TOPIC: SOCIETY CAPABLE OF COEXISTING WITH AI: FROM MY RESEARCH PERSPECTIVE

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Summary

The relationship between the society and AI has increasingly come under the weight of serious scrutiny. Research shows that the society is losing its human touch as many individuals become more absorbed in Artificial Intelligence. This work aims at evaluating the relationship of the coexistence of the society and AI especially from the point of view of human socialization, human relationships rights to privacy and human dignity. Building on works in this field especially the works and contributions of the French priest, scientist and paleontologist Pierre Teilhard de Chardin who took part in the discovery of the S*inathropus Pekinensis,* we have asked the question: is the co-existence of society and AI harmonious? Is it one that is symbiotic, helpful complimentary or one that is parasitic, harmful and contradictory? In this context society is defined as an aggregate of human beings living together in a more or less organized environment. AI is the ability of machine to think, and act in a correct way. In short it would refer to the ability of the machine to recognize context, and to act in the right way. Our method has been analytical. This was mainly based on analyzing the texts of Teilhard and other computer scientists. In Teilhard's thought, reality is interdependent and interconnected. This means that there is no balkanization or segmenting of life process. His theory of evolution is one which is a process. It is moving to a pleroma or fullness. This is made possible by the presence of the mysterious force which he calls love. This love is capable of drawing everything together so much so that the gates of the future will be an advance of all together. The end process of this drawing things together is what he calls noogenesis which for Christians a Christogenesis.

Society, artificial Intelligence, noogenesis, evolution, Christogenesis, socialization

INTRODUCTION

The insatiable desire to make society a better place has fostered an exponential unabated spirit of creativity in technology. This has led to the inventions of electronic machines with unfathomable thinking abilities. These inventions amongst others have brought in intelligent machines. These machines are called "intelligent" because they have the ability to understand, to know and to comprehend using the "brain". Since these machines can perform tasks, modify contexts and do the right thing at the right time, they are said have Artificial Intelligence (hereafter AI). In their book *Artificial intelligence*, Stuart Russell and Peter Norvig maintain that artificial intelligence attempts not just to understand but also to build intelligent entities.[1] With this in mind, they define AI as "the exciting new efforts to make computers think…machines with minds, in the full and literal sense"[2] the word Artificial reminds one of the antonym natural.

The ever presence nature of AI has led to a certain dependence on these machines. The dependence of human beings on AI for performance of multiple tasks like communication calls for a rethink of the relationship between the society and AI. In a similar light, Carl Mitcham remarked "a thousand or two thousand years ago the philosophical challenge was to think nature -and ourselves in the presence of nature. Today, the great and the first philosophical challenge is to think technology and… ourselves in the presence of technology."[3] Mitcham sees an important relationship between technology and the society. In this light, the question that imposes itself is; is society capable of living harmoniously with AI? In short, does the society pose an existential threat to AI or does the existence of AI pose a threat to the survival of the society?

Our aim in this work is to argue together with the French Jesuit Priest, Paleontologists, philosopher and scientist Pierre Teilhard de Chardin (1881-1955), that though AI might pose certain existential threats to the society, their coexistence for the most is symbiotic and complimentary. Technology leads to the invention of AI which is considered a higher stage of consciousness in Teilhard's philosophy of evolutionary. Our methods shall mainly be analytical. We shall first consider Teilhard's understanding of the society; his understanding

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[1] Cf. Stuart Russell &Peter Norvig, *Artificial Intelligence: a Modern Approach,* New Jersey Pearson Education Inc. 2003, 1.
[2] Ibid.
[3] Carl Mitcham,"The Philosophical Challenges of Technology," *American Catholic Philosophical Association Proceedings,* 40(199), 45.

of consciousness; the place of the noosphere, Artificial intelligence and then the coexistence of society and AI.

