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Science, Creative Activity and Academic Plagiarism: Connections and Contradictions

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Abstract: In the study, the phenomenon of academic plagiarism is considered a result of creative scientific activity, which exists in a certain institutional design and is immersed in the appropriate environment and economic, socio-political circumstances. The study uses philosophical principles as a method—humanistic, historical, comprehensiveness and determinism, system and practice, specificity and activity. The historical retrospective shows that theft and misappropriation of other people’s intellectual property existed already in ancient societies. The prevalence of the phenomenon and the ambiguity of its interpretation inspired us to explore academic plagiarism in its various aspects.

The neurobiological principles of the human brain work in a way that promotes mimesis, reproduction, copying, and unconscious combinations of memories. The process of creative activity includes many subtle under-researched components that are difficult to capture or identify, such as a source of inspiration. The processes of socialization and assimilation of cultural norms consist in the reproduction of rules of conduct, in the level of assimilation of deep cultural norms, values, ideals, and codes. Thus, culture, as a factor of influence, promotes, generates, encourages, and justifies plagiarism. Postmodernist culture, like no other cultural paradigm, contributes to the transformation of understanding of what is called plagiarism, because it has fundamentally changed the moral attitude towards it. Various global and local socio-economic factors can also, for different reasons, intensify and contribute to such a negative phenomenon as academic plagiarism.

We emphasize that the modern scientific environment is quite complex, it involves about ten million people worldwide. New forms of organization of the scientific environment cause its bureaucratization, standardization, unification, functional, and stylistic stereotypes. Which, in turn, have led to the massification of such a negative phenomenon as plagiarism.

In conclusion, the authors argue that the ineffectiveness of the means of combating academic plagiarism arises due to a lack of understanding of the nature of the phenomenon. Rethinking the essence of creativity and institutional changes in science will help overcome academic plagiarism.

Keywords: *academic dishonesty, academic plagiarism, creation, creative activity, plagiarism, science, science community*

Introduction

The significant demand for creative activity in the modern world is explained by civilizational changes in the development of the global information society. People's creativity is now the driving force and main goal of the global information society. The results of creative activity are also of great value, because they represent the diversity of social life as a whole, including material, spiritual and other manifestations, as well as human development. Creativity is becoming increasingly popular owing to its great value in the global information society (Rybka, 2013b; 2020).

It is a well-known fact that creativity is a desirable feature, and even a requirement for any activity today. Creative activity, innovation, and the creation of a new have become the religion of our time. There is a perception that nothing is complete and unchanging, only eternal renewal is unchanging.

This is especially true of science, which strictly requires originality and novelty in all its canons. Plagiarism, the most famous problem of modern science, has become not only widespread but also strikingly diverse. Lisa Maruca (2004) even uses the expression “the plagiarism panic” to highlight the problem.

Plagiarism as the appropriation of authorship of another’s work, is:

- Explicit and disguised plagiarism (rewriting);
- The use of other people’s ideas without the knowledge of their author and without reference to him (plagiarism, or theft, ideas);
- Autoplagerism and others.

Due to this, there has been a recent increase in the attention of the scientific community to the phenomenon of academic plagiarism in scientific works, student works, etc. (Maruca, 2004; Sutherland-Smith, 2008; Haviland & Mullin, 2009). The media and social networks widely disseminate information about the facts of plagiarism, both in the works of scientific and pedagogical workers, and in the works of high-ranking officials.

In the scientific community, the problem of plagiarism does not lose its relevance. Researchers in their works represent the diversity of its contexts—legal, sociological, pedagogical, historical, and philosophical.

In this article, we will consider the problem of plagiarism and academic plagiarism resulting from creative activity. Creative activity has features which create the conditions, motives, desires and opportunities to steal it. We propose to consider academic plagiarism in connection with the essence of creativity in general and scientific creativity in particular. We will also try to answer the question: Is it possible to overcome the phenomenon of academic plagiarism?

