Asian Journal of Social Science Studies; Vol. 7, No. 5; 2022
ISSN 2424-8517 E-ISSN 2424-9041
Published by July Press

Analysis of Whether Artificial Intelligence Should Have Legal Status

Xun Pang[1]

[1] School of Law, Beijing Institute of Technology, Beijing, China

Correspondence: Xun Pang, School of Law, Beijing Institute of Technology, Beijing, China.

Received: May 1, 2022 Accepted: May 19, 2022 Online Published: May 26, 2022

doi:10.20849/ajsss.v7i5.1168 URL: https://doi.org/10.20849/ajsss.v7i5.1168

Abstract

The introduction of artificial intelligence in industry and society will revolutionise the current social landscape and, while having the potential to significantly improve welfare and quality of life, will also face a number of technical, industrial and regulatory challenges. The development of artificial intelligence will revolutionise the current structure of society and will bring with it a number of regulatory challenges arising from a legal framework that is not yet ready. To accommodate this reality, machines with limited memory, machines with a theory of mind and machines with self-awareness should be considered as legal entities separate from their owners and users. This paper discusses the rationale for this conclusion and analyses whether AI should have property rights among the rights and obligations it should have once its legal status is established.

Keywords: artificial intelligence, legal status

1. The Social Context That Led to the Discussion

When asked about the future, the forward-thinking Elon Musk listed the internet, sustainable energy, genetic reprogramming, planetary life and artificial intelligence as the "five" key areas that will impact humanity and break our standards of living. The Internet and sustainable energy are currently in advanced development, while the remaining three items have yet to be mastered. However, there is no doubt that a new industrial revolution is on the horizon and we are currently experiencing the calm before the storm. Over the past few years, the innate curiosity of mankind is rapidly turning this fantasy into reality. With the number of patents filed for robotics increasing rapidly each year over the last decade, the technology industry of artificially intelligent robotics is growing rapidly. (Zhang, Y. C., 2019) Artificially intelligent robotics will increase efficiency and thus save costs, and increase productivity while reducing error rates through more accurate, high- quality and uninterrupted work performance. (Li, J., Li, R., Xu, Y. M., Yang, S. J., & Sun, K.-Y., 2020) In addition, machines can work in hazardous conditions without injury or fatigue, increasing overall safety in the workplace. Thus, at a societal level robots will contribute to the advancement of human society in several key areas, such as transportation, healthcare, food production, etc. (Qin, L. (2018)

While robotics and artificial intelligence may, in theory, enable humanity to fulfil its ultimate quest for prosperity, the path that currently separates us from the goal of prosperity is long and murky. Like other major changes in industry, this one will bring with it a number of challenges that we will need to overcome. With the birth of artificial intelligence, humanity is about to enter uncharted territory and tread a path that has never been travelled before.

The coming industrial revolution in artificial intelligence has the potential to significantly improve social welfare. At the same time, its arrival shows a great deal of uncertainty in terms of its consequences and impact on industry and society, the only thing that is certain is that any class will be affected. In any case, the AI revolution seems inevitable, and it is foreseeable that it will challenge humanity in unprecedented ways. (Jiang W.-S., & Li, B.-J., 2020) And the trend in AI is its increasing autonomy, when AI robots begin to operate and act independently without human intervention. (He, Z., 2016) What will be the responsibility for their actions, and what will be the attribution of their creations. Do we then need to affirm their personality and do we need to restrict their behaviour? Specifically, one of the regulatory challenges that legislators will face is to reform the legal framework to accommodate the AI subjects that exist in society and in everyday life. (Yuan, B., 2019)

2. Definition of Artificial Intelligence

The concepts of robotics and artificial intelligence have different meanings. While it is common to associate robots with walking and talking machines, this association may be more misleading today. For working

purposes, the definition of artificial intelligence includes, but is not limited to, computer-coded software and programs that can make decisions autonomously, and associated physical machines. (Yu, Z.-L., 2017) There are various definitions of artificial intelligence, some of which relate to the ability to perceive and act on the environment, while others imply the possession of cognitive functions generally associated with human intelligence, such as learning and problem solving. In the author's view, the most fundamental distinction between artificial intelligence and ordinary machines or algorithmic programs is whether they can do the job without relying on specific human instructions for specific problems.

