

Natural and artificial intelligence; the ethos philosophic

DIOGO ZAPPAROLI MANENTI
UNIVERSIDADE DE COIMBRA

Introdução

Artificial intelligence and post cybernetic culture had demonstrated a stage of development not completely known. But, technological developments, and artificial intelligence systems have been developing faster. According to the authors (Tsujii, Juan-ichi, 1995), artificial intelligence is the capability to develop programs, equations, and build solutions developed by humans. The complexity of reality, in the social and technological aspects, and the logic of the systems, considering that studies relating ethical philosophic, and reflections are needed.

Problema de Pesquisa e Objetivo

The main objective of this article is providing an initial reflection about natural and artificial intelligence related to socio technological paradigm. The hypothesis identification is related to theoretical questions; it provides a framework, it can expand reflexive thinking in this area of study, using a propositional logic system. Secondary objective provides orientations and considers to manager, for promoting ethos philosophical orientations. These factors are important to improving quality of life, protecting life, minimization of risks, and can improve longevity.

Fundamentação Teórica

Considering theoretical bases, ethical and legal systems appear not completely prepared to confront, and to block malicious uses, and systems; controlling virtual and real spaces, in order to promote human dignity; potentially danger if not able to protect and promote quality of life and longevity. Despite it, about those subjects, and related subject, many authors had consistent considers (Park, Heo, and Lee, 2008), (Nguyen, Alqurashi, Raghebi, Banaei-Kashani, Halbower, and Vu, 2018), (Wu, Joon Gi, and Lee, 2012), at al.

Metodologia

This article is based on some hypotheses, problems, and possible solutions; there are predominantly some hypotheses to investigate, and theoretical propositions. Then, the methodology is based on theoretical structure, dialogic to reflections, and logic propositional to verify the validation of assertives. Consequently, a reflective thinking about the subjects. This initial reflection about philosophical ethos and human technological interactions involves the socio-technical paradigm, subjacent issues, and other areas of knowledge.

Análise dos Resultados

The discussions and results concluding that is necessary more amplitude in terms of conceptual development, and reflections in context of socio-technical model, and related subjects, it can contribute to develop, consistent, in praxis and theoretic dimension associated to ethical, and legal needs. The limits imposed by legal ethical systems should be guided by fundamentals that can block, and make a barrier to prevent malicious uses, unauthorized actions, or cases that represent potential danger to physical, moral, psychological, biological, and intellectual integrity.

Conclusão

The value of this study is associated with an increase of knowledge about artificial intelligence and natural intelligence, related to the technocratic, social, and technological areas. Human technological interactions involve the socio-technical paradigm, subjacent issues, and other areas of knowledge; It in considering, there are several ways to develop solutions related to new products, considering theoretical, and philosophical bases of ethics, to developing products, and solutions; That can be virtuous if can promote quality of life, and longevity.

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Palavras Chave

Biomarketing, Education, Ethic philosophy

Natural and artificial intelligence; the ethos philosophic

1 Introduction

Artificial intelligence and post cybernetic culture imply a stage of development not completely known. In addition, technological developments and artificial intelligence systems had been developing faster, in comparison to natural intelligence. According to the authors (Tsujii, Juan-ichi., 1995), artificial intelligence is the ability to develop programs, equations, and build solutions developed by humans.

The complexity of reality, in the social and technological aspects, and the logic of the systems, that can permeate the understanding of artificial, and natural intelligence; it can be engaging in a situation from new perspectives of developments to solve problems, and to provide solutions.

The technological developments and applications, considering artificial intelligence, involve many areas of knowledge: physical, and virtual systems. Human-computer interactions are examples of applications.

Natural intelligence, in a possible true perspective, can consider the evolutive cycles of human, and biological developments; From thousands and thousands of years, considering it, without genetic manipulation, the human brain has improved your capacity. It has consequences in human knowledge, memorization of human knowledge, and others results from natural development. Consequential ethics implications, considering human-computer interactions, and artificial intelligence [human computer interactions] are a valid perspective of study.

Despite those evolutions, emerging questions need considering abrupt technological developments; ethical and legal systems appear not completely prepared to respond, block malicious uses and systems; and control virtual and real spaces, in order to promote human dignity; potentially danger if not able to protect and prevent improved quality of life and longevity. Protective mechanisms, prevention from bio attacks, principles of ethics, and preventive mechanisms are needs; for regulating and consolidating the limits in advancing technology, that configure invasions in human dignity, physical, moral, and ethical integrity. The objective of this study involves a reflection about ethics applied in those contexts, supported for logic propositions testing of validations.

Considering the conceptualization of artificial intelligence, and correlates subjects, previously there is a consolidated notion about those subjects, but is necessary more amplitude in terms of conceptual development and reflections, socio-technical model and related subjects can contribute to develop consistent in terms theoretical.

2 Socio-technical model

The Socio technical model, by paradigmatic perspective, can be considered in the social system, involving: biological, social, and human perspectives. In this context, there is a dimension that considers: society, ecology, and the environment, integrating humanism. Not exclusively in physical dimension; metaphysic, and psyche equally. The human consciousness, the cognitive system, and intellectuality is associated. In conceptual terms, it can be considering the soul and body; other perspectives validated.

