autonomous-intelligence-perfcon\(hereinafter 'Rice'\)](https://fedtechmagazine.com/article/2020/01/assisted-intelligence-vs-augmented-intelligence-and-autonomous-intelligence-perfcon(hereinafter 'Rice')).

<sup>43</sup> Preetipadma, *How are Assisted Intelligence and Augmented Intelligence Different?*, ANALYTICS INSIGHT (July 29, 2020), <https://www.analyticsinsight.net/assisted-intelligence-augmented-intelligence-different/>.

Therefore, in an assisted AI model, the AI is entrusted with the responsibility of carrying out specific tasks that may assist the BODs in making certain decisions; However, decision-making control remains solely with the human directors. Here, the power to decide is not delegated to the AI, rather the output given by the AI is relied upon to take a specific decision.

A suitable example of this is “Aera” launched by a tech company with the same name. BODs can ask Aera questions about their company and receive proactive recommendations. For instance, “the system could answer a question about revenue by suggesting an inventory shift from one territory to another”<sup>44</sup> but the decision to implement this recommendation would be the prerogative of the BODs.

## B. Augmentation

Augmented intelligence refers to collaborative decision making between humans and machines. Machines through the usage of “advanced analytics and visualization tools”<sup>45</sup> generate detailed suggestions for humans to make prompt decisions.<sup>46</sup> Unlike assisted intelligence, which is limited to applying predetermined solutions through pattern recognition, augmented intelligence employs both pattern recognition and model building. Simply put, it combines data and knowledge to propose new solutions.

Vital employed by DPV is a suitable example of this. Vital assists the venture capital firm company in making investment decisions.<sup>47</sup> Despite the fact that Vital is not a member of the board in legal parlance, it is perceived as a member of the board with an observer status, and investment decisions are not made without consultation with it.<sup>48</sup>

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<sup>44</sup> Blair Hanley Frank, *Aera Uses AI to Help Enterprises Make Good Decisions*, VENTUREBEAT (June 20, 2017, 6:03 AM), <https://venturebeat.com/2017/06/20/aera-uses-ai-to-help-enterprises-make-good-decisions/>.

<sup>45</sup> RICE, *supra* note 42.

<sup>46</sup> *Id.*

<sup>47</sup> *Algorithm Appointed Board Director*, BBC NEWS (May 16, 2014), <https://www.bbc.com/news/technology-27426942>.

<sup>48</sup> ZOLFAGHARIFARD, *supra* note 8.

As the decision-making powers under the augmented model are to be shared between humans and the AI, it can be deduced its implementation would entail some degree of delegation (of power) to the AI. In the Indian corporate realm, Section 179(3) of the Companies Act permits the delegation of the BODs' powers (investing capital, takeovers, merger approvals, etc.<sup>49</sup>). However, this power can only be delegated to "the committee of directors, the managing director, the manager or a principal officer".<sup>50</sup> Section 2(59) defines an officer as a "director, manager, or key managerial person".<sup>51</sup> Further, as discussed in the previous chapter, only an individual can be appointed as a director and similarly, Section 2(53) of the Act specifies that only an individual can be appointed as a manager.<sup>52</sup> Therefore, augmented AI cannot be implemented in India under the current legal framework.

### C. Automation

Autonomous intelligence is regarded to be the most advanced form of implementing an AI model. Here, the AI takes over all the powers along with the decision rights and operates without any human intervention. It is programmed to produce the information in such a way that the machines functions independently — without the need for human interference.

At the moment, autonomous intelligence is not well suited for decision-making. In situations where it is difficult to quantify the best outcome, relying on this model can result some crucial intangible factors (reputation, employee morale, etc.) being neglected.<sup>53</sup>

Furthermore, adopting autonomous intelligence would result in the replacement of a human director by an AI director, which, as posited in the previous chapter, is not permitted under Indian law.

