IS ARTIFICIAL INTELLIGENCE INTELLIGENT? QUESTIONING THE STATUS OF THE INVENTED VIS-À-VIS THE INVENTOR

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Abstract
This paper presents an intriguing debate on artificial intelligence and the human person. Science has grown into an unpredictable parlance to the extent that its breakthroughs now re-make creation to reflect man's desires. This has led, for example, to the attempt to create machines that could work like more competent persons, such that these machines could be equated with human persons or considered as the human counterpart. By implication, the project of artificial intelligence seeks but one thing, that is, to make a 'prototype man' or an 'artificial man'. For, to grant the concept of artificial intelligence is to affirm, without any prejudice, the concept of artificial man. For this reason, this paper argues that there is nothing like artificial intelligence because it is too much of an exaggeration to think of machines that can do things men can do. It maintains that intelligence cannot be assigned to machines and machines do not possess intelligence. Rather, machines merely perform intelligent acts not as an ontological attribute but as an installed programme; hence machines are not intelligent in themselves. It concludes that intelligence is authentic and ontological to the human person.
Keywords: Artificial Intelligence, Human Person, Intelligence, Machine.

Introduction

Never in the history of man has there been such breakthrough in science as in the 20th and 21st centuries. This is a tribute to the tireless efforts of man down the ages. Scientists are now attempting to study the composition of the human brain with its functional system, in order to create machines that could work like more competent persons, such that these machines could be equated with human persons or considered as the human counterpart. This leads to the debate on and artificial intelligence. And the advocates of artificial intelligence have argued that there are machines which could be considered as intelligent because they can perform activities that a man could perform. According to Crasson and Sayre (1967, p.13), the whole debate on artificial intelligence was set in motion in 1948 when Norbert Wienner used the term "cybernetics" to describe the study of artificial intelligence. Subsequently, in 1950, the project of artificial intelligence became standardised when Alan Turing changed the question 'Can machine think?' to the question 'Is it possible to ascribe intelligence to machine that can perform as man?'

In the past, when you talk of a thinking being, your mind goes to man. But today, this quality of 'thinking' seems to have been given also to another being called artificial intelligence. Many advocates of artificial intelligence are of the opinion that machines share rationality, man's essential attribute, with man because machines have their own language as man and by virtue of their performance. Rationality is an intrinsic and essential nature of man. Hence the advocates of artificial intelligence seem to be equating machine with man by arguing that machines do possess rationality. There are

diverse implications for equating machine with man. For example, it implies that machines possess consciousness but the very nature of a machine excludes consciousness, so a machine cannot possess consciousness unless the concept of machine will have to be re-defined. Also, since rationality is a measure of morality of man, then if machines share rationality with man, then can one successfully argue that machines are likewise moral?

To equate machine with man therefore, would go beyond the assumption that machines possess consciousness and rationality to also imply that machines generally possess the defining attributes of man such as thinking, reasoning, and others, which point to intelligence. For this reason, the question of whether artificial intelligence is really intelligent is raised. And in response, there is the need to determine whether the quality of intelligence is ontological to both man and machine.

The Nature of Artificial Intelligence

M. Ringle (1979, p.6) believes that there is no precise criterion for deciding artificial intelligence. For him, anything which would require human mental processes is an example of artificial intelligence. Hence he acknowledges that traditionally, the category of artificial intelligence has been satisfied by projects for game-playing, pattern recognition, problem solving, theorem proving and the like. From a conceptual elucidation, however, the term artificial intelligence could be said to mean that which is intelligent but artificial, and not natural. One the one hand, artificiality is the absence of originality, that is, that which could possibly exist as the original but not and could not be the original or the natural as the case may be. In this sense, artificiality is man-made, that is, man's creation which is created out of man's ingenuity. Intelligence, on the other hand, could have different meanings, but basically, it is a synonym for "wisdom". Wisdom consists not knowledge or understanding merely, but in being happy and in having used such knowledge to attain happiness. Thus, wisdom implies the ability to use required means to attain ends. Hence, intelligence in this sense is the ability to select the better means to an end and how to use the means to reach the desired end. In another sense, intelligence has to do with the ability to adapt to relatively new situations. This conception stretches farther than merely the ability to adapt to a new situation but also includes the ability to cope with an enduring factor; a being which can adapt to relatively new situations but which become bored, weakened or deteriorated when conditions remain enduringly the same may perish also (*Philosophical Studies*, p. 151). Generally, the ability to stand and solve problems is referred to as intelligence. However, it is important to note that whatever meaning given to intelligence, it still has to do with learning, mental process and ability.

