

# Legal personality of robots, corporations, idols and chimpanzees: a quest for legitimacy

S. M. Solaiman<sup>1,2</sup>

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**Abstract** Robots are now associated with various aspects of our lives. These sophisticated machines have been increasingly used in different manufacturing industries and services sectors for decades. During this time, they have been a factor in causing significant harm to humans, prompting questions of liability. Industrial robots are presently regarded as products for liability purposes. In contrast, some commentators have proposed that robots be granted legal personality, with an overarching aim of exonerating the respective creators and users of these artefacts from liability. This article is concerned mainly with industrial robots that exercise some degree of self-control as programmed, though the creation of fully autonomous robots is still a long way off. The proponents of the robot's personality compare these machines generally with corporations, and sporadically with, inter alia, animals, and idols, in substantiating their arguments. This article discusses the attributes of legal personhood and the justifications for the separate personality of corporations and idols. It then demonstrates the reasons for refusal of an animal's personality. It concludes that robots are ineligible to be persons, based on the requirements of personhood.

**Keywords** Legal personality · Robots · Corporations · Idols · Chimpanzees

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✉ S. M. Solaiman  
sheikh@uow.edu.au;  
<http://lha.uow.edu.au/law/contacts/UOW126834.html>

<sup>1</sup> School of Law, University of Wollongong, Wollongong, NSW, Australia

<sup>2</sup> Hoque & Associates (A Leading Law Firm), Dhaka, Bangladesh

## 1 Introduction

Robots have been slowly but steadily permeating our life in many respects, ranging from manufacturing industries to the administration of justice. Amongst their various usages, the increase in the use of industrial robots (IRs or IR in singular) is perhaps most phenomenal. The International Federation for Robotics (IFR) in a 2015 report on IRs found an increase in the usage of robots by 29% in 2014, which recorded the highest sales of 229,261 units for a single year (IFR 2015). IFR estimates that about 1.3 million new IRs will be employed to work alongside humans in factories worldwide between 2015 and 2018 (IFR 2015). IFR has termed this incredible rise as ‘conquering the world’ by robots (IFR 2015).

Parallel to this proliferation of IRs, IFR predicts an exponential rise in service robots too, which will reach 31 m by 2018 (Cookson 2015). The Foundation for Responsible Robotics (FRR) identifies the areas of usage of service robots: these machines are operational in, inter alia, entertaining and taking care of children and elderly people, preparing food and cooking in restaurants, cleaning residential premises, and milking cows (Cookson 2015). There are presently a total of 12 m service robots employed across the globe, as reported by FRR (Cookson 2015).

The usefulness of robots is undeniable; however, what concerns us are the serious risks associated with the usage of these robots, as co-workers at work or as companions of the vulnerable in particular. This is because they have already been involved in causing numerous deaths around the world. For example, there have been a total of 26 deaths killed by robots’ malfunctions in the United States (US) over the past 30 years, whilst the United Kingdom (UK) recorded 77 robot related fatal accidents in 2005 alone (Noack 2015, quoted from *The Economist*). A recent accident, in Frankfurt at a Volkswagen factory on 29 June 2015, was the death of a 22-year old worker at the hand of a robot, but prosecutors are still undecided as to who should be prosecuted for this tragic death (Bora 2015). Worryingly, the robotic industry itself has its own share of accidents (Dhillon 1991). Even medical robots are not always trustworthy: a recent study released in July 2015 reveals that surgical robots have been linked to the deaths of at least 144 and injuries of 1391 over a period of 14 years (2000–2013) in the US (Alemzadeh et al. 2015). Many believe that even more harmful consequences are ‘lying around the corner’ (Cookson 2015), and that these machines are destined to take over the world (see Leenes and Lucivero 2014).

Despite such a distressing picture, legislators and policymakers remain largely unmoved. Robotics Professor Noel Sharkey, Chairman of FRR, asserts that it is time now to take action before robots cause further harm (Cookson 2015). Consistently, the UK Health and Safety Executive emphasises the need for adequate protection of people from malfunctioning collaborative robots at work (Health and Safety Executive 2012). This protection requires regulation, which generally entails ascription of liability for harm committed by humans or human-made machines.

Some academic discourse has viewed differently the need for the separate legal personhood of the possessor of artificial intelligence (PAI) such as robots for decades (Pagallo 2013). Therefore, a debate persists in the absence of concrete

guidelines about the ‘persons’<sup>1</sup> to be held liable as to who should take responsibility for such harm: the manufacturer, the employer, or the machines themselves. One group of the debate argues that robots should be conferred with personality in order to exonerate their makers and users from potential liability; the other group strongly opposes this view. The primary basis of the proponent’s arguments is an analogy between robots and corporations, though robots are sporadically likened to, animals and idols as well.

This article critically examines the attributes of personality from legal points of view in exclusion of moral personality<sup>2</sup> and applies them to corporations, idols, chimpanzees and robots, with a view to finding a rationale for ascribing legal personality to robots. Admittedly, corporations have legal personality recognised worldwide; idols’ legal personality is accepted in some jurisdictions, chimpanzees’ personality has been denied repeatedly, whilst robots’ legal personhood has not been recognised as yet anywhere, to the best of our knowledge. The analysis in this article relies on both judicial and scholarly interpretations of the attributes of legal personality, and concludes that industrial and services robots do not meet those personhood qualities, and therefore the claim for their personality is unfounded.

## 2 Concept of legal personhood: creation and recognition

None of the three ‘human’ creations being robots, idols and corporations—nor the animal chimpanzees that are the concern of this article can be defined as a person, according to the ordinary dictionary meaning of the word, which recognises the personhood of living human beings only. None of these three are rational creations with the capability of ‘feeling’ and ‘willing’ that would be directly comparable with that of humans, except chimpanzees which have some similarities with human beings. However, legal personhood is not necessarily synonymous with or confined to human beings (*Byrn v New York City Health & Hosp Corp* 1972). When the term ‘personality’ comes to legal concepts, conferring this status (personality) on any entity depends upon a given jurisdiction having an independent legal system. This is why there is no uniformity across legal systems in recognising entities as a legal person (Gray 1909). For example, some idols are legal persons in some countries such as India, but not in others, such as the UK, and this dissimilarity exists even though both countries belong to the common law family (see *Bumper Development Corp Ltd v Commissioner of Police of the Metropolis* 1991).

Generally, law confers certain rights and imposes specific duties on legal persons, entitles them to own and dispose of property and to sue others in their own right in order to enforce these entitlements, and permits them to be sued by others following any breach of legal duty owed to another person or to the rest of the world. A person is thus defined in law by reference to ‘rights’ and ‘duties’, which means that a legally recognised person is subject to legal rights and duties (Smith 1928, see also

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<sup>1</sup> The terms ‘person’ or ‘persons’ in this article refers to ‘legal personality’ unless otherwise mentioned, because we omit ‘moral personality’ from consideration in this piece.

<sup>2</sup> For differences between legal and moral personality, see Blyth (1906).

Gray 1909). As defined in Black's Law Dictionary, a person is a 'human being,' or 'natural person,' and '[a]n entity (such as a corporation) that is recognised by law as having the rights and duties of a human being' (see *Matter of Nonhuman Rights Project, Inc v Stanley* 2015/hereinafter *Stanley* 2015').<sup>3</sup> Similarly, covering both natural and artificial persons, Butterworths Australian Legal Dictionary describes a person as 'a separate legal entity, recognised by the law as having rights and obligations' that includes human beings and entities of humans only whom 'the law regards as capable of rights and duties' (Nygh 1997). It further clarifies, referring to Salmond, that the capability of enjoying rights and performing duties is the *exclusive* criterion of legal personality, and adds that any beings who possess this capability are legal persons, and conversely other beings who lack this capability are not such persons, regardless of whether the beings are human or not (Nygh 1997). Hence, conferring legal personality is inherently connected with the conferral of legal rights and the imposition of legal duties (see Gray 1909; Salmond 1916; Holland 1900; Pollock 1923).