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<sup>49</sup> Companies Act, 2013, § 179(3), No. 18, Acts of Parliament, 2013 (India).

<sup>50</sup> *Id.*

<sup>51</sup> Companies Act, 2013, § 2(59), No. 18, Acts of Parliament, 2013 (India).

<sup>52</sup> *Id.*, § 2(53).

<sup>53</sup> RICE, *supra* note 42.

#### IV. WEIGHING ADVANTAGES AGAINST DISADVANTAGES: THROUGH THE LENS OF CORPORATE GOVERNANCE

Today, corporate governance is ostensibly viewed as an impregnable tenet of corporate law worldwide. Corporate governance is “the system by which companies are directed and controlled.”<sup>54</sup> Companies have a significant effect on a nation because they generate job opportunities and contribute to the economy. This is why countries such as the United Kingdom have strict corporate governance codes in place.<sup>55</sup> Decisions made by the BODs are complex and have a significant effect on the company’s operation and, inevitably, on its stakeholders. As a result, owing to their role in carrying out a company’s day-to-day functions, the composition and role of the BODs; including their decision-making powers, unquestionably have a significant impact on a company’s governance.<sup>56</sup> Thus, if Indian companies were to venture into these uncharted waters of inducting AI in the boardroom, it becomes imperative to conduct a deeper analysis in order to understand its implications and its compatibility with the principles of the corporate governance.

The Organization for Economic Co-operation and Development (“OECD”) formulated the OECD principles in 1992 to assist governments in developing an effective legislative, regulatory, and institutional framework for corporate governance. The fundamental guiding principles of corporate governance on the basis of which these principles were drafted are “fairness, openness, and accountability.”<sup>57</sup> These are also known as the pillars of corporate governance.

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<sup>54</sup> FINANCIAL REPORTING COUNCIL, REPORT OF THE COMMITTEE ON THE FINANCIAL ASPECTS OF CORPORATE GOVERNANCE ¶ 2.5 (1992).

<sup>55</sup> Martin Lipton et al., *The UK Corporate Governance Code*, HARV. L. SCH. FORUM CORP. GOVERNANCE (July 17, 2018), <https://corpgov.law.harvard.edu/2018/07/17/the-uk-corporate-governance-code/>.

<sup>56</sup> Mukul Gulati, *Board of Directors: The Importance of Good Corporate Governance in Family Run Businesses*, THE ECONOMIC TIMES (Aug. 1, 2020), <https://economictimes.indiatimes.com/small-biz/hr-leadership/leadership/board-of-directors-the-importance-of-good-corporate-governance-in-family-run-businesses/articleshow/77297720.cms>.

<sup>57</sup> OECD, CORPORATE GOVERNANCE: IMPROVING COMPETITIVENESS AND ACCESS TO CAPITAL IN GLOBAL MARKETS: A REPORT TO THE OECD BY THE BUSINESS SECTOR ADVISORY GROUP ON CORPORATE GOVERNANCE (1998).

## A. Fairness

The term “fairness” corresponds to treatment that is “free of bias”<sup>58</sup>. In the context of a company, it entails treating all stakeholders particularly minorities — impartially and equitably; alongside providing requisite remedies recourse for any misconduct. In terms of fairness, while AI fails to eliminate human bias and is hampered by the complexity of quantifying a subjective attribute like fairness; at the same time, it has the potential to stimulate the function of an independent director.

### i. *Reinforces Human Bias*

Universally, bias is a part of human life, and it is extremely unlikely to be immune from it. Although AI is ostensibly accredited for not having any fundamental biases that humans may have, it is important to remember that an AI system is programmed by a human. The reliability of these decisions made by an AI is dependent on the integrity of the data set fed to it.<sup>59</sup> If the data on which the AI is programmed (and subsequently trained) is biased, then output would inevitably be biased.<sup>60</sup>

### ii. *Subjective Valuation of Fairness*

If an AI is coded to be “fair” in order to remove any potential bias, it is crucial to understand that when a developer (of the AI) is instructed to ensure that their AI is fair, they are often asked to choose what “fairness” should mean in the sense of each case and how it should be calculated. As a number of researchers in the field of machine learning have noted, this can be an extremely complex method and such an AI, in most cases may fail to generate an equitable result.<sup>61</sup>

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<sup>58</sup> *Fairness*, BLACK’S LAW DICTIONARY (9th ed. 2009).