From the foregoing, M. Boden (1993-1998) conceives artificial intelligence as the study of how to make computers do things that minds can do. This includes many things not normally thought of as intelligent, such as moving without bumping into obstacles, or gaining information about an environment through vision. Consequently, artificial intelligence is seen as the science of making machines that can do the kind of things that humans do. Topics of research in this field have included speech recognition, visual recognition, and the more familiar problem solving and game

playing (S. Blackburn, 1994). Thus, artificial intelligence attempts to make complex system to do what humans can do such as interpreting a photograph as depicting a face, offering medical diagnosis, using and translating language. Furthermore, Emerson and Forbes (1989, p. 26) defined artificial intelligence as the grand or perhaps grandiose enterprise of writing computer programs that can do things that we could consider intelligent if done by human beings – the enterprise of constructing a mind. In addition, they express that the workings of the human mind can be completely explained in the computational language of programs and the human nature could be understood with the nature of the computers.

From a different perspective, R. Bertram (1982, p. 221) posits that artificial intelligence deals with development of devices that exhibit intelligence. In his opinion, artificial intelligence involves elements of both scientific research, aimed at understanding the fundamental nature of intelligence, and engineering development, aimed at "smarter" and therefore, more useful practical machines. He holds that there are now available systems that perform such tasks as recognition of printed characters and solution of symbolic algebraic equations. He however, laments that building a machine that can negotiate a treaty or compose a symphony is still many decades away from solution.

Besides, R. Sokolowski (1988) insists on the need to clarify the ambiguous word "artificial". Thus, he notes that the word "artificial" could be used in two senses, and so it is appropriate to determine the sense of the word artificial that applies to artificial intelligence. He gives the examples of artificial flowers, which are only papers not flowers at all, and artificial light, which is light and does illuminate. Although the artificial light is fabricated as a substitute to natural light, but it is what it is, what it seems to be. For him, this sense of artificial intelligence is not simply an imitation of something else; rather the appearance of the thing reveals that it is, not how something else looks. Based on the above distinction of the meaning of artificial, critics of artificial intelligence often claim that the term is used in the first sense meaning that artificial intelligence is really nothing but complex mechanical structures and electrical processes that present an illusion of some sort of thinking. Whereas supporters of artificial intelligence would argue that the word artificial is used in the second sense, that is although, thinking machines are artefacts, once made and set in motion the machines do think, though the thinking may be different from that of human beings in some ways but it is a kind of genuine thinking (R. Sokolowski, 1988, p.6). This implies that artificial intelligence can be construed as an artefact that behaves intelligently.

Types of Artificial Intelligence

Generally, three categories of artificial intelligence can be identified to include; symbolic, connectionist and evolutionary. While each of these categories has its characteristic strengths and weaknesses, the symbolic artificial intelligence is based on logic, the connectionist artificial intelligence is inspired by the brain, while the evolutionary artificial intelligence is based on biology.

(i) *Symbolic Artificial Intelligence*

This type of artificial intelligence uses a set of rules, that is, sequences of rules, to instruct the computer or system of what next to do. These set of rules are called IF-THEN rules, and it implies that IF this is the case, THEN do that, or IF that is the situation, THEN do this. This implies that this type of artificial intelligence depends on another subject, which provides those rules to be followed. Thus, if this is the case then, we cannot say that such machine is rational. However, according to M. Boden (1993-1998), the performance of a logic-based program need not appear "logical", since some rules may cause it to take apparently irrational actions. Nevertheless, "illogical" artificial intelligence programs are not used for practical problem-solving, but are useful in modelling how humans think. It must be noted also that symbolic programs are good at dealing with set problems, though they are brittle; if part of the expected input data is missing or mistaken, they may give a bad answer, or no answer at all. Thus, for the symbolic artificial intelligence to function well it must follow a particular set of rules that are sequential; otherwise it would give a wrong response, since it would not understand anything outside what has been programed in it.