In nature, intelligence exhibits varying degrees of intensity. Take a pet dog for example: although it cannot reason or use logic, and its problem-solving abilities may be limited, it can learn how to respond to certain commands, such as retrieving a Frisbee thrown by its owner or rolling on the floor. The same logic applies to the field of artificial intelligence: it may manifest itself with greater or lesser intensity. In general, manifestations of artificial intelligence can be divided into four categories: "reactive machines", "machines with limited memory", "machines with a theory of mind" and "self-aware machines". (Wang, D.-H., 2014) Reactive machines consist of systems that operate in a purely reactive manner; they have no memory and no ability to use past experiences to influence current decisions, and therefore behave in the same way every time they encounter the same situation. They have no concept of the world, which means they cannot go beyond the specific task they have been set. Google's AlphaGO and IBM's Deep Blue are examples of such machines.

Machines with limited memory are those that can observe specific key objects by identifying them and monitoring them over time. (Gao, H. F., Zhao, W. J., & Wu, S. H., 2017) These observations are added to the machine's pre-programmed representation of the world and thus inform their decision-making process. These machines have only a relative amount of memory or memory to make decisions and perform appropriate actions. For example, a self-driving car can observe the speed and direction of other vehicles and use this information to decide when to change lanes to avoid cutting off another driver or being hit by a nearby car.

The third category is machines with a theory of mind type, named after a concept in psychology that describes the thoughts and emotions that people, creatures and objects in the world may have that affect their own behaviour. Machines belonging to this category will be able to form representations of that world and other agents and entities, adapting their behaviour according to their understanding of the feelings, expectations, motivations and intentions of others.

The last type of self-aware robot is the final stage of artificial intelligence, with its ability to build, and form, systems of self- representation. (Zhai, Z. M., & Peng, X. Y., 2016) In this stage, machines will be conscious, sentient and able to understand the feelings of others. Machines not only know what they want, but are able to understand what they want and why they want it.

3. Shortcomings of the Current Legal Framework

As discussed earlier, artificial intelligence has been slowly introduced into society and the rapid trends in AI are becoming clearer and clearer. (Yuan, Y., Wu, C.-N., & Li, Q.-Y., 2020) It is therefore necessary to consider whether the current legal framework is ready to adapt to this reality or whether the current legal framework needs to be adjusted. In order to better express this question, the following scenario is presented for consideration.

When A's business needs supplies, he spends time contacting known suppliers to negotiate supply contracts. To make his business more efficient, A uses a system that monitors his company's stock levels and negotiates supply contracts by comparing the terms of different suppliers when stock is low, and then places an order with one of them. Now suppose that supplier B uses a system that accepts orders she receives by monitoring her inventory and only when the inventory level is sufficient for execution. On a particular day, A's system places an order with B and B's system agrees to fulfil it.

These systems are agreed before A and B are aware of the decisions it makes. How does the current legal framework accommodate this situation? Are A and B faced with an enforceable contract? A conservative approach might answer that the machine cannot be a party to the agreement and therefore the contract would not exist. However if we go on to discuss the example just given, consider that on the same night A realises that he is running short of goods A logs onto his computer and finds that the system order has been accepted by supplier B. A ignores whether B is using a system to manage the orders. Should A have a reasonable expectation that B will supply these goods?

If B confirms the order herself, will B be exempt from execution because the order was placed by her system and not manually accepted by her? Conversely, if B had accepted the order manually, would she have been exempt

from execution because the order was placed by A's system? Or is B's non-enforcement justified because both parties to the communication are systems, despite the fact that A ignores the existence of B's system?