I. Teilhard's on the Society

The concept of the society like other concepts in Teilhard is the product of evolution. This explains why evolution would evoke often. The society like evolution is dynamic. It evolves. What is society for Teilhard? He understands "society as that mysterious association of free metazoans in which (with varying success) the formation of hyper-complex units by mega-synthesis seems to be being attempted." [4] By mysterious, he means the social organization which is sometimes difficult to be explained and identified because of its complexity. By association, he thinks of a grouping together of elementary particles, than the living elements.[5] With this grouping together, higher plants and metazoan evolved out of isolated cells, the bee colony, and the ant hills amongst others. With this, the question is; where is the human society in this process of socialization? Teilhard holds that we cannot forget the human species because we are part of this association.[6] In this light, he invites humans in the following terms "let us study ourselves in the mirror of other living forms."[7] To this, he adds that man must have lived in small autonomous groups, after which links were established, first between families and then between tribes. The associations became more and more elaborate as time went on.[8] All of these led to the emergence of a social system in which purposeful organization orders the masses and tends to impose a specialized function on each individual.[9] These associations have grown so much so that Teilhard opines that the immense social disturbances which today so trouble the world appear to signify that Mankind in its turn has reached the stage, common to every species, when it must of biological necessity undergo the coordination of its elements. He concludes that in fact, in our time, Mankind seems to be approaching its critical point of social organization.[10] These associations form hyper complex units by a synthesis which is so large and capable of reflection.[11] By reflection, he means the power acquired by consciousness to turn in upon itself, to take possession of itself as of an object endowed with its particular consistence and value: no longer to know but to know that

[4] Teilhard de Chardin, *The Phenomenon of Man*, (Collin St James's Place, London 1955), 107.
[5] Cf. Teilhard de Chardin, *The Future of Man*, tr. Norman Denny, (Collins St James's place, London 1964),37.
[6] Cf. ibid., 38.
[7] Cf. ibid.
[8] Cf. ibid., 39.
[9]Cf. Teilhard de Chardin, *The Future of Man*, 39.
[10] Cf. ibid
[11] Teilhard de Chardin, *The Phenomenon of Man*, op. cit., 107.

one knows.[12] Therefore a human society would definitely be a community of beings that can reflect. It is to this community that lies the onus to rethink the question of the coexistence with AI.

Teilhard's concept of society is dynamic and not static. In his *Writings in Time of War,* Teilhard observes that the universe is committed to a becoming which gradually constitutes in its destined form, the most perfect of the world being produced in succession through the less perfect, starting from lower states of existence. It is a refinement of psychism that determines the true absolute position of monads in the ascendancy series of beings.[13] In this way, society has evolved from subatomic particles to the human society which is biologically the last stage of evolution. Socialization is the process in which society is formed through evolution. The next stage takes us to evolution and consciousness.

II. Evolution and Consciousness

In his *magnus opus*, Teilhard interrogates: "is evolution a theory, a system or a hypothesis?"[14]

To this he answers:

> It is much more; it is a general condition to which all theories, all hypotheses, all systems must bow and which they must satisfy henceforth if they are to be thinkable and true. Evolution is a light illuminating all facts, a curve that all lines must follow…The consciousness of each of us is evolution looking at itself and reflecting upon itself….Man alone constitutes the last-born, the freshest, the most complicated, the most subtle of all the successive layers of life…the universe has always been in motion and at this moment, continues to be in motion but will still be in motion tomorrow...what makes the world modern is our discovery in it and around it of evolution.[15]

Through evolution, creation is continued. In this connection, Teilhard adds, "we may perhaps, imagine that creation was finished long ago. But that would be quite wrong. It continues still more magnificently, and at the highest levels of the world."[16] Corroborating the point, Julian Huxley maintains that "evolutionary facts and logic demands that minds should have evolved gradually as well as bodies and that accordingly mind like properties must be present

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[12] Cf. Teilhard de Chardin, *The Phenomenon of Man*, op. cit., 165.
[13] Cf. Teilhard de Chardin, *Writings in Times of War*, (London, Collins 1968), 154.
[14] Teilhard de Chardin, The Phenomenon of Man, 2nd ed. (New York, Harper Colophon, 1975), 218, 220, 223, 227, 228, 277.
[15] Ibid.
[16] Teilhard de Chardin, *The Divine Milieu*, rev.ed. (New York: Harper Torchbooks,1968), 62.