The technical system, part of the socio-technical model, refers to technical other dimensions of model, which can be considered from the more rudimentary non-human technology to the

more advanced and actualized technologies, based on artificial intelligence, providing hardware, and software developments.

Natural and artificial intelligence, in a possible perspective of truth, are considered integrating in human-computer interactions.

Biological integration in medical devices is a reality in developing, the variability of devices, equipment, dispositive are a part of reality in developing. Previously it is possible to conclude that it is potentially dangerous, if not controlled, and non regulated / authorized for use. Then, there are virtuous uses, and malicious possibilities. Not authorized or bad intentioned uses can be considered an attack to human dignity; Potentially a problem.

2.1 Natural Intelligence, Artificial Intelligence, and Digital humanism

Posthumanism can imply the association between humanism, and cybernetic concepts; limits from hybridization of this conceptualization, in practical, and theoretical implications. Those questions have received attention from universities, governments, organizations, and society. Reflecting about those problems is crucial for solutions, preservation of quality of life, and improving longevity.

This section presents the concepts related to this problem and subject: artificial intelligence, natural intelligence, and digital humanism.

Digital Humanism refers to technology engaged in robots, language assistance, electronic control systems, and in general, for a digitization process. Previously, maybe there are consequences for nursing, health care, social life, and the digital world (Tsujii, Juan-ichi., 2019). Because of this, the management of risks is needed.

Natural intelligence derives from human value, relating to non-quantitative qualitative aspects, for example the value of ideas, cognitive ability, and intelligence. These characteristics and aspects are derived from natural, biological systems, neuronal activity, synapses, memory, and physical biological systems.

Natural intelligence, in this study, is not completely characterized and conceptually developed, in terms of concepts, the amplitude of reflections, and the dissemination of knowledge; It is because this research is more focused on artificial intelligence. This research is centred in applications of human-computer interaction, quality life, reflections of effects in longevity, and the ethical reflections substantially, in consequence of technological advancement. Therefore, this study presents the ethos philosophical, consequent reflections, impacts, reflections about the consequences in the quality of life, and longevity, resulting in artificial intelligence applications, digital humanism, cybernetic and correlates.

Intelligence is considered, in this article, the ability to solve problems, provide solutions, memorize situations, development of knowledge, development of languages competences, social interactions, make reflections, systematization, understanding, synthesis, and interconnect knowledge.

Considering safety, preservation of life and quality of life, related to interventions non authorized from technological development and artificial intelligence in natural intelligence, it is necessary to impose limits for advancing these developments; improving capacity for discussion and reflections.

This research can be able to create an initial reflection that can contribute to establishing a protective system, for minimization of environmental risks, development of protective systems applied to physics solutions, development of protective systems provenient from law, and other solutions. In addition, it can provide a discussion about ethics, bioethics, and other subjects related, not commonly discussed, in terms of social and technological developments, but equally necessary for improving solutions.

Development of solutions and applications, in complex environments, and systems is another ability considered, associated with brain activity. Biological apparatus supports cognition and intelligence in processes of social, and environmental interaction; Natural intelligence is associated with biophysical characteristics in terms of genetic compositions, and those characteristics. Logically, there are other characteristics, and relevant aspects for considerations in terms of research development, and news scientific discoveries.

In terms of human species evolution, historically, according to scientific findings, and researchers, it is possible to conclude that brain capacity has been improving; In terms of brain capacity and others developments aspects, it's probably because of genetic evolution, and exposure to more amplitude of knowledge and interactions. Those aspects are relevant in terms of natural intelligence. But possibly slowly in biological aspects.

In terms of the development of technology and relating to natural intelligence, the process of human-computer interaction has obtained substantial developments. Natural intelligence systems can be considered in terms of support from computational interaction. This process, and relativistic perspective, consider the process of hybridization between the real and virtual world, that consider human-machine interactions. About it, ethical considerations are an imperative need.

Then natural intelligence can be impacted by artificial intelligence. There are good and bad possibilities. The virtuous uses and possibilities are explored in project development from good companies. The advancement of technology in natural systems, should consider effects in natural systems, natural intelligence, health, quality of life and longevity. Ethics studies, and studies related to consequences in education are needed.

3 Artificial intelligence

Artificial intelligence is derived from software and hardware developments, and human-computer interaction. Software development, programming, algorithmic programming in similar contexts, include the advent of big data. A large and strong database that can provide a big informational apparatus for utilization of systems.

Those systems are able to control, measure, and register interaction, based on mechanisms providing a variety, and big quantification of inputs. These inputs can turn available in an enormous database, for processing, and transforming in output, that potentially can solve problems, and provide solutions.

