Workshop in 'Philosophy and Informatics'

('Philosophers need to know the relevant scientific facts, and scientists need to know the history of philosophy!')

FINAL DRAFT:

Title: '*When the Artifact and AI met Philosophy: a false comparison towards the human intelligence*'.

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Philosophy as a logical, methodical and systematic spiritual activity has always defined itself in the special field of reality and metaphysics. In contrast to what most hasty craftsmen tend to conceive as pure philosophical thinking[1], Philosophy cannot bear the cost of globalizing and solecism that semantics and modern technology or advertisement withhold in the name of profit. When 'hi-tech' met Epistemology and the Philosophy of Computing symbolization and theoretical induction of process categorized science and arose much wrangling and opposite troops for and against AI. In the meanwhile phenomena such as loneliness, alienation and man's divorce with critical thought and pure perception of his own entity and triviality in the universe, encouraged the consequent indolence of his brain and naïve underestimated submissiveness to what simulation, more precisely computer simulation means, gently offered. Technology is continuously being revolutionized by new methods being discovered to manipulate computers to do many tasks that reduce the human labor.

Although a computer appears to do intelligent tasks, it does not have an artificial intelligence which can be equalized with the human intelligence. Human intelligence, on the other hand, is a rational thinking state of awareness. Human beings posses a natural feel of instinct and mental reasoning. The prospect of thinking is the ability to use a human mind in an active way to form connected ideas. People can direct their minds to form a plan of series ideas, words or images. In regards to feeling, humans are able to perceive something physically by touching, holding or through their emotional sensations. Intelligence is acquired through a series of physical and emotional experiences by human sensations. It is the ability to observe, remember and generalize from past experiences to better oneself for the future. Intelligence requires not just action or thought, but the governance of action by thought, which requires a history. 'Wired-up systems lack the explanatory connection

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[1] The notion of "theory." The term "theory" comes from the Greek word '_____' and is present with little variations in the main western languages: théorie" (French), "Theorie" (German), "teoria" (Spanish), "teoria" (Italian). The Greek word comes from the verb '_____'whose meaning is "to look all around," in the sense of looking from the vantage of a "higher point of view." The term "theoria" in the sense of a whole, comprehensive doctrine is currently used by Plato and Aristotle.

between thought and action, so are not intelligent'(Dretske 201-216). According to the Internet Encyclopaedia of Philosophy, "experience involves a series of events from the past which are actual in one's memory and are included in a present situation"(Experience). It continues to break experience down into Internal, as experience related to a person's own mental circumstance, and External, as thought to be discrete in a person's consciousness. But let us not castigate against norms, shall we? Philosophy within the morphological foundation of symbolization differs from computing in the sense that, whatever programming depicts and compresses in characters, philosophy represents with words. According to Analytical Philosophy great thinkers like Popper, Kraft, Reichenbach, Schlick, Otto and Wittgenstein, no metaphysical sentences exist, because contemporary Physics and modern Technologies do not identify or even accept matters of 'faith'. As a result contemporary philosophy surpasses matters of Logic, but lacks of innovative feeling. It justifies nature and physical states while testing our entities (__=Being), but does not prove every time its reason of existence[2]. Although there is an obvious spectrum of possible restoration and redesign projects that differ in their value, 'most of these projects appear to involve the manipulation and domination of natural areas'. The 'natural' then is a term we use to designate objects and processes that exist as far as possible from human manipulation and control. Natural entities are autonomous in ways that human-created artifacts are not. *When we thus judge natural objects, and evaluate them more highly than artifacts, we are focusing on the extent of their independence from human domination.* In this sense, then, human actions can also be judged to be natural- these are the human actions that exist as evolutionary adaptations, free of the control and alteration of technological processes.