Methods

As we have determined, it is necessary to study academic plagiarism as a phenomenon that is the result of creative scientific activity, exists in a certain institutional design and is immersed in the appropriate environment and economic, socio-political circumstances. In view of this, it is necessary to carry out a comprehensive and consistent analysis of all aspects of creative scientific activity and draw conclusions about the causes of academic plagiarism from the perspective of all the identified features of the functioning of science.

In analyzing the problem of academic plagiarism, we must proceed primarily from the principle of humanism. This principle reveals the phenomenon that we study in relation to creative activity and the functioning of the social construct 'science'. The principle of humanism allows us to see the mechanisms of mutual development of our society and science, and science and personality.

According to the principle of comprehensiveness and determinism, the phenomenon of 'academic plagiarism' must be consistently considered in all its manifestations, characteristics, attitudes, and aspects. In this case, we can use the historical method of cognition, which consists in reproducing all the details of real historical development and in reproducing history in its main, essential features. This is the method used in the subchapter 'History of the problem'.

The principle of systematization allows us to consider academic plagiarism within the construct of science, as well as to study the phenomenon in the system, as a whole, to highlight its structure and composition. The principle of systematicity allows defining academic plagiarism as a component of creative activity, and identifying the neurobiological features of creative activity which make its existence possible.

The principle of practice allows us to consider the specific implementation of science. Its manifestations in social reality is revealed in the subchapters 'Culturological factories' and 'Moral transformations of postmodernist culture', which explore the consequences of the general state of culture and the development of economic, spiritual, political, and social spheres of society on creative activity and science.

The principle of specificity makes it possible to consider science in its development, its manifestation in specific situations, for example, at one or another stage of the development of society, in certain conditions in social development. The

principle of specificity is examined in the subchapter ‘Local factors in the spread of plagiarism’.

The principle of activity allows considering science in the structure of human activity, and is discussed in the subchapter ‘Institutional aspects of scientific creativity’.

History of the problem

The high status of creative activity and, especially, scientific creativity in modern society highlights the situations that arise or develop in areas where there is creative activity. Scandals systematically shake the society—plagiarism, borrowing, espionage, and appropriation of someone else’s results and achievements in various fields (industry, art and science, education and social practice) are very common now.

Since an excursion into the history of plagiarism remains outside the scope of this article, we will concentrate only on the results of some researches on the history of plagiarism.

Many research works have been devoted to the study of plagiarism, allowing us to trace the emergence and manifestations of plagiarism in different historical eras, and, unfortunately, even back to antiquity. According to Scott McGill (2020), O. A. Matveychev (2018), V. G. Borukhovich (1977), Lise Buranen, Alice M. Roy and Andrea Lunsford (Buranen & Roy, 1999), dishonest borrowing, or plagiarism, was observed in ancient Greece and Rome in the activities of Aristotle and Democritus, Pythagoras and Herodotus, and many other pillars of European science.

Marianina Olcott (2002) explores in her study the history of academic plagiarism through millennia. She finds that “accusations of misappropriation of literature in all periods of the ancient Greek world” can be found “from the 5th century BCE to the 5th century AD” (Olcott, 2002, p. 1047).

The phenomenon of plagiarism in the recent history of humanity has been analyzed by V. A. Kolganov (2020), who cites cases of plagiarism in the United States, Germany, France, and Russia. Kolganov points out identified borrowings in various spheres of human life—literature, painting, cinema, theater and music, science, industry, politics. In his study, the author even tries to justify

plagiarism, believing that the peculiarities of the human psyche underpin plagiarism. Kolganov also believes that some detractors have gone too far in the struggle for the purity of science and art.

Despite the active fight against all forms of plagiarism, the quantitative growth of academic plagiarism and its penetration into the higher levels of the social hierarchy continues. Richard A. Posner (2007, see also Barlow, 2007) calls plagiarism “a chump’s crime” and discusses an incident at the University of Oregon, where a whole section of Stanford University’s pamphlet on plagiarism risk was reproduced without citing the source.