The recognition of legal personality is a means of mutually respecting persons' rights and of enforcing legal control against any breaches thereof. When P is compelled by the society or the state (state and society are used interchangeably) to do or to forbear something in favour of Q, and this compulsion is backed up by a threat of legal sanctions, it implies that the latter has a legal right and the former owes a corresponding duty (Corbin 1920).<sup>4</sup> Hence, mutual rights and duties necessarily set up a legal relation between two persons, and no such relation can exist between a person and a thing or property such as an animal or a car (Corbin 1920). The relation between a person and a thing or property is rather 'physical'<sup>5</sup>; however, the owner of the thing has many legal relations to other persons surrounding it, for example, preventing others from trespassing on it, or transferring it to anyone (Corbin 1920). To clarify, a legal relation represents facts embracing 'acts' and 'events' (Corbin 1920). As defined by Corbin, '[a]n act is one of that class of facts manifest to the senses that consists of voluntary physical movements ... of human beings' (Corbin 1920). An act also includes forbearance that denotes 'a consciously willed absence of physical movement. Animals other than men can act or forbear, but they do not become parties to a legal relation' (Corbin 1920). Corbin also defines 'events' to mean changes in the prevailing 'totality of facts, including the acts of human beings' (Corbin 1920). The assertion of the presence of a specific legal relation implicitly denotes the existence of certain facts expressing our existing mental concept of future social consequences (Corbin 1920). For example, Corbin provides that a 'statement that a legal relation exists between A and B is a

<sup>3</sup> Cited in *Stanley* (2015). However, the citation in *People ex rel Nonhuman Rights Project, Inc v Lavery* 2014/*Lavery* 2014') was: 'Black's Law Dictionary defines the term "person" as "[a] human being" or, as relevant here, "[a]n entity (such as a corporation) that is recognized by law as having the *rights and duties* [of] a human being" [emphasis added]: Garner (1999). The court also cited (Salmond 1947) for a similar view.

<sup>4</sup> For an analysis of the words 'rights' 'duties' and 'liabilities, see Corbin (1920).

<sup>5</sup> Physical Relation: 'A relation perceivable by the senses, between two physical objects. This would include relations of space, time, weight, color, density, and the like': Corbin (1920).

*prediction* as to what society, acting through its courts or executive agents, will do or not do for one and against the other' (Corbin 1920).

Unlike the relation between two individuals, the relation between an individual and a corporation as a person may always be reduced to many legal relations separately, with every individual standing behind it, though they are combined into one for convenience (Corbin 1920). According to Salmond, a more satisfactory definition of legal personality refers to the capacity for legal relations (Salmond 1916; Holland 1900). It means that a legal person shall have the capacity to establish, maintain and effectuate legal relations with others, staying within the bounds of law.

The word 'rights' used in describing personality connotes legal relations between persons. It is interconnected with duties and it contains legally enforceable claims against others who are obliged not to breach such relations (Corbin 1920). A legal person who knows that he/she has a certain right should be able to answer the question: 'What *must another do* for me?' Corbin (1920). Hence the holder of rights needs to have the awareness of its own entitlements and others' obligations of performance. To compel such performance, the possessor of a right is entitled to utilise the available legal recourses through the state (Corbin 1924). A right provides an option to its holder to do or not to do a certain act that is not forbidden nor commanded by law, while the act forms the content of the right in question (Terry 1916). Again, the existence of a right is a question of law, and the exercise of the right entails its holder's conscious choice about doing or not doing something.

As implied above, the enjoyment of one's rights requires the existence of duties of others and their performance of those duties. Duties of a person as a constituent element of legal relations are described as responsibilities commanded by law to do or to forbear something for the benefit of others, the failure in, or disobedience of, which will attract a remedy (Terry 1916; Corbin 1920). A person who bears a particular duty with the knowledge of its existence, compulsion in its performance, and sanctions against its disobedience, should be able to answer the question: 'What *must I do* for another?' (Corbin 1920) Similar to the enjoyment of rights, the performance of duties warrants their subject to have awareness of his/her/its (subject's) relevant obligations, and to perform such obligations accordingly, in order to avoid legal sanctions to be exerted by the society in the event of failure or disobedience. For example, trespass to land or trespass to the person with the required guilty mind demonstrates disobedience to one's obligations to refrain from doing so, thus committing trespass attracts liability under both torts and criminal law.

The rights and duties discussed above as essential ingredients of personality justify the ascription of personhood from the viewpoint of its purposes. The principal purpose of legal personhood, conferred on whomever or whatever, is to facilitate the regulation of human conduct by an organised society (Smith 1928). This facilitation is effected through the regulation of the conduct of the subjects of law by reference to legal relations, while conduct includes both acts and omissions (Terry 1916). Generally, any legal liability is imposed for a breach of someone's right with an ultimate objective of maintaining order in the society. For example, killing of a person by an intentional act or a grossly negligent omission is penalised

due to the violation of the right to life of the deceased. To this end, the imposition of a duty aims to prevent consequences which may come about in the absence or non-performance of the duty at hand; the duty not to kill someone aims to avoid that death, for example (Terry 1916). This consequence can amount to a violation of one's right (Terry 1916). According to Lundstedt's conception of the meaning of legal right, the sole purpose for which law exists is to prevent harm of the community or to confer social benefit (Lundstedt cited in Allen 1931). The law protects these rights by imposing duties on others and providing remedies against any breach thereof. More precisely, as West terms it, a 'breach of duty is an act of injustice' (West 2010).

The duty imposed on a person is said to correspond to the right of another where the former owes the duty to the latter; however, when the duty is imposed by criminal law, it is regarded as owed to the state (Terry 1916). Some of the paramount duties imposed by law generally include: (1) duties not to do any act which will cause injuries or death to others; (2) duties of possessors of actively dangerous things, such as ferocious animals or man-made treacherous products (industrial or social robots, for example) to prevent them from causing harm; and (3) duties not to take possession of property in violation of others' rights or legal interest (Terry 1916). A legal interest is defined as '[t]he aggregate of the legal relations of a person with respect to some specific physical object or the physical relations of specific objects' (Corbin 1920).

Case law has consistently recognised the correlative rights and duties that attach to legal personhood.<sup>6</sup> It is judicially recognised that '[s]o far as legal theory is concerned, a person is any being whom the law regards as capable of rights and duties.... Persons are the substances of which rights and duties are the attributes. It is only in this respect that persons possess juridical significance, and this is the exclusive point of view from which personality receives legal recognition' *People ex rel Nonhuman Rights Project Inc v Lavery (Lavery)*. Most recently the Supreme Court of New York (NY-SC) in *Matter of Nonhuman Rights Project, Inc. v Stanley (Stanley)* upheld that the autonomy and self-determination of any entity are not regarded as the basis for granting it rights (Stanley 2015). Rather, the Appellate Division of the NY-SC (NY-SCAD) in *Lavery (2014)*, which was followed in *Stanley*, applied the prevailing attributes of personality, in determining the personhood of a chimpanzee, that legal personhood has unfailingly been defined by reference to both rights and duties (Lavery 2014). Central to the legal personality is thus the ability to enjoy rights and to discharge duties (Duff 1929).