But it is not really the misunderstanding over the identity of the creator of the restored natural objects. It derives instead from the misplaced category of 'creator', for natural objects do not have creators or designers as human artworks do. Once we realize that a human 'artisan' it ceases to be a natural object has restored the natural entity we are viewing. It is not a forgery; it is an artifact with essential anthropocentric nature. On the other hand, we cannot and should not think of natural objects as artifacts, for this imposes a human purpose or design of their very essence. As artifacts, they are evaluated by their success in meeting human interests and needs, not by their own intrinsic being. So natural entities have to be evaluated on their own terms, not as artworks, machines, factories or any other human-created artifact. Common sense is another good argument that shows the impossibility of a machine having the same level of intelligence as a human being. Common sense is the ability to make good judgment by connecting and analysing a variety of ideas to make a decision using human instinct. For example, in investigating a homicide case, a human detective will collect all evidence, come up with a series of questions relating

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[2] Take as an example the sentence: ' God exists'. This sentence cannot be regarded as a scientific sentence, not meaning that there is no God out there, but that matters of faith are not and cannot be justified or proved. Therefore, metaphysical sentences that lack of meaning (in Modern Linguistics we call it semasiology) or at least of explanation are foolish and their only path to escape from this scientific humiliation seems to be through verification, experience, experiment and the laws of nature. Any attempt to redesign, recreate and restore natural areas and objects is radical intervention in natural processes.

to the crime, and finally question the suspect(s). Afterwards, he or she will use his or her common sense to make a conclusion. In order to make the conclusion, the suspect(s) behaviour and state of mind such as nervousness, eye contact, sweatiness and so forth is detected by the investigator using his or her common sense. "An expert system would lack Sherlock Holmes' ability to raise the right questions, sort out relevant data, and determine what data are in need of explanation."(Manning 19-28) Although it is possible to program a computer to process data, which is the information of the crime that is placed in the computer by a human being, and come up with questions relating to the crime, it can not analyse and make good judgment by observing the suspect(s). This is because a computer does not have the necessary human sensations and instinct that is needed in order to have a common sense. One of the three philosophical behaviourism's category is Hard behaviourism[3].

Should we, in terms, provide a scientific plain and common dictionary in modern Computing? The answer is yes. In spite of Wittgenstein's assertion that the so-called Metaglossa (Postmodern Language in Informatics) is the language of reality itself, this language remains silent. There is pure reality behind every word and this reality says: *every ontological sentence or principle does not remain just ontological or scientific, but has to be conceived as an evaluative, ethical and anthropological question.* Consequently there is no Ontology that is not ethical or moral, evaluative or anthropological. In other words, whatever stands for nature and man, the same stands for the artificial. Inevitably man owes to make an anthropological and anthropocentric approach of Modern Technology, Informatics and especially Computing, so as not to be morally eroded by unlawful antagonism, the rules of the open-free market, overconsumption excess and his unpredictable arrogance to exceed in the clepsydra of time his own limits.

But are there any limits, at all, in science and computing technology of the modern era? What's the rush in setting any boundaries or conservative, for some, moral questionnaire or even talk over the ethical duty of science and the scientist, whilst sounding like idealistic or anachronistic moralizers and not look forward to the future of Informatics with cynicism and despondence, regardless the cost against the human factor? And who is fretful anymore for the moralization of science, except those trying to alert technocratic imitators ex cathedra or ex vocis? Let us first consider two types of intelligence. *Obviously, computers, as any machine, have an incorporated intelligence. But they cannot have creative intelligence.* In particular, *every intelligence that requires feelings, like the interpersonal (emotional) and musical (related to art), cannot be incorporated into a computer. The same applies to the intelligences that require self-consciousness. So I conjecture that a machine will never become fully conscious-more optimistically self-conscious- therefore, again, not intelligent.*

And who argues that our mind is purely natural? In the quest to make a brainpower computer, perhaps the biggest mystery remains the most nebulous: Where does awareness come from[4]? Can it be simulated? What does awareness by itself look

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[3] . "Hard behaviorism is an ontological position which holds that immaterial minds do not exist. Most Behaviorists claim this to be true; therefore, they clearly allow the possibility of intelligent machines.

