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VOLODYMYR POGREBNOI

ORCID:

Ph.D.,

the first vice-rector of PMTS

## ANN AND EDUCATIONAL INTEGRITY: EXAMPLE OF SOLOMON'S POLYFUNCTIONAL

**Annotation.** The analysis of the relationship between the growing interest in artificial neural network and its negligent exploitation by students of secondary and higher schools in order to minimize personal intellectual effort is conducted in work. The author has proposed the biographical and literary pattern from the ancient history - Solomon's polyfunctional as one of the self-stimulation tools of participation in educational process. That is considered as a universal analogue of comprehensive use of personal potential. The personal development path is confirmed by biological data.

**Keywords:** artificial neural network, artificial intelligence, non-author's work, pattern, Solomon, harmonious development.

**Formulation of the problem.** Over the past four years, teachers of higher and secondary schools have increasingly had to face cases of writing theses and term papers, works with the help of artificial neural networks (ANNs). As the latter are improved, and especially after the introduction of the error backpropagation method, which is an educational element of ANN, the results of the generated final papers are increasingly difficult to distinguish from the author's. This is especially true of general special subjects that have a large amount of literature to refer to on the Internet. At the same time, teachers of narrow-profile disciplines still manage, due to the small number of thematic studies written by domestic and foreign scientists, to identify references to non-existent monographs and assume non-author's work. With the release of each new version of the ANN, the chances of an objective assessment of the student in both cases are minimized, which is why the problem cannot be solved only by an analytical check, the establishment of scientific abuse and subsequent punishment. Moreover, it does not coincide with the purpose of education. That is why this problem presents us with the need to find positive educational ways of popularizing personal mental activity both in modern tools and in ancient pedagogical and social patterns fixed by experience over time.

**Analysis of recent research and publications.** Considering the novelty of the issues and the rapid improvement of ANN, the number of publications on the researched topic is gradually increasing in Ukrainian and foreign sources, which are presented not only by scientists, but also by concerned parents and practical workers in the field of education: (Berdo, Rasiun, Velychko, 2023; Bysaha, Bielov, Zaborovskyi, 2023, p. 299-304; Dodonova, V., Dodonov, R.; Kokarcha, 2023, p. 260-262; Matusyevych, 2023, p. 41-45; Nalyvayko, 2023; Rohozha, 2019, p. 45-50; Awad, 2018, p. 59; Pedro, 2019, p. 48), etc.. At the same time, such publications, due to the partial loss of the value of research in communication with each new release of AI proto-versions is still not enough. In the context of the general ethics of artificial intelligence (AI) and ANNs, which is widely discussed by the scientific community, the local topic of the intellectual decline of youth, which reveals, in fact, the reverse effect of the expected exponential development, drowns in the pursuit of progress. Large-scale reviews for a comprehensive study of various aspects, and primarily ethical in the matter of speculative use, were almost never conducted. They permanently remain necessary for the productive use of new methodological developments and effective work with the younger generation in the matter of raising a harmonious person, educational and scientific neatness.

**The aim of the study.** Learning is the act of transferring knowledge from those who have it to those who do not yet have it. Education is purposeful social and moral disciplining of mostly young individuals by those who, in one way or another, are authorized by society to be mentors. Education is a synthesized unity of learning and upbringing. The assimilation of the proposed information loads, as segments of education, is the key to the constructive growth of the subject being formed. Quasi-active use of ANNs by students and pupils to reduce study time, without an obvious personal result for an individual system of social values and intellectual growth, transforms education into its mimicry. Taking into account the peculiarities of age-related adolescent and youth psychology, where the herd instinct is important, and the best proof of the constructiveness of the proposed information is centuries-old testing and long-term protection of the psyche and health from early destruction, it is suggested to use the pedagogical experience of well-known historical figures.

