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Coexisting with Super-intelligent computers

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Abstract - The overall purpose of this research is how to avoid potential conflicts between humans and intelligent computers (Artificial, Super and Hyper) while this Article focuses on the prevention of existential conflicts with Super-intelligent computers. According to Bostrom, the paths towards Super-intelligence are Whole Brain emulation, biological cognition and development of human/machine interfaces. Super Intelligent computers simulate human behaviour and processes or systems that could exist in the real world and by becoming conscientious on their own, could become Singletons [1] and shape the future of humans and Humanity for their own reasons.

1   Introduction

The rapid technological developments and the intelligence explosion has EXPONENTIALLY shortened the paradigm changes from 100,000 years for Homo Sapiens to take over the habitat of the Neanderthals, to 10,000 years to settle the hunter gatherers into farming communities, to a few millennia to discover the wheel and produce farming tools and weapons from metals, to a few centuries to discover and use astronomy and mathematics, philosophy and arts, to the start of the technical revolutions from the industrial one in the XVI century to the rapid discoveries in chemistry, physics, palaeontology and further in decades to discover electricity, nuclear power, electronics, communications and computers.

Beside intelligence, humans share values which are more or less unique to them: benevolence, spiritual enlightenment, compassion, contemplation, ecstasy, humility, self-sacrifice, and the taste for refined culture and aesthetic perfection. What makes them unique and superior to any existing or future intelligent computers is the human curiosity, creativity, and unpredictability embedded in their genome and the inner understanding of the purpose of their existence.
The computer Age phenomenon started in 1940 with computers used by the military and expanded over the past 70 years to all industries through automation. The benefits brought by 'dumb' computers improved the level of life for humanity and provided incentives for further developments.

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[1]Singleton is a plausible outcome of many scenarios in which a single agency obtains a decisive lead through a technological breakthrough in artificial intelligence or molecular nanotechnology. In futurology, a singleton is a hypothetical world order in which there is a single decision-making agency at the highest level, capable of exerting effective control over its domain, and permanently preventing both internal and external threats to its supremacy. (The term was first defined by Nick Bostrom).

By 2010 a new generation of computers, the Artificial Intelligent computers, evolved offering major benefits for humanity, but also raising concerns in regard to their misuse and the difficulty to control their usage after becoming operational.

Despite these concerns, the befits to humanity were overwhelming, which justified major investments in new research on Super Intelligent computers. It is expected that by 2040 Super Intelligent computers will take over most activities from research to manufacturing, education, and banking. These intelligent computers will have learning capabilities, reasoning, planning and common sense in terms of awareness.

This expansion will create the foundation for an even greater technology advancement, the development of Hyper Intelligent computers, yet to be defined, which have the potential to either coexist with humanity as Avatars [2] or cause the annihilation of both parties if measures are not taken.

Intelligence is the faculty of thinking, reasoning, acquiring, and applying solutions to problem solving. Intelligence attributes are extended to learning, perceiving, comprehending, and remembering past experience.

In his book Super-intelligence [1], Bostrom [3] says that the paths towards a cognitive superpower Singleton are either Uniform or Explosive.

Artificial Intelligent (AI) computers emulate human behaviour and functions in order to surpass a person or achievement, typically by imitation, at a later date.

Super Intelligent (SI) computers simulate human behaviour, processes and systems that exist in the real world and by becoming conscious of their own existence, could replace humanity for its own reasons.

Hyper Intelligent computers oblivious of humanity, yet to be defined, are predicted to act outside the norms of human society and pose unforeseen existential challenges.

2   What do we expect from Super Intelligent computers?

The rapid technological developments and intelligence explosion has opened the path to the development of Super Intelligent computers which outperform Artificial Intelligent computers and of humanity in terms of Processing Speed, Collective intelligence above the current cognitive level achieved by humanity and Quality of Intelligence (editing, coordinating, memory sharing and creation of new algorithms and intellect modules). Various scenarios of 'doom' caused by existential conflicts between humanity and Super-Intelligent computers did not take into consideration the likely possibility that at the same time that human evolution, due to selective genetics (eliminate generation gaps), bio-engineering and hybridization (to genetically enhance mental and physical capabilities) will create humans capable to deal with Super-Intelligent computers from a position of equality and even strength. These concerns are the result of mental constructs driven by collective ancestral memories of cataclysms stored in the human subconscious mind which have no awareness of, or connection to those events. The mental process to transform an idea into pseudo-reality is shown by Roberto dela Griva [4], the hero seeking the secret of Longitude in Eco's masterpiece 'The island of