In any case, the answer seems to be no, even for the most conservative of people. A will have a reasonable expectation of the goods to be supplied and B will be obliged to perform. So what should be the regulation under the existing legal framework? What about the institution of that contract? One possible approach would be to see the system as merely a contractual instrument, in which case the contract would be considered as a direct agreement between A and B. The advantage of this approach is that it can be easily introduced into the legal framework without any significant modification, whether through legislative, case law or doctrinal considerations. However, it relies on the assumption that any decision made from a computer actually emanates directly from its controller. The autonomy that the system may have is completely ignored. Furthermore, by assuming a consensual agreement between the parties, who may not even be aware that the contract has been concluded or that another party exists, this approach deprives the formation of a contract of one of its most important elements: consensual agreement. (Deng, Z.-B., 2013)

An alternative approach in this case would be to equate the actions of the system with those of the employee. Under this approach, the contract would be signed by A's legal representative and one of B's legal representatives. It makes no difference to the other party whether the employee is operating the other party's computer or whether the computer is operating itself. The advantage of this approach is that it does not rely on any presumptions and does not distort the principles of contract formation. However, this approach implies the adoption of a legal entity that favours treating the systems of A and B as separate from their owners and users. That is, it gives the system a personality.

4. Whether the Subject of Artificial Intelligence May Have the Status of a Legal Subject

It is clear from the preceding discussion that as artificial intelligence develops, some legal issues will surface and the legal framework will inevitably need to adapt. (Yuan, Z., 2017) The author argues that "the more autonomous robots become, the less likely they are to be regarded as simple tools in the hands of their owners. And, while in the examples provided the matter is contractual in nature, similar issues may arise in other areas, and ordinary liability rules may not be able to directly address the new situations that will eventually emerge. (Sun, H.-T., & Guo, Y.-Y., 2020) "It is therefore becoming increasingly urgent to address the fundamental question of whether AI robots should have a legal status. This is because it guides the subsequent legislative direction for the legal regulation of AI robots. Generally speaking, the need for legislation includes the stability of the legislative premise and the consistency of the understanding of the object of the legislation. The basic premise of legislation is the stability of things. To legislate on things that are in transition or in transition, to try to solidify the inherent stability of things through the external stability of man-made laws, is a harm to both legislation and things." (Yu, Z.-B., 2014) Therefore, legislation on AI is not yet on the agenda, as it is in a developmental stage. However, the question of whether AI subjects are morally qualified to be considered as independent legal entities can be considered in advance, in order to provide some reference for future legislative work.

In the context of the question of whether AI subjects are morally entitled to be considered as separate legal entities.

The following reflections are needed before we can discuss the issue of legal entities. That is, which realities are morally entitled to be considered as independent legal entities and what characteristics do they have to support this consideration? In the author's view, they are characterised by the ability to act autonomously and by subjective experience. As for the subjects of artificial intelligence, the same principle applies: as long as they possess the capacity to act autonomously and subjective experience, they are morally entitled to a separate legal status. (Cheng, S.-M., & Gao, S.-Y., 2020)

The autonomy of a robot can be defined as the ability to make decisions in the external world and to implement them, without external control or influence but according to self-modified or self-created instructions. (Xia, Y. H., 2020) Of the four types of artificial intelligence, machines with theory of mind and self-awareness undoubtedly have this property, but reactive machines do not make autonomous decisions, and this property should be further confirmed for machines with limited memory. However, since memory-limited machines are able to add their own observations to the decision-making process, it should be assumed that they are capable of making autonomous decisions. And a person, animal or machine will have a subjective experience in forming a representation about itself, which will influence its sense or perception of reality. As for the capacity for subjective experience, which is profoundly linked to self-consciousness, it can only be reached by a sentient machine.

Machines with self-awareness are therefore morally entitled to a legal status of their own. As for machines with limited memory and machines with a theory of mind, although they can act autonomously, they lack sentience and they cannot have subjective experience. Reactive machines also lack sentience and are therefore also excluded. Therefore, if any of the latter three types of artificial intelligence are to be considered as separate legal entities and given their own legal status, this choice must be based on considerations other than morality.