<sup>59</sup> MANYIKA, *supra* note 30.

<sup>60</sup> Marina Jirotko & Helena Webb, *Are Algorithms Biased?*, OXFORD UNIV. (Oct. 15, 2018), <https://www.research.ox.ac.uk/Article/2018-10-15-are-algorithms-biased>.

<sup>61</sup> Reuben Binns, *On the Apparent Conflict between Individual and Group Fairness*, in CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY 514, 520-523 (ACM New York, 2020).

### iii. *Stimulates the Role of an Independent Director*

Clause 49 of the Equity Listing Agreement (“Clause49”) outlines India’s corporate governance standards for companies seeking to be listed.<sup>62</sup> Clause 49, in its current form, mandates the appointment of a minimum number of independent directors on a listed company’s BODs. Concentrated ownership is widespread in Indian companies, with majority shareholders wielding considerable control and exerting significant influence over the directors.<sup>63</sup> One of the most difficult obstacles to implementing the fairness principle is the oppression of minority shareholders.<sup>64</sup> To resolve this imbalance and restore equilibrium in the boardroom, the appointment of independent directors was envisaged. In simple terms, an independent director is an individual who has no ties to the corporation or any of its employees, managers, or shareholders.<sup>65</sup>

In contrast to humans, who are susceptible to conflicts of interest, AI is unlikely to suffer from any such dilemmas.<sup>66</sup> Furthermore, it would not be susceptible to human biases, unless it is programmed into its system. This assuages independent directors of the cumbersome responsibility of solely being on top of all the company affairs.

## B. Openness

In the context of corporate governance, openness (also known as transparency) refers to a company’s duty to provide transparent disclosure to shareholders and other stakeholders. Companies must ensure that timely and reliable information about their operations,

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<sup>62</sup> Securities and Exchange Board of India, Corporate Governance in listed Companies – Clause 49(I)(A) of the Listed Agreement, SEBI/CFD/DIL/CG/1/2004/12/10 (Issued on Oct. 29, 2004) (India).

<sup>63</sup> Umakanth Varottil, *A Cautionary Tale of the Transplant Effect on Indian Corporate Governance*, 21 NAT’L L. SCH. OF INDIA REV. 1, 19-21 (2009).

<sup>64</sup> For an introductory discussion of this concept, see Sakate Khaitan et al., *Shareholder Activism in India: Overview*, THOMSON REUTERS PRACTICAL LAW (Oct. 1, 2020), [https://uk.practicallaw.thomsonreuters.com/w-013-9526?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/w-013-9526?transitionType=Default&contextData=(sc.Default)&firstPage=true).

<sup>65</sup> Companies Act, 2013, § 149(6), No. 18, Acts of Parliament, 2013 (India).

<sup>66</sup> Akshaya Kamalnath, *The Perennial Quest for Board Independence: Artificial Intelligence to the Rescue?*, HARV. L. SCH. FORUM CORP. GOVERNANCE (May 1, 2019), <https://corpgov.law.harvard.edu/2019/05/01/the-perennial-quest-for-board-independence-artificial-intelligence-to-the-rescue/>.

organization, financial position, performance, ownership, and governance is disclosed.<sup>67</sup> This information must be made accessible to stakeholders and must be tailored to outsiders while keeping the corporate confidentiality standards in mind. This results in the procedures and transactions of the company becoming traceable and verifiable.