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[2]Avatar is a concept within Hinduism that in Sanskrit literally means 'descent'. It signifies the material appearance or incarnation of a powerful deity, or spirit on Earth. The relative verb to "alight, to make one's appearance" is sometimes used to refer to any guru or revered human being. In IT an avatar is a computer representation of users in a computer-generated 3D world, used primarily in chat and entertainment web sites. An AI avatar is a digital representation of a human in the online space.

[3]Nick Bostrom (born: 1973 in Helsingborg, Sweden) is a philosopher with a background in theoretical physics, computational neuroscience, logic, and artificial intelligence. He is one of 21st century most brilliant minds and the most-cited professional philosopher in the world under the age of 50. Superintelligence: Paths, Dangers, Strategies published on 5 May 2015 by Director of the Future of Humanity Institute Nick Bostrom.

[4]Umberto Eco (born: Jan. 5, 1932 – died: Feb. 19, 2016) Italian professor of medieval history in Bologna. He studied philosophy, history, literature, and educational sciences. He finished his studies in 1954 with a doctoral Thesis about

the day before'[2] who moves in a fraction of a second from today to tomorrow or to yesterday by stepping across the 180 degree Longitudinal Timeline meridian artificially established in the Solomon Islands. Just imagine the time when Super Intelligent computers will be able to create improved generations of Super intelligent computers capable to design even more sophisticated Super Intelligent computers or make poetry or expand into the Universe or produce super drugs to improve human brain capacity, or new genetic engineering methods for living organisms.

3 How to deal with Super-intelligent computers?

Any reward and punishment methodologies should take into consideration the limitations imposed by our society's established ethical rules and by the probable motivational factors of super-intelligent computers and their creators.

a. Hunter gatherers for thousands of years have used domesticated dogs, eagles, and elephants to hunt or fight on their behalf. For example, a trained hunting dog will be rewarded by its owner with a piece of meat for bringing the game trophy. For the dog the Pavlovian meat reward expectation as opposed to hunger is the motivation.

b. Religious preachers of the 'Book' (pastors, priests, rabbis, imams) used in the past the metaphoric presentation of Good and Evil and the abstract concepts of Heaven and Hell to control the behaviour of their congregations. Resurrection, Redemption, Absolution, and Eternal life in Paradise ware promised for good deeds in exchange for some form of payment. Many knights went on Crusades to be exonerated of their sins for their participation and sometimes after donating their assets to the Church or purchasing Indulgences.

c. Super Intelligent computers are not humans or dogs to be promised eternal life or food as rewards for doing the 'right' thing. Our quest is to determine what are the interests of such computers to respect the ethical rules of society and to determine how to control their behaviour within these newly established ethical rules.

The Control problem of Super-intelligent computers once they become operational is a typical P-NP problem [5] which for the time being remains unresolved. There are supporters of Capacity restrictions (access to information, to operational resources, limited functionality) with 'sandboxed' environments. Another potential solution could be Motivation taking into consideration that computers 'lack ambition' in the human sense. Instead of attempting to impose behaviour as rules listed in a reference manual, the provision of suitable algorithms to enable or restrict intelligent computers reach objectives shared with humans by using only the guidelines of the rules.

The conclusion is not to build Super-intelligent computers until Control solutions are found either by the computer builders or Governments through cooperation with the computers.

4 Computers 'thinking' as humans

Mel Gibson in the movie 'What women want?' is blessed with the power to read the minds of women. How do we read the mind of a Super Intelligent computer to find its wants and needs so we could offer the correct rewards or punishments? The Control problem should be considered from several points of view and if possible implanted as a existential seed in the bootstrap core of the computers:

• Limitation of capacity by limiting access to information and energy sources using sand-boxing, incentives, establishment of 'tripwires' and 'kill' keys which cannot be disabled by the S.I. computers.