Fields of investigation in artificial intelligence can considering various solutions to development and research (Tsujii, Juan-ichi., 1995), for example:

- 1- Theorem-proving: systems can develop solutions for many questions.
- 2- Games: in early stages, the games can develop ludic activities for cognitive stimulus.
- 3- Robotic: intelligent robots with eyes, hands, and heads are developed in design institutes for programmed activities. The technology permits to include many sensors, and develops that can to perform diverse programming activities. Curiously, part of that technology was developed in the 1960s.
- 4 - Vision: the ability to recognize people is a segment of computer vision developed. There are others possibilities, that consider others technologies, and new developments, in support of computer visions systems, in advancing.
- 5- Natural language processing: the processing of language is focused in syntactic analysis, and others developments are planned according to new objectives.
- 6 - Knowledge engineering: there are applications in development of knowledge that integrate divers areas: molecular biology, economic, medicine, and others.

7 - New developments: there are new developments, and applications in development, currently at universities, and research institutes. New uses for things, and new developments not completely elucidated; There are restricted advanced knowledge supported by high levels of study, researchers, and engineers in universities, and organizations.

In the future, in many cases, artificial intelligence systems will be more effective to provide better results, coadjutant to natural intelligence, or cognitive abilities. Not every case, artificial intelligence is faster, and more able to provide outputs coadjutant to solutions. But, unregulated, indiscriminate, and non-authorized uses imply an ethical problem with impact in society, because it, a reflection about ethos philosophical and, discussions about this context can contribute to minimization of risks.

4 Cybernetics, cyber human and post cybernetic

Cybernetics is considered the development of computers applied in social developments. [For a possible perspective of knowledge]. Considering the technocratic paradigm; the computer is an element of interaction, and application of programmed functions. It also considers the concept of software, hardware, and developments.

Considering the historical value of technological development, and the cybernetic, the development of cyberspace, that is a place of virtualities, can be considered the conjugation between virtualities and reality, included augmented reality; Then, the world has been evolved in cybernetics in function of computers, hardware, and software advancement. In consequence of the advancement, the stage of development can conduct humanity in an unimaginable stage of development. Equally needs control, management of risks, ethical reflections and discussions.

Artificial intelligence and systems evolution are changing, abruptly, social reality, coadjutant algorithms programming and developments. This study provides some reflections that can contribute to critical and reflexive conclusions about a type of social artificialization, in consequence of those advancing.

5 The cyber human

In considering cyberspace, the virtualized environment, the computer interactions, and the social artificialization; cyber applications in industry, commerce, services, agriculture, and any other; Is possible to consider that humans are dependent of technology. But if the uses of technology attack the human-psico-neurodevelopment, in terms of substitution of cognitive capacity of neurons, is potentially dangerous. For these considerations, Ethical barriers cannot fail. Inclusively, to preserve the quality of life, longevity and human natural biology those ethical imperatives are needed.

The ontological conception of human applied to the advent of cybernetics can consider humans susceptible to computer interactions. In these terms, it is possible to think about the concept of a cyber human. This consequence is cyber humanism, similar to context compatible to posthumanism. The concept of human can be considered from a valid perspective of ontologic conceptualization.

The increasing technological apparatus and the integration of human and technology, hardware and software in order to integrate with human interactions is a fertile area of discussion, reflections and developments; because it needs attention by researchers, and organized civil society, in general mode, diverse sectors of activity.

The potential of development includes: Implants, artefacts, wearable and other applications, some from bioengineering, physical engineering, telecommunications engineering, and general engineering, product design, medical devices, implants, various technological instruments, equipment to smart cities, and other functions. Cited in terms of examples and possibilities.

The alert of the consequences, after these adventus is: it can turn the human conditioned by technologies, hardware, and software applications, it can cause crucial interference in human social reality. Therefore, it is necessary to know these technologies, and applications. Don't know can turn susceptible to social manipulation, generating a "victim" of the system. In any case potential danger if not completely elucidated because the susceptibility for hierarchization and levels of autonomy-control is a possible situation. This is another crucial question that puts ethos studies in priority for those developments, and correlated questions.

6 Applications and Interactions

In this section are presented the ideas and applications about artificial intelligence, and technological developments, concerning human-computer interactions.

Human-Computer Interactions

Considering human-computer interactions, it is possible, previously, to conclude for the advanced capacity of integrating between social, and technical systems; life, and the animation of life can be susceptible to algorithmic programming. Social interactions can be conditioned, modified, and conducted to organizational or institutional objectives. In many cases, it had virtuous uses. The problem begins in non-authorized human intervention, especially if its implications and interventions are in the physic body.

Computer programming is capable of integrating machines, and other computers, dependent on programming software. Computers, objects, wearables, gadgets, and devices will be able to provide a substantial variability of interactions reagent to social life. Not common, and not obvious is: the system evolving in humans' interactions are potentially complex, dynamic, and intelligent. Compatible with artificial intelligence concepts. Tangibility is a probable demand from the context and evolution of human-computer interactions, the Internet of Things can provide results in terms of concepts and practice. But not is the exclusivity, in terms of results applied.

7 IoT - Internet of Things

IoT - Internet of Things is a technology that permits connecting objects and systems. Human interactions are mediated by systems, objectification is a reality in terms of mediation of the human computer, and interference in social life is a plausible hypothesis.

Human interactions consider the systems, and hardware interactions. The capacity of communicability, data capture systems, and other forms can provide interactions. Every case considers the programming hardware to generate results established previously. Then, the computer is able to provide results corresponding to programming.