**Presenting main material.** The analysis of literary sources showed a significant interest in the topic of neural networks and their place in educational world activities. With the increase in the use of AI technologies in education, the number of published studies in this field has increased (Chen, Zou, Xie, Cheng, Liu, 2022). Back in 2012, neural networks could not be called full-fledged artificial intelligence. This point of view was reached based on the simplest mathematical calculations: a person has about 86 billion biological neurons, while the 2012 version of the ANN has no more than 10 billion. But at the beginning of 2023, experts already assessed the architecture of the GPT-4 model as approximately comparable to by the number of neural connections in the human brain (*Bratskyi poedynok chata...*). This trend fills the

young generation with Eldoradic expectations, especially when predictions are given about the rapid reduction of the working week by half, without loss of quality of life (Pavlysh). The same bright future was seen by Plato in his

«Laws» (Platon) after the release of vacation time, as a result of the systematization and harmonization of political life. However, the freed time, in practice, does not necessarily flow into the field of cultural enrichment, but is conditioned by positive transformation only under the condition of active direction of personal will and effort. Plato, in correspondence with the geometer Theodore, reflecting on the independent mental process characteristic of every person, wrote: «Oh, Theodore! We have such a blessing, better than which nothing has ever been, and will never be sent as a gift to people from the gods» (Anakht, 1975, p. 99).

Ancient folk wisdom gave its timeless aphorism a long time ago: «everything new is the well-forgotten old». And, naturally, when we try to analyze this conclusion, we arrive at the formula of permanently existing patterns that determine what is truly axiological in human society. One of these proto-models is the philosophical and pedagogical biblical corpus called Solomonov. The latter is depicted in myths, legends and historical documents as a collective image of a widely educated and well-educated person. «At the same time, we should note that we are not interested in religious dogmas themselves, but in the cultural values they carry, value meanings that can enrich the palette of modern secular education» (Kostiukova, 2000, p. 67).

The ancient king Solomon was a genius of the biological neural system. During his lifetime, despite geographical and political limitations, he covered all relevant topics of the humanitarian bloc with his research. As the monarch of one of the young federative eastern despotisms, he could not afford to travel, as in his youth he appreciated the constant threat that hung in the form of intrigues over his father, King David. At the same time, taking into account the task entrusted to him, after his father's seizure of large territories and filling of the reserve fund, the mission of internal strengthening and infrastructure development, he was in demand for systematic experience of far and near social, cultural, political systems, engineering, etc. Solomon found a way out in increasing the cultural and trade-economic attractiveness of his region for foreign trade agents and diplomats, in order to minimize the effect of situational local management consciousness. First, he will create a priority for additional tax-free gifts to the monarch in the form of books on the broadest topics. In this way, a pedagogical manual for difficult teenagers (his multiple sons) will appear – «Proverbs of Solomon», a psychotherapeutic autobiographical study devoted to existential self-determination and crisis – «Ecclesiastes», a poetic treatise as the basis of a dual anthropological aesthetics on the one hand and an axiological and providential aspect sexual education from another – «Song of Songs». The «Wisdom of Solomon» can be included in this series as a philosophical and theological treatise. But what is important to note, each of these books, like none other of the Old Testament, did not carry such a compilative educational burden as Solomon's. It should be taken into account that close diplomatic relations with Egypt, as a scientific center of the Ancient East in the past, and progressive tribes, which later united and strengthened the new Babylonian civilization, as a scientific center in the future, played a significant role here. During the last three centuries, archaeologists and paleographers have found a large number of sources of ancient Egyptian, Sumerian, Akkadian and other literature parallel to the Solomonic script (Serhyi (Akymov), 2018, p. 89). That is, three millennia before the Internet appeared, Solomon found a way:

- to acquire fundamental knowledge of the areas of wide geography,
- process them using hired analysts (so-called scribes) by cutting off foreign concepts, preserving the local system of traditional values, instilling new effective properties into Jewish society,
- popularization of the new social and philosophical anthropoculture.

Solomon's genius has been preserved in world history not only and not so much as a biblical hero, but as a collective image of a scientist-phenomenon who was ahead of his time in his methodology. Today, it is one of the examples of harmonious human development and maximum use of the capabilities of the human brain in ancient times.

