EVOLUTIONS IN COMMUNICATION WITH A.I. SYSTEMS OF GENERATIVE PRETRAINED TRANSFORMATIVE TYPE.
DEVELOPING A.I. MEDICAL TECHNOLOGIES AND TOOLS BASED ON DATA PREVIOUSLY ACQUIRED BY A.I. E-LEARNING TECHNOLOGY SYSTEMS

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Abstract: This paper presents how A.I. can be used to create and develop useful applications, but also how data from a certain area of A.I. can be hijacked and repurposed in other areas of A.I, sometimes without the prior consent of the users, or even worse, information can be even hacked and used for evil purposes. It also shows how this fact can jeopardize and infringe upon the rights of users giving up their sensitive personal data in internet.

Keywords: eLearning, eLearning A.I. based technologies, A.I. based medical technologies

1. INTRODUCTION

The present paper refers extensively to the new applications of the A.I. models of GPT type, explaining the functioning of a fine-tuned instrument to be used individually by people, either as an effective substitute for a teacher or as a psychological adviser.

One of the facts related to A.I. today is that many people really believe that this is already so clever that it is "thinking" and is understanding them. They are also scared about the dangers related to A.I. and consequently they fear this intelligence which is, at the moment, merely only simply spying on them, by gathering "intelligence" about them.

A.I. then can use this information, either to manipulate them to have certain attitudes, or by selling them products, based on their internet searches or their online interests, as presented in [6].

This situation of fear can also cause significant mental stress regarding A.I. because people does not understand that their interaction with A.I. is based on the data they freely, voluntarily and unconsciously gave away in internet, when they interacted with these modern technologies and they do not understand where from is all this information about them, which is used nowadays, mostly, to sell them stuff.

But, however, as it is presented in this paper, in addition to that, there are also some upsides regarding the using of A.I. in the near future, advantages designated either to help people who want to improve their knowledge and skills using A.I., but then again, this advantage can also be hijacked by A.I. and the respective information gathered may be used in other purposes, as it will be shown in this paper.

This paper presents concretely how data acquired by the advanced A.I. eLearning instruments from their interaction with people, can be further used, sometimes without peoples' consent, to create A.I. medical technology tools to help people with their various medical needs, but this acquired information could also be used in other, more harmful ways, which will be not further addressed in this paper.

At the first stage, people will more often use A.I. for learning purposes. A.I. will become thus better and better in understanding their interests, their learning needs and skills. But, at the same time, A.I. will thus acquire information, data and details about people interacting with A.I. out of learning purposes, data acquired by means of these eLearning instruments.

2. ISSUES IN THE MODERN SOCIETY

Viktor Frankl, a Jewish doctor and survivor of Nazi concentration camps, is the originator of the science of logotherapy. As father of logotherapy, he has already some decades ago intuited the problems of our society, with increasingly alone and lonely people, problems which nowadays became reality, and a lot of these problems have been also caused by technology itself. But, luckily enough, this technology which is the culprit for many mental issues nowadays, can be also used as a tool and a solution to solve such issues.

According to Frankl, questions about the meaning of life cannot be answered with general statements. According to him, "life is not something

vague, but something very real and concrete, in the same way in which the tasks of life are real and concrete. All these make up one's destiny which is different and unique for each individual. No man and no situation can be compared because no situation repeats identically and hence, each individual situation requires a different reply and reaction".

Frankl admits that for more than a half century, psychiatry tried in vain, and in the end failed to interpret the human mind as a mechanism or machinery and the related therapy as a technique, failed as well. Therefore, he states the necessity for both, psychology and psychiatry to be rehumanized. The human being is not a machine and moreover it has the ability to be self-determined. These thoughts of Frankl, a Jewish who suffered and survived the Nazi extermination camps and who generated those thoughts based on his harsh experience in these Nazi concentration camps, offer the explanation and the motivation behind this paper.

According to psychologists and as also stated in [1], there are mainly three wills: the will of sense (in life), on which the science of logotherapy is based, the will of pleasure, on which the Freudian psychanalysis theory is based upon, and the will of power, on which the Adlerian psychology theory is based upon.

In accordance with the explanations of Frankl, the science of logotherapy is derived out of the Greek word "logos" which has the meaning of "meaning or sense". This wiener school of psychology is focusing on the "meaning of human existence" and on the "process of searching of this meaning".

V. Frankl restates the words of Nietzsche and makes them a motivation for the importance of logotherapy: "the one who has a *why*, will endure any *how*"

In modern times, due to various unfortunate factors, evolution of society and evolution of technology, many people are living senseless lives. These problems of modern people and unfavourable evolutions are extensively presented by Frankl in [1].