In terms of openness, AI has the potential to eliminate information asymmetry. Further, it has the ability to improve transparency by upholding truthfulness, timeliness and completeness while ensuring information accessibility. However, the reasoning behind the decisions taken by an AI cannot be observed thereby mitigating transparency.

*i. Eliminates Information Asymmetry*

Since shareholders, unlike BODs, are not involved in the day-to-day operations of the company, information asymmetry can emerge as a prominent issue. Managements (of the company) often take advantage of this information asymmetry and indulge in making dishonest disclosures to expropriate shareholder capital.<sup>68</sup> Furthermore, in light of the pandemic, the Ministry of Corporate Affairs has permitted companies to hold virtual meetings.<sup>69</sup> A virtual setting may widen any communication gaps that exist between the BODs and the shareholders.

AI has the potential to resolve information asymmetry in boardrooms<sup>70</sup> and compensate for the inaccessibility of former communication networks by making the screening of information easier through its capacity to store and process massive amounts of data.

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<sup>67</sup> Robert M. Bushman et al., *What Determines Corporate Transparency?*, 42 J. ACCOUNTING RESEARCH 207, 225-228 (2003).

<sup>68</sup> Seung Hun Han et al., *Information Asymmetry, Corporate Governance, and Shareholder Wealth: Evidence from Unfaithful Disclosures of Korean Listed Firms*, 42 ASIA PACIFIC J. FIN. STUD. 690, 718-720 (2014).

<sup>69</sup> Gaurav Noronha, *Annual General Meetings, Extraordinary General Meetings may Go Virtual Permanently*, THE ECONOMIC TIMES (Jan. 25, 2021), <https://economictimes.indiatimes.com/news/company/corporate-trends/agms-egms-may-go-virtual-permanently/articleshow/80437521.cms?from=mdr>.

<sup>70</sup> Dirk Nicolas Wagner, *Economic Patterns in a World with Artificial Intelligence*, 17 EVOLUTIONARY INS. REV. 111, 129 (2020).

## ii. *Enhances Transparency*

Factors that ensure transparency and disclosures in corporate governance are truthfulness, completeness, accessibility, and timeliness.<sup>71</sup> AI makes data more accessible — it can store massive amounts of data and provide easy access to that data (to those authorized). As a result, the information is readily accessible and usable. Furthermore, since AI is automated and can process data in seconds<sup>72</sup>, it is easier to make timely disclosures to stakeholders. Furthermore, unless and until some intentional programming is executed, AI is incapable of making any false disclosures and thus provides an accurate representation of events. AI can also efficiently analyze critical information, such as details of related party transactions, and mitigate these problems. Finally, unlike humans, AI cannot be swayed by inducements such as capital, so the information revealed is usually complete and enables stakeholders to make informed decisions.

## iii. *Opacity Embedded Within AI*

With only the input data and outcomes being known variables in AI, it is extremely difficult to track the reasoning behind an AI's decision. AI models are fed and trained on a wide range of data sets; as a result, the output is essentially a clustered collection of classification decisions (based on the data upon which they are trained). Now, while the output/classification/decision of the AI model can be tracked, the rationale behind why a particular output was selected cannot. The NITI Aayog has also called attention to this problem dubbed as — “the black box phenomenon.”<sup>73</sup>

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<sup>71</sup> Benjamin Fung, *The Demand and Need for Transparency and Disclosure in Corporate Governance*, 2(2) *UNIVERSAL J. MGMT.* 72, 75 (2014).

<sup>72</sup> Kevin Gardner, *How AI is Helping Efficiency Improve*, *TOWARDS DATA SCIENCE* (Oct. 24, 2019), <https://towardsdatascience.com/how-ai-is-helping-efficiency-improve-98d0171a23e2>.

<sup>73</sup> NITI AAYOG, *DISCUSSION PAPER ON NATIONAL STRATEGY FOR ARTIFICIAL INTELLIGENCE 86* (2018) (India).