Free will is a critical element of personhood where the person is subject of a legal right, because its existence is needed to exercise such a right, and it is not necessary to have this power for a person who is bound by a legal duty (Gray 1909). However, a different view exists that gives emphasis to duties instead of rights with respect to a juristic person (Machen 1911). A 'juristic person', as Gray describes, is one who is not a human being, but rather a legal person composed of humans with the objective

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<sup>6</sup> The case can be found in: *Smith v ConAgra Foods, Inc (2013)*; *Calaway v Practice Mgt Servs, Inc (2010)*; *Wartelle v Women's & Children's Hosp, Inc (1997)*; Cited in *People ex rel Nonhuman Rights Project Inc v Lavery (2014)*.

of advancing certain interests, for example states and corporations (Gray 1909). Also, with respect to affording legal personality, authorities primarily consider whether law can address its commands to those who are seeking personhood, as understanding and acting upon such commands is only possible for those who are rational beings having the capability of feeling and volition (Machen 1911). Gray thinks that there can be no legal personhood without having a will to exercise the right, and its (right) owner must exercise the willpower in enjoying it (Gray 1909). Linking this with the concept of right, Salmond says that in order to have right, one must be capable of interests that may be affected by others, and correspondingly, also be capable of duties not to act affecting the interests of others (Salmond 1916).

Thus the idea of personhood entails an entity to be a legal subject able to enjoy rights and to perform duties, rather than being merely an object, in order for it to be a legally recognised person. This concept of personhood, developed by experts of Canon law in the thirteenth century (Pagallo 2013), continues to dominate the administration of justice to date, as most recently interpreted by the NY-SC in *Stanley*, which involved the determination of personhood of two chimpanzees (*Stanley* 2015).<sup>7</sup>

In a nutshell, the requirements or attributes of legal personhood are: (1) a person shall be capable of being a subject of law; (2) being a legal subject entails the ability to exercise rights and to perform duties; and (3) the enjoyment of rights needs to exercise awareness and choice.

Different kinds of persons that may be recognised by various legal systems can be classified as: normal human beings; abnormal human beings (e.g., infants); supernatural beings (e.g., angels); animals; inanimate objects (e.g., idols); and incorporated entities (e.g., corporations) (Gray 1909). This article examines the legal status of the latter three categories, excluding human and supernatural beings, with a view to assessing the presence of the personhood attributes in robots and in light of these three. In doing so, an emphasis will be given to the corporate legal personality, which is often compared with robots in advocating the latter's legal personality (see Hallevey 2010a, b).<sup>8</sup> Robots are also sometimes likened to animals (see Bertolini 2013). However, Bertolini rejects that analogy, asserting that the central argument of those who make such a comparison—that weakly autonomous robots and animals behave sensing the environmental conditions independently of human directions—is not sufficient to equate these two unequals: one is natural whilst the other is a human creation (Bertolini 2013). Therefore this untenable comparison does not warrant any changes to be brought about in the existing legal paradigm by affording personality to robots (Bertolini 2013). Both idols and chimpanzees have been included in the present article in order to show the reasons for recognising the former's personality while refusing the latter's. Those reasons will provide insight into the lack of substance in the advocacy of robots' personhood.

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<sup>7</sup> The case has been discussed at some length further later in this article.

<sup>8</sup> Idols are also regarded as a 'juristic person' as will be shown later in this article.



### 3 Corporations as a legal person

A company or corporation (used interchangeably) from a legal viewpoint is an entity created by humans and recognised by law as an artificial person having attributes of personhood conferred on it through incorporation by a state agency, mainly for the convenience of all others in dealing with this organisation, which operates for profits or other purposes with perpetuity in its existence and simplicity in its relations with the rest of the world. Corporations emerged as a division of society and progressively changed to an association of individuals (Davis 1909); however, at present a single person is sufficient to form a company.<sup>9</sup> Corporations are now major players in both national and international economies, while contemporary societies are intensely dependent upon these entities: we are all affected by them one way or another. This reality necessitates the regulation of corporations, which has ultimately become a part of social governance (Farrar 2005). Despite such significance of corporations for human societies, obtaining the recognition of corporations as a separate legal person was a difficult task. The difficulty lies in the attribute that legal persons bear legal duties in exchange for their legal rights (Lavery 2014). Given these personhood attributes, it has ‘puzzled legal theorists’ (Ripken 2010)<sup>10</sup> for years as to whether a corporation should be regarded as a separate person independent of its owners and managers (see, for example Freund 1897; Hallis 1930; Nekam 1938; Stoljar 1973; Cohen 1935; Radin 1932; Vinogradoff 1924; Wolff 1938). Nevertheless the corporate separate personality is now recognised in all legal systems, based mainly on the principle established in *Salomon v Salomon & Co Ltd* [1897] AC 22 though their liabilities may vary depending on the specific provisions of a given jurisdiction.<sup>11</sup> This personality enables the entity to serve as a single contracting party independent of its owners and managers, and this is said to be the first and foremost contribution of corporate law (Kraakman et al. 2009). This personality has a strong bearing on its operations and interaction with others.

#### 3.1 Significance of the separate personality

The separate personality bestows the legal capacity of entering into almost all legal relations with other persons.<sup>12</sup> It demarcates the assets of the entity itself and those of its owners; as a result it can shield its own assets from the intervention of its owners or their personal creditors, because company’s creditors are given priority over investors—this is called ‘entity shielding’ (see Hansmann et al. 2006).

<sup>9</sup> For example, see s114 of the Corporations Act 2001 (Cth); s123 of the Companies Act 2006 (UK).

<sup>10</sup> This article has been generously followed in discussing the corporate personality section in the present article.

<sup>11</sup> In Germany, corporations cannot be held liable under criminal law, however can be fined for regulatory offences, in contrast, they can be criminally liable even for manslaughter in major common law countries including the United Kingdom, the United States, Australia.

<sup>12</sup> See, for example, s 124 of the Corporations Act 2001 (Cth) in Australia. It begins with: ‘A company has the legal capacity and powers of an individual....’



Another important rule in this regard is ‘liquidation protection’, which makes shareholders or their personal creditors unable to withdraw their investment at the time of financial trouble of the company (Hansmann and Kraakman 2001). This shielding makes corporate contractual commitments credible to the outside world (Kraakman et al. 2009). A corporation is entitled to enter into a contract like an individual [see s124 of the Corporations Act 2001 (Cth)]. Indeed, it can sue and be sued; another important benefit of this personality is the elimination of the need to name or specify in judicial proceedings, all shareholders and other individuals behind the corporation that intends to sue another or is sued by others, such as a creditor or regulator (Kraakman et al. 2009). All these entitlements are critical to the operation of a business with a separate personality, as they enhance the credibility of corporate transactions and afford simplicity in dealing with a corporation for business and governance purposes (Kraakman et al. 2009). These benefits are convincing for the separate personhood of corporations, and this has been granted based on the attributes of rights and duties. Although there is almost complete unanimity on the need for corporate personality, it is viewed differently in legal discourses that have contributed to the emergence of different theories of corporations.

### 3.2 Legal theories of the corporate separate personality

There are three prominent theories of corporate separate personhood: (1) an artificial and dependent person theory; (2) an aggregate person theory; and (3) a real and independent person theory (Ripken 2010). These theories view corporations differently from one another, to some extent. These theories are briefly discussed below with a view to finding a rationale for corporate separate personhood (For a detailed discussion of these theories, see Ripken 2010).