Frankl explains the loosing and the lack of meaning of the modern individual by the concept of "existential void".

He explains that at the dawn of civilization, mankind has lost some of his essential basic instincts due to the fact that humans have to make decisions. Besides that, Frankl explains that the same outcome of existential void and hence lack of meaning has occurred with the loosing of ancient traditions and rituals.

That is why, the modern human wants to do what the others do, that is to say he conforms, or he wants to do what the others want, that is to say he is subjected to totalitarianism. This existential void has as an effect the feeling of boredom. According to the data of Frankl, this sentiment of boredom brings more people to the psychiatrist than the feeling of suffering.

Once with the automatization of the industrial processes and todays' technologies based on A.I., people will have increasingly more time available and they will

also experience more and more this existential void, because they do not know how to deal with and how to use this available increased free time.

The goal of logotherapy is to fill this existential void and to show the patient under this therapy the meaning of *his particular life.* Because the meaning of life provided by the science of logotherapy is the specific sense of one particular person, but not the meaning of life in general manner.

The "lack of meaning of life" which is caused by this "existential void" leads to serious mental conditions such as depression, anxiety, aggressivity, addictions, drugs abuse and sometimes the lacking will of sense of life is replaced by the will of power, exhibited in the form of greed or money accumulation or it is replaced by the will of pleasure.

Also, according to Frankl, logotherapy considers the responsibility as essence of human existence. Some other authors are regarding the etymology of this word "responsibility" as the ability to give response or to respond to the challenges and issues one encounters in life.

A special kind of this "ability to respond" regards a special ability and quality of some special humans who are endowed with the ability to respond properly to harsh challenges, hardships and hurdles of life, having the advantage and ability to be resilient, as presented in [2].

3. HIJACKING AND REPURPOSING DATA GATHERED BY A.I. ELEARNING INSTRUMENTS TO SOLVE MEDICAL ISSUES

Before the modern era, very much unlike today, the solutions for psychological conditions were found in the community and in its traditions, in family, friends or religious or medical advisers.

Former eLearning instruments, techniques and technologies were developed once with the evolution of the internet and of the software instruments. Until a few years ago, they were based on general data and information about groups of people, obtained by classical marketing segmentation techniques.

Nowadays, once with the development of data mining techniques and of A.I. the eLearning instruments have become more and more sophisticated.

The design of such advanced systems ready to collect data and information about persons accessing them are already described by one of the software giants, Microsoft, such as presented by their originator in [3], [4] and [5].

Such systems, able to collect huge amounts of details and data which will be stored in the servers of the company, are already heavily advertised in education institutions and they will be most likely very used by various pupils and students, and these kinds of instruments will also be advertised, most likely in this first stage, as "free" instruments to be accessed.

With the use of these new technologies, some people having either mental issues or wanting to improve their knowledge and skills, could be efficiently and effectively personally and individually helped to solve their issues, based on the data and information they freely gave about them in internet.

One issue with such an A.I. instrument, created to help those people in need, is that the data and information gathered about anyone, may be acquired without the consent of the user of technology, and hence, may be illegally acquired.

One other issue may regard the accessibility of such data gathered about people, using such A.I. instruments, in the sense that the ones possessing this data may also be use it in other harmful ways.

At its first stage of development, in education, A.I. instruments will be useful because of the tailored experience, customized and personalized depending on the level of intelligence, understanding and previous knowledge of each user.

Subsequently, based on the input data, A.I. will be able to identify unusual ways of thinking of people using the internet. It will be able even to identify either brilliant people or people with lower intelligence levels and it will help them by tailored experiences, according to their intelligence levels.

By analysing the interests, videos watched and online activity in general, A.I. could adopt the best approach to a person and the best way to teach that person. It could be used to train people to learn new things based on the information about them and about all people, information available in internet.

At its second stage, based on the information acquired at the previous first stage of development, A.I. instruments will be then also able to identify potential medical problems in people accessing the internet, based on both: on their internet searches but mostly on their interaction with the A.I. eLearning instruments.

In psychological treatment, this tool will be employed based on the same personalized, customized approach, regarding both, personality and data about the respective patient. Based on data gathered about the potential patient, this A.I. tool should identify and "discern" among the possible existing psychological problems of the respective patient. Taking into account the previous section, once with the occurrence of A.I., this tool can also be used to help people in need, but this tool should use wisely the data it accesses about anyone and should be also more humanized by means of special interactions and interfaces, but also by adopting a friendly and humanized approaches, in the communications with its learning trainee or its patients.

This A.I. communication tool could identify which of the previous categories of will prevails in the respective patient, and then this tool could employ an adequate method to communicate with the patient and to treat one in the most appropriate way.