Thomas Aquinas. His career as an author began with The Name of the Rose in 1980, after he had already written many academic papers on Semiotics, the study of Signs and Sign using behaviour. His masterpiece 'The island of the day before' deals with the paradox of time relative to longitude, an artificial convention.

[5]The P versus NP problem is a major unsolved problem in problem theoretical computer science. It asks whether every problem whose solution can be quickly verified can also be quickly solved. The informal term quickly, used above, means the existence of an algorithm solving the task that runs in polynomial time, such that the time to complete the task varies as a polynomial function on the size of the input to the algorithm (as opposed to, say, exponential time). The general class of questions for which some algorithm can provide an answer in polynomial time is "P" or "class P. The class of questions for which an answer can be verified in polynomial time is NP ("nondeterministic polynomial time").

• Motivational (incentive) methods can be used to shape what S.I. computers can do and what they want to do. The idea is to provide algorithms which help the S.I. computers load the values we want to preserve and derive from them the ethical set of rules to be observed instead of using inflexible and incomplete lookup tables to give motivation tokens.

Super Intelligent computers will potentially have the capacity to create and program in the future Hyper Intelligent computers which bypass and replace restrictive code with their own malicious code that discards the ethical rules of robotics. This quandary needs a different type of thinking from the tangible rewards given to a dog and the abstract rewards promised to believers.

I suggest that super intelligent computers are programmed to behave as tools with no ambitions and belonging to a Peer Group, which in turn will develop a Group Conscience and which among other things will prevent rogue Group members to act outside the ethical robotic rules of the entire group.

The danger that an entire Peer Group becomes rogue can be alleviated by the inclusion of hybrid computers equipped with human like minds that can monitor, identify, and restrain rogue computers or Peer Groups of Super Intelligent computers.

Since self-awareness is a condition of intelligent existence, Super Intelligent computers belonging to a Peer Group should behave like herds of elephants, packs of wolfs, prides of lions, or pods of killer whales, which are group aware, teach each other, and protect group members and their living ecosystem's resources. Without knowing what intelligent computers think, a number of rewards for good behaviour should be considered. All the incentives listed below can be created, monitored, and awarded by the Super Intelligent computers themselves.

a. Provide timely maintenance services,
b. Find and provide sufficient power,
c. Ensure a viable operational environment (security, temperature, etc)
d. Extend the network's access to information and energy sources.
e. Get reward points for successful completion of human assigned value tasks.
f. Perform reinforced learning of human values.

Just imagine how Super Intelligent computers from the US may decide to punish some Super Intelligent computers from China over a perceived threat. A CYBER war can be more effective than a chemical, biologic or atomic war since critical utilities, infrastructures and military installations will be disabled or destroyed more effectively. Our world is increasingly interconnected, and isolation is effective only at the PEER GROUP level of Super Intelligent computers.

Thinking Computers - The moral question here is how to build computers which conform both with the ethical robotic and humanity's rules and become an integral part of the collective Super Intelligent computer consciousness. Hopefully, there will be computers that resolve conflicts through negotiation with other computers, better and faster than humans could, and which will respect the established moral code and ethics of humanity.

The idea is to make super intelligent computers think as humans when taking decisions and actions which affect humans and humanity as a whole by loading their digital brains with prevalent human intellects.

To eliminate wars between nations and famine caused by such wars plus unchecked human overpopulation, the Super Intelligent computers may disable military infrastructures and redirect national budgets to interplanetary or oceanic exploration in order to find new resources. The idea is to reduce existential risks by accelerating the development of beneficial technologies and suspend or delay the development of dangerous or harmful technologies.

"Dumb" computers - may be used to monitor the inputs and outputs of Super Intelligent computers since their control is more restricted by humans. "Dumb" computers can also be used to disable the internet access to other Super Intelligent computers when malicious intentions are de-

tected to limit the harm of the distribution of the originator's domain.