(ii) *Connectionist Artificial Intelligence*

This category of artificial intelligence is closely related to computational neuroscience which models brain cells and neural circuits. Thus, the connectionist artificial intelligence uses artificial neural networks made of many units working in parallel to instruct the computer on what next to do. However, the study of connectionist computation has grown rapidly and extended to every area of cognitive science. According to Taylor and Francis (2000, p.116), one of the theories of artificial intelligence holds that connectionism is a network which is composed of information processing unit, typically, many units processing information simultaneously, giving rise to massively parallel distributed processing; as such, it likens the mind to a network that is composed of information processing units.

(iii) *Evolutionary Artificial Intelligence*

This type of artificial intelligence is usually used in modelling artificial life. For example, by developing problem-solving programs, it can evolve the "brains and "eyes" of robots. As such, evolutionary artificial intelligence systems make random changes in their own rules, and select the best daughter programs to breed the next generation (M. Boden, 1993-1998).

The Purposes of Artificial Intelligence

One of the most significant technological developments during this era is the construction of general-purpose computers capable of performance of what would be deemed intelligent behaviour. Accordingly, artificial intelligence seeks to make a "prototype man", or an "artificial man". This is because, to grant artificial intelligence is to affirm the concept of artificial man. From the foregoing, artificial intelligence has two basic purposes, which could be categorised as technological and psychological. Technologically, artificial intelligence was meant to make machines do useful tasks, including methods that human beings cannot equal in ability, e.g. sensitivity to ultraviolet light. Psychologically, on the other hand, artificial intelligence was intended to learn about human minds or brains, and accordingly,

some programs are developed as psychological theories, avoiding methods that humans cannot use (M. Boden, 1993-1998).

In its applications, artificial intelligence is used in various fields such as financial institutions, sciences, medical practice, design engineering and security services. In financial institutions, artificial intelligence is used in accounts' calculation, proper recording of account and communication, among others. In the field of sciences, artificial intelligence is used for several purposes and in diagnosing diseases in medical practice. And the design engineers use artificial intelligence to make their work easier and accurate in the area of drawings, measurement, colouring etc. while the security services employ it in their detective and defence works. The purposes stated so far are the core or some of the salient purposes of artificial intelligence.

Is There an Artificial Intelligence?

This question arises from the vitalists' position that intelligence is an ontological attribute of the human person and so, an artificial of it is rather inconceivable. This is because artificial intelligence could never exhibit teleological behaviour. However, this position has been watered down and rendered less persuasive, seeing some machines solve problems, play chess, prove theorems, diagnose diseases, recalling events of past years, etc. In fact, these are some of the criteria for purposive behaviour, and with the eruption of such development in artefacts, it may seem that machines are indeed goal seeking. It becomes even more difficult to conclude that an artificial intelligence is inconceivable in the face of some rigorous arguments in support of artificial intelligence. The arguments of Alan Turing, a mechanist, and John Pollock, a physicalist, will suffice here.

According to R.J. Welson (1980), the mechanists hold that the human mind follows a system of rules, which operate on a level of consciousness for the most parts when it acts. The implication of this is that the human mind operates under certain rules, which control its operations. Consequently, the traditional mechanism which in a sense is a form of materialistic thesis which states that the mind is the brain, argues that the biological laws guiding the human brain necessarily guides the actions of the mind. Hence, from their view, there is nothing in the human mind that cannot be compared with artificial intelligence. From the position of the mechanists, Alan Turing presents one of the most influential arguments in support of artificial intelligence that "if we could make a machine that was capable of certain highly sophisticated outputs, and that could not under certain conditions be distinguished by its output from that of an intelligent human being, we should then conclude that machines could think" (P. Edwards, 1967). In addition, he proposed what is now called the Turing Test as a way of deciding whether a machine is intelligent, in the following way:

> He imagined a person and a computer hidden behind a screen, communicating by electronic means. If we cannot tell which one is the human, we have no reason to deny that the machine is thinking. That

> is, a purely behavioural test is adequate for identifying intelligence (and consciousness) (M. Boden, 1993-1998).

Furthermore, Turing imagined a machine and an intelligent being, kept in a separate room from an interrogator; suppose the goal of the interrogator is to be able to distinguish through a question and answer session, between the machine and the intelligent being. As such, the interrogator will ask a question like "surely, you are the machine?" And obviously, the machine will deny this with statement like "can't you know I am human?" The answers (both machine and intelligent being) are neatly typed and that makes it impossible to detect voices. Turing asserts that if at the end, the interrogator is unable to logically distinguish between the person and the machine by virtue of their output (answer), then, we must accept that machines do exhibit intelligent behaviours. Turing is so convinced of this and was quoted as saying that, "it would be interesting to discover the degree of intellectual activity of which a machine was capable and to what extent it could think for itself" (M. Mays, 1952, p.148).