It will be able to generate different evolution scenarios for communication, respectively interaction activities with its subjects, and it will be also able to correct and adapt these scenarios in real time, according to the evolution and interaction with the subjects, based on both, mined big data in internet and data gathered about each individual.

This tool will also take into account that each individual person is different and so complex, as presented in [2], that former psychological theories fitting individuals into small typology boxes cannot be applied when dealing with psychological patients. It will also be able to treat psychological issues of persons with personal background experiences.

A really good doctor should not put a label to on a patient according to his most often limited knowledge and abilities, but he should really be able to listen, understand and give full therapy support to a patient, in accordance and in the way logotherapy does it.

This is another strength of these A.I. instruments by comparison with the usual medical personnel, and in his book [1], Frankl states explicitly that "Psychotherapy should be rehumanized and its usual nowadays practices changed accordingly". He also affirms that "persons with existential challenges and or crises, should seek advice and guidance to their families, friends, therapists or religious advisers", which at his time were the only alternatives available.

In this light, an evolution of this type of A.I. could be effective and adequate for a great deal of students and patients.

The A.I. communication tool presented in this paper could also be used as a substitute for the needs and issues of such individuals. This A.I. tool may have the potential to fill one's existentialism void, based on experiences of similar persons who found meaning and sense in life. It could also fill the gaps in one's knowledge by teaching this one using the methods and instruments most suitable for one's personality.

Due to A.I., many disciplines and fields will be made and may become obsolete by A.I. Using A.I. to replace people in these fields will negatively affect the intelligence of man, because connections in the human mind and the wiring of the human brain will not happen anymore as previously, since human mind will not be used anymore to make these connections. By using A.I. instruments replacing the use of human mind, humanity and mankind will consequently become poorer and poorer in intelligence and the abilities of man to understand facts and things will thus permanently decrease. Karl Marx was among the first ones to remark in his illustrious work "The Capital" that "humans are not using the means of production, but instead they actually are used by those means of production". This applies in the very much same way when regarding the use of the nowadays new technologies, where people are unconsciously "used" and even "consumed" by these technologies.

There are, however, significant advantages regarding the use of these new technologies, which no one could deny, as it is presented in this paper.

Because of the potential dangers related to its use, this type of instrument should be used firstly only under the supervision of a teacher od a psychological doctor, and they should be used as independent and standalone instruments only when the time is right for their use without human supervision.

The A.I. communication tool presented could be used either for personalized psychological treatment or for customized training of certain abilities and learning purposes.

The existence of this A.I. communication tool is based on the assumption that in the near future, A.I. will evolve sufficiently to become a real partner in education and afterwards, based on the acquired data, also a partner in psychological treatment.

The present human population has very segregated levels of intelligence of individuals and most of the users of the new technologies are claiming that they are keeping up with technology and they are mastering these new technologies, when in fact they are only plain and simple users of their gadgets and of therein related apps.

They are also, many times, manipulated users feeding these hungry technologies with all sorts of their individual and sometimes sensitive personal data and information, thus permanently enriching the big data already stored for long time now. This big data is at the free and permanent disposal of IT giants, giants which already know enough about most of their users with respect to their intellectual level, interests, etc,

These IT giants have nowadays various and huge data mining potential with respect to the big data stored, data which can be used in very many ways.

4. CONCLUSIONS

The approach in the evolution of communication with A.I. presented in this paper assumes that users themselves or automatically A.I. will set up the level of communication with its users, in accordance with the level of the respective user, so that this A.I. tool will directly speak and teach each of its users according to their actual intellectual capacity and abilities to understand things and issues, thus being able to be more effective than a real teacher or psychological adviser.

This will happen since it will be set up and personally adjusted and personalized fine-tuned for each user, based on the data delivered in internet regarding the respective user and all the other data available in internet. Having been set up personalized and tailored in accordance with the level of its user and corresponding to the intellectual abilities and understanding of the user, this new tool will speak and teach each one individually, based on the data delivered in his online interactions with the internet and all its related devices and apps.

This new A.I. communication tool will have major applications in both, education and afterwards in psychological treatment.

As it is presented in this paper, A.I. could hijack information gathered from one certain area, repurposing and reusing it later in other completely different areas, without the prior consent of users.

Based on input data regarding A.I. eLearning tools, information gathered at the first stage, at the second stage, A.I. could use this information gathered at the first stage to help people to fight their stress and their anxiety or other mental conditions.

But this help will be made with the cost of the personal data the people sometimes freely, unconsciously and willingly gave up in internet, many times not knowing how this information will be used.

That is why, one should always assess the utility and cost benefit ratio, when giving up its sensitive personal information in internet.

5. REFERENCES

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