[4] Renaissance philosopher Descartes primarily talked about dualism defending the idea of the perfect Existence of God, who exists only as a inborn idea of the immense Being and of the non-perishable, imperfect being-that is man. He adds that man could never invent a perfect Being as God, because He is perfect by all means and man is imperfect and that His perfect identity proves that He

like? If you create a machine that is capable of independent reasoning, have you created life? Do you have a responsibility to that life or have you merely assembled another piece of clever hardware that will be rendered obsolete by the next new thing? *To say that a machine is self-aware and therefore is a conscious being, we must first know what it is to be aware. At least one human mind contends that when it comes to the nature of awareness, we don't have a clue.* Similarly today man cannot assimilate or join his mind and mode of thinking with his own existence in the macrocosm and his evolution in life, and so mistakenly divides the sense of Spirit from Consciousness emphasizing on Mind and not on his true existence through Mind, which interacts and presupposes an engagement to the Ego or, more optimistically speaking, to the 'We'. Our Ego, conceived as a non-metaphorical crystal clear state of consciousness relieved from sick, undermined, sealed interests, is set aside in favor of current cynicism and egotism to cerate an artifact or a simulative machine beyond our human nature.

       Think of what we invented: the Robot, cloned animals, created the Cyborg[5] and Automata along with terms like Virtual Reality. *I reckon we managed a temporary escape from reality and our self-consciousness deluding ourselves with 'tranquillizers.* Machines that do not actually sound like a human, but talk as such or sometimes look like a human, like robots. Some even say that we'll have very powerful little computers that can travel through our bloodstream in the size of blood cells, which will actually communicate wirelessly with our neurons, so we'll be actually able to enhance our own thinking capacity, speed up our thinking, increase human memory, increase our cognitive abilities and pattern recognition by combining our biological intelligence with these new forms of non-biological intelligence.[6] They continue with the assertion that, what 'human beings are is a species that has undergone a cultural and technological evolution, and it's the nature of evolution that it accelerates, and that its powers grow exponentially, and that's what we're talking about. The next stage of this will be to amplify our own intellectual powers with the results of our technology.' A well-known objection to this assertion was Searle's perception known as the 'Chinese Room', which explains the false belief about intelligent machines that possess grammatical, syntactical and symbolic perfection, without meaning at the same time that they are intelligent machines. *Giving the correct answer does not necessarily mean I know the answer or I possess the meaning of the answer up to a certain depth. Therefore, I do not know the answer or possess the deeper meaning of the answer, therefore I am not intelligent.* A sociologic point of view would statistically show that not few are cases of not intelligent beings which or who are most of times incorporated in the society's arena as being intelligent. Presumably Turing's test cannot be regarded as an intelligence metro. Obviously there are people with whom you can talk about a subject without them being predominantly smart, *while on the other hand, there are many highly intelligent non-human beings, like the whale, the dolphin or the dog, which cannot talk. On the other hand, only humans have creative intelligence. No other living beings have it. Animals follow their instincts, a kind of "program". Their instincts or "program" may change under the influence of the environment.* But at any given time, an animal is automatically following its instincts. There are some scientists who think that a dolphin could be a

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exists. This rather weak dualistic system cannot join together _____ (Gedanke) and _____ (Sein) and inevitably apart them.

[5] _____> ancient Greek word meaning a square prototype of a machine.
[6] I've never been a fun of science-fiction films, allow me to mention here…

person. Consciousness depends on the ability to reflect upon and evaluate oneself. You needn't be a human being to be a person, and given that it's possible there are animals that are nonhuman persons, it's not inconceivable to imagine that you could build a person. The human being is able to recognize an inner driving force to do something, but he may think about the consequences of acting according to that force, and just not realize what his drive was pushing him to do[7].