8 Wearables technology

Wearables technology implies the configuration of objects, and fabrication of objects incorporated in clothing, or presented as gadgets, or equipment wearables. Can be used, for example: accessories, as bracelets, electronic watches, and others. Wearables are integrating in clothing for human interactions generated by computers.

Wearable technology not is absolutely restricted to an accessory. Smartwatches can measure heart activity, level of oxygen, blood pressure, and others indicators. There are several types

of sensors, and solutions in hardware components. Software, hardware, and design product integration can provide wearable solutions, it is a reality.

In these terms, the wearable is a technology more suitable, minus invasive, friendly, smart, more ethical than invasive systems. Especially when not authorized systems generating interventions in human life. Biochips and nanotechnology are a possible reality that cannot be discovered. Because of this, the ethical imperative is necessary.

The good news is that wearable technology is a non-invasive technique, considering other forms of interaction. There are not big problems related to this technique considering that human intervention, and especially human body intervention, should previously be authorized. Other technology refers to bioships, with different characteristics.

9 Biochips

Biochip is a small object, artefact or similar incorporated into the human body, for measurement, emission of signals, and others interactions. Recently the development of implantable solutions has been observed in terms of diverse applications. The materials for production should be biocompatible then, non-interference with health, in terms of non-toxic material, and non-toxic consequences.

There are some applications used for health, functions monitoring; BioSignal measurement, supporting drugs, and others uses are possible applications. However, ethics systems, and ethical considerations about it are needed, because the process and techniques are considered invasive. Consent must be required before to implement those dispositives; on the contrary, a basic principle of ethics, that refers to non-intervention in the human body unauthorized, is violated. Medical devices, and some implantable equipment / dispositive, in concordance to the patient, and medic recommendations, configure possible virtuous uses.

10 Nanotechnology and new developments

Nanotechnology is a technology capable of miniaturizing tangibles. Considering this, applications from physics, physical engineering, biomedical engineering, nano pharmaceuticals, robotics, cybernetic, and other possibilities are a reality or a projection of reality.

The miniaturization of tangibles, nanotechnology can provide many solutions in diverse areas and applications. Solutions in health and healthcare are promising to improve quality of life, and longevity.

11 Present, and new development technology

Communication systems, invented or not, maybe will revolutionize communication between people; The combination of biochip and nanotechnology technologies, are potentially able to establish a new frontier in communication. It can facilitate communication between people and organizations.

In consequence, there is an imperative need to require the agreement, protecting the autonomy of individuals; because of a potential capacity to control these systems. The intentionality of communication is also another factor that requires attention.

When this type of system is accessible to some organizations, and people, it is minimally necessary for the agreement to participate in technological innovations, as in traditional media. Opposite to it, is a potential danger, generating potential problems associated with injury, psychological disorder, and impact in normal social life. Good uses are real possibilities with the agreement of the participant.

In these systems, the autonomic [not automatic] control of technology is an ideal imperative need. Failure about this, can provide unexpected results, in terms of moral, intellectual, psychological and social disorganization. In extreme cases can be considered torture, or violation, if unauthorized and non-autonomous controllable, is potentially susceptible to attacks and injury.

The problem characterized by the non-possibility to defence in this case is related to the interference of machines in human cognition, the injury, and others possible problems; The consequence of advancing of technology implicates a possible decrease of capacity autonomic in cognition. In the long term it can turn the human into a dependent of the machine, in a hypothetical future situation. In a long period of utilization, if the computer stops, then human and natural capacity is not probably able to provide, and recover the normal, and natural cognition capacity for social life, because autonomous natural capacity was not completely utilized.

Because of this, the establishment of control and agreement of technologic uses is needed. For non-consent, and no agreement uses, the negative effects should be criminalized. The consequence of the problem, from not authorized uses, and bad effects should be repaired. The inappropriate use, and bad results, should be reversed. Not considering it is an ethical violation, configuring a problem that should give attention for solutions.

Objects from Medical Bioengineering, Physical Engineering, and technologies correlates

In the context of advancing technology, interaction between human computers and diverse devices in development there are many possible applications. From medicine, and correlated areas, decurrent applications should be particularly considered in terms of ethics considerations. For example, if the patient has advanced age and if implies a not totally level of autonomy, the family and the medical considerations are needs. Maybe the unique form that the uses of this technology, implicate a non-decision from the patient. Moreover, possibly there are other situations that make it a non general law. Then, caution, and prudence to establish a general law, is needed.

There are virtuous aspects associated with bioengineering, and medical bioengineering, predominantly, and there are applications in health care solutions, medical applications, and correlates.

In addition, many other bioengineered solutions can be developed to increase the quality of life, and long-life expectancy. Ideally, the equipment and integrated solutions should be able to solve medical problems diagnosticated, or provide minimization of the problems, but disease prevention, and health monitoring solutions can be a factual reality for improving quality of life, and life expectancy.

It is known, from previous studies, that devices from biomedical engineering and related, can provide solutions to improve the quality of life and health. In various situations the problems and diseases can be mitigated or solved. But, the indiscriminate use of this technology is potentially bad. If these devices, and capabilities to development are available to malicious people or for criminals' circumstances. Potentially dangerous. Preventing biological, physical, and chemical attacks is needed. Punishing when necessary is probably the ideal action to minimize risks; providing efficient legislation, and protective systems to prevent, and block those abuses.