One of the other considerations may be that the law must reflect social reality. Advances in technology clearly indicate that "in the near future, more and more transactions, both commercial and non-commercial, will be conducted by robots. As this practice becomes more common in business, people may begin to treat robots as if they themselves were involved in transactions, rather than just as an extension of another legal person. If society begins to see AI agents as autonomous actors and counterparties to transactions, in the same way that society now sees corporations as legal entities distinct from their members, then this social reality will put pressure on the law to give legal effect to this social perception".

However, we should make a distinction between types of AI. While this basic principle applies to artificially intelligent agents capable of making autonomous decisions, decisions made by reactive machines are merely a reflection of the input provided by their designers or owners. (Zhai, Z. M., & Peng, X. Y., 2016) For this reason, it is assumed that the legal system can tailor a separate legal status for machines with limited memory, machines with theory of mind or self-awareness, but the same reasoning does not apply to reactive machines, as there is no good reason to separate their behaviour from that of their respective designers or users.

5. Whether the Subject of Artificial Intelligence May Have Property Rights

So if AI agents are to be considered as separate legal entities and a specific legal status is created for these agents, it also means determining whether this status should be accompanied by a specific set of rights and obligations. (Wang, S.-Z., 2009) If the answer is yes, what are these rights and obligations? The question that needs to be addressed is whether an AI agent can own property, as AI can now create valuable works autonomously, but the ownership of the property from the sale of the work has not been determined. Should an AI agent own property? Many people's initial reaction to this question may be one of scepticism. Why would a machine need to own property? Although some of the first reactions to this question are a little strange, it is worth thinking about it in more depth.

AI subjects are now able to create works that can generate revenue.

On the 26th of June the Grey Area Art Foundation auctioned a collection of 29 paintings by Google's Deep Dreams. The most expensive artwork won the bid for $8,000. And, with the development of artificial intelligence, the creation of complex intelligence by these intelligences is expected to increase even more. (Xu, M.-Y., & Tan, L., 2018)

In order to analyse whether an AI subject ultimately has a moral right to own property, the author argues that an AI body is morally entitled to own property if it is capable of having a subjective experience of the given property, that is, if it can feel that it is the owner of that property, i.e. if it can recognise that it is entitled to own it according to the prevailing social and legal standards that lead to ownership of property. Of the four types of AI robots discussed by the author, only machines with self-awareness can do this.

But if artificially intelligent agents other than self-aware machines cannot own property, who owns their creations? A case can be made in favour of the designer. They do design the agents that design a given creation.

Shouldn't this make them indirect creators of the creation? But, on the other hand, could it be argued that IBM's Deep Blue designers indirectly beat Kasparov in a game of chess? If the IBM Deep Blue designers had been facing Kasparov himself, the chances of Kasparov beating them would have been high. Applying the same logic, the designers of Google's Deep Dreams may not have had the skills to paint the auction canvases. Furthermore, with the proliferation of AI agents capable of creating objects susceptible to ownership, it is unrealistic to expect designers to be able to defend their property claims, as in most cases they will not even be aware of their existence, and in fact it seems more practical and meaningful to attribute ownership of the agent's creations to the agent's owner.

In summary, the result does not seem to be a good reason for recognizing property rights in machines that are "reactive machines", "machines with limited memory", "machines with theory of mind". As for self-conscious machines, the author has not found a good reason for recognizing property rights in "reactive machines", "machines with limited memory" or "machines with theory of mind". As for self-aware machines, I believe that they can have property rights from a moral point of view.

6. Summary

The introduction of artificial intelligence into industry and society will revolutionise the current social structure, and the current legal framework does not respond directly to these challenges. (Wang, Q.-H., 2019) As time goes on, the more autonomous AI become, the less likely they will be considered mere tools. By analysing the characteristics of different types of AI, at the level of moral and social reality, this paper proposes that "machines with limited memory", "machines with theory of mind" and "self- aware machines" should be considered as "machines with limited memory", "machines with theory of mind" and "machines with self-awareness". "should be considered as legal entities separate from their owners and users. However, when it comes to reactive machines, there are no positive arguments to justify similar considerations.