### 3.3 Artificial and dependent person theory

The theory of artificial and dependent persons believes that there is no physical existence of a corporation: it is an abstract idea constructed by law. So a corporation is just a legal construct, an artificial creation of law and humans; its personhood is a legal fiction conferred by law solely for the facilitation of trade and commerce (Ripken 2010). Maitland stipulated that a corporation itself can do only one thing: appoint an agent to act on its behalf (cited in Duff 1929). Duff explains that if shareholders in a meeting adopt three resolutions—appointing an employee; entering into a contract by accepting an offer; and inciting the commission of an offence—only the first one would be the act of the entity: the other two may be either acts of its agents or not acts at all, depending on governing laws (Duff 1929).

The second characteristic of a company under this theory is its dependence on law; as Niman states, a corporation does not come into being until the legal formalities are met and its incorporation is certified by the appropriate state agency (Niman 2012).

Regarding the rights and duties which are our basic concerns, Gray asserts that the name of a corporation is basically an abbreviation used in law and commerce in

order to confer specific rights on, and perform duties by, individuals contractually or otherwise related to or affected by the entity (see Gray 1909; Wolff 1938). As stated by Marshal CJ in *Trustees of Dartmouth College v Woodward* (1819) 17 U S 518 about corporations, '[i]t is chiefly for the purpose of clothing bodies of men, in succession, with these qualities and capacities, that corporations were invented, and are in use.' However, English courts repeatedly rejected the notion that a corporation is just a name to avoid the trouble with using the names of numerous individuals, because it did not seem to reflect the economic and psychological facts of a corporation with which the law must deal (for example, *Salomon v Solomon Co Ltd* 1897; *Mlacaura v Northern Assurance Co* 1925).

It is to be conceded that the personality of a corporation came into existence through incorporation by appropriate state authorities as part of a legal process. However, the concept of artificiality is old, and the assertion that the rights and duties of a corporation represent those of individuals remained prevalent in this theory. This old concept changed over time in the mid-nineteenth century, which gave a perception that the incorporation process is merely a formality. It is now widely believed that the existence of a company is owed to the natural persons called 'corporators' who form it, and this has significantly diminished the force of the artificial person theory (Ripken 2010). An alternative view of the perception of a corporate entity as an aggregate of persons emerged in the second half of the nineteenth century (Ripken 2010).

### 3.4 Aggregate person theory

The main weakness in the aggregate person theory is that its proponents do not recognise a corporation as a separate and distinct person. They believe that a corporation is not an artificial entity nor merely a creation of law as such; rather it is an organisation or association of a group of people who form its individual human constituents and without whom it would not have any identity of its own or any ability to function towards its goals (Ripken 2010; see also Blumberg 1993). Similarly, as Cressey stipulates, a corporation is virtually a manifestation of natural persons because it is created, owned, managed and administered by those who thus become the ultimate actors of the body corporate (cited in Ripken 2010). Diminishing the distinct personality, the US-SC in *Santa Clara County v Southern Pacific Railroad Company* (1886) 118 U S 394 in 1886 pronounced that company's properties are those of the individuals behind it. Likewise, according to Morawetz (1886), this theory reinforces that the rights and duties of a corporation are factually those of corporators, rather than those of an imaginary person. Salmond spelt out that there are some natural persons behind every corporation, and initially the interests of those persons are fictitiously attributed to their corporation, and subsequently their conduct or acts are also imputed to it in the same way (cited in Duff 1929). This means that a company represents both the interests and the acts of individuals, rather than those of its own in the true sense, hence a distinct personality does not exist according to this theory.

This theory is thus in sharp contrast to the artificial person theory, as it recognises that a corporation is not a fiction, but rather does exist as an aggregate of

individuals, not as a separate person independent of its incorporators. The basic tenets of this theory are the negation of artificiality in the corporation as a separate entity, and the merger of individuals and the entity together, eliminating the distinction between a corporation and its incorporators in term of rights, duties, and properties. However, this does not reflect the contemporary view of corporations.

The limited liability feature of modern corporations stimulated the general public to invest in securities which contributed to dispersing the spectrum of shareholders and enlarging corporations by the early twentieth century. This development even more clearly separated the ownership and control of corporations, given the inability of the large number of widely scattered shareholders to stay interconnected and to control their entities, as observed by Berle and Means (1932). This deep separation, which makes the aggregate theory largely redundant (Phillips 1994), has given birth to a new theory called the real and independent person theory.

### 3.5 Real and independent person theory

The real and independent person theory argues that the corporate personality is both real and natural as opposed to fictitious, and that States have just recognised the existing fact, rather than creating it (Machen 1911). Gierke posits that once an organisation has been created by a group of human beings, a body corporate or a corporate organism is founded *per se*, which is recognised by law in order to facilitate trade and commerce by and with this newly created entity (cited in Machen 1911). They contend that the existence of corporations is an objective fact, and that the entities have a real presence in our society; therefore corporate life comes into existence independently of law, and States only officially recognise the pre-existing fact (Ripken 2010). This doctrine accepts the separation of the entity from its owners and others who are involved in the corporate enterprise, recognises the perpetuity of the organisation regardless of any changes in its ownership and management, and at the same time distinguishes between the personality of a natural person and that of a corporation (Ripken 2010). Machen asserts that when we admit a corporation is created by the State, it cannot be fictitious at the same time (Machen 1911).

Currently the predominant view is that corporations are real: we recognise that their citizenship compares with that of humans, they pay taxes and bear social responsibility, they can be held liable for committing both civil wrongs and crimes in addition to regulatory breaches. We have thus brought them within the purview of social governance as a necessity, in that we are all affected by them one way or another.

Whichever theory we accept, in reality both individuals and corporations can be held liable for corporate wrongdoings.<sup>13</sup> This means that despite the separation of personality by law, individuals behind a corporation are not immune from the liability that may arise from the breach of a corporate duty committed by individuals wearing the veil of incorporation. On the other hand, as well as managers/controllers, shareholders may be held liable for corporate debts to varying extents,

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<sup>13</sup> See more than 50 sections listed in s1317E on civil penalty and Schedule 3 containing 346 sections on criminal liability of the Corporations Act 2001 (Cth), Australia.

depending on the type of their company.<sup>14</sup> Any pecuniary fines paid by corporations are eventually imposed on stockholders, who are the residual claimants of corporate assets. Correspondingly, any profits of a corporation are likely to benefit its incorporators in the course of time, in the form of dividends, capital gains or residual payments. Corporate personhood, discussed below, is based on these theories of corporations and attributes of personality.

### 3.6 Corporation as a legal person: Do they satisfy the attributes of personhood?

Corporations are called a 'juristic person', the essence of which lies in subjection to duties, rather than in the possession of rights (Machen 1911). Corporate personality will be negated if the ordinary meaning of personhood is applied, because it is not a rational being, it is incapable of understanding legal commands and it is unable to do anything without its human agents (Machen 1911). So when law commands a corporation to do or not to do certain things, it goes in essence to the individuals behind it; if the commands are violated, a corporation can be penalised as a way of directly or indirectly punishing the people who manage (Machen 1911) and/or own it.<sup>15</sup> According to Machen (2011), corporate entity is used by law as a mere sight aiming at shooting the individuals hiding behind it. So individuals are not immune from liabilities arising from failure in discharging corporate duties or in complying with law.<sup>16</sup> Both corporations and individuals wearing the veil of incorporation can be held liable under administrative,<sup>17</sup> civil (see, for civil cases, Hubbard 2014; Sexton et al. 2010), civil penalty<sup>18</sup> and even criminal liability<sup>19</sup> regimes. Notably, regarding offences, both the *actus reus* (physical element) and *mens rea* (mental element) of an offence are imputed to the company from its directing mind and will under the common law organic theory of corporation, also known as the directing mind theory or the identification doctrine, as expounded by the House of Lords in *Tesco Supermarkets Ltd v*

<sup>14</sup> Generally, a company can be of different types by reference to the liability of its shareholders in the event of its winding up. These are: company limited by shares, company limited by guarantee, company limited by both shares and guarantees, unlimited company, and no liability company: For details (see Harris et al. 2016).

