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TRANSHUMANISM VERSUS THE FUTURE OF ACCOUNTING

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Abstract:
Due to the accelerated development of technological innovations, the accounting profession is undergoing changes. Studies conducted by research offices worldwide have shown that a significant transformation of the profession is anticipated in the upcoming years. Thus, there is a tendency to develop accounting software, which provide reliable and relevant financial information, to perform in-depth analyzes, and in a timely manner to provide financial advices. There is a need for future accountants to possess both financial-accounting language and to have advanced technical skills in the field. Hence, the importance and timeliness of the topic because the concept of "transhumanism" involves the use of contemporary technological sciences by capitalizing on human existence, by improving human skills, while imposing respect for reason and science. Thus, the authors set out to shed some light on this area, given that these two concepts have been unstudied so far. The research methodology is based on the method of comparison, induction, deduction, analysis of literature and web sources, as well as international web sources that have been studied.

Keywords: transhumanism, accounting profession, accounting software, financial information, technological sciences

JEL Classification: M 40, 41

1. INTRODUCTION

Since the 1970s, robots have penetrated rapidly into various industries and production processes within economic units, later, they have suddenly spread to other service-providing sectors, like financial services, especially — in accounting.

Digitization, represented by new technologies, robotics, cloud services, intelligent systems and Big Data, has quickly entered the field of accounting, being the main factor that contributes to increasing the efficiency of the activity. In the accounting profession, 97% of the activities are suitable for digitalization, being necessary to adapt to the new reality and to reconfigure the activity of the accountant (Botea, 2018).

The phenomenon of robotization is becoming more pronounced in recent years, as the business world tends to globalize and the Internet to develop, information flows becoming extremely fluid, with a rapid process of digitization of society as a whole (Lacurezeanu, Tiron-

Tudor & Bresfelean, 2020). The digital age also stems from several substantial changes in the labor market by replacing people with robots, and the emergence of new trades that require the development of digital skills and continuous training of employees.

As computers continue to develop, in a few years, they will exceed the capacity of the human brain, which has become a goal, called transhumanism, "and it is not something scientific-fantastic, but the aspirations of the most well-trained experts in these technologies" (see https://alfaomega.tv/creationism/7399 transumanismul-reinventand-umanitatea-prin-tehnologie). Intelligent machines continue to redesign themselves and improve recursively, denoting the probability of developing superintelligence, with cognitive abilities thousands of times greater than humans (Dvorsky, 2008).

The first use of the term "transhumanism" dates back to 1957, and describes the philosophy of improving the human species through science and technology to deserve the label of "posthuman", thus is born the idea that nothing is impossible in the progress of human civilization, and the individual can get rid of his biological constraints (Enachi, 2020).

The major difference between the man of yesterday and the man of today postulates in the evolution of consciousness, and this means that man has the ability to experience the world, to reflect on it, and the most important, to shape it. Thus, what begins as humanism becomes transhumanism: "the motivation to fundamentally revolutionize what it means to be human through technological progress. Changing human nature could be the most dangerous idea in human history, or perhaps the most liberating, so transhumanism involves two fundamental aspects" (Fătulescu, 2018):

- appreciation of current trends in estimating the evolution of future technologies and how they could affect humanity;
- the use of current and future technology to bring about beneficial changes for society.

Transhumanism is a way of thinking about the future that is based on the premise that the human species in its current form is not the end of our development, but rather a relatively early phase. Thus, the studied concept can be defined as "the intellectual and cultural movement that affirms the possibility and desire to fundamentally improve the human condition through applied reason, especially through the development and provision of large-scale technologies to eliminate aging and enhance largely the intellectual, physical and psychological abilities of humans" (see http://www.theastrolabe.net/transhumanist_ faq.htm).

In the context of the digital age and particularizing on the digitalization of the accounting profession, *the research aims* at the theoretical approach of transhumanism and the challenges posed to the accounting profession, as a result, highlighting the idea that current humanity is not the endpoint of human evolution more and more ground through the responsible use of science, technology, and other rational means we will finally be able to become posthumously, beings with much greater capacities than current human beings have.

The topicality of the research relies in the constant advances in the field of information technologies and robotics, which lead more and more experts to conclude that equivalent human artificial intelligence can be achieved by 2040, if not earlier, also the topic is of interest to practitioners and the academic environment at national and international level due to its vaguely defined position of movement and scientific-fantastic consideration.