The fact that they are regarded as separate legal entities does not mean that they are automatically endowed with rights. As far as property rights are concerned, there is no good reason why reactive machines, machines with limited memory, or machines with a theory of mind should have property rights. This is because their perception of the ultimate right or will they have or are entitled to have is merely the result of being programmed. It is therefore more appropriate for the owners of these machines to own their respective creations. However, if humans are able to create self-aware machines, then it would seem that these machines are entitled to legal recognition of rights, whether the right to own property or basic rights similar to those of humans, which should be properly adapted.

References

Cheng, S.-M., & Gao, S.-Y. (2020). Should intelligent robots have the status of legal subjects?. *Journal of Xi'an Jiaotong University (Social Science Edition), 40*(1), 115-122.

Deng, Z.-B. (2013). Research on contract formation. *Wuhan University*.

Gao, H. F., Zhao, W. J., & Wu, S. H. (2017). Current status of research on humanoid robotics. *Machine Tools and Hydraulics*, *45*(21), 164-172.

He, Z. (2016). Towards the Era of Artificial Intelligence - A Discussion of the Strategic Direction of Artificial Intelligence in the United States and the Implications for China's Artificial Intelligence Strategy. *E-Government*, (12), 2-10.

Jiang W.-S., & Li, B.-J. (2020). On the impact of artificial intelligence technology on the development of human society. *Journal of Xi'an University of Finance and Economics, 33*(1), 23-29.

Li, J., Li, R., Xu, Y. M., Yang, S. J., & Sun, K.-Y. (2020). Current status and prospects of industrial artificial intelligence and application research. *Journal of Automation, 46*(10), 2031-2044.

Qin, L. (2018). Research on the Impact of Artificial Intelligence on Human Society. *Northeast Normal University.*

Sun, H.-T., & Guo, Y.-Y. (2020). Rethinking and reconstructing the civil legal liability system of artificial intelligence robots. *Guangxi Social Science*, (1), 105-111.

Wang, D.-H. (2014). Research on the ethical issues of robots. *Nankai University*.

Wang, Q.-H. (2019). The path of legal regulation of artificial intelligence: A framework discussion. *Modern Jurisprudence, 4*1(2), 54-63.

Wang, S.-Z. (2009). Governance theory and its applicability in China. *Zhejiang University.*

Xia, Y. H. (2020). Creativity and Autonomy of Artificial Intelligence - On Dreyfus' Critique of the New School of Artificial Intelligence. *Philosophical Dynamics*, (9), 112-120.

Xu, M.-Y., & Tan, L. (2018). On the Protection of Neighboring Rights of Artificial Intelligence Creations - Theoretical Proof and Institutional Arrangement. *Comparative Law Research*, (6), 42-54.

Yu, Z.-B. (2014). The theoretical basis of the feasibility of legislative necessity and the improvement of China's legislation - the perspective of English legislation. *Journal of Law*, *35*(11), 55-63.

Yu, Z.-L. (2017). An overview of the development of artificial intelligence technology. *Journal of Nanjing Information Engineering University (Natural Sciences Edition), 9*(3), 297-304.

Yuan, B. (2019). Research on anti-monopoly in the field of big data. *Shanghai Jiaotong University*.

Yuan, Y., Wu, C.-N., & Li, Q.-Y. (2020). Analysis of the international competitive situation of core technologies in artificial intelligence industry. *Journal of the Chinese Academy of Electronic Science*, *15*(11), 1128-1138.

Yuan, Z. (2017). A review of the limited legal personality of artificial intelligence. *Oriental Jurisprudence*, (5), 50-57.

Zhai, Z. M., & Peng, X. Y. (2016). How "strong artificial intelligence" will change the world: A technological leap and ethical foresight of application of artificial intelligence. *People's Forum - Academic Frontier*, (7), 22-33.

Zhang, Y. C. (2019). Employment effects of artificial intelligence and robotics and suggestions for countermeasures. *Science Management Research, 37*(1), 43-45.