<sup>15</sup> The owners are punished in effect when a corporation is penalised in that any pecuniary penalties reduce the value of their ownership holdings, and if a corporate capital punishment is awarded, then the owners are in most cases likely to suffer even more financial losses given the additional costs involved in the winding up or liquidation procedure, which will be paid as a priority payment.

<sup>16</sup> For numerous civil cases where corporations and/or individuals were held liable for corporate wrongdoings (see Hubbard 2014; Sexton et al. 2010).

<sup>17</sup> See, for example of administrative actions against corporations and individuals, Australian Securities and Investment Commission (ASIC 2015).

<sup>18</sup> Recent leading cases in Australia under its corporate civil penalty regime: *ASIC v Macdonald (No 11)* (2009); *ASIC v Macdonald (No 12)* (2009); *ASIC v Hellicar* (2012); *A v Healey* (2011); *ASIC v Healey (No 2)* (2011).

<sup>19</sup> See for recent several manslaughter cases in the United Kingdom: Filedfisher (2015).

*Nattrass* [1972] AC 153.<sup>20</sup> Put simply, only senior executives of a company can be its directing mind and will.

Similar to the indirect imposition of duties and corresponding penalties on human being who clothe the corporation, legal rights too, when conferred on such an entity, are due to be carried to those individuals who compose it (Machen 1911). Ihering notes that individuals, not corporations, are the real subject of the rights conferred on corporations (Machen 1911). Moreover, the legal personhood of corporations is not absolute because the corporate separate personality may be ignored for liability purposes in some instances by lifting the corporate veil (see *Sloan Shipyards Corporation v Emergency Fleet Corporation* 1921; *United States v Walter* 1923).

Hence, corporations are, in reality, formed by humans and recognised by the State as being all for the purposes of human benefits. Individuals embody a corporation: the rights and duties of the latter effectually refer to those of the former. When it comes to any wrongdoings, both physical and mental elements are attributed from individuals to their corporate entity. Hence, in recognising the juristic personality of a corporation, all of the personality attributes of individuals behind it are directly imputed to their corporation. We can now conclude that the personhood of corporation does meet the needs of legal personality (i.e., subject of law, rights, duties, awareness, and willpower).

#### 4 Idols as a legal person

An idol is a statue created and worshipped by humans as a god or goddess, perhaps most popularly in the Hindu religion. As a legal person, a Hindu idol has been held to have peculiar desires and a will of its own which must be respected, as held by the Privy Council in *Pramatha Nath Mullick v Pradyumna Kumar Mullick* (1925) 27 BOMLR 1064 (Mullick) in 1925 (see also Yesey-Fitzgfrad 1925). Hence, Hindu idols have long been judicially recognised in some jurisdictions, such as India, as a legal person, founded upon religious customs (Duff 1929; Lord Shaw in *Mullick* 1925). Shaw J held in *Mullick* (1925), which involved a dispute arising out of the controlling and worship of a Hindu family idol, ruled that such an idol is a juristic person and held:

A Hindu idol is, according to long established authority, founded upon the religious customs of the Hindus, and the recognition thereof by Courts of law, a “juristic entity.” It has a juridical status with the power of suing and being sued. Its interests are attended to by the person who has the deity in his charge and who is in law its manager with all the powers which would, in such circumstances, on analogy, be given to the manager of the estate of an infant heir, [i]t is unnecessary to quote the authorities; for this doctrine, thus simply stated, is firmly established.

<sup>20</sup> The doctrine was applied in a more recent case of *Transco PLC v Her Majesty's Advocate* (2004). For its initial consideration, see *Lennard's Carrying Co Ltd v Asiatic Petroleum Co Ltd* (1915). A discussion of this common law theory falls beyond the scope of this article, however, for its analysis at some length see Solaiman and Begum (2014).

The Privy Council further clarified that a Hindu idol is not a chattel or personal property as such. It ruled that ‘this was not a dedication, in any sense of the word, of the idol as property, nor of the idol at all. It was a dedication of real estate in trust for the idol, recognised as a legal entity, to which such dedication might be made’ (*Mullick* 1925).

These powerful judicial stipulations resemble the most fundamental feature of corporations in articulating the legal status of an idol.

Although an idol differs overtly from a company in terms of physique, they are comparable to each other in that their attributes of personality are borrowed from human beings who are lawfully entitled to manage them with all the powers, as with a guardian or manager of an infant and his/her assets (Duff 1929; Lord Shaw in *Mullick* 1925). In other words, an idol’s legal interests are attended to by its managers. Savigny thus rightly compared a corporation with an idol in respect of juristic personality, which is composed of humans (Duff 1929). Consistently, referring to the capacity for rights and liabilities, Duff admits that a recognised idol is a legal person as good as a human being and a body corporate (Duff 1929). This capacity does refer to that of managers of respective idols. When an idol’s legal personality comes to its power of will, a question may emerge as to how to ascertain such a will. Perhaps the best answer would be that whatever the relevant law regards as its power of will, giving due consideration to the interests of the worshipers as well as social interests in materialising the wishes of pious founders, will be the idol’s will (Duff 1929; Lord Shaw in *Mullick* 1925). To clarify further, the Privy Council in *Mullick* 1925 pronounced that the will of the idol will be expressed by its guardian, the manager.

Therefore, rights and duties of an idol are those of the individuals having managerial powers. Based on the similarities between corporations and idols in terms of personality attributes, we can draw a conclusion that an idol’s personhood is justified, and that the corpus of an idol is used just as a symbol of power, god or goddess, whose affairs are managed by humans.

## 5 Chimpanzee as a legal person

An animal is distinct from corporations and idols in that it is naturally a living thing, with its peculiar characteristics being vicious or otherwise, and is capable of doing acts that include both things it has been trained for, and anything of its own will, depending on the very nature of a particular animal and the erratic behaviour of others that may cause the animal’s behavioural deviation (Bertolini 2013). Bertolini (2013) appreciates the prevailing owners’ liability provisions for their animals’ misconduct, and in the same way he positively argues that the owner or user of the robot can be held liable for the harm caused by robot. However, he also adds that makers or manufacturers can also be held liable if their products were found to be defective (Bertolini 2013). Although an animal’s personality is not recognised in law, it has recently and recurrently become an issue before the courts in the US, the decisions of which would be useful for determining the eligibility of robots’

personhood, particularly with respect to robot's so-called 'autonomy', the central issue of advocating the machine's personality.