throughout the universe."[17] In like manner, George Appleton et al intimate that "evolution is a light that is illuminating all facts, a curve all lines must follow."[18] Teilhard is of the same opinion when he holds that evolution is an ascent towards consciousness.[19] This ascent culminates in an "Omega point"[20] which for Christians would be a "pleroma" or a Christogenesis. This Omega point is an ultimate self-subsistent pole of consciousness. Teilhard postulates it as a reality due to the principle of (i) irreversibility (ii) an attractive force, the inverse of gravity that is force of unanimity whereby individuals are not repeated by the process but drawn to a person. Consequently, evolution is a movement towards a supremely personal supreme personalizing being.[21] In this evolutionary movement, love is the driving force.[22] Teilhard concludes this by insinuating that

> "Evolution=Rise of Consciousness
>
> Rise of Consciousness=Effects of Union"[23]

The rise of consciousness leads to a much more profound consideration of the Noosphere, the "thinking" center of the earth.

III. The Noosphere

According to Ursula King, the word Noosphere was coined by Teilhard in collaboration with his friend Edouard Le Roy. Derived from the Greek word *nous* meaning "soul" and sphere, the noosphere describes the layer of mind, thought and spirit within the layer of life that is covering the earth.[24] In *The Phenomenon of Man*, Teilhard asks "How could we imagine a cosmogensis reaching right up to mind without being confronted with a noogenesis."[25] So what is this noosphere? Teilhard describes the noosphere thus:

> The idea is that the Earth (is) not only becoming covered by myriads of grains of thought, but becoming enclosed in a single thinking envelope so as to form a single vast grain of thought on the sidereal scale, the plurality of individual

[17] Teilhard de Chardin, *The Phenomenon of Man*, 16-17.
[18] George Appleton et al., *The Human Search-Teilhard de Chardin*,(Glasgow, Collins 1979), 54.
[19] Teilhard de Chardin, *The Phenomenon of Man*, 258.
[20] Cf. Pierre Teilhard de Chardin, *The Future of Man 174.*
[21] Cf. Ibid., 188.
[22] Teilhard de Chardin, *The Heart of Matter,* (New York, William Collins and Sons Inc. 1978,) 51-52.
[23] Teilhard de Chardin, *The Phenomenon of Man*, (Glasgow: Collins,1959), 268.
[24] Cf. Ursula King, "One Planet, One Spirit: Searching for an ecologically Balanced Spirituality," in *Pierre Teilhard de Chardin on People and Planet,* ed. Cecilia Deane-Drummond (London,Equinox, 2008), 82.
[25] Teilhard de Chardin, *The Phenomenon of Man,* 26.

> reflections grouping themselves together and reinforcing one another in a single unanimous reflection.[26]

The noosphere insinuates that the earth has a single thinking center which has been developed overtime. This is an accumulation of mankind's combined achievement which is forming a network of collective minds.[27] This collective mind like a living membrane which is stretched is like a film over the lustrous surface of the star which holds us.[28] The noosphere is like a bank which collects stores and communicates every conscious heritage. In the mind of Teilhard, the noosphere is the pan-terrestrial organism in which by compression and arrangement of the thinking particles, a resurgence of evolution (itself now become reflective) is striving to carry the stuff of the universe towards the higher conditions of a planetary super reflection.[29] This noosphere is developed through hereditary (memory, through education, mechanization and progress cerebralization.[30] This new layer, is referred to as the "thinking layer" which has spread over the plants and animals.[31]

How does the noosphere come about? For Teilhard, the noosphere begins with a global network of trade, communication, accumulation and exchange of knowledge, cooperative research, mixture of populations and production of energy…all go into the weaving of the material support for a sphere of collective thought.[32] This idea of the noosphere is supported by David Bohm who like Teilhard maintains that human's participate in a greater collective mind in principle capable of going indefinitely beyond even the human species as a whole.[33] This going beyond the human species definitely leads us to Artificial Intelligence.