But what principles should structure legal, and protective systems? Govern, Justice system, Police, collaborative agents, probably. But, undoubtedly starting by reflecting on philosophical ethics, the legal system may be immediately providing general orientations for those contributors. Consequent discussions, in terms of updating and compatibility of legislation are needed. In this case the law systems should provide immediate orientations for solutions, prevent minimization of risks, punish crime attacks and repair the damage.

Nevertheless, institutions should assume a universalist ethic, and should implement a consenting term, elucidating action that puts at risk individual physical integrity. In this form is possible a true evolution in morality, ethics, civility and human respect.

12 Software, Smartphones and Apps

Artificial intelligence has become increasingly complex; conjugated with algorithmic programming is able to generate the most diverse responses, providing information, and solutions for interactive platforms from technological, social and human demands.

Is estimated that the development of apps and applications for smartphones could become more complex and richer in development. The Internet of Things is able to control objects remotely. But what is the limit of this development? These questions are relevant, absolutely.

13 New developments, objects remotely controlled, and devices

The ability of controlling remote objects, with artificial intelligence, from bioengineering, nanotechnology, biochips, and other devices correlates, are a factual reality, in terms of sufficient technology for developments, considering the knowledge consolidated in various areas of knowledge.

The concept of cyber man, the post-human, is expanded, and the perspective of controllable and configurable interference and interaction in humans and in a city are a possible reality not so far. The limits of these developments are questioned, especially the impact of ethics, and questions associated.

The objectification of human, the artificialization of life, the increasing of controllability can generate potentially bad effects that should be mitigate: potential electronic torture, georeferenced controls as limitation of space, diseases from high level of radiation exposition, and excess.

The measurement of these risks, control of utilization, limitation of exposition are imperatives needs. Then, there are good and bad applications. Equally the association with chemical engineering, devices developments, nano pharmacos, can provide virtues uses, dependent on good intentions since the project development.

The advance of technology in robotization, cybernetic, preventing cyber-attacks, bio chemical and physical attacks from technology are preludes of the new era: posthumanism.

14 The Posthuman, posthumanism and ethical reverberations

The ontology of posthuman is a human that incorporates interaction with the technological system. Historically the concept had effect and interference in diverse perspectives. The concept of posthuman incorporated the concept from cybernetic, and predominantly cyber humanism, the human had influence in technology and the human received influence in technology, the consequence is cyberspace. The reality currently, moreover, is a social situation conditioned by a hybridism, that configures a combination between the real and virtual world.

Biomedical engineering, engineering in general, and correlates areas of study, can provide an infinite human computer interaction. The advancing process is correspondent to human machine integration. But what is the limit? Ethical barriers and conditions to longevity and quality of life should be considered in these questions.

15 Methodology

Considering applications from bioengineering in medicine, and correlates technologies; The fabrication of medical devices and others, implantable or not, should be authorized, and conditioned to agreement by the user. Undisclosed projects, in industry sector, engineering, and universities should considering the proposition and the premise:

P1: Not all interventions are consented, authorized and ethical.

P1.1: Protective and preventive systems, and in some cases, restorative action is required in this context.

If considered P1 an absolute truth, then some action is necessary P1.1.

Human interaction and computer interface systems, remembering, are provided from devices, software, and hardware, it can provide human computer interactions; compatible with platforms based in system and hardware with interactive elements. In this context there are invasive and non-invasive hardware and systems. Despite this, bioethics and ethical systems are in turn needed.

The literature review considered present support to reflections about natural and artificial intelligence, in advancing to ethical reflections. This article is based on some premises, problems, and possible solutions; there are predominantly some hypotheses to investigate, and theoretical propositions. Then, the methodology is based on theoretical structure, dialogic to reflections, and logic propositional to verify the validation of assertives. Consequently, reflections can improve critical thinking about the subjects.

16 Discussions

Reflections about Bioethics

Bioethics according to the authors (Archer, L. Biscaia, J. Osswald, W., 1996), and considering the needs from new ethic developments, because the improve of technology, and non-humanization about process development of things; it considers the development of ethic in social context, medical context, health, genetic, and ecological environment. This multidimensional perspective denotes the amplitude of the bioethics concept. That considers not just one dimension, isolated, but the convergence between diverse dimensions, and questions about what is the right to do.

The prominent centre of research and observation of bioethics in EUA, the Kennedy Institute of Ethics, and in Europe, various centres are established, in association with the European Centre of Medical Ethics, highlighted from Louvain; had considered those contexts, correlated to studies and researchers areas.

Invasive and non-invasive systems

Considering the invasion of the body by implantables, are examples: cardiac pacemakers, drug pumps, artificial organs, cochlear implants, and others non informed. Currently this type of invasion is supported by medicine, because the medic is, normally, the professional authorized by law, in agreement, knowledge and acceptance of the patient, to implement those procedures. The opposite is not authorized or it is probably a criminal implementation.