Moreover, another argument related to previously mentioned emotions is that *computers cannot fantasize*. This, though sounds simple, is crucial: they merely generate new data from previously given or calculated data, in a process of combination. I do not consider that humans have new ideas just as a combination of previously known facts or ideas. 'Maybe if we face machines or the 'means' not merely as a bridge between man and nature' says Marshall McLuhan 'but as something natural, then we can regard a cyborg, for example, as a part of ourselves'. Such an observation could be factual, if we regarded ourselves as partially artificial, for example via injections being made to us against viruses, or wearing contact lenses, artificial teeth or having a valve so that our heart still beats. Researchers at the MIT Artificial Intelligence Lab are working to create robots as intelligent and sociable as humans. At the same time, medical advances are making humans more robot-like, with mechanical hearts and working artificial limbs. This is associated more with the general idea between the natural and the artificial (unnatural). I am not stating that a computer is not constructed like a simulation or model of a human mind or that in some cases it would count as a mind, but I wonder how can we converse about AI and simulation of the human brain, since we ourselves have not yet defined or completely discovered the human brain's functioning biologically, medically, linguistically or psychologically. Let us imagine how many human brains with some sort of high-level mentality evolve in this planet and how unpredictable and inconceivable is their vision. Paradoxically, let us think some mentally handicapped or damaged people with special skills, however, that in seconds perform a multiplication or a division so accurately as if they were programmed to function only that way, similarly to a robot simulation machine programmed to function and react to orders like: Kill any humans you see, keep walking, avoid solid objects or duck if a man with a gun can see you…

The consideration that nothing can or should be put into comparison to the human brain (or any human brain on this planet) is closer to reality[8]. Will computers

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[7] For instance, a person may recognize that he is a bit fat, and decide to go on a diet for aesthetic purposes. He fantasizes himself thinner, more elegant. His hunger instincts will drive him to eat, but he may refrain from doing so, just to lose weight. No animal goes on a diet for aesthetic purposes. Observing the world, one may see that humans, not animals, are changing it (unfortunately, in general for worse).

[8] According to medical researches, the human average brain elaborates through 100billion ribs and neurons are connected to other 1000 neighbors multiplying 10.000teraflop per second; the cornea of the eye scrutinizes 10 images per second in the analysis of 1million points, while an average computer processes 1million prompts per second (MIPS) when it surveys a thin white line in a black background. In 10MIPS applicable black and white images can be perceived (a well-known example is cruise missiles and 'smart' bombs), but a safe comparison to a computer would show that the human brain, which is 100.000times bigger than the cornea, ranks the human brain in an area of 100million MIPS. Yet a down-to-earth reminisce of Gary Gasparov's defeat by Deep Blue back in 1997 produced a prophetic phrase stated by him after the game: 'I am ashamed by what I did at the end of this match, but so be it'.' So be it' is not enough for the skeptical philosopher, in contrast to the convenience such a phrase offers to fanatics of AI or to the team of engineers and programmers that constructed Deep Blue.

This statement is absolutely unjustified. He does not say what kind of calculations are done by each neuron connection, and as we have pointed out before, he cannot even say how data are stored in the brain. Based upon

become intelligent like us in a world that we are in?' The reason the computer could win is, because it is a completely isolated domain that does not connect up with the rest of human life, therefore, like arithmetic, it is completely formalizable and runs through enough calculable possibilities to see a winning strategy. *Humans on the other hand, do not live in a formal world where they can exhaust all calculable possibilities and run through them. It is obvious that the computer will always beat man with brute force calculation, but finds it difficult in a world of relevance, consciousness and emotions. No computer can stand consciousness or deeper emotional states, because humans understand just by the way we are, like we understand that insults make us angry.* Even when making a humanoid robot that is embodied so as to develop real intelligence in a real embodied world, it seems very difficult to program it not only as a symbolic rule-using robot, but also as a brain-imitating robot, which will be able to understand natural language. The optimistic hypothesis of a computer simulating the neurons of the human brain, no matter how obtainable, is false belief, because even if computers are not objectively 'mindless manipulators of symbols' as Searle said, they surely are unconscious, unspiritual entities.