On 30 July 2015, the NY-SC in a landmark judgment in *Stanley* (2015) pronounced that chimpanzees are not legal persons. The verdict was delivered following a writ petition of *habeas corpus* by an organisation, *Nonhuman Rights Project, Inc* (NhRP). The NhRP submitted the writ petition for freeing two chimpanzees kept in a laboratory of the Stony Brook University, New York for biomedical experimentation. They first unsuccessfully lodged their petition on behalf of the detained chimpanzees with the Suffolk County Supreme Court (Suffolk Court) in December 2013, where their petition was dismissed by its Appellate Division on the ground that the NhRP did not have the right to appeal on behalf of chimpanzees (NhRP 2015). In their petition, the NhRP asked for the termination of the chimpanzees' captivity and for releasing them into the care of 'Save the Chimps', a sanctuary in Florida (NhRP 2015). They likened the animals' captivity to human imprisonment, and claimed that the chimpanzees had the right to not be imprisoned against their will (NhRP 2015).

The NhRP took the dismissal as an error of the Suffolk Court and then moved to the NY-SC in Manhattan in March 2015. They lodged their proceeding pursuant to Art 70 of the *Civil Practice Law and Rules* (CPLR) and under the common law for a writ of *habeas corpus* on behalf of the two chimpanzees. Unlike the original petition in Suffolk, this time they were initially successful in obtaining a show cause order from the NY-SC issued by Judge Barbara Jaffe in the first of a two-step process (first show cause and then determination). However, Jaffe J in the second step rejected the petition in July 2015, pronouncing that chimpanzees are not legal persons, and the court strictly relied upon the precedent set forth in the *Lavery* (2014).

The petition required a determination as to whether chimpanzees are legal persons entitled to bring a writ of *habeas corpus*, a legal challenge against unlawful detention typically brought by human prisoners, and sometimes in child custody cases. The NhRP tried to take advantage of the absence of definition of 'person' in both Article 70 of the CPLR and the common law of *habeas corpus* (Stanley 2015). The Court found no previous judicial decisions evidencing that such a writ had ever been granted to anyone other than human beings under Article 70 or common law. Nonetheless, the NY-SC had dealt with the petition referring to *Lavery* (2014), that the lack of precedent does not in itself end the inquiry into whether *habeas corpus* relief may be extended to chimpanzees (Stanley 2015). Notably, the petitioner had not claimed the human rights of chimpanzees, but rather had contended that 'the law can and should employ the legal fiction that chimpanzees are legal persons solely for the purpose of endowing them with the right of *habeas corpus*, as the law accepts in other contexts the "legal fiction" that nonhuman entities, such as corporations, may be deemed legal persons, with the rights incident thereto' (Stanley 2015). The petition likened chimpanzees to humans and further maintained that 'because chimpanzees possess fundamental attributes of personhood in that they are demonstrably autonomous, self-aware, and self-determining, and otherwise are



very much like humans, “justice demands” that they be granted the fundamental rights of liberty and equality afforded to humans’ (Stanley 2015).<sup>21</sup>

*Amicus curiae* in presenting independent arguments made a reference to the definition of ‘person’ provided in the New York State Penal Law (s10.7) that a person conclusively denotes ‘a human being, and where appropriate, a public or private corporation, an unincorporated association, a partnership, a government or a governmental instrumentality.’ *Amicus curiae* opined that the personality of all these entities is justified because they are composed of human beings (Stanley 2015). Referring to this extension of the subjects of the penal provisions, *Amicus curiae* persuasively argued that ‘the expanded definition of person in a restricted context connotes a legislative intent that the definition not be further expanded.... nowhere in that statute are animals defined as persons’ (Stanley 2015).

The Court critically examines the current trends towards the empathy for animals, particularly the demands for pets’ legal personhood. For example, given the rights, love and attachment for pet animals, some commentators argue that animals are currently ‘quasi-persons’ in law as they are entitled to some rights and protection though not others (Stanley 2015 citing Matambanadzo 2012). However, Jaffe J states that as the law presently regards, there is no ‘in-between’ position of personhood for the purposes of establishing rights because entities are categorised in a simple, binary, ‘all-or-nothing’ fashion (Stanley 2015). Distinguishing persons from things, Jaffe J adds that the beings recognised as persons have rights to enjoy and duties to perform, whereas ‘things’ do not have these legal entitlements and responsibilities (Stanley 2015). Her Honour thus reaffirms that legally, all animals, regardless of their level of intelligence and physical appearance, are property (Stanley 2015).

Jaffe J noted the previous 2014 determination of the NY-SCAD in *Lavery* (2014), which involved an identical issue, and the court ruled that ascribing legal personhood to chimpanzees is ‘inappropriate as they are incapable of bearing any legal responsibilities and societal duties’ (cited in Stanley 2015). The NY-SCAD, citing several judicial decisions, distinguished between chimpanzees and currently recognised legal persons, and stated that corporations are composed of human beings, therefore they are able to bear legal duties in return for their legal rights, hence their legal personality is justified (Lavery 2014). Alongside the reliance on judicial authorities, the courts in both *Lavery* (2014) and *Stanley* (2015) also noted, as further sources of support, the definition of person provided in Black’s Law Dictionary stated earlier. The Court in *Lavery* (2014) finally affirmed the denial of writ of *habeas corpus* and held that:

A chimpanzee was not a ‘person’ entitled to the rights and protections afforded by the writ of *habeas corpus* ... because animals, unlike human persons, corporations, and municipal entities, could not bear any legal duties, submit to societal responsibilities, or be held legally accountable for their actions; the incapability to bear any legal responsibilities and societal duties rendered it inappropriate to confer upon chimpanzees legal rights.

<sup>21</sup> Autonomous intelligence denotes the ‘capabilities for solving problems involving pattern recognition, automated scheduling, and planning based on prior experience’ (Koditschek 1989).

Jaffe J, in deciding the personhood of chimpanzees in *Stanley* (2015), overtly relied upon the precedent set out in *Lavery* (2014), and rejected the petitioner's argument against the applicability of the previous decision 'that the decision in *Lavery* (2014) is based on an erroneous legal analysis or "unsettled" law is immaterial' (*Stanley* 2015). Her Honour thus finally dismissed the proceeding in *Stanley* (2015) stating that *Lavery* (2014) has binding effects according to the doctrine of precedent. Therefore, chimpanzees are not legal persons based precisely on the lack of being capable of rights and duties, an essential requirement of personhood (*Stanley* 2015; *Lavery* 2014), despite the important pieces of scientific expert evidence presented before the Court in *Stanley* (2015) that:

... humans and chimpanzees share almost 99% of their DNA, and chimpanzees ... closely related to human beings.... They share with humans similarities in brain structure and cognitive development, including a parallel development of communications skills, as shown by their use and understanding of sign language.... Chimpanzees also demonstrate self-awareness, recognizing themselves in mirrors and photographs and on television, and have the capacity to reflect on their behavior. They manifest a capacity for empathy, are attuned to the experiences and emotions of others, and imitate and emulate others.... They behave in ways that reflect moral inclinations ... and demonstrate compassion and depression when a member of their community or familial group dies .... They also have a cooperative social life ... engage in imaginary play, and display a sense of humor ....

Therefore both *Stanley* and *Lavery* categorically rejected the demand for personhood of chimpanzees, which are argued to be closest to humans in terms of appearance and of some basic human attributes. Both courts reinforced that a legal person must have the capability of rights and duties, which requires the ability to properly understand and follow the commands of law, and that no derogation from this critical need is currently permissible in legal domains unless any statutes specifically provide otherwise. The NY-SC further confirmed, no any attributes of human beings (as identified in the above quotation of scientific evidence on chimpanzee) other than being capable of rights and duties, nor the look-like physical appearance of any 'things', is a determinant in deciding the legal personality of any entities. We can now look to the position of robots.