The physicalists, on the other hand, also present their argument in support of artificial intelligence. Physicalism states that only physical things exist in the universe. John Pollock, a representative of this school of thought, advances and defends the thesis that there is no essential difference between human and artificial minds, such as the computer, on the basis of his physicalist conception of the human mind and human consciousness. He sees the human mind as something physical and the human consciousness as a physical event (J. Omoregbe, 2001, p. 49). For him, human beings are physical objects that supervene on their bodies. However, in his work titled, "My Brother, the Machine", he advances the thesis that "mental events are just physical events that can be perceived by our internal sense" (J. Omoregbe, 2001, p. 49). As a result, Pollock holds that there is no obstacle to building consciousness into an intelligent machine. This implies that it is possible to construct an intelligent machine and build consciousness into it. Hence, there is nothing like mental activity, rather, they are all physical activities.

Questioning the Status of the Invented vis-à-vis the Inventor

Responding to the question of whether there is an artificial intelligence has led to different arguments propounded in support of artificial intelligence as seen above. It is however, necessary to ask whether the arguments presented so far place artificial intelligence in the same rank and file with the human person. In other words, is artificial intelligence ontological and essentially the same with human or natural intelligence? What makes artificial intelligence different from human or natural intelligence? What informs the paradigm for measuring the differences between what a machine that possesses artificial intelligence is and who the human person whose intelligence is ontological is? The portcullis of reactions to the arguments in support of artificial intelligence can be opened with Boethius' poignant but ontological definition of the human person as "*persona est rationalis naturae individual substantia* (the person is an individual substance of a rational nature)" (B. Mondin, 1985, p.247). Nevertheless, there are some things which make the human person

distinct among other things in the material world; these things are called human attributes which imply "qualities regarded as natural or typical part of somebody" (A.S. Hornby, 1995). Some among the human attributes include consciousness, thinking, reasoning and intelligence.

Generally, according to H.K. Schilling (1973, p.17), "consciousness refers to being aware of, or perceiving, knowing, understanding as well as reacting and responding to reality." Thus, consciousness can be applied in four basic areas namely, intentionality, knowledge, introspection and phenomenal experience. The distinctive features of consciousness include; being a mental activity, being indubitable, being inaccessible, having continuous nature, being outside oriented, being reflective and does not create its objects. Thinking, as a human attribute, is a combination of different activities such as doubting, imagining, remembering, pondering, intending, meditating, introspecting and so on. Thinking, generally, is an act of the intellect in which a thing's essence, or intelligible form, actually qualifies the intellect; an activity of bringing concepts or ideas before the mind (P. Edwards, 1967, p.101).

Furthermore, reasoning, as a human attribute, is a kind of thinking which involves a sequence of symbolic activities. It is "the process by which the human intellect passes from what it already knows to what it does not yet know, without having recourse to new information" (New Catholic Encyclopaedia, p.119). Lastly, the word intelligence was introduced by Cicero as an almost literal translation of Aristotle's term *dia-noesis* (Encyclopaedia Britannica, 1963). Consequently, the word intelligence acquired a standard meaning as a technical term, and it has been held to imply three basic distinctions namely;

(i) It connotes a cognitive or intellectual capacity, as distinct from other characteristics of the total personality;
(ii) It implies a general quality (i.e. it enters into all types of intellectual processes and is not specific to any one type of ability);
(iii) It is an inborn or innate quality, as distinct from those abilities that are acquired through individual experience at home, at school or elsewhere.

Therefore, intelligence is the power to learn from experience, or the ability to adapt to new circumstances, or man's higher cognitive power, precisely as immaterial and spiritual, and these obviously preclude machines since it is certainly idiotic to speak of an experienced or spiritual machine. From the above, is it possible to have machines that could possess those human attributes that have been discussed and function in such a complex manner as the human person? Is it possible or appropriate to argue that machines can have consciousness, thinking, reasoning and intelligence? Can we ascribe these said human attributes to machines of whatever kind? Can there really be an artificial intelligence? Is artificial intelligence intelligent? What is the status of artificial intelligence? Is it superior or inferior to human or natural intelligence?