Still, the vast range of Computing Engineering and Informatics has not yet found a formula by which man and machine could properly and clearly interact in the same environment, whether culturally, linguistically or semantically. Creating a computer that 'thinks' is one goal of artificial-intelligence research. The single most important fact about thought follows from an obvious observation: these four styles are connected. Valdemar Setzer says we can label them ''analysi'[9], 'common sense', 'free association' and 'dreaming'. But the key point is that they are four points on a single, continuous spectrum, with analysis at one end and dreaming at the other. Psychologists and computer scientists like to talk about analysis and common sense as if they were salt and steel, or apples and oranges. We would do better to think of them as red and yellow, separated not by some sharp boundary, but by a continuous range of red-oranges and orange-yellows.' Making machines become conscious is considered one of the hardest problems of Artificial Intelligence.

So, it is necessary to distinguish two different kinds of consciousness: consciousness and self-consciousness. Animals can be conscious: if an animal is hit, it becomes conscious, aware of its pain and reacts accordingly. But only humans can be self-conscious. A careful observation will lead to this difference. Self-consciousness requires thinking. We can only be conscious when we are fully awake, and think of what we perceive, think, feel or wish. Animals aren't able to think. If they could they would be creative as humans are. No bee tries a different shape than the hexagon for its honeycomb. Animals just follow their instincts and conditioning, and act accordingly. Due to their thinking ability, humans may reflect on the consequences of their future actions, and control their actions. As mentioned previously, machines cannot have feelings and can only simulate a very restricted type of thinking: logical-symbolic thinking. One should never say that a computer thinks. Thus, I conclude that

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the number above, he multiplies it by the 100×10^{12} connections existing in the brain, coming to the conclusion that we are able to perform 20×10^{15} "calculations" per second. He does not even consider the possibility that there may be different functions for different connections; for him this capacity to perform calculation is the most important factor. He uses the same type of reasoning to come to the conclusion that our memory has 10^{15} bits.

[9] Derives from the Greek verb '_____'> _____ < analysis (___+___ = loose)

machines will never be conscious, much less self-conscious.[10] So if we are willing to construct a conscious subject or robot or machine with self-referential mental states, we should also bear in mind that if we build semantic considerations into the conditions for implementation, any role that computation can play in providing a foundation for AI and cognitive science will be endangered- as the notion of semantic content is so ill-understood that it desperately needs a foundation itself.

Still, this is not the case. 'History is littered with unfulfilled predictions and erroneous theories by so-called experts.' For centuries, science and philosophy have grappled with the mystery of our inner life. The philosopher's contribution is not merely an analysis of computational problems, but providing to all computer-alcoholics an anthropocentric value via a mirror reflection crystal clear image of themselves. Instead of arguing how much artificial or simulative idiocy expert systems possess- imitation will never become authentication-or boasting over hi-tech fast very useful thinking machinery, it would be more fruitful to enrich our skepticism with common sense and engage ourselves with what science has not yet found: a conscious machine, which is not commercially 'smart' or 'thinking' but deeper thinking. While postmodernists deconstruct the idea of the human, genetic engineering and artificial intelligence threaten the physical base of human identity and individuality. As technology fills you up with synthetic parts, at what point do you cease to be fully human? One quarter? One third? Which part of us is irreplaceably human, such that if we augmented it with technology we would become some other kind of being? The brain? Or is the brain merely a conductive medium, our humanity defined more by the content of our thought and the intensity of our emotions than by the neural circuitry? Other scientists also have come to the conclusion that we are endangered, but for other reasons. The means have to be identified with the ends. It is not by restricting freedom that we will attain freedom. I think the solution lies in the individual decision and action of each scientist and technician - they should individually decide what they should investigate and produce. I hope these lines have helped those that are searching for a more responsible science, to become conscious that strong and weak AI are not the fields that should be investigated in order to improve humanity. On the contrary, if pursued, those fields will only contribute to accelerate our increasing misery. Our main problems are not material problems. Only by solving our main problem, that is, the way we regard ourselves and the world, we will be able to revert our increasing social, individual, and the world's downfall.

