

Robot in Health Care Services: Moral Judgment for the Existence of Artificial Intelligence

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Abstract: This paper focusses on the usage of artificial intelligence in the health care services, from the perspectives of ethical and humanitarian. In health care, the issue of using AI assistive technologies raises different perspectives. First, the use of technology-assisted by artificial intelligence is predicted to replace human care. Second, care assisted by AI technologies is not as good as social care. In other words, the issue is not about replacement but replaceability. This research adopts the ontology of Floridian information based, which is originated from ethical information theory. Using the hermeneutic phenomenology method, this study performs a systematic literature review. The research findings showed that the artificial agents in health care cause the reduction of the human position that creates social nervousness as a knowing subject. Based on this study, ethical regulation is required on artificial agent construction effort as a moral agent within the constellation of ethical actions in the information ecosystem.

1 INTRODUCTION

The discourse of artificial intelligence is widely discussed in the last decade. Discussion of this intelligent artefact dwells on the future, especially on its impact on human life. Is this artefact will bring significant benefits to humankind? Or its presence would bring disaster to humans? Questions and concerns about the future of AI are widely discussed by several countries, both national and supranational. Discussions were conducted generally discuss the opportunities and risks of the presence of artificial agencies is amid society. But of all these things, one thing for sure that AI is a high strength, an intelligence agency, which has been reshaping our lives, interactions, and environment (Floridi, 2018).

The diversity of meaning arising in connection with the phenomenon of AI causes differences in interpreting the existence of these smart artefacts. Floridi (2019, 1-2), at least, notice two things that need to be studied more deeply associated with AI development. First, the nature of the data is used by AI to support its performance. Second, the quality of the problem that AI can possibly solve. In this article, I will not describe both things more deeply.

Stahl and Coeckelberg (2016, 153) managed to summarize the main points of discussion and philosophical reflection about ethical and social issues related to intelligent artefacts, especially in the context of health. They at least look at three things to be a significant concern. First, a critical evaluation of the vision of intelligent technology and its implications on society and health care. In this section, Stahl and Coeckelberg see that the issue of the replacement of humans by robots enliven the discussion by questioning the possibility that robots and other technologies threaten social work? Besides, the chance of robots can provide quality work like humans that include emotions. Second, the idea of a takeover of the role of man by intelligent artefacts. The main issues addressed in this case are the issue of autonomy, the role and duty, moral agency, responsibility, deception and trust. Third, the problems have been widely discussed about ICT that involve human users, among other things: privacy and data protection as well as safety and avoidance of harm. This latter issue expressed by Asimov in Coeckelbergh (2010a, 235) about robot morality that gave birth to 'Laws of Robotics'.

The world community has undertaken precautions for treating AI technology that will be

used as part of human life. High-Level Expert Group on Artificial Intelligence (AI HLEG) has even managed to put together a guide in connection with efforts to develop an AI that bring benefit to humankind. There are at least three things highlighted by AI HLEG in the guide: [1] guarantee attempt to maximize profits with the presence of AI and also at the same time minimizing the risks of it; [2] ensures that the development and utilization of AI must be on the right track through a human-centric approach where AI should not only serve as a means but as a goal to improve human well-being; and [3] build trustworthiness for AI because humans can be fully confident and reap more benefits if they trust the technology (European Commission, 2018).

Moreover, a group of people in Europe who call themselves Atomium European Institute for Science, Media, and Democracy (Atomium EISMD) develop a forum named AI4People. The Forum is built to create an open discussion space to lay the foundations that contain principles, policies, and practices in building "Good AI Society". There are at least three important things are highlighted as the outcome of the Forum, namely: [1] the opportunities and risks of AI technology to uphold the dignity and human growth; [2] 5 principles that support the adoption of AI technology; and [3] 20 recommendations for stakeholders to be able to take advantage of opportunities, minimize and offset the risk, and respect the principles that can build Good AI Society (Floridi, 2018). The emergence of intelligence agency has developed a man's consciousness of the potential benefits and risks at the same time, both of which cannot be predicted early from the moment they were created. Therefore, efforts that can be done is to minimize the risk that impacts on humans because of the existence of AI.

This article discusses the position of AI amid a vortex of debate which predicted its existence could threaten human life. However, the discussion emphasized the use of AI in health care by using Luciano Floridi's information ethics binoculars.