## 6 Industrial robots as a potential legal person

A robot as a possessor of artificial intelligence (PAI) is said to have five attributes: (1) the ability to communicate with others; (2) internal knowledge<sup>22</sup>; (3) external or outside world knowledge<sup>23</sup>; (4) some degree of intentionality<sup>24</sup>; and (5) some

<sup>22</sup> Some knowledge about themselves—what they need, what they think etc.

<sup>23</sup> Awareness of the outside world, past experience etc.

<sup>24</sup> The ability to act towards achieving specific goals.

degree of creativity.<sup>25</sup> Despite having all these, robots are presently recognised as a product or property at law (see Bertolini 2013; Sexton et al. 2010; Hubbard 2014). Floridi (2009) compares robots with tools which are no different from hammers. However, in view of the above attributes, some commentators are arguing for partial (quasi) or full-fledged personhood of these machines.

Asaro (2007) proposes a concept of creating ‘quasi-persons’ for robots, which will enjoy only partial rights and duties. Solum (1992) argues for a ‘borderline status’ though indecisively. He critically analysed the personhood of a PAI relying on two different tests: (1) whether a PAI can serve as a trustee; and (2) whether a PAI can be granted the rights of constitutional personhood. He has provided two scenarios for these two tests and has discussed potential objections that may be raised against a PAI’s personality claim (Solum 1992). Regarding the first test, he identified two objections: the reasonability objection and the judgment objection. Three different potential objections have been discussed in relation to the second test: a PAI is not a human; the missing-something argument; and a PAI ought to be property.<sup>26</sup> Having addressed all these potential issues, Solum could not firmly conclude that a PAI be granted legal personality. Rather he has argued for a borderline status in some way, pointing out reasons for hesitation and uneasiness surrounding the personhood, even against this new approach (Solum 1992). However, he has clearly mentioned that ‘thinking about personhood for a PAI forces us to acknowledge that we currently lack the resources to develop a fully satisfactory theory of legal and moral personhood’ (Solum 1992). Quite logically, Solum (1992) finally concludes in favour of the ‘rights and duties’ construct of legal personality.

It should be noted that while arguing for a borderline status, Solum refers to the behavioural aspect of these machines and submits that they ‘behaved the right way and if cognitive science confirmed that the underlying processes producing these behaviors were relatively similar to the processes of the human mind, we would have very good reason to treat an AI as persons’ (Solum 1992). As noted earlier, this point had been strongly raised and considered carefully by the NY-SC in *Stanley* in 2015, following credible evidence in favour of chimpanzees’ personality, and it did not succeed (*Stanley* 2015). It means we are not finding any compelling reasons for robots’ legal personality in this argument.

Hallevy (2010a, b) seems to be a frontrunner in soliciting the world for robots’ full personality, based mainly on an analogy between robots and corporations with respect to criminal liability, though he has sometimes compared robots with animals as well (see Hallevy 2010a, b). The gist of his (Hallevy 2010a, b) arguments is, in his own words:

Why should AI entities be different from corporations? AI entities are taking larger and larger parts in human activities, as do corporations. Offenses have already been committed by AI entities or through them. AI entities have no soul, and some AI entities have neither body nor soul. Thus, there is no

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<sup>25</sup> For details of these attributes, see Schank (1987).

<sup>26</sup> Discussions of these arguments and objections at some length have been avoided in order to keep this piece in a manageable size. For details, see Solum (1992).

substantive legal difference between the idea of criminal responsibility imposed on corporations and on AI entities. It would be outrageous not to subordinate them to human laws, as corporations have been. ... What else is needed?

While we disagree with the concept that robots have committed offences in the true sense, the above quoted assertions implicitly deny or plainly overlook the fact that any punishment imposed on a corporation effectively punishes human beings behind it (managers and/or owners). Likewise, this article advocates punishing individuals whose fault, if any, caused the robot's malfunction contributing to harm sustained by humans. To the best of our understanding, Hallevy's submissions in two of his articles (Hallevy 2010a, b) and in his book titled *When Robots Kill: Artificial Intelligence under Criminal Law*—strongly criticised by Charney (2015),—contain fundamentally the same arguments in favour of robots' criminal liability which entails separate legal personality. He has endeavoured to demonstrate that robots have the ability to commit *actus reus* of different types of offences with the requisite negligence and subjective *mens rea*, and therefore the machines themselves should be punished, and Hallevy argues that the objectives of punishment can be achieved by punishing these machines (Hallevy 2010a, b; Hallevy 2013). An analysis of the constituent elements of different types of offences, along with the objectives of punishment, a huge task by itself, obviously falls outside the scope of the present article, which aims to be confined to the attributes of legal personality alone. However, interestingly, he has recommended imposition of criminal liability on robots without having to justify their legal personality anywhere in his articles apart from superficial comparison with corporations (Hallevy 2010a, b; Hallevy 2013). While a separate initiative is intended to be undertaken to critically analyse Hallevy's claims about robots' physical and mental capabilities and the justifications for applying human punishment to machines, from our present perspective there is evidence that industrial and social robots are still a long way off from attaining such human capabilities (see Weng et al. 2009; Demaitre 2016). Sartor (2009) asserts that 'the substitution of intelligent machine for humans in creative tasks is very far away'. Further to those claims arguing robots' lacking of the requisite capability, Solum (1992) iterates that robots do lack several critical attributes of personhood, such as, intentionality, desires and interests, and therefore they lack the prerequisites laid down for attributing criminal liability.<sup>27</sup> All these are relevant to the commission of *actus reus* with *mens rea*. For example, an act constituting *actus reus* requires 'a volitional bodily movement' exercising power of will (Terry 1916), which cannot exist in an entity that lacks, intentionality, desires and interests. Vladeck (2014) mentions that the current law is not necessarily equipped to deal with the incidents in which injuries will be caused by malfunction of such machines in the absence of a principal directing the unlawful acts.

<sup>27</sup> Although the notion of BDI (Belief-Desire-Intention) plays an important role in Multi Agent Systems (Rao and Georff 1995), these terms have a very technical meaning in that context, which does not entirely correspond to that intended by Solum.

Therefore, robots are still being justifiably treated as ‘products’ for the purposes of liability (Bertolini 2013). Some commentators suggest that even if we compare robots with corporations, with respect to rights and responsibilities, a separate set of laws would be needed for robots (Weng et al. 2009). In contrast to Hallevy, they (Weng et al. 2009) validly point out that even if robots are ever held responsible for their actions, a major issue will be determining punishment. They raise doubts about the effectiveness of applying human punishment to robots, and refer to Asaro who utterly denied the usefulness punishment claimed by Hallevy (Weng et al. 2009). Charney (2015) has unequivocally denied Hallevy’s arguments regarding robots’ physical and mental capabilities with reasons, and so also the justifications for applying the conventional criminal punishments developed for and applied to humans.

In anticipation of creating fully autonomous machines in the future, Vladeck (2014) advocates robots’ personhood for civil law purposes at some point, by arguing that the ascription of personality would resolve the agency issue because the machines themselves will become principals in their own right and then self-insurance will be required in order to meet any legal obligations arising from the damage caused by their conduct. He then suggests that a broader range of ‘audience’, including the owner of the faulty machine, will participate in funding the insurance (Vladeck 2014). These arguments seem self-conflicting in that when the machine will be a separate person, why should ‘other persons’ pay for the insurance of robots? Then a counter question may be raised as to who pays for the corporate insurance. The answer would be the corporation itself, which is *made up of human beings* through whom the entity operates as it does not have any physical or intellectual ability to do anything whatsoever without its human agents. This is a critical point where machines *made by humans* differ absolutely from corporations. Quite consistently, Bertolini (2013) argues in respect of civil liability that even if a separate personality is attributed to a software agent, it does not make any difference with respect to liability because the same humans or corporations standing behind it will still have to bear the liability unless robots earn revenue from their operation.