Then, there are two principles to consider. The process development of devices, normally from engineering, and biomedical engineering; and [the second idea] the process to implementation, that if invasive, supported by medic. The first thinking should be supported from normative technical and law that considers ethical basement; the second thinking should be supported from high quality professionals, normally the medic [exclusively], that implement the chirurgic just when necessary, and have obtained acceptance. Both cases should be supported for law, and free acceptance.

The formal education systems have important activity in both cases. Nevertheless, it is strictly necessary to establish a formal protocol for maintenance of autonomy in agreement in consent from the user, patient, family, and health systems. Complementary, the implementation should consider exclusively the purposes of health, promotion, quality of life, and longevity. Others implementations, specially that disconcert these factors and promote only with economic motivations, probably configuring an ethical transgression.

Non-invasive systems are less susceptible to control, normative, and law regulations. This tip of devices, solutions or objects considering interactions based on human computer interactions, not physically invasive. In this classification it results from the use of laptops, tablets, biomedical reading systems [form measurement of health signals], control and automation systems, at home, city and others forms of interactions in the most diverse applications.

Considering wearables technologies, resulting from wearables devices, is based on the systems for interactions that consider hardware and software, essentially usable but not implantable, because it is possible to be clothed. Examples are devices that measure heart rate for athletes, oxygenation, temperature, and biomedical signals by sensors. There are also new applications, and innovations in industries, medicine, sports, entertainment, and others areas of applications and developments.

Any object can be potentially socially oppressive, generating interaction risks. The technology can offer oppressive elements, such as excessive, camera monitoring, unauthorized recording, control systems. And control systems based on electronic interactions, automated and mediated by other humans, which equipment that puts it in advantage, in comparison to other people. Thus, mediated interactions offer elements of interaction that can be considered oppressively disproportionate to somebody, in non-social equilibrium, in comparison to the others that have no access to technology. In this case the ethical principle of equality is violated. But it is not a problem from wearable devices, considering that this technology is more friendly that objects non revealed, or implanted. Wearable is an appropriate technology for human computer interactions, and for many situations and applications, is suitable and has a tendency to respect the autonomy of decisions for interactions. Then there is a tendency to be considered a good option.

The question, not considered, in advancing to this discussion, is any technique non-invasive, but that generates an interference in the body. In cases of the physique or chemical, or both interventions. This situation is not completely elucidating in this study, but is a projection in a future that could consider it: devices providing interactions mediated from chemical or physical interventions. This article doesn't consider everything about it, because those things maybe will be a problem for developers of products when turning knowledge about its developments.

Human Computer Interactions, and previous conclusives considerations

Human computer interactions refer to an interactive process that considers these two components: social and technological; this consequence refers to a computer, hardware and software interacting with a person or more than one person. There are several examples in this development. Not every example is completely discovered for everybody.

Applications in physical engineering, and computer-machine interactions are founded, and are restricted in the specific sectors, in several cases. In parts of process control, for example, radiation is used to check the technical quality of products, in automated systems. There are many other applications in physical engineering in industry, medicine, and others areas.

Applications in medicinal chemistry, biomedical engineering, and medicine, are promising for promoting health, quality of life, and longevity. Medical devices can control drug dosage in an

automated system. Will be able to equalize the dosage, and controlling the time of use, mediated by complex sensors.

Human computer interactions applications transcend the medicine, biomedical engineering and medical chemistry applications, because it is an interdisciplinary application. There are examples in industry, commerce, services, entertainment, leisure, aviation, educational purposes, and many others. The limits of applications, and conditions are an imperative need, for ethical fundamentals guarantees.

Ethic

Ethic, and moral, according to the authors, refers to the right thing to do in a determined situation, it considers moral systems of values; in accordance to the right things to do for the community, and society (Fischer, C. B., 2003). This concept considers society, in terms of a place to live, influenced by ethics and morals.

Other concepts about ethics consider good, wellness, esthetical, and right judgment; this considers the concept of ethics with a multidimensional meaning. The quality of judgment, in terms of correspondence to right things, is an indicator of correspondence to ethics fundamentals. The moral is engaged in this amplitude of concept, but not in equal conditions. Many authors had defined moral conditioned by the temporal questions, in terms of the right thing to do for a society. Ethics have a more ample concept, because they involve moral, law, but others factors, and principles, non temporals, and universalists are a conceptual tendency. An important imperative categorical consider those characteristics of ethos, the universalization in a conceptualization, its correspondent to this considering [a simplification, and transcription from original text]:

Do not do a thing to other people that will not do to himself.

Do not do a thing to the other that he himself would not do.

Those imperatives originated from Immanuel Kant principles, an important German philosopher; he wrote in your books: critique of reason practice, and critique of pure reason, important questions about ethos fundamentals.

Others conceptualizations had relevance considering goodness, and kindness in fundamentals, conceptualism of ethics, and orientated for action ethics. The theoretical conceptualization considers [right actions], then, prevalent, and recurrent in various conceptualizations.