Thus, academic plagiarism is an “eternal” and generally civilizational problem. That is why we propose to investigate plagiarism using philosophical methods. This will allow us to assess the problem of plagiarism in many aspects, as well as to identify the reasons for the millennia-long history in fighting against it, as well as current measures adopted around the world to overcome it, unfortunately without results.

The essence of creativity and scientific creativity

The neurobiological basis of creativity

Considering plagiarism as a consequence, or a byproduct, of creativity, and specifically academic plagiarism as product of scientific creativity, it is impossible to avoid talking about the neurobiological basis of creativity.

Scientists point out that one of the main neural networks of the nervous system, which are directly involved in creative processes, is the network of passive brain function. (Vatansever *et al.*, 2016; Sali, Courtney & Yantis, 2016; Beaty *et al.*, 2014; Andreasen, 2011; Yang *et al.*, 2010; Ino *et al.*, 2011).

The conclusions reached by researchers of passive brain networks suggest that they provide flexibility of thinking, defocus, disconnection from the mode of purposeful problem solving according to known procedures, and are a means of branching, switching attention from one task to another. Proper use of the network of the brain’s passive mode allows making thinking more flexible, which is necessary when solving creative tasks. It promotes creative self-expression and has the ability to establish connections between individual parts of the brain, and thus, unique associations appear, and the development of human identity. This allows a person to act spontaneously and directly. It promotes a clearer

manifestation of vague memories, as well as helps use the memory that lies beyond attention, the processes of spontaneous recollection, to extract from it information that is not removed in other ways.

Thus, it is important for creative thinking to what extent is the brain of a particular individual able to independently establish associations, spontaneously use memory, arbitrarily extract memories, and more. That is, the process of creative activity largely involves memory and such operations with memories that bypass awareness.

In addition, when studying the work of the human brain, we should mention the system of mirror neurons, which allows imitation and reproduction of other people's actions (Gallese *et al.*, 1996; Gallese, 2000). Many contemporary authors attach great importance to the participation of imitation in social, scientific, and technological development (Ramachandran, 2000).

Creative activity is largely due to the existence and functioning of mirror neuron systems. Such components of creativity (Amabile, 2012) are empathy, the ability to understand the emotions of others through empathy; human language and speech; understanding of another's consciousness; general development of culture and civilization through inheritance.

In addition, the neurobiological foundations of creativity include a complex balance between already established neural connections and networks of neurons (experts interpret these "existing connections" as stereotypes) and those that are just being formed. According to systems theory, creative thinking is the destruction of some existing connections (stereotypes) and the establishment of new connections between ideas, concepts, judgments, and inferences that exist in the mind of a particular person.

As is known, stereotypes play a dual role in human life. On the one hand, they are necessary for the "normal" existence of the individual in biological and social aspects. On the other hand, the same stereotypes can interfere with the perception of the new, which both objectively exists and is created by human thinking, that is, hinder creative activity.

However, the "conservatism" of stereotypes about thinking is also important for true creativity. Creative activity involves a certain change in the existing stereotypes of thinking, in particular, related to the original goals, with the specification of goals in the process of this activity (Rybka, 2013a).

There are several possibilities for a creative process in the context of stereotype. The first is overcoming a stereotype, that is, creating something completely new, unusual for the society. The second is a perfect reflection of a stereotype as a reproduction of the reality of a particular society with its norms, rules, values, and more. The third is to change some stereotypes in order to harmonize or improve a process or an object. Therefore, for creativity, reproduction and repetition are of great importance.

From these facts one may conclude that at least two significant systems of the human brain and the principles of stereotyping work in a way that promotes mimesis, imitation, reproduction, copying, and unconscious combinations of memories. The process of creative activity includes many subtle under-researched components that are difficult to capture or identify, such as a source of inspiration. Hence so many excuses for “involuntary” plagiarism, borrowings from the works of scientists. There are cases of different scientists making scientific discoveries almost simultaneously and independently of each other.

Culturological factories

In addition to the neurobiological basis, there is a culturological dimension to the problem of plagiarism.