### C. Accountability

The principal of accountability is central to corporate governance. The rationale behind handing over the reins of a company — officially recognized as a separate legal entity — to a management (including BODs), who are legally mandated to be individuals<sup>74</sup> was to prevent the misuse of the company's limited liability structure.<sup>75</sup> Individuals comprising of the management are held accountable for the duties assigned to them.

The implementation of AI has had a huge impact on this principle, as directors can use it to avoid responsibility by claiming a generalized dependence upon it. Furthermore, reliance on AI may raise privacy concerns due to the large amount of data stored; this may result in the evasion of liability due to the absence of a data privacy law in India.

#### i. *Liability*

Section 166(3) of the Companies Act bestows a duty upon the director to exercise his duties with due diligence and reasonable care.<sup>76</sup> Due Diligence is described as “[t]he diligence reasonably expected from, and ordinarily exercised by, a person who seeks to satisfy a legal requirement or to discharge an obligation.”<sup>77</sup>

With AI's ability to use tools like web scraping and upon being programmed to fulfill all legal requirements, directors can conveniently argue that due and reasonable care has not been violated because of AI's greater ability to analyze and process data, thus enabling them to neglect their liability by simply relying upon the AI. This can be problematic because the decisions that boards BODs are tasked with making have often needed some level of qualitative judgment; many matters that come before the board are not conducive to resolution by quantitative methods, necessitating human intervention.<sup>78</sup>

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<sup>74</sup> See ch. 2 of this paper.

<sup>75</sup> JOHN MICKLETHWAIT, *THE COMPANY: A SHORT HISTORY OF A REVOLUTIONARY IDEA* 22 (2003).

<sup>76</sup> Companies Act, 2013, § 166(3), No. 18, Acts of Parliament, 2013 (India).

<sup>77</sup> *Due Diligence*, BLACK'S LAW DICTIONARY (9th ed. 2009).

<sup>78</sup> PAINE, *supra* note 4.

## ii. *Privacy Concerns*

Information relayed in board meetings (and to directors in general) can contain highly sensitive and confidential information that may have an impact upon the company's operations and the stakeholders involved. AI works by analyzing large quantities of data sets containing information about the company and its stakeholders, and it is easy to hack.<sup>79</sup> The inability to ensure the implementation of robust mechanisms and systems to ensure cybersecurity will result in a violation of the board's duties<sup>80</sup>, and the implementation of these systems will result in significantly higher costs.

## V. KEY FINDINGS, CONCLUSION AND SUGGESTIONS

With its ability to impact almost every aspect of human life, AI seems to be the single most important technological revolution of our time, and the corporate world must prepare itself for this exponential transformation. While this technological revolution will be affected in part by the structure of corporate law — unpreparedness may profoundly affect its well-functioning. Although the framework of corporate law may influence this technological revolution in part, legislative unpreparedness will have a significant impact on its functioning. Given the perilous state of the corporate environment today, AI is most likely to be used at the level of corporate boards, where the most difficult corporate decisions are to be made. AI's ground breaking abilities have already been put to use in a multitude of sectors. For example, in the medical field, a recent study discovered that while a human pathologist had a 3.5 percent error rate, an AI had a 7.5 percent error rate. However, by integrating AI and human reviews, the error rate was reduced to 0.5 percent, representing an 85 percent reduction in error.<sup>81</sup>

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<sup>79</sup> Alex Woodie, *Hacking AI: Exposing Vulnerabilities in Machine Learning*, DATANAMI (July 28, 2020), <https://www.datanami.com/2020/07/28/hacking-ai-exposing-vulnerabilities-in-machine-learning/>.

<sup>80</sup> Companies Act, 2013, § 166, No. 18, Acts of Parliament, 2013 (India).

<sup>81</sup> Barb Darrow, *How Artificial Intelligence will Kill Some Jobs but Create Others*, FORTUNE (Oct.12, 2016), <https://fortune.com/2016/10/12/artificial-intelligence-jobs/>.