We do not know how far new technology or AI projects and Robotics will lead us, but let us be the leaders of this greedy, ephemeral and marketable consumption. No technology has ever had greater influence on Philosophy than modern Informatics and Communications, but also provoked so many moral and epistemological

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[10] Ray Kurzweil is one of the exponents of the idea that humans are machines, and thus machines will be able to do whatever humans do. His best-selling book [1999] is full of prophecies, based upon the following statement: 'The human brain has about 100 billion neurons. With an estimated average of one thousand connections between each neuron and its neighbours, we have about 100 trillion connections, each capable of a simultaneous calculation. That's rather massive parallel processing, and one key to the strength of human thinking. A profound weakness, however, is the excruciatingly slow speed of neural circuitry, only 200 calculations per second.' [p. 103]

argumentations. Materialism[11] was developed mainly during the last two centuries, as a necessity of mankind. It has made it possible for us to immerse ourselves into matter to a degree that would have been impossible without it. Without this immersion we would not have developed our capacity for being free and self-conscious. But I think it's now time to consciously overcome this view of the world, without losing everything we have developed, otherwise we will continue to see social misery continuously increasing. Man is not a purely physical system; our thinking, feeling and willing activities do not originate in our physical parts. So it will be impossible to introduce real human mentality into machines, and studying and developing machines will never reveal our real essence; on the contrary, they deviate our attention from it. The degree of depletion of natural resources, including air, water and agricultural soil (what a paradox: our materialistic age is destroying matter), the increasing social and economic instability and misery everyone can observe makes it absolutely urgent that we change something. I think this has to begin by radically changing the view humans have of themselves and of living beings, the view that they are machines. Unfortunately, academic AI has not contributed to that change, on the contrary, it has contributed to denigrating the image humans make of themselves. It has contributed to the elimination of our human dignity and social responsibility.

The impact of globalization makes it more difficult to build a bridge between the human desires and technology itself. So far I can recall the Greek ancient myth of Pygmalion, who spent most of his time sculpting and eventually carved the most beautiful woman out of ivory. He adored and adorned his creation, until finally, along with Venus's help, the perfect statue became alive and lived with her happily ever after. What you do not probably know is that before creating this female masterpiece he encountered many faults with women and instead made that artificial substitute. Challenging charming phonies cannot be ignored, but challenging reality seems to be the hardest challenger, to whom we have to focus on very intimately before dreaming of any virtual false engagements, as it may be unfortunate not to live inside a myth, but why not build naturally our own?

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[11] Many people, certainly all materialists, would say that concepts are not realities in the Platonic world of ideas, but are "stored" or "generated" somewhere in the brain. For instance, Ray Jackendoff puts it this way: 'I think of word meanings as instantiated in large part in a particular subsystem of the brain's combinatorial organization that I call conceptual structure." [1993, p.54]Unfortunately for materialists, this is not a scientific fact, it is a speculation, because they cannot show where and how a simple concept such as "two" is stored in the brain. There are many evidences for the existence of that Platonic world. For instance, how could Darwin and Russell Wallace, who were almost antipodes, have developed in the same time span the idea of natural selection? Such and other "coincidences" may be explained by the fact that both perceived the same idea in the world of concepts. I am aware of the fact that materialists will argue that my supposition for the existence of a "real" Platonic world of ideas is also a speculation. Fortunately, no one can prove that the other is incorrect, otherwise spiritualists could prove the existence of the non-physical world, or materialists could prove that the non-physical world does not exist.

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