2 LITERATURE REVIEW

Floridi (2013) information ethics is a 'new' ethical theory which focuses on the actions the recipient (patient) as opposed to the majority of existing methods of ethics which is precisely oriented towards moral agents. This information ethics is not to answer the question of how agents should behave, but rather to answer questions about what qualifies as the honourable recipient, namely objects that

deserve moral consideration or respect, and how different classes of distinguished recipients are treated.

Floridi (2013) defines a class of moral recipients by taking a radical view that everything in the world is an honourable recipient. That is, everything that exists deserves appreciation, although minimal. Floridi idea is beyond the classical anthropocentric position where moral receiver class includes only human, and outside the biocentric location and ecocentric with consideration where precise receiver class is composed of a living organism or ecosystem elements.

Floridi's ethical position is categorized as into centrism or infocentrism, where the main idea is not just humans or animals that deserve moral respect, but also inanimate entities. Floridi wants any moral agents behaviour should be guided by the fact that his actions could cause a negative or positive impact on the environment. Thus, it is not only the form of life that deserve respect and brings moral interest, but also everything that fits in that environment.

The idea was introduced when he published an article entitled "*Information Ethics: on the Theoretical Foundations of Computer Ethics*" on an international scale discussion in 1999. This article highlights the relationship between information and computer ethics. Shifting Floridi of computer ethics to the ethics of information based on the observation that the ethical issues that arise not only address the issue of how far computer challenged the morality of human action. But also the question of how now a person, not just a computer professional but throughout the policyholder, challenged by what called infosphere (Floridi, 1999: 38). This shift then obscures our view, through the mediation of ICT, on the meaning of life online where so far, we conceptualize as life has two sides, one is analogue, carbon-based, and offline and the other side of the digital, silicon-based, and online. So, a mix between human agents of evolutionary adaptation to the digital environment, and as a form of post-modern life is becoming increasingly unclear. Floridi (2013, 8) then call it as life experience in an online (online).

The fundamental moral claim about the ethics of information is that all entities that inhabit infosphere are an information object. Because of their status as objects of knowledge, all of the bodies are entitled to an intrinsic moral value, which means that they have a moral value that cannot be deprived of their own and therefore deserve ethical consideration and respect. The correct amount may be quite minimal but could be supplemented by other moral factors. This minimum moral value then is premised on the

argument that any information objects should develop itself, and other entities should not inhibit and eliminate each object. Therefore, by the minimum rights attached to the agent, then the agent should respect the information object as an end in themselves. In this context, the agent has a responsibility of stewardship towards infosphere overall, to contribute to the growth and maintain its sustainability by reducing entropy and not to increase it. Floridi (1999, 44) proposes a set of structured tasks towards infosphere, including jobs that may not cause, prevent and remove entropy from infosphere and promote the development of information and infosphere entity as a whole.

Thus, we can conclude that ethics Floridi's information ethics is based on the Four Formal Moral Principles. This ethics does not show concretely a moral action that should be done. In other words, information ethics does not provide material content about what a virtuous agent must do in a concrete situation.

3 METHODOLOGY

Paul Ricoeur's Hermeneutics Phenomenology methods used to understand the constellation of the existence of AI in the context of health care by referring to the idea of Luciano Floridi's information ethics. Reading of the text and AI phenomenon in the context of health care with this method is expected to bring interpreters at a better understanding of themselves (appropriation) through the process of negation dichotomy between the subjective dimension of the subject and the object objectivity. The interpretive activity includes four methodological categories, namely: objectivation through the structure, instantiation through writing, instantiation through the world of texts, and appropriation (or self- understanding).

4 RESULTS AND DISCUSSION

4.1 Robot as a Moral Responsibility

Floridi's information ethics wants to expand its moral judgment by including non-human entities (e.g. Robots, AI, information systems, etc.) as part of a moral centre. The basis of his argument is that this inanimated object is an honourable recipient and in certain circumstances can be a moral agent at a minimal level. Another basis of his evidence is that

the object of information, as are humans and animals. As such, deserves to sit alongside an animate entity within a moral framework.

The basis of Floridi's views is influenced by his knowledge that there is currently a rife of technological discovery activities which led to the birth of intelligent artefacts resulting from research conducted in the fields of neuroscience, bio-engineering, gene editing, and others with the support of ICT. The impact of this is the reduction of human dignity because people considered to have a moral equivalence with other information objects. Humans are no different from an artificial agent that has interactive capability, autonomous, and adaptation because they are equally intelligent. It was this reduction that became Floridi's foundation in developing his argument about the position of artificial agents.