Obviously, the strut between artificial intelligence and the human person is one between "the invented" and "the inventor". The glaring merits or advantages of artificial intelligence such as offering medical diagnosis, interpreting a photograph, translating languages, making work easier and faster, have accounted for the attempt to equate it with the human person. However, can we because of the merits and advantages of artificial intelligence, dispirit or sacrifice the superiority of man (the inventor) for what he has created (the invented)? Can we afford to celebrate the functionality of artificial intelligence over the ontological status of the human person? Is it justifiable to acclaim that the tussle between the "invented" and the "inventor" should end in favour of the "invented"? Has man actually created an artificial intelligence? If yes, is artificial intelligence more intelligent than man's natural or real intelligence?

Questioning the status of the invented vis-à-vis the inventor raises the questions of whether the computer is a model of the human brain and whether there can be an artificial mind. The first question generates from the speculations of scientists about the relationship between computers and the human person in terms of thinking. However, the computer is not a model of the human brain, even though the motivations of artificial intelligence include to model or design an artificial brain, because the physical characteristics of the components of the computer are so different from those of the human brain. Thinking is inherent in the human person; hence it is unrealistic to view the computer as a model of the human brain. In response to the question of artificial mind, Descartes and other philosophers have opined that mind is the spiritual essence in man. Thus, it bereaves computers of this essence (mind), since computer is just a bundle of physical materials; artificial intelligence devices are merely functionaries, since they will continue to remain in their dormant state unless they are operated.

From the above, the human person is different from artificial intelligence, since man carries out both physical and mental events, whereas artificial intelligence carries out only physical events, though it may look as if it were mental events. In addition, the moral implication of equating machine with man is that machine will be considered as a moral being, thus, it is morally responsible for its actions. So, can a machine be taken to court for appropriate judgment or be jailed should it cut off someone's hand? Obviously, that would be irrational and unrealistic. In the same vein, to equate man with machine would imply machine having freedom of choice and of decision-making. However, from our knowledge, we know that machines are determined on what to do and what not to do. By implication, machines are not free to make choice of their own or to decide on their own whereas man has and enjoys freewill. Also, man is dynamic, flexible and creative, whereas if a machine is invented for a particular work, it cannot do otherwise, because to do so signifies fault in the machine.

Conclusion

The thrust of this work has been to see if it were really possible to equate machine or computer with the human person on the ground of intelligence. Nevertheless, it went further to engage in a philosophical justification of the superiority of the human

person over artificial intelligence. Though, no one can deny the fact that artificial intelligence bears multiple benefits to man, it is very essential that we understand the intention or purpose of artificial intelligence, as rendering possible assistance to man in his daily living. If we lose hold of this purpose, then we can be sure that the project of artificial intelligence would go beyond competing superiority with its inventor, the human person, into an extinction of the humanness or essence and dignity of the human person.

Artificial intelligence can only produce a part of man's intelligence; its software program only contains an aspect of the experience of man, and it acts only within this confine. Hence, R. Sokolowski (1988) asked: what does machine do that we can call its own machine thinking, its own activity that cannot be dissolved into the thinking of the people who made and programed the machine? Thus, there is limitation to machine intelligence; hence artificial intelligence cannot be a replacement of the human person. Artificial intelligence seems to think but in reality it does not think as it is only following formal rules in exhibiting intelligent behaviour. In essence, it has been programed to act that way. If this is the case, then artificial intelligence does not know. In this wise, it is more of an instrument in the hands of humans than an equal of man that can replace him.

In conclusion, the intelligence ascribed to artificial intelligence, if at all it must stand, must be interpreted specially. This is because only human beings think in the real sense of the word. Artificial intelligence does not. Intelligent behaviour simply flows through it without being conscious of it. Artificial intelligence in appearance seems to think but in reality it does not think. No wonder it is called artificial intelligence because its thinking is fake; a mere syntactic operation at work. Therefore, in spite of the functionality, speed and accuracy of artificial intelligence, the human person is and would remain superior to it, not only because the human person is its inventor, but also because the invented lacks the qualities of invention, innovation and initiative. And above all, intelligence is an imitation in artificial intelligence, whereas, it is ontological to the human person.

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