The research methodology has aggregated the consultation of numerous bibliographic sources, consisting mainly of scientific papers published in national and international journals, as well as sources available on websites. In conducting the research, comparative analysis, the deduction method, the induction method, but also the methods inherent to economic disciplines were applied: observation, comparison, selection, grouping, and scientific abstraction.

It is easy to identify that more and more people are moving towards transhumanism, which aims to promote and encourage human improvement through the application of science and technology, thus contributing to the achievement of a posthuman condition, and according to the common opinion of experts, "transhumanism is in many ways a choice in a thriving lifestyle and cultural phenomenon".

The changes needed to become posthuman are too profound to be achievable by simply changing an aspect of psychological theory or thinking, radical technological changes are needed on the human brain and body. Some posthumans may benefit from living as information models on vast, super-fast computer networks. Their minds may not only be stronger than ours, but they may also use different cognitive architectures or may include new sensory modalities that allow for greater participation in their virtual reality settings (Esfandiary, 2007).

Currently, in the context of research and analysis of human evolution, especially the predicted evolution in transhumanism and posthumanism, it can be seen that thanks to the evolution of information technology, accounting services can improve their performance by automating processes through robotics, which contributes to increasing credibility and streamlining the accounting profession, but also to comply with the requirements imposed by professional standards.

2. LITERATURE REVIEW

In order to identify the relevant publications in the field, the Web of Science (WoS) platform was used, and a search was carried out between 1980 and the present, with the words "*transhumanism*" and "*future of accounting*". Following this analysis, it was found that there is a lack of research to address these concepts at the same time. Thus, separate research of the concepts was carried out, being identified 22 works with the theme "*future of accounting*".

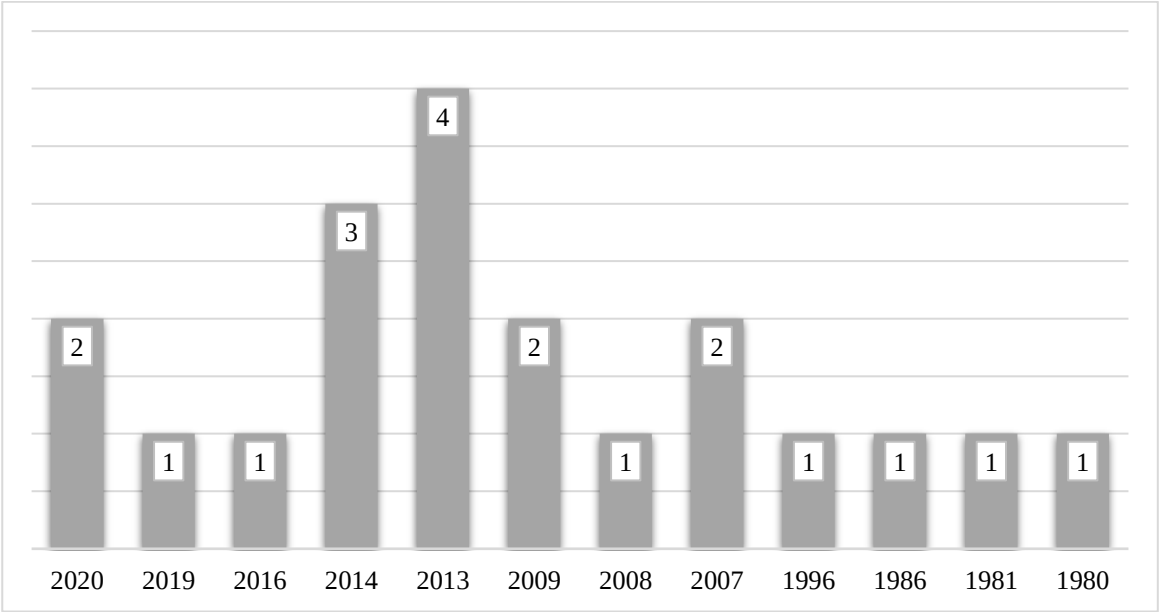

Figure no. 1. Scientific research on the topic "*future of accounting*" published between 1980-2021
Source: Elaborated by authors via VOSviewer

Even if it seems to be a vast field of research, from the analysis of publications in dynamics, there is no positive trend in the study of this subject, the peak being reached in 2013, with 4 papers. To understand the main issues addressed in scientific research on the topic "*future of accounting*", the results were interpreted through VosViewer (see Figure no. 2).