IV. Artificial Intelligence (AI)

The word AI is one that has as many definitions as there are authors who have attempted to work on. In as much as this is limitation, it is also an advantage as research in this domain is carried out with a free spirit with no dogmas limiting the research efforts. What is Artificial Intelligence within the context of Teilhard's works? The term is a combination of two words which under normal circumstances seem mutually exclusive. This is because intelligence is

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[26] Teilhard de Chardin, *The Phenomenon of Man,* 251.
[27] Blanche Gallagher, *Meditations with Teilhard de Chardin*(Santa Fe,Bear&Co.1988), 39
[28] Michael H. Wurray, *The Thought of Teilhard de Chardin* (New York, Seabury Press, 1966), 20-21.
[29] Teilhard de Chardin, *The Future of Man,* (New York, Harper and Row Publishers 1904), 180.
[30] Cf. Llia Delio, "Transhumanism or Ultrahumanism? Teilhard de Chardin on technology, Religion and Evolution", *Theology and Science* 10.2, 153-166, DOI:1080/14746700.2012669948.
[31] Teilhard de Chardin, *The Phenomenon of Man,* 202.
[32] Cf. Llia Delio, "Transhumanism or Ultrahumanism?
[33] David Bohm, *The Undivided Universe,* (London, Routledge 2002), 386.

used of a being that is capable of reflective action. For Teilhard, only a human being can reflect. By intelligence, we mean the capacity in humans to acquire and apply knowledge.[34] Intelligence is applied primarily to the human being and then in a secondary sense to an animal, or machines. AIs can do the right thing at the right time and in some cases, they can even modify behavior and act as if they had cognitive powers. Amongst the definitions for AI, we have this from Nils J. Nilsson who says: "Artificial intelligence is that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment."[35] This activity makes a machine to function with the same precision and conciseness like a human being. In this case, it could be asked if there would be any difference between a human being and AI. To this worry, one would presuppose that from the point of view of the functions, there will be a little difference but from the point of view of kind and species, there will be a huge difference as the one is a machine and the other a reflective being. However, Nils Nilsson is quick to say that the human being has no match when it comes to reasoning, achieving goals, understanding and generating language, perceiving and responding to sensory inputs, proving mathematical theorems, playing challenging games, synthesizing and summarizing information, creating art and music, and even writing histories.[36] With this understanding, Herbert A. Simon gives a near inclusive definition when he mentions that AI is that branch of computer science that studies the properties of intelligence by synthesizing intelligence.[37] Though Teilhard does not use AI frequently in his works, there are many descriptions that fit this reality. This explains what Llia Delio means when he says that Teilhard anticipated the advent of the computer.[38] The discussion on the noosphere naturally indicts us to have to say something about technology and by extension AI. However, Teilhard continues to describe AI when he writes

> I am thinking, of course, in the first place of the extraordinary network of radio and television communications which perhaps anticipating the direct inter-communication of brains through the mysterious power of telepathy, already link us all in a sort or etherized universal consciousness.[39]

In addition to his thinking about these networks of radio and television, he further states

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[34] Cf. *Concise Oxford English Dictionary,* (eleventh edition), Oxford, Oxford University Press 2004.
[35] Nils J. Nilsson, *The Quest for Artificial Intelligence: A History of Ideas and Achievements* (Cambridge, UK: Cambridge University Press, 2010). 5.
[36] Cf. Ibid., 6.
[37] Herbert A. Simon, "Artificial Intelligence: An Empirical Science," *Artificial Intelligence* 77, no. 2 (1995):95–127.
[38] Cf. Llia Delio, "Transhumanism or Ultra humanism?
[39] Llia Delio, "Transhumanism or Ultrahumanism?

> …I am also thinking of…those astonishing electronic computers which pulsating with signals at the rate of hundreds of thousands a second, not only relieve our brains of tedious and exhausting work but, they enhance the essential factor of 'speed of thought' paving a way for a revolution in the sphere of research.[40]

To buttress the point, he says in this regard, "we find out that the artificial carries the function of the natural."[41] We notice that without necessarily using the term AI, Teilhard makes use of words which capture well the idea of AI. Furthermore, he adds "we are witnessing a truly explosive growth of technology and research, bringing a …mastery… of cosmic energy… the rapid heightening of psychic…temperature…the growth of a true ultra-human."[42] The collective brain gives birth an explosion of technology. Now how does Teilhard construe these machines? He does not see a machine as only that which relieves and liberates man from the trammels which hinder progress but thinks of the machines which create, help to assemble, and to concentrate in the form of an ever more deeply penetrating organism; all the reflective elements upon earth.[43] From this point of view, these machines seem to have taken over what was reserved to human beings. This consideration suggests an examination of the relationship between society and AI.