Morals and religion are subjects to consider in this context, and are associated, especially because moral, and religion consider similar things in social life. Ethic concept has been considered more stable in terms of conceptual variations. The moral considers the needs of adaptation to mores in social life. In considering, ethical systems tend to be more resistant to influences of habits in the time. But are conceptualizations distinguished for different authors' considerations.

17 Results

First, results describe the vulnerabilities, and risks, in direction for solutions related to development of ethical systems. Consequently, improving discussions for development of complementary protective systems. Discussions are supported by logic argumentation, providing objective results from assertive and logic operations. Decurrent critical and reflexive thinking and consequent discussions are demonstrated.

Intervention in systems, and hardware, invasive, and non-invasive; Are potentially vulnerable for humans. Susceptible to risks, if not controlled by high quality techniques conducted by

medical professionals. The devices, and instruments can be good or not, in considering the risks and vulnerabilities. If the controls, and interventions are not authorized, are potentially bad intentions.

This reflections involve thinking about: uses of devices without consent; interventive devices; the use of devices for bargain; the use of devices as a manipulation instrument; controlling not authorized; the unscrupulous control and intervention; the use of devices for economical manipulation; control system for manipulation, and or commercialization of controls; unidentified violation and susceptibility; the induction to failure the autonomy and conscientious of the individual.

Unidentifiable others use and situations, and knew that involving bad consequences should be identified and blocked. Ethical systems are needed. Not just necessary learning about technology, programming and operating systems; it is necessary to protect individual autonomy. To punish attacks are needed, but prevention is a better solution. Preventing violation, physical, virtual, psychological, moral, ethical. social, individual, chemical, physic, blocking and punishing hackers and bio hackers.

Hacker attacks refer to computer systems modifications with bad intentionally, transgressing, physically, indirectly, and virtually, human integrity. Violating aspects of ethical, moral, and intellectual integrity. Unscrupulous biohackers are agents that use computer-human interaction systems, not exclusively, to manipulate physical, chemical and biological conditions, provoking risks or violating physics or biology, with possibly bad results. New inventions, and new developments should consider the prevention of those attacks, in considering the protective system's needs.

The limits imposed by legal ethical systems should be guided by elements that block and make a barrier to prevent malicious uses, unauthorized actions, or that represent potential danger to physical, moral, psychological, biologic, and intellectual integrity.

Because the principal result of this article is to provide an initial proposition imperative that implies challenges in contemporaneity and posthumanism. These consequences implicate these propositions considering premises.

Logic operations based on premises

Based on premises shown below, the operations are demonstrated in sequence. The results of these operations consider a propositional logic system, that is a formulation for the structure of thinking based on objectivity, logic and that permit formulate conclusions in these terms. This tip of model of thinking and consequent conclusion is based in logic argument; and universal symbolism.

Considering:

- P1: There are environmental risks
- P2: The human body is susceptible to risks
- P3: There are good and not good actions
- P4: There are ethical and unethical actions
- P5: There are good and not good intentions
- P6: There are risks physic, biologics, and chemicals
- P7: Part of knowledge represent a potential risk
- P8: There are hackers and biohackers
- P9: Protective systems are needs
- P10: Law is need
- P11: Official criminal repressive actions are efficient

P12: There are solutions non completely developed

P13: Quality of life and longevity are dependents of variables controllable

Operations:

Considering:

(P1:P13): True

$(P1 \wedge P2 \wedge P3 \wedge P4 \wedge P5 \wedge P6 \wedge P7 \wedge P8) \rightarrow P9$

$(P1 \wedge P2 \wedge P3 \wedge P4 \wedge P5 \wedge P6 \wedge P7 \wedge P8) \rightarrow P10$

$(P1 \wedge P2 \wedge P3 \wedge P4 \wedge P5 \wedge P6 \wedge P7 \wedge P8) \rightarrow (\neg P11)$

$(P1 \wedge P2 \wedge P3 \wedge P4 \wedge P5 \wedge P6 \wedge P7 \wedge P8) \rightarrow (P11)$

Partial conclusion:

a: $(\neg P11 \wedge P11) \rightarrow P12$

b: $((P1 \wedge P2 \wedge P3 \wedge P4 \wedge P5 \wedge P6 \wedge P7 \wedge P8) \rightarrow (P9 \wedge P10 \wedge P11)) \rightarrow P13$

Logic operation continuum

Considering:

Premise α : Physical Integrity is need; [refers to the natural right of the human to maintain physical and biologic integrity]

Premise β : Moral Integrity is need: [Refers to the right of the human for not morality disregarding];

Premise Δ : Ethical Integrity is needed: [Refers to the right of humans to ethical treatment. Have no ethic violation, to maintain physical, biological, moral, psychological and ethical integrity].

Considering:

$(P9 \wedge P10) \rightarrow (P \alpha \wedge P \beta \wedge P \Delta)$

$\neg (P9 \wedge P10) \rightarrow \neg (P \alpha \wedge P \beta \wedge P \Delta)$

Operations conclusions:

$(P9 \wedge P10) \rightarrow (P \alpha \wedge P \beta \wedge P \Delta) \wedge (\neg (P9 \wedge P10) \rightarrow \neg (P \alpha \wedge P \beta \wedge P \Delta)) \rightarrow P12$

$((P9 \wedge P10) \rightarrow (P \alpha \wedge P \beta \wedge P \Delta)) \wedge P12 \rightarrow P13$

The conclusive results are remembered in this sequence, shown by conclusive reflections format. Before it, discussions are provided.