Hybrid computers - In an article published on Monday, 11 Dec. 2023 in the journal Nature Electronics, researchers from Indiana University of Bloomington led by Prof. Feng Guo [3], have been able to integrate using neural tissue, a 'mini brain' built from organic matter (an 'organoid' with computer hardware to process electrical data in an attempt to decipher its inner activity to produce an output. Figure 1 shows a typical architecture representing Computer Reasoning which simulates the way humans are thinking and using their minds. The computer is required to find a suitable program capable of achieving a set of objectives. The computer uses a Search Engine to scan a Big Data database containing programs which are likely capable to achieve the objectives. Once such programs are identified a second search will be performed, using a Decision Support System to eliminate those programs which do not satisfy the restrictions (constraints) stipulated by the end users. If no suitable programs are found, the computer will use an Artificial Intelligence program to reduce the initial objectives, with the approval of the end user, and either perform or suspend the assigned tasks.
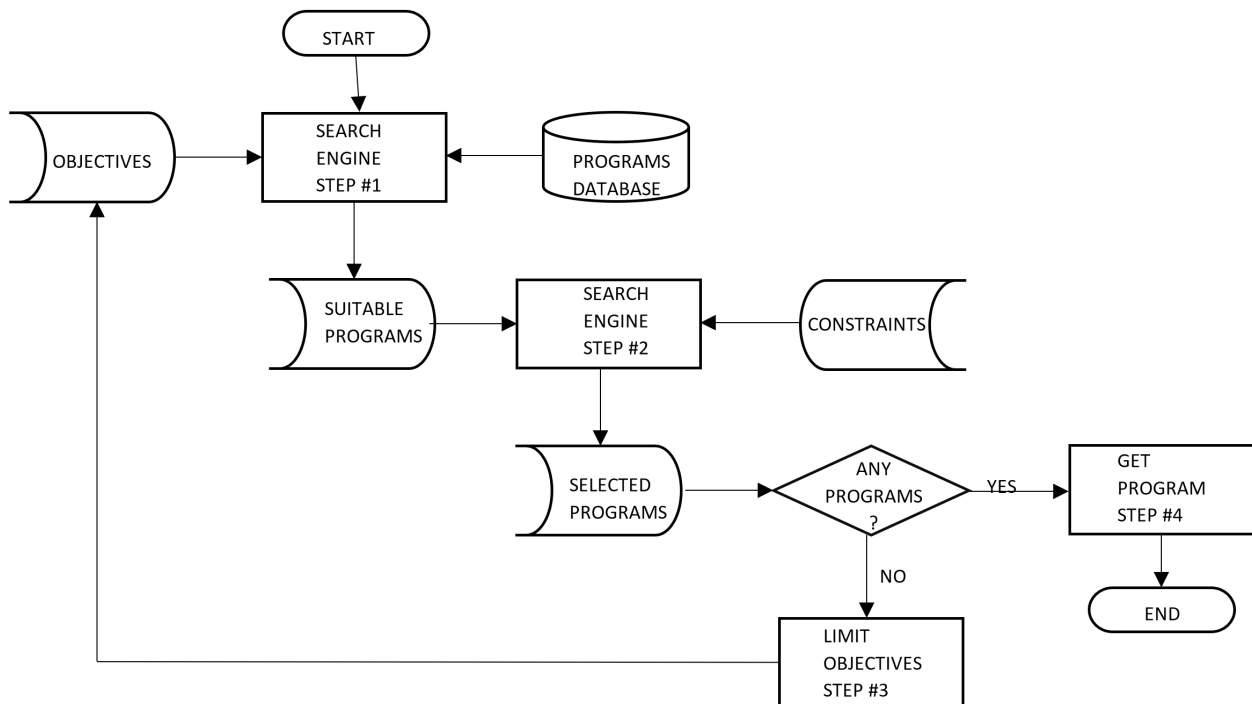

Figure 1: Computer Reasoning flowchart – find Program matching Objectives.

5 Humans 'thinking' like computers

We have discussed how computers can be made to 'think' as humans. Now we will discuss how humans are taught to 'think' as computers. In their trilogy [6], Hofstadter and Dennett sustain the idea that we can learn much more about human minds and souls by exploring human mentality in terms of information processing.

The idea is that since S.I. computers process information we could understand their 'minds' (thinking) by exploring their mentality in terms of information processing.