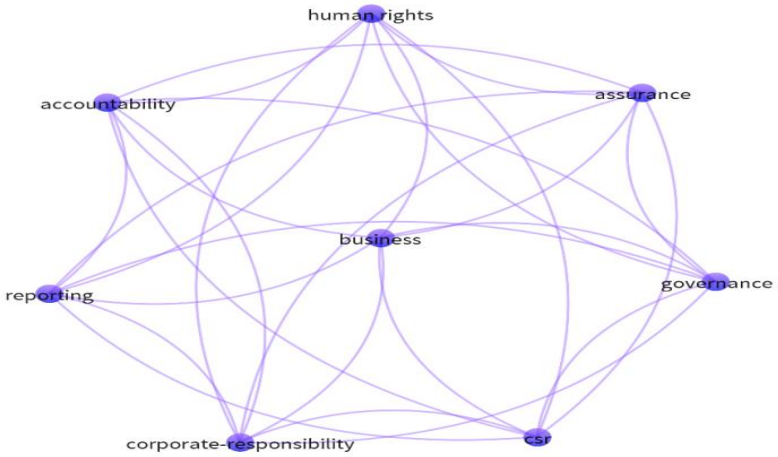

Figure no. 2. The interconnectivity between the keywords of scientific research with the "*future of accounting*"
Source: Elaborated by authors via VOSviewer

Figure no. 3 outlines a cluster of keywords that have a higher incidence in the analyzed works. As can be seen, the concept of "*transhumanism*" has not been previously addressed in studies.

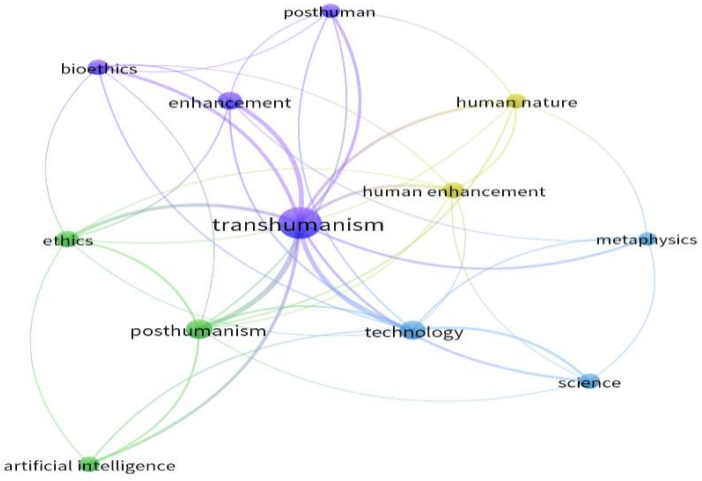

Figura no. 3. The interconnectivity between the keywords of scientific research with "*transhumanism*"
Source: Elaborated by authors via VOSviewer

Researching the concept of "*transhumanism*", 312 works were identified on the Web of Science that correspond to the set requirements. Four clusters of the keywords in these works are noticeable, the notion of "*transhumanism*", having a close connection with *posthumanism, enhancement, technology, ethics, bioethics*, etc.

3. EVOLUTIONARY INCURSIONS OF THE TRANSHUMANISM CONCEPT

In the second half of the twentieth century, humanism was harshly criticized for its theoretical and ethical limitations. The emergence of cybernetics and new technologies, such as robotics, communications, artificial intelligence, genetic engineering and nanotechnology, has led to the desire to articulate a new worldview that fits the posthuman condition, the transition from the human to the posthuman condition being facilitated by transhumanism (Tirosh-Samuelson, 2012).

"Transhuman" emphasizes how transhumanism goes far beyond humanism in both means and ends. Humanism tends to rely exclusively on educational and cultural sophistication to enhance human nature, while transhumanists want to apply technology to overcome the limits imposed by our biological and genetic heritage. Thus, by applying technology, human can become posthumous. Becoming posthuman means overcoming the boundaries that define the less desirable aspects of the "human condition", posthuman beings would no longer suffer from disease, aging, and inevitable death, they would have a much greater physical capacity and freedom of form, cognitive abilities much bigger and more refined emotions (More & Vita-More, 2013).

Transhumanism is entering mass culture today, as an increasing number of scientists are beginning to take seriously the range of possibilities it encompasses. A rapidly expanding family of transhumanist groups, which differ somewhat in concentration and a host of focus groups in many countries around the world, are gathered under the *World Transhumanist Association* (1998) (Bostrom, 2003a), which "remains the central organization of the movement in although organizations such as *the Institute for Ethics and Emerging Technologies (IEET)* and *the Institute for the Future of Humanity* play a strong role in the academic arena" (More & Vita-More, 2013).