After considering the legal implications of AI in the Indian corporate domain and cataloguing the different modes of implementing AI, the author has come to the conclusion that the integration of augmented or autonomous intelligence into BODs is not permissible under Indian corporate law. This is because only individuals — humans — are eligible to be appointed as directors (subject to other requirements). The purpose of enforcing this restriction was to ensure accountability, the attribution of which can be hindered through the appointment of an artificial person (such as a company). There is no denying that AI, with its ability to conduct meticulous analysis as well as its ever-evolving technology, can unquestionably enhance the decisions taken by the BODs — Vital is a prime example of this. However, at this juncture, it is important to remember at this point that AI is not yet developed enough to replicate human thought processes.<sup>82</sup> AI functions on the basis of the data supplied to it. It is thus, trained using this data, and in some cases, similar data it may collect (web scraping). It may also train itself, but this training also occurs based on the results it already produces. As a result, unlike humans, AI does not develop on the basis of true intelligence.<sup>83</sup> It is simply a reflection of the potential outcomes depending upon the data presented to it during the training phase.<sup>84</sup> Thus, AI can only perceive risks, decide on problems, and take the appropriate actions based on the data set that it has been trained upon. This necessitates human involvement for unique situations and is perhaps why AI is yet to be granted a seat in the boardroom worldwide. Even Vital, which is regarded as the first AI director is not legally a member of the board.<sup>85</sup>

For these reasons, “assisted intelligence” can be introduced in the Indian boardroom. This achieves a perfect equilibrium entailing quantitative and qualitative analysis by balancing AI’s efficiency in processing data beyond human capacities and a human’s ability of

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<sup>82</sup> Akshay, *How Well can Machines Replicate Human Thought Patterns*, MEDIUM (July 25, 2018), <https://medium.com/@sourcedexter/how-well-can-machines-replicate-human-thought-patterns-340dca806292>.

<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> Nicky BurrIDGE, *Artificial Intelligence Gets a Seat in the Boardroom*, NIKKEI ASIA (May 10, 2017), <https://asia.nikkei.com/Business/Artificial-intelligence-gets-a-seat-in-the-boardroom>.

diversified learning. This is also permissible under the existing law since the implementation of assisted intelligence does not entail the delegation of any power and neither occupies a seat in the boardroom. It thus, functions as a consultative model and leaves the final decision to the directors (human).

However, the implementation of assisted intelligence opens the door to a slew of concerns with regards to corporate governance. While it enhances the principles of corporate governance –accountability, transparency, and fairness – by stimulating the function of an independent director, enhancing transparency, and reducing information asymmetry; it also has the potential to adversely affect these principles. These problems hitherto highlighted in this paper are: privacy concerns due to large amounts of data involved, opacity inherent within AI, inability to properly assess subjective values, and the evasion of liability (by directors) citing blanket reliance. Though subjective valuation can be mitigated through a combined application of AI and the human mind, the remaining issues necessitate a reform in the Indian legislative structure and the introduction of robust mechanisms as safeguards.

Simply put, in order for the implementation of AI in the boardroom to be positively fruitful, Indian legislation must calibrate and resolve these potential problems. For the same: *First*, while cybersecurity initiatives can alleviate privacy concerns, the absence of data privacy regulations can mitigate the director's liability. This can only be resolved through the implementation of a robust data protection law. *Second*, given its high potential for misuse, regulatory authorities must develop comprehensive guidelines for the ethical use of AI. *Third*, to ensure that accountability is not subverted, the use of AI should not be attributed to the standard of care; rather, the purpose of the directors should be judged based on whether they were justified in using AI in the manner that they did – with minimal insight into AI's decision-making patterns.<sup>86</sup>

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<sup>86</sup> Yavar Bathaee, *The Artificial Intelligence Black Box and the Failure of Intent and Causation*, 31 HARV. J.L. & TECH. 890,937 (2018).