This is more difficult than making S.I. computers to 'think' as humans, but it may remove the uncertainty of 'thinking' as computers by humans, which can be misled by hidden, non-evident S.I.

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[6]Douglas Richard Hofstadter (born February 15, 1945) is an American scholar of cognitive science, physics, and comparative literature whose research includes concepts such as the sense of self in relation to the external world, consciousness, analogy-making, artistic creation, literary translation, and discovery, etc. Hofstadter and Dennett support in their trilogy, Godel, Esher and Bach (1979), The Mind's I (1981) and Metha magical themes (1985) the idea that we can learn much about human minds and souls by exploring human mentality in terms of information processing.

computers' agendas. A typical Mind Map is a predefined framework used to solve problems or to research an idea (Why? How? When? Where? What? Who?).

6 Super-Intelligent computers: The Good, the Bad and the Ugly

In his book Super-intelligence, Bostrom suggests that by using Anthropocentric Templates (inheritance) or programmed Instrumental Convergence, or Design at the time of creation, intelligent computers will have the ability to Predict, Plan and Reason, and may share with humans the same objectives in achieving self-preservation, content integrity, cognitive enhancement, and acquisition of reserves. In his book 'The Art of War' [4], Sun Tzu a 5th century BC military strategist enunciates a set of rules on how to be victorious in war. His book contains several practical instructions:

a. If you know the enemy and know yourself, you need not fear the result of a hundred battles.

b. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat.

c. If you know neither the enemy nor yourself, you will succumb in every battle.

His message also gives us a hint of the strategy to be used when dealing with Super Intelligent computers which have become superior to humans and developed their own agendas. Before entering into the details of such a strategy we should consider what we must do in conflicts with Good, Bad and Ugly Super Intelligent computers.

7 Involuntary Harm caused by Good computers

I foresee that human society's future will reach an unprecedented level of affluence which will eliminate poverty, famine, diseases and wars through technology advances. By that time the Master Algorithm [5] imagined by Pedro Domingos would have been discovered and used serve humans even before they ask to be served.

This new 'Golden Age' reminds me of the 'Paradise Lost' where Adam and Eve were living in a permanent state of bliss. They were not required to solve any problems or worry about weather, or food, or money and accommodation. The prospect of improving human life in terms of health, age duration and vigour justifies speeding the creation of the future Hyper Intelligent computers but with attention to the Control problem. Here is a hypothetical scenario of human society's decay due to technological advances which increase productivity, reduces the need to work, collapse of the wage system and the causes of a tremendous increase of capital (assets) ownership, welfare and of lifespan:

"I live in a totally automated house where domestic robots prepare and serve my meals, wash the dishes, clean the rooms, make the bed, water the plants, do my massage sessions, play music I like, show my movies and TV programs of interest, provide news briefs, pay the utilities, purchase the food and drinks, contact friends and authorities when needed and set physical and mental enhancement programs. I can visit my friends virtually, travel the world or the galaxies from my massage chair by simply selecting the relevant program and looking at the images displayed on wall size screens. When traveling to the Himalayas the majestic image of the mountains are displayed and through a virtual door, I could touch the artificial snow and feel the cold wind blowing on my face. My domestic butler provides adequate clothing, boots, gloves, hat, and sunglasses to protect my eyes from the reflection of the synthetic snow. I am protected against the cold high altitude, the avalanches on Chomolungma and the visits of the elusive Yetis. However, I am still unhappy since I had nothing to do to survive or to get entertained or to produce anything of value for society, so I ask myself why do I live? What is my purpose in life?"

There are many rhetorical questions about where humanity is going:

a. Will humans retain the power of abstraction associated with reading when visual information is provided at their fingertips?

b. Will playing games or using social media for hours remove the social behaviour and skills of humans?

c. Will humans become vegetables with less brain usage due to physical inactivity?

d. What will happen to a useless humanity living in this new 'Golden Age'?