Repetition, reproduction of cultural patterns has always been of great importance in human culture. Repetition is considered to be what is called the main mechanism of cultural assimilation, socialization, social adaptation, it is the basis of civilization and the most widespread among everyday social practices.

Authors studying the processes of socialization, social adaptation, human behavior, etc. use a wide range of synonymous terms—imitation, repetition, inheritance, reproduction. In our study, we only intend to record the frequency of references to the current topic in order to draw the reader’s attention to the scale and depth of the problem we have identified.

Simulation considers imitation in the sense of “inheritance” as a psychological mechanism of primary socialization: according to this concept, the perception of role functions and norms by the child occurs through direct copying of the behavioral patterns of its parents. Durkheim (1951, pp. 372–373) speaks mainly about the social-role aspects of imitation, and, in fact, even devised a sequence: mimesis (imitation)—the basic values of culture (“collective ideas”)—the symbolic codes of this culture. This sequence is further developed in the

structural functionalism of Talcott Parsons (1998), who pays not so much attention to the social role but to the cultural and social aspects of imitation.

Inheritance of the basic principle of creativity, according to the theory of mimesis, can be traced back to ancient philosophers (Democritus, Socrates, Plato and Aristotle). In their teachings, mimesis is not a homogeneous theory, but has different objects of imitation already available in nature.

The idea of mimesis would later find its followers also outside ancient aesthetics: in the Middle Ages it would be represented by Tertullian, twelfth-century humanist John of Salisbury, and Thomas Aquinas proclaimed his classic thesis “art imitates nature”. The creative artists of the Renaissance, such as Leon Battista Alberti, Leonardo da Vinci and Girolamo Cardano, also supported the idea of mimesis.

An important innovation of the Renaissance was the idea that one should imitate not only nature. It is also possible to imitate those artists who were better at imitating nature than others. The notion of imitation of antiquity appeared in the 15th century, and by the end of the 17th century, it had almost supplanted that of imitating nature.

As a result, the theory of mimesis remained culturally dominant for three centuries. Or, to use the terminology of this article, during these three centuries, plagiarism served as the basis of all art and culture. The theory of mimesis finds its place not only in Western but also in Eastern culture: modern China, generally known for counterfeiting and faking of well-known brands, has cultural determinants.

Nancy Joyce Snow (1997) has also studied repetition as a traditional educational technology. Snow emphasizes that inheritance was one of the five methods adopted by the Greeks and, from the antiquity to nineteenth-century Russia, enjoyed great respect among scholars and educators.

Studying the peculiarities of Chinese culture, it is not difficult to notice a linguistic nuance: in Chinese, there are two concepts: *Fangjipin* (Chinese: 仿製品 *fǎngzhìpǐn*)—copying, when differences from the original are obvious, such as reduced copies for souvenir shops; and *Fujipin* (Chinese: 複製品 *fùzhìpǐn*), which refers to the same value as the original.

In some civilizations, the ability to accurately repeat after Laos, the Master—whether a hieroglyph, a movement in martial arts, or a wave of the brush—was considered one of the highest virtues since the ancient times. Copying was not something negative or criminal, it was not plagiarism. Imitating the ideal

infinitely will get one closer to perfection, is a thought familiar to every Chinese from childhood, as they carefully filled in many notebooks with a single character.

Due to such translation difficulties and fundamental differences in the world picture, a scandal broke out in Hamburg in 2007. The terracotta warriors from Xi'an, which were brought to the exhibition at the local Museum of Ethnology, turned out to be "fake" for the European view, that is, clearly not those made in the era of Emperor Qin Shihuang. The museum considered it a terrible blow to its reputation and offered refunds to the visitors. However, the Chinese side did not really understand the reasons for the outrage because the warriors were made using the same technique as thousands of years ago, and therefore had every right to be displayed at the exhibition.

Another incident occurred in 1956 at the Museum of Modern Art in Paris. The works of "the Chinese Picasso", a twentieth-century artist Zhang Daqiang (by the way, he is credited with the authorship of 30,000 paintings) were presented as masterpieces of ancient artists of the "Celestial Empire". The French considered themselves deceived, while the Chinese, on the contrary, were proud to show the West the artist, who with such skill imitated the creators of the Golden Age and, therefore, was in no way inferior to them.