Many transhumanists want to follow ways of life that would condition growth in posthumous people: they want to reach intellectual heights just as high above any current human genius, which would redesign the human body using advanced nanotechnology.

This vision, in general, is to create the possibility to live a much longer and healthier life, to increase people's memory and other intellectual faculties, to refine the emotional experiences and to increase the subjective feeling of well-being, and, in general, to achieve the degree of control over lives (Bostrom, 2003b).

Transhumanist thinking is based on three areas: "*superlongevity*", "*superintelligence*" and "*superwelfare*", named the three "*supers"* due to their transformative potential (see Figure no. 4):

Figure no. 4. Basic directions in transhumanist thinking

Source: Adapted by the authors based on Fătulescu, 2018

Superlongevity. Nobody treats the aging of the population as a global problem, but the indispensability of preventing the majority of deaths due to aging appears. Today, technology can fight it, but it lacks the will and the financial support. Most are accustomed to the idea of dying of old age so that aging has become a mere fact of life, while modern medicine could maintain life and health, thus replacing "*as much as possible*" with "*as much as we want"*.

Superintelligence. Nowadays, computers are becoming more and more powerful, what used to be in a room, now goes into a pocket, which allows instant transmission of thoughts to the other side of the world, identifying the exact position on the globe using satellites, all being inconceivable twenty years ago. As a result of the integration of man with technology, its abilities will also become human, which will propel the humanity into a period of superintelligence.

Superwelfare. It is assumed that transhumanity would allow the choice of certain features of children's biology: genetic predisposition to depression, anxiety, jealousy, anger, or pain threshold. If society and technology have made progress, humans are still driven by emotions, so it is believed that if the welfare of the species is to be improved, genetic modification will be needed.

In the relatively near future, the confrontation with the prospect of real artificial intelligence could arise, technologies such as brain-computer interfaces and neuropharmacology could amplify human intelligence, increase emotional well-being, etc. In the dark side of the spectrum, transhumanists recognize that some of these future technologies could cause great harm to human life, even the survival of our species could be endangered (Bostrom, 2003a).

Transhumanism does not imply technological optimism, while future technological capabilities possess considerable potential for beneficial implementations, they could also be misused to cause enormous damage, ranging to the extreme possibility of the disappearance of intelligent libfe (Bostrom, 2003b).

4. THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE ACCOUNTING PROFESSION

The intellects of neuroscientists, engineers, and mathematicians gathered, even compared to the most ordinary artificial intelligence, once connected, the machine instantly exceeds the limits of biology. In a short time, his analytical power will be greater than the intelligence of any person ever born in the history of the world. Some scholars call this phenomenon "technological singularity" or transcendence (see https://alfaomega.tv/creationism/7399-transumanismul-reinventand-umanitatea-prin-tehnologie).

As for the accounting profession, many specific activities are repetitive, and the robotization of processes by automation would help to relieve employees of invoice processing, completing certain documents, worksheets, preparing reports, updating databases, validating data, concatenating databases, etc.

In the field of accounting services, artificial intelligence is an opportunity to improve the quality of services offered, thus, the main advantages of robotization of processes through automation for companies providing professional accounting services, suppose (see Figure no. 5):

Replacing human resources

- *Avoiding possible conflicts between employee and customer due to the lack of emotional side of the robot;*
- *Avoid the worry of looking for specialized personnel in the field;*
- *Resistance to working under pressure.*

Reducing long-term salary costs

- *Immediate costs increase when purchasing software.*

Performing tasks regardless of their difficulty

- *The robots are specialized so as to cope with a high degree of work, having behind a whole programming system.*
- *The idea of multitasking is not a challenge for robots, but part of their daily routine;*
- *As for the monotony, repetitive tasks do not affect their performance at work, so it is considered the robot capable of satisfying any customer need.*

Absence of the need for motivational factors

- *The robot works on the basis of a mechanism that does not require motivation (bonuses, vouchers, holidays), fact for which its purchase is favorable to the employer.*

Figure no. 5. The main advantages of process robotization by automation

Source: Adapted by the authors based on Lacurezeanu, Tiron-Tudor & Bresfelean, 2020

Automation is one of the most important steps in the process of digital transformation of businesses, helping to increase the efficiency of the business process and reduce human errors and costs (Lacurezeanu, Tiron-Tudor & Bresfelean, 2020).