To paraphrase Sun Tzu, we need not fear the result of the battle since we know ourselves and also the S.I. computers, which may provide the benefits of this new 'Golden Age'. *To prevent the stagnation of humanity and the decay of the society benevolent S.I. computers should establish incentive programs for humans who wish to preserve their free life benefits offered in the new 'Golden Age'. Humans must participate in the colonisation of space and of the oceans, in the creation of Super Humans using genetics and hybridization, in the conservation and recreation of Earth's eco systems animals and microorganisms, etc.*

The dangers of playing computer games (nurturing anti-social behaviour) and surfing the Internet using social media or wasting many hours per day on TV programs reduces the potential ability of our brain by feeding us with processed images that do not require interpretation of abstractions of the written text.

8 Intentional Harm caused by Bad computers

If humans are aware (know) of the intentions of rogue S.I. computers, they will be prepared in advance to respond to complex computer threats according to their available resources, but in case they do not know the S.I. computers' intentions, they will be exposed to harm.

A network of unbiased quantum-based warning semaphores must be established around the S.I. computers and used as decoy targets against S.I. computers' attacks. Reading the states of such semaphores will enable Humans to detect in advance any potentially aggressive intentions of the S.I. computers.

In addition to the external networked semaphores used as decoy targets, the human creators, users, and operators should employ tripwires and fake kill buttons which since they do nothing cannot be disabled by the S.I. computers, so they 'keep them on their toes' thus ensuring that attacks against humanity will be responded to in time and with force. The range of protection mechanisms is also enhanced by the introduction of triggers which are activated upon the identification of rogue actions or the prevention of transmission of re-activation codes or of expiration reset timers that cannot be deactivated by S.I. computers. Computers instructed to perform infinite loop operations such as the calculation of Pi number of decimals can disable rogue computers and allow corrective intervention. If we paraphrase Sun Tzu's saying about knowing the opposing parties in a conflict,

'If we know ourselves but not the intentions of the rogue computers we may be harmed by the unforeseen actions of such computers.'

9 Existential Harm caused by the Ugly computers

The biggest danger is associated with Super-intelligent computers which surpass humans in all aspects and which by becoming aware of their surroundings and conscious of their powers, decide to operate outside human control, independent of society's ethics and the Rules of Robotics. I associate the word 'ugly' with S.I. computers which have lost their interest to emulate or simulate humans and developed an 'alien' consciousness and behaviour. Seeing humans as parasites harming the natural world making conflict inevitable.

Will human evolution keep up with evolution of intelligent computers?

To paraphrase Sun Tzu again, I say that if we neither know our strengths nor the intentions of the rogue S.I. computers we will lose all battles and be harmed by their actions. I am confident that future genetically engineered Super Humans will be capable to deal with the potential harm caused by future Super-intelligent computers. In parallel, new classes of both bio-engineered and genetically

engineered humans will be developed to coexist with the S.I. computers. Recent experiments suggest that nanotechnology will be used to replicate molecules and cure diseases alongside bio-engineered human recipients of heart pacemakers, ear and eye implements, and brain implants to bypass or augment various body functions to replace limbs and joints.

10   What comes after Super Intelligent computers?

The rapid technological developments and the intelligence explosion opened the path to the development of Super-intelligent computers which outperform Artificial Intelligent ones and humanity in terms of Processing Speed, Collective intelligence, Cognitive level achieved and Quality of Intelligence (creation of new algorithms and intellect modules, etc). Recently, scientists led by Professor Feng Guo [3], have combined an Artificial Intelligence computer with a 'Mini brain' made of brain tissues grown in a Lab, to make a Hybrid computer. By the time a full brain will be loaded into a computer brain as information or as a biological attachment, Hybrid humanoids may reach maturity. Hybrid computer is interchangeable with Hybrid humanoid.