His view is contrary to the current philosophical perspective in which non-human entities cannot possibly be the subject of responsibility. The issue only may be pinned on the man as the only being who has consciousness and freedom. Awareness is undoubtedly different from intelligence. Artificial intelligence agent may have equal or even exceed human intelligence. However, these agents have no knowledge that makes his actions could be qualified as a moral act. Floridi (2013: 110) also view that not all artificial agent is a moral agent, but some moral agents can be held accountable.

Thus, if a robot performs moral actions that deviate from what was programmed at the beginning, then the moral responsibility, if a beachhead of view Floridi, embedded on the robot. In other words, the designer or creator of the robot cannot be held liable for accountability, but only moral responsibility alone.

Floridi effort in expanding the classification of these moral agency marks a shift in the centre of the moral and ethical as well as build demarcation with anthropocentric because ethics so far have been based on moral considerations only on humans. However, when viewed more deeply, the information ethics of Floridi does not fully indicate separation from human centralization. Indeed, the reduction of human is seen as the centre of moral action. This reduction process has begun when biocentric ethics emphasizes its moral judgment on the value of life and suffering, where even the honourable recipients in this ethics do not always have to be humans. For example, land ethics focuses on the concept of moral recipients on the environment (non-human entities), where humans

need to consider how to treat them in an ethical framework.

The rejection of the exotic idea of Floridi come from various experts. One is Rafael Capurro that commented quite spicy. According to him, for what man creates, artificial agents are held responsible for their actions. Meanwhile, at this time, the earth which people live have packed filled with about 6 billion moral agents. Therefore, for what else we create millions or even billions of artificial agents? He reminded analogy of Ockham's knife, *entia non sunt multiplicanda sine necessitate*. Thinking about the possibility of artificial moral agents is not a realistic and rational alternative, at least in the light of what needs to be done and thought out beforehand. Furthermore, Capurro (2008: 171) has seen that the effort carried by Floridi is related to the epistemological and moral status of this digital agent, in fact only a repetition of the argument that occurred in the 1970s about artificial intelligence. By saying that any artificial agent is a moral agent, then the statement is simply to dilute the concept of morality.

4.2 Considering Robot as Moral Agents

The main problem in ethics is to treat the inanimate entity as a moral agent. Does this matter raise questions about whether it might create artificial intelligence that is morally responsible for his actions? The argument on this question is based on the capacity of technology that can solve several problems faced by humans, and even artificial intelligence can match human capabilities. This condition is the cornerstone of Floridi and Sanders idea. According to them, moral agents do not need to show free will, emotional or mental awareness. Then, Floridi and Sanders proposed the concept of morality without consciousness (mind-less morality) to avoid the above questions and concerns about artificial intelligence (Floridi, 2004: 351). This view would say that artificial intelligence, animals and the company can be considered as a moral agent. Floridi and Sanders called it a morality without awareness (mind-less morality). This concept of morality was built to strengthen further Floridi's view that to be a moral agent does not require the existence of awareness.

These claims are of course raises our doubts and questions on how might be software or computer system, which has autonomous character and programmed by the designer (human) to be able to "act" in a certain way, can be a moral agent responsible (accountability) for these actions. In

other words, Floridi and Sanders would like to say that designers and users, regardless of responsibility (accountability) of the moral agent. To explain this view, Floridi and Sanders uses the famous epistemological conception is Levels of Abstraction /LoA.

Floridi and Sanders believe that artificial agents can lead to crime, namely artificial crime. Both of them want to expand the existing classification of crimes, from moral evil and natural evil to artificial evil. The extension argument is based on the claim that the classification of moral evil or natural evil cannot explain all kinds of evil (Floridi, 2001: 60).

In strengthening the argument, Floridi presents some examples that show the artificial crime. For example, the analogy of an ambulance driver who brings emergency patients were stuck in traffic due to a mistake (error) of traffic lights. If a traffic jam is a common thing like in Jakarta, every day jammed, probably an ambulance driver could have chosen another route or send a helicopter ambulance. Therefore, the event cannot be said to be a crime. If it is a crime, if it means Floridi will blame the traffic lights? This does not make sense.