At the same time, his son Rehoboam, who destroyed the Jewish state after his father, is an example of minimizing personal intellectual activity and analytics with a paradoxical desire to increase income. «The image of wealth and the rich, which the Book of Proverbs paints, is not one-sided. As soon as wealth becomes the goal in life, everything changes (Proverbs of Solomon 23:4-5, 28:20-22, etc.)» (Dauma, 2011, p. 117). «Happy is the man who has found wisdom, and the man who has received understanding, because his possessions are better than the possession of silver, and his profit is better than pure gold, he is more precious than pearls, and all your desires cannot compare with him. Length of days in her right hand, wealth and glory in her left. Her ways are pleasant ways, all her paths are peace» (Proverbs 3:13-18).

In a deep analysis of the entire literary quartet of Solomon's books, we even find a warning against the possible sterile intellectualization of the life process, which involves ANNs and AI. The amount of knowledge of Proverbs is not enough, the existential framework of Ecclesiastes is not enough, and the pseudo-metaphysical predictions of myths are not enough. Solomon places a checkbook in his case as a check code. He reminds that without positive communication in love, a person's existence becomes dull and often leads to the loss of its meaning. Love colors your own conditions and everyday life, miraculously giving it the properties of a happy future, even euphoric at its peak. The code of his book «Song of Songs»- «strong as death love» (Song of Songs 8:6) reveals the sacrificial principle of our existence, which is observed at every stage of life. This is the pattern common to all: parents limit and give us themselves; after two decades of this practicum, we are already giving ourselves to our heirs, and paradoxically, feeling the joy of voluntary self-sacrifice - the limitation of personal time, material goods, free movement, etc. «Solomon continues his opinion and says that only a reasonable life, that is, a life in hope of God,

is able to save from evil. What else, apart from this hope, apart from the moral life, can give the same guarantees?» (Feoktyst (Yhumnov), 2022, p. 42).

In ancient times, life was the ultimate value and rare cases of self-sacrifice in the uncertainty of the afterlife looked like a phenomenon that required analysis. It is this dilemma that Solomon exposes, emphasizing the willingness of loving people to supplement the existence of their loved ones in exchange for shortening their own earthly existence. It is noteworthy that this aspect of self-sacrificing love has both a theological and socio-philosophical character, later revealed as life-determining by Christ in His life. Here, Solomon looked like a theoretic scientist who admitted the unproven, but objective, while Christ laboratory proved in the audience of our society the main law of personal growth and existence.

The popular argument about the gradual replacement of the human neural network by an artificial neural network is untenable. «The brain is not a neural network, but, to put it simply, something unknown. Science has so far discovered only what the brain is not. In the 3rd century BC people invented hydraulics and assumed that the brain was a hydraulic device. In the 16th and 17th centuries, with the development of mechanisms, fantasies about the brain as a mechanism arose. Electricity, the telegraph, the first computing machines all found a place in hypotheses about the origin of thought» (Epstein, 2016). Now it is the turn of neural networks. And the brain is just as incomprehensible (Pavlov, 2017, p. 27).

**Conclusions.** Every young man, regardless of whether he is a high school student or a university student, subconsciously imagines a cloudless future for himself in a constant active state of body and brain, in the accumulation of theoretical knowledge, and practical skills, and bright sensual moments in memory. However, neglecting constant individual intellectual work, and not only during schooling, but also in the process of learning throughout life, according to medical indicators, leads to a reduction in working age, early dementia and brain atrophy (Zakharov). If we systematically relay in lectures and conversations to our students concrete historical and biological data about the direct dependence of the quality of life and active brain work, we have a much better chance of reading the written brain products of biological rather than artificial neural networks. «There is no knowledge that would not compel a person delving into it to turn to introspection and self-knowledge. Even the Jews were critical of their knowledge, trying to understand its nature and origins. Mind itself has become a subject of reflection for them... In short, knowledge always requires significant intellectual effort and is acquired only as a result of long-term reflection» (Rad, 1972, p. 68). «The nature of things» is embedded in the life process, while it is understood as an order necessary for life, neglect of which leads to death (Briuhheman, 2009, p. 393).

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