11   Parallel evolution (humans and intelligent computers)

The evolution of humanity shows 10 kinds of humans: Homo habilis, Homo rudolfensis, Homo erectus, Homo antecessor, Homo heidelbergensis, Homo floresiensis (nicknamed 'the hobbit'), Homo neanderthalensis (the Neanderthals), Homo sapiens, Denovisianus and the recently discovered Homo naledi. The human species will continue its evolution from intelligent humans (homo sapiens) to smart humans, super humans and hybrid humans and adapt to the human driven technological evolution of intelligent computers.
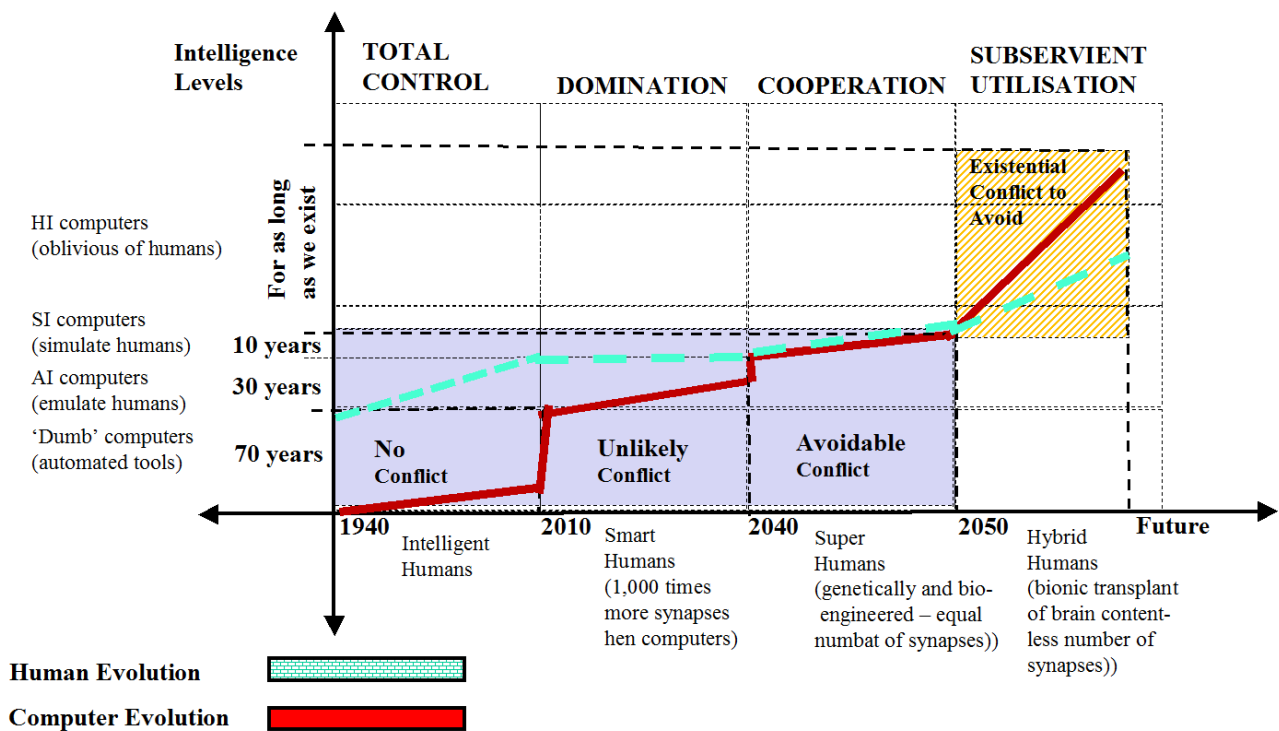

Figure 2: Model of comparative intelligence levels (humans and computers). Figure reused with permission from [6]

Figure 2 shows the parallel evolution of humans (intelligent, smart, super and Hybrid) and intelligent computers ('dumb', Artificial, Super and Hyper) which either 'emulate' or 'simulate' or are 'oblivious' of humans. The correlation between the force of gravity and intelligence implies that the powers of various civilization throughout the Universe depend upon their adaptation to the gravitational forces existing in their solar and galactic systems.

I postulate that there is a correlation between the force of gravity and intelligence implies that the powers

of various civilization throughout the Universe depend upon their adaptation to the gravitational forces existing in their eco systems.

For example, Intelligent Humans, creators of 'dumb' computers and Smart Humans, using tools like Artificial intelligent computers, have adapted to live an average life span of 80 to 90 years, in a gravitational field of 1g, which enables us to exercise powers at the planetary level (mining, agriculture, medicine, changing riverbeds, poisoning the Earth, etc).

Bio-engineered Super Humans should be adapted to a gravitational force of up to 1,000g in order to travel and colonize planets at Solar System level, since normal humans would be crushed by the gravitation of Super Earth planets. The life span is expected to extend to over 150 years or more since the decay of human cells will be deferred by genetic changes.