The literature (Appelbaum & Nehmer, 2017; Devarajan, 2018) also draws attention to some disadvantages generated by artificial intelligence in accounting activities, such as:

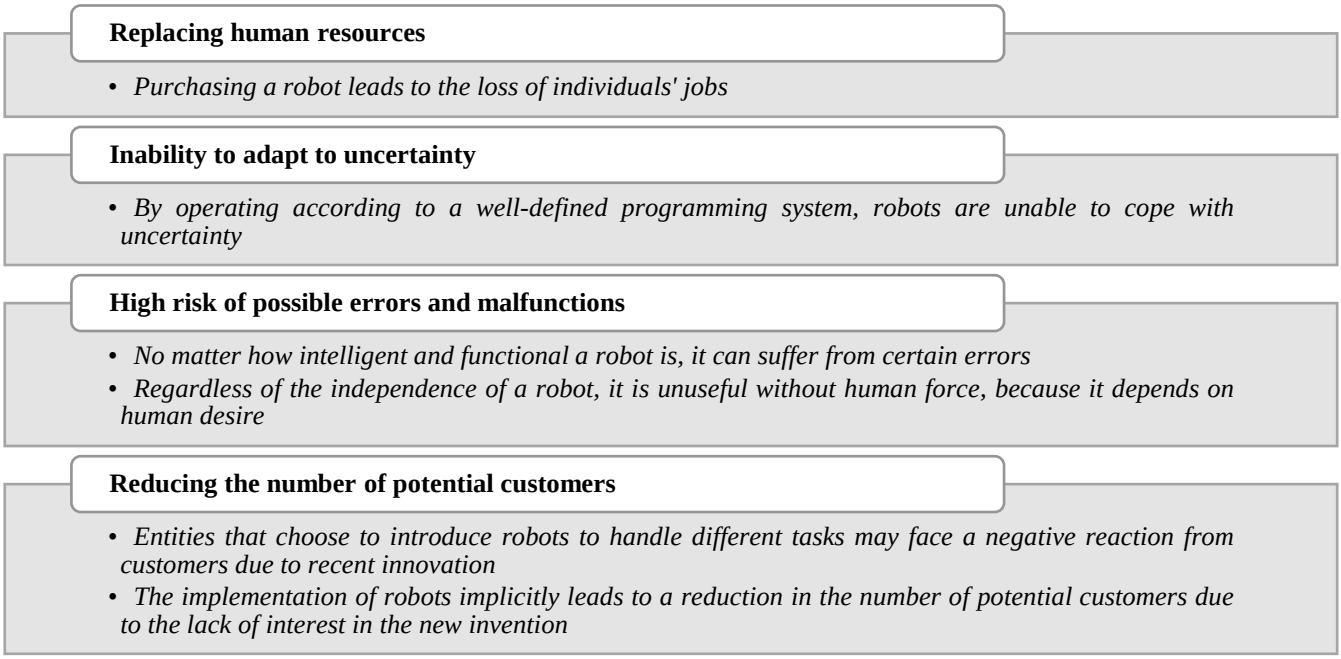

Figure no. 6. The main disadvantages of process robotization by automation

Source: Adapted by the authors based on Lacurezeanu, Tiron-Tudor & Bresfelean, 2020

The purpose of applying artificial intelligence is to perform the task more efficiently than the manual or technological methods previously used. By integrating the artificial component, there are still many unknowns at the level of entities, so it tends to maintain a balance between automated and manual processes (human).

5. CONCLUSIONS

One of the most extraordinary achievements of humanity in recent years is technology, an essential part of both everyday and professional life, as a result, the accounting profession is becoming increasingly integrated with artificial intelligence.

Given the evolution of technology, an increasing number of people are turning their visions to transhumanism, which aims to promote and encourage human improvement through the application of science and technology, supporting and encouraging the transition to a posthuman condition.

The three "*supers*" (directions of transhumanism) could radically transform the history of mankind if realized. One of the biggest problems in confronting transhumanist ideals is that they are seen as distant or perceived as science fiction, but humans are already transhuman, live longer, integrate more with technology, and improve their quality of life.

As in other fields, with the development of transhumanism, technology will take over the accounting field, so it will be possible to reduce the number of jobs in terms of accountants, but not their disappearance, or there is the vision that entities will concatenate both types of employees in carrying out the accounting activity.

Thus, robotics, automation, digitization, artificial intelligence and transhumanism are positive aspects that bring many changes to the benefit of professional accountants.

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