Discussion in advancing

Various technologies based on a socio-technological paradigm are shown in this study from the areas of artificial intelligence, and human computer interaction; these concepts can provide many products, and solutions.

The existence of biosensors and biomedical signals, consequent data collections, technologies and the consequent analysis and interpretation of the collected data, provides for the prototyping, manufacturing and development of hardware and software from multi-platforms. Algorithms can be built for different objectives, and propositions (Teha, Jambeka, and Hashimba, 2016). Similarly, the manufacture and use of sensors and devices implies taking into account the humanistic imperative and corresponding ethical design. The imperative need for these technological developments implies the need and the ability to control these systems. Communication intentionality is also another factor that deserves a lot of attention.

When this type of system and hardware platform is accessible to organizations and people, it is dependent on authorization, consent and legality; can protect humans from susceptibility to technological innovations.

Considering the controlability of systems and the manufacture of devices, and others hardware, it implies considering the existence of some risk, it can result in danger in terms of moral, intellectual, psychological and social violence; in some cases, it can be considered as torture, depending on the content and the way this communication is used, when unauthorized and uncontrollable.

The problem can be characterized as a non-possibility of defence, and the abusive expansion of the electronic space in human cognition; The consequence of the growth of technology implies an increase in the needs of the computer and a decrease in the capacity for autonomous cognition. In the long run, it could make humans dependent on the machine. In a hypothetical situation, after a long period of use, if the computer stops, the human and natural capacity is not able to respond to normal social life, without the support of technology.

Therefore, establishing control of this technology is necessary. Inappropriate uses should be suppressed and corrected when possible. Effectively, it is necessary to prevent so that there are no uses that imply noncompliance with ethical needs.

In the event that technology is potentially dangerous, legal systems must provide immediate solutions to preventively minimize risks, punish crime attacks and repair damage. Waiting for a response from the legal system, peoples and institutions must assume a universalist ethic and must implement a consent and clarification term so that the action does not jeopardize individual physical integrity. In this way, a true evolution and protection to morality, ethics, civility and human respect is possible.

18 Conclusions

This article provides a reflection about the philosophical ethos, natural and artificial intelligence. There are two lines of expected results and conclusions. Critical thinking based on dialogic promoting a reflexive thinking, and logic propositional and logic operations supporting the argumentation and conclusive reflections.

From logical propositional conclusions it is possible to conclude that there are risks on the environment, then humans are susceptible to risks, good, and bad intentions, from technology and social actions. Human integrity is dependent on right actions, and right developments, based in ethical and legal systems. Quality of life and longevity are dependents of good practices, and good intentioned development of technologies. There are problems deriving from the failure of systems, because its discussions and developments of laws and ethical systems are needed.

Theoretical bases considering the development process in bioengineering and solutions aimed at health care, medical applications and related aspects are considered to be good uses of applied knowledge. Usually, considering the nomenclature "devices" - which refers to equipment, objects for measuring heart rate, blood glucose, pumping for resolute drugs, associated with excess glucose, usually in cases of non-reversible diabetes; and others. Despite it, about those subjects, and related subject, many authors had consistent considers (Park, Heo, and Lee, 2008),(Nguyen, Alqurashi, Raghebi, Banaei-Kashani, Halbower, and Vu, 2018),(Wu, Joon Gi, and Lee, 2012),(Tan-Hsu Tan1, Munkhjargal Gochoo, Yung-Fu Chen2,8, Jin-Jia Hu1, John Y. Chiang, Ching-Su Chang, Ming-Huei Lee, Yung-Nian Hsu and Jiin-Chyr Hsu, 2017),(Yung-Fu Chen, Jin-Jia Hu, John Y. Chiang, Ching-Su Chang, Ming-Huei Lee, Yung-Nian Hsu and Jiin-Chyr Hsu, 2018),(Tsujii, Juan-ichi., 1995),(Fischer, C. B. , 2003),(Archer, L. Bisciaia, J. Osswald, W., 1996). Biosensors and bio signals, inserted in this expanded context, normally enable virtuous uses and applications that promote diagnosis, monitoring of vital functions, and related applications; They can allow for an increase in the quality of life and even promote longevity.

Practical implications consider new inventions, intellectual property, and product development, and nevertheless, ethical consequences. Future researches probably will be considering new Inventions and Intellectual Property Records, Inventions and new developments in hardware, software, and results of artificial intelligence can provide equipment, devices, systems, and instruments that can support the improvement of quality of life and lifelong expectancy. New materials, news applications based on ethical systems and filtering by ethical systems.

Precautions are needed, bad intentions should be blocked, legal and ethical systems should be a first option for protecting human integrity, quality of life, and longevity. The development of biosensors must consider these postulated designs (Manenti, D., 2019). Medical devices, and objects from bioengineering, engineering, and correlated areas should be considered according to logic and desirable results, with good and right intentions, in society, and technology decisions, based on ethics, and the law system.

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