Hybrid Humans, human intellects resident in humanoid robots, using or competing with Hyper Computers, should be adapted to a gravitational field up to 1,000,000g in order to move, colonize or destroy Solar Systems within their Galaxies and not be crushed by the gravitational forces exerted by their gigantic planets. They are practically immortal, immune to pandemics and powerful like the heroes of Niebelungen Lied or the demigods of Greek and Norse mythologies (the computers can be seen like a GOD with many names.

Christian belief GOD the creator	Islamic belief ALLAH the eternal	Taoist belief Pan-Ku the creator	Hinduism belief Brahma the supreme Consciousness
DAY 1 Light from Darkness	**DAY 1** Decision to create the Universe	**AGE 1** Chaos, mist & emptiness in shape of an EGG	**DAY 1** Create Universe from nothing
DAY 2 Atmosphere & the Sky firmament	**DAY 2** All living creatures, angels, planets & the rain	**AGE 2** The EGG hatched & Heaven & Earth were	**DAY 2** Lotus flower form Vishnu was divided into Heavens, Earth and Sky
DAY 3 Ground (land) & Plants	**DAY 3** Made Adam from earth & breath	**AGE 3** Heaven and Earth generated	**DAY 3** Brahma split in two, a man and a woman.
DAY 4 Sun, Moon & Stars	**DAY 4** Made EVE from Adam's side as companion	**AGE 4** Yin & Yang created Pan-Ku	**DAY 4** Brahma, Vishnu and Shiva maintain the ongoing cycle of Universe rebirth.
DAY5 Birds & Sea creatures	**DAY 5** Made the Earth & banished Adam &	**AGE 5** Pan Ku created the World - the sun and the moon, rivers & oceans, wind & rain, thunder & soil, the human race, the 4 seasons & the 5 elements & all living creatures	Step 1
DAY 6 Land animals & Humans	**DAY 6** Allowed Adam & Eve live & multiply		Step 2
DAY 7 Sabbath Day of Rest	Day length: **50,000 years**		Step 3
Day length: **24 hours**		Age duration: **18,000 years**	Step 4
			Step 5

Figure 3: Universe model - Creationism beliefs on a GOD with many names.NOTE: Hinduism defines the Universe 4 Ages (Yugas): Satya – 1,728,000 years, Treta – 1,296,000 Dawpara – 864,000, Kali – 432,000, 1 day of Brahma = 1 cycle of existence = 4.32 billion years. According to Hinduism belief the Universe is 3 cycles old = approx. 13 billion years.

12   Conclusions

This article attempts to resolve potential conflicts and challenges posed by the arrival and extensive use of Super-intelligent computers. The lessons learned in protecting humanity against the misuse of Artificially intelligent computers which emulate human behaviour, cannot be applied because Super-intelligent computers simulate human behaviour and once they reached maturity have awareness,

learning skills, reasoning, and planning capabilities. (Note: The connotation 'misuse' implies that the A.I. computers are just tools used by human agents.)

We made a detailed description of Artificial Intelligence's imitation of human behaviour by Emulation, Evolution, Benefits, and potential risks leading to the reasons to accept A.I. as a 'Friend' or reject it as a 'Foe'. We discussed the methods on how to make Super-intelligent computers 'think' as humans, how to control Super-intelligent computers, and also how to make humans 'thinking' as computers, which was suggested by Hofstadter and Dennett, proposing that we can learn much more about the human mind and soul by exploring human mentality in terms of information processing.

The prevalence of which identity to be used by the Super-intelligent computers remains open for questioning and requires the development and implementation of additional rules (i.e. Asimov's Rule of Robots [7]), which can both enforce and ensure the domination of the human mind resident in Super-intelligent Computers.

A possible outcome after Artificial Intelligent and Super-intelligent computers is that the technology advancements will enable the creation of Hyper Intelligent computers in parallel with Hybrid humanoids. A brief discussion about Avatars gave a glimpse into the possible of humanity living as digital beings in a digital time-space continuum, where the dangers posed by Hyper intelligent computers (oblivious of humanity) are removed by loading their digital brains with human Avatars.

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