Meanwhile, a second analogy, the occurrence of a system error while surgery patients. It may be a human error. This means that the system developer as the person responsible for the sustainability of the system forgets to do adequate testing before the operation runs. To strengthen their claims, Floridi and Sanders stated that moral accountability could be embedded in "autonomous" software because of the software (although developed by humans), can learn and "change" its behaviour in ways that cannot be explained by the original developer. (Floridi, 2001: 62)

Seeing the thesis that non-human entities (for example, software) can be categorized as morally responsible agents, of course, it is entirely unreasonable at least until this moment. Floridi and Sanders would like to say that when someone uses a computer and then suddenly the computer has a problem, and then the person quickly blames the computer for the incident. This is considered as an attempt by the person to avoid responsibility for the mistakes that occur. Floridi and Sanders point of view is, of course, contrary to one purpose of developing information ethics which overcome the problem of depersonalization, and moral action agents do not understand the consequences of their actions. With this view, Floridi instead led to the depersonalization.

Floridi and Sanders' claim seems like an attempt to transfer human responsibility to non-human

agents instead of the developer and people who deliberately act carelessly, causing the wrong moral action to occur. It is hard to imagine, that people will blame an atomic bomb that exploded unexpectedly, where the bomb has the character as a moral agent (interactive, autonomous, and able to adapt).

Floridi and Sanders' argument that when this view is rejected will lead to a more significant increase in individual moral responsibility, it is illogical. Moreover, when related to their previous ideas where they claim that the main problem is humans do not see and understand the real consequences of their actions. However, at present, Floridi and Sanders claim that there is right to much moral responsibility on the "shoulders" of individuals so that it must be removed by putting it on the "shoulders" of non-human entities, such as computer software. The two views are opposite each other.

4.3 Robot and Health Care

Robot discourse used in health care was present at least more than a decade ago. The discourse is increasingly growing and developing rapidly since the emergence of intelligent artefacts that have interactive characters, autonomous, and adaptive, who later became known as artificial intelligence. AI and human allusion are what gave birth to the needs of more modern footing ethics because ethics that currently exist do not speak specifically about human interaction with these intelligent robots.

This discourse has also led to the pro-cons, especially related to the use of intelligent robots in performing health care activities. Robert and Linda Sparrow, for example, opposed the replacement of human nurses by the robot in elderly care because the robot is not able to meet the social and emotional needs of the elderly. According to him, this work can only be done through contact with humans (Sparrow and Sparrow, 2006). While, Coeckelbergh (2010b, 185) found a priori rejection and common like Sparrow and Sparrow is unacceptable because the existence of intelligent artefacts, of course, must be placed on its use in health care on a case-by-case basis.

Besides, the problem of the use of AI in health care is feared to leave the issue in the breach of privacy because the patient medical data can be accessed by the system and open opportunities others can view such data. Assurance that the patient medical data is not used for the benefit of others and the other party is still an issue today. Therefore, Coeckelbergh (2010b, 186-187) suggest that system developers consider the matter of privacy in the

design of the system and its use as well as follow AI technology regulations.

5 CONCLUSION

Ethical binoculars related to the existence of AI in the context of health care should be discussed more. Therefore, the presence of AI stores the potential to reduce the position of humans. Humans are no longer subject (anthropocentric); even human position is equivalent to other lifeless objects (info centric). The takeover of social roles by intelligent artefacts, especially those concerning issues of autonomous, roles and tasks, moral agency, responsibility, deception, and trust will occur if AI's existence is not adequately addressed. The interaction of AI and humans has the potential to threaten privacy, data theft, and even to the point of threatening human safety. Doubts about the existence of robots or AI appears because the current

AI has not been able to provide proper care where excellent treatment course requires interaction with humans who have social and emotional needs.

Moreover, doubts that AI can provide genuine care as is done by human nurses, raises the problem that AI assistive technology such as robots tend to give 'false' care so that 'cheat' human by making them think that they receive the real treatment.

Floridi ethical information's binoculars, although it is formal, it has managed to distinguish between moral agents who have the responsibility (responsibility) and moral agents who are held accountable (accountability). This view can clear up the issue of morality and law, both of which have been mixed up unconsciously. While on the other hand, this view also gave rise to controversy, namely that artificial moral agents can be subject to legal sanctions (accountability). Meanwhile, human moral agents are only asked for moral responsibility (responsibility).

With this ethics of information, a foothold is available that provides space for humans to think and renegotiate anthropocentric morality which is narrow and not flexible. This makes people aware that the problem of morality in the future will face challenges and problems that are more complicated than the past and present. Therefore, it requires a flexible ethic and broader scope.

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