V. Society capable of co-existing with AI?

The invention and manufacture of AIs, with their multifaceted ability and capacity to perform tasks demands an urgent appraisal of the co-existence of both. We must note that in Teilhard, the society is not limited to humans but in this research paper, we will limit ourselves to the human society. With this in mind, the worry now arises; does the presence of AI within the society pose insurmountable challenges to the society? Do AIs violate the dignity of man say to work? Can society and AI coexist harmoniously? In *fine,* is the relationship between society and AI harmful or helpful, symbiotic or parasitic, complimentary or contradictory?

In Teilhard's mind, the relationship between society and AI is harmonious. AI represents an advanced stage of psychic evolution. Commenting on the relationship between the society and the social organism, Teilhard writes *inter alia:*

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[40] Ibid.
[41] Teilhard de Chardin, *The Phenomenon of Man,* 277.
[42] Teilhard de Chardin, *The Future of man, 289.*
[43] Ibid., 167.

> We feel that the relation between the society and social organism is no longer a matter of symbolism but must be treated in realistic terms. This forces him to come to the reality of a "thinking earth". In this thinking earth, we find the process of life and vitalization.[44]

For him, life is a process of which AI is the latest stage in that process. From this view, AI comes later in the series of evolution. This coexistence is premised on love which is the affinity of being with being which is not peculiar to man.[45] This love is a general property of all life and as such it embraces in its varieties and degrees all the forms successively adopted by organized matter.[46] For Teilhard, it is easily recognized in social solidarity.[47] Love is responsible for this relationship. This means driven by the forces of love, the fragments of the world seek each other so that the world may come to being.[48] It does not only come to being but it is capable of uniting living beings in such a way as to complete and fulfill them for it alone takes them and joins them by what is deepest in themselves.[49] In this way, Teilhard sees a symbiotic coexistence between society and AI. With AI, "planetization" or globalization is feasible. AI has impacted society positively in various domains. These range from facilitating the learning of new languages, transportation, health, learning, calculation, connectivity, healthcare, employment and work, public safety and security, education, sports, and entertainment. This is so important for Teilhard as it gradually moves society to its "pleroma" or fullness where he sees a Christogenesis. In the words of Teilhard, society has evolved from subatomic to human society which is in its last stage. In his mind, society is passing through a transition stage.[50] He continues to aver that this is an age of industry; the age of oil; electricity and the atom; the age of the machine of huge collectivities and of science.[51] AIs have facilitated life within the society.

The Teilhardian society is one which has grown out of prehistoric evolutionary stages. In this respect that society is dynamic. This society forms part of the whole. In this respect, we can assert that for Teilhard, society does not exist in isolation of the various developments and

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[44] Teilhard de Chardin, *The Future of Man,* 155.
[45] Teilhard de Chardin, *The Phenomenon of Man*, introduction by Sir. Julian Huxley, 264.
[46] Cf. ibid.
[47] Cf. ibid.
[48] Cf. ibid., 265.
[49] Cf. ibid.
[50] Teilhard de Chardin, *The Phenomenon of Man*, 214.
[51] Ibid.

inventions in the universe. Teilhard therefore has an integrative holistic approach to reality. In this connection, Julian Huxley writes:

> The different branches of science combine to demonstrate that the universe in its entirety must be regarded as one gigantic process, a process of becoming, of attaining new levels of existence and organization which can properly be called a genesis or an evolution.[52]

For Teilhard, reality must be construed as a whole. Thus for him, the relationship between society and AI is symbiotic, helpful, cordial and complimentary. For Teilhard, instead of seeing doom, he envisages a cordial and mutually beneficial relationship. In his own words, technology leads not to well-being but to more being. In this vein, Teilhard insinuates:

> It is not well-being but a hunger for more being which of psychological necessity, can alone preserve the thinking earth from *taedium vitae*… it is upon its point(or superstructure) of spiritual concentration and not upon its bass(or infrastructure)of material biologically depends.[53]

Technology enhances being. From the point of view of material, it is well-being but from the spiritual and the psychical, it becomes more being. In the word of Llia Delio, Teilhard did not see evolution of new *techno sapiens* species as a replacement for the biological rather it becomes a deepening of biological life through *techno sapiens.*[54] Teilhard's philosophy is thus one of interdependence and interconnection between all in the universe. In this sense, we can say that society cannot grow in isolation of AI, for the "gates of the future will open only to an advance of all together."[55]

Despite the glorification of technology and its attendant correlates like AIs, some scientists like Margaret Werthelm, and Bell Joy seem to think that all is not rosy and cozy. For some, AI spells doom and gloom for the entire society. In this connection, Margaret Werthelm avers that "Artificial Intelligence is spawning a philosophical shift from reality constructed of matter and energy to reality constructed on information."[56] Werthelm is afraid that the increasing use of AIs will lead to a shift from the reality constructed matter and energy to information which would downgrade the importance of matter and energy in the world. Bell

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[52] Ibid., 13.
[53] Teilhard de Chardin, *The Future of Man,* 317.
[54] Llia Delio, "Transhumanism or Ultra humanism? Teilhard de Chardin on technology, Religion and Evolution"
[55] Teilhard de Chardin, *The Phenomenon of Man* (New York: HarperCollins, 1959), Rpt. Perennial Harper Collins, 244-46, 253, and 264-66.
[56] Margaret Werthelm in Llia Delio,"Transhumanism or Ultra humanism?

Joy seems to have sounded a more serious warning on the use of AI. For her, the most powerful 21st century technologies-robotics, genetic engineering and nanotech are threatening to make human beings an endangered species.[57] This seems to be the point the Italian philosopher Han Jonas makes in his *The Ethics of Responsibility.* These are suggestions which should be taken seriously. One thing, that one must not lose sight of is the fact that contrary to Teilhard's harmless symbiotic coexistence between society and AI, we need to stress that the presence of AI poses a serious threat to social cohesion in the families and the societies. Many a modern man and woman are so glued to these that the person to person touch of society is fast disappearing.

[57] Bell Joy, "Why the Future doesn't need us" wired (April 2000 http://archive.wired.com/wired/archive/8.04/joypr.htlm.

CONCLUSION

We set ourselves the task of examining the relationship between the society and AI within the context of Pierre Teilhard de Chardin's thought. In this light, we sought the answer to the question; can society coexist with AI? From the study we arrived the findings that though there may be some inability to coexist from the views of some scholars, in Teilhard's understanding, there is a harmonious coexistence between society and AI. This is because for Teilhard, everything is implicated in one big web. In this connection, Julian Huxley writes:

> The different branches of science combine to demonstrate that the universe in its entirety must be regarded as one gigantic process, a process of becoming, of attaining new levels of existence and organization which can properly be called a genesis or an evolution.[58]

The society is just an early stage in the evolution of AI. In Teilhard's mind, therefore, the relationship between society and AI is symbiotic, complementary and harmonious. This is because all of these are moving towards a final point, the "pleroma" or "Christogenesis" which means creation is moving towards Christ as the center. For him then, the movement is from comogenesis, biogenesis, anthropogenesis, noogenesis and finally to a Christogenesis.

In fact what we retain with Teilhard is that for the most part, the relationship is cordial. However, we must not lose sight of the fact that the rapid development of intelligent machines with cognitive abilities may gradually affect, effect and undermine the ability of the human being to think, work and advance without these machines. This leads to ethical considerations. Humans may become machine dependent which is dangerous for man's natural abilities. From this point of view, it can become very dangerous for the society to become dependent on the AI. However, given that the final invention or AIs have not been made and the implications for society not fully been explored, there is still plenty to be said and written in this regard.

[58] Teilhard de Chardin, *The Phenomenon of Man,* 13

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