Having shown the aforesaid rebuttals of Hallevy’s solicitation for robots’ personhood, we consider that no further discussion of elements of crime is warranted in this article to determine robots’ personhood attributes. Instead, if we turn to our requirement of the capability of rights and duties, robots are unlikely to meet the judicial interpretations of this essential requisite, given that they are human-made products with limited self-control as programmed to date, particularly those used in industrial and social sectors. Other human characteristics as found in chimpanzees, even if they are present in robots, will not help much in conferring legal personhood on these machines as those were rejected by the NY-SC in *Stanley*. The arguments for corporate personality may apply to idols’ personhood, as their interests are attended to by humans and any religious devotion can be expressed only by human beings in an acceptable manner, but the same rationales do not apply to robots and chimpanzees. Rather, the latter two, robots and chimpanzees, may be compared to each other to some extent, in terms for example of temperament, ability to act, but those are insufficient for separate personhood as decreed judicially. It could also be argued that an idol can be constructed with a

physically unique appearance as an art, and can therefore be bodily destroyed as well. These features of an idol may equally apply to robots. However, they are, as artefacts, just objects, therefore are not directly subjects of legal rights and duties. Referring to robots as artefacts, Leenes and Lucivero (2014) emphasise ‘they do not have legal rights and legal duties and they cannot perform legal acts’. Nevertheless, as alluded to earlier, a Hindu idol is recognised as a legal person clearly because of its being a juristic person that distinguishes it from a robot.

As Jaffe J points out in *Stanley* (2015), referring to rights and duties for the purposes of legal personhood, creatures are categorised into two: either a legal person or not (‘all-or-nothing’ fashion). If we give due consideration to the foregoing discussion of legal personality in respect of corporations, idols and chimpanzees, we can logically infer that robots, as a *prima facie* case, should not be granted personhood, precisely because they do not meet the fundamental tenets of such legal recognition as is inextricably linked with rights and duties. Through this link, personhood is generally attached to human beings, and although law recognises personality of corporations in all legal systems, and of idols in some jurisdictions, these latter two are juristic persons composed of human beings one way or another, and they cannot do anything without their human agents. Therefore, the rights and duties relevant to their personality refer basically to those of humans behind them, which stands in stark contrast to the advocacy for robots’ personhood. When we argue for robots’ personality on the basis of artificial knowledge, or ability to make independent decisions of their own, they still cannot satisfy the personhood attributes as interpreted by both the judiciary and academia. Chimpanzees had all of these attributes which are argued to be present in robots; nonetheless the repeated appeals for the animals’ personality have failed mainly due to their inability to perform duties. Hence any move to obtain robots’ personality is arguably destined to be unsuccessful at this stage. Therefore we can conclude that robots are yet to be competent to have independent personality.

## 7 Conclusions

The determination of personality in order to identify the subject of law is the foremost requirement of a legal solution to any dispute, because a law can be broken by its ‘subjects’ alone. Levy, like many others, predicts that robots will be found in the majority of households by the end of the twenty first century (Weng et al. 2009). Meanwhile, robots are being used in their millions, and have already proved sometimes dangerous, causing significant amounts of harm. The personality of robots has thus been a critical concern for many countries around the world.

The proponents of robots’ personality rely basically on the personhood of corporations, ignoring the fundamental consideration that corporate personality is essentially a symbol of people standing behind the entity. The rights and duties of a corporation resemble those of individuals who own and manage it, as alluded to earlier; this is where the justification for corporate personhood lies. On the other hand, the rationale for the recognition of idols’ personality is akin to that of corporations in that idols’ rights and duties are attended to by their managers or

custodians, who are human beings. Thus robots are not comparable with either of these two recognised legal persons. Rather, these machines can be better compared to animals in terms, for instance, of so-called autonomy, self-awareness, or self-determination, though the latter may be more autonomous compared to the former; and they are different by nature—one is a human-made product, whilst the other is a living animal. However, they are again similar, as both of them are regarded as property and thus are mere ‘objects’ of law, rather than ‘subjects’. Leenes and Lucivero (2014) reinforce that from legal perspective, robots are ‘treated as tools and it is always a human being that is legally responsible for the robot’s actions and hence responsible for ensuring that they operate within the boundaries of the law.’

Autonomy and self-determination are not regarded as foundations of conferring legal rights on any entity (Stanley 2015). The NY-SCAD in *Lavery* reaffirmed that rights cannot be recognised in isolation from societal considerations, and thus granting legal rights has historically been attached to the imposition of social obligations and duties (Lavery 2014). As a member of a society, everyone should be subject to rights and duties in order to live in an orderly manner. This subjection requires a being to have the capability of these two attributes. Principles of social contract thus warrant reciprocity between rights and duties (Lavery 2014). Pursuant to this view, rights of persons are recognised in exchange for an express or implicit agreement from them to submit to social duties (Lavery 2014). A right is attached to moral agency and to the ability to shoulder social responsibility in exchange for that entitlement (Lavery 2014). According to Bryson (2010), ‘calling a robot a moral agent is not only false but an abrogation of our own responsibility’.

The capability of rights and duties is therefore the sole attribute that is exclusively considered by courts in determining legal personality of any entities, in the absence of any succinct statutory provisions defining personality of any beings. Both chimpanzees and robots lack this critical attribute as demonstrated previously.

Industrial and social robots have been empowered to do different types of acts for us. In doing their jobs, robots have already malfunctioned resulting in enormous harm. The machines might have gone beyond their programmed functions for some reason, such as internal defects in manufacturing, or operational mistakes at some stage, or a plausible reason that could never be detected. In the event of not finding any fault or scientific reason for robots’ malfunction, the resultant harm should be redressed under a mandatory insurance system. Otherwise, we recommend that legal persons from either or both of the supply and user sides of the faulty robots be held liable for the harm in question, depending on the cause of their wrongful conduct and the corresponding involvement or fault of the legal persons (corporations and humans) in a given case. Nugenborg, comparing robots with pets, advocates owner’s liability (Weng et al. 2009; see also Leenes and Lucivero 2014), while others prefer manufacturers’ liability under the product liability regime (see Bertolini 2013). Liability is, for a rational being, an incentive, rather than a deterrent, in the sense that it inspires fear in wrongdoers, contributing to compliance with law and to the resultant prevention of harm (Allen 1931). Granting legal personality to robots may not be a panacea; rather it may turn out to be Pandora’s box, if we transform the machines to our masters: as Smith (1928) commented, ‘[l]egal personality is a good servant, but it may be a bad master’. The robots’



personality could be that ‘bad master’, as recently Stephen Hawking, like many others, has given an alarming warning that artificial intelligence could end humankind (Cellan-Jones 2014). The personality in question may thus exacerbate the dangers by exonerating humans from liability and thereby diluting the effectiveness of deterrence. Moreover, robots do not as yet meet the requirements of personality, and we also need to think about the query and concerns expressed by Sartor (2009) in relation to robots: ‘Shall we delegate so much to them, and become so dependent on them that we will lose our ability to think and act on our own?’ In response, we may concur with Bryson’s view that ‘we are obliged not to the robots, but to our society. We are obliged to educate consumers and producers alike to their real obligations with respect to robotics’ (Bryson 2010).

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