Thus, the processes of socialization and assimilation of cultural norms have long been based on the principle of "Do as I do!" The very essence of culture is to reproduce the rules of conduct, the level of assimilation of deep cultural norms, values, ideals, and codes. Thus, culture, as a factor of influence, promotes, generates, encourages and justifies plagiarism.

Moral transformations of postmodernist culture

Traditionally, a plagiarist bears not only legal but also moral responsibility for what he does. Thus, the mass phenomenon of plagiarism signals a special state of morality in modern society. Experts call the current existential state of cultural progress of the humanity—covered by the concepts of postculture, postmodernity, risk society, and postindustrial society—postmodernism.

Indeed, the analysis of postmodernist society reveals such relevant ways of thinking and imagination as fragmentation, disproportion, intertextuality, mosaic, uncontrollability, and the lack of boundaries, where the artist is free to express himself in any way. "If ideological modernism is essentially full of persistent dictators who proclaim what art should and should not be, then

postmodernism is much more eclectic, able to assimilate, even plunder all forms of style, genre and circumstances, it is tolerant of diversity and even values conflicting.” (Gablik, 1984, p. 73).

Discourses of postmodernism sometimes completely ignore the primary principles of postmodern philosophy: new texts are only products of intertextuality interweaving, as they are readers’ interpretations (Müller, 2006; Shevchenko, Filipenko & Yakubovska, 2021).

Rees (1999) defines it as follows: “Postmodernism is seen as blurring the distinction between truth and error, theory and nonsense. In its extreme form, it even glorifies anarchy as a methodology. Postmodernism can be compared to ‘everything fits’ as an epistemology, described as anti-theory and anti-science.”

Thus, in the postmodern era, the following become legitimate:

- Eclecticism (borrowing and mixing features of many different systems and areas);
- Pastiche (imitation of previous works of other artists, often with satirical intent);
- “Plagiarism game”. (Broich, 1989, p. 252).

Therefore, postmodernism, like no other cultural paradigm, contributes to the transformation of understanding of plagiarism, because it has fundamentally changed the moral attitude towards it.

Summing up, we would like to note the following: Barthes’ postmodern opinion on the death of the author and the text as a tissue of quotations (Barthes, 1968) is understood directly and literally, as well as a direct call to action—theft. Against the background of the global and desperate fight against plagiarism, books such as *The Steal Like an Artist Journal: A Notebook for Creative Kleptomaniacs* by Austin Kleon (2015), which the critics have called the “manifesto of the digital age”, have been published.

Local factors in the spread of plagiarism

Different levels of the socio-economic development of the country pose various risks and problems associated with plagiarism. This is a matter of principle because the measures and strategies to fight it must be different, so it is pointless to talk about global memoranda, etc.

Among the local factors contributing to the spread of plagiarism in highly developed countries is the ease of electronic copying of texts via the internet. Indeed, ancient texts were protected from borrowing and copying by a particular person's limits of memory. There are historical facts that librarians of the Library of Alexandria, such as Aristophanes of Byzantium (257–180 BC), the fourth chief librarian, evaluated borrowings in various texts based on personal knowledge. Of course, limited access to other people's texts indirectly protects these from theft. However, such a barrier is inconceivable when it comes to science, because the cumulative principle is perhaps the most important in scientific knowledge: Robert Merton (1963 [reprinted in Merton, 1973]; 1988) directly pointed out that lacking knowledge about past work often destines the scientist to discover what is already known, it takes time and energy to reinvent the wheel.

Indeed, with the advent of the internet, plagiarism has become a serious problem. Once published online, knowledge becomes everyone's property and copyright enforcement becomes increasingly difficult, even impossible. Gradually it becomes more difficult to identify the original author. Due to the rapid expansion of the web and the growing computer literacy of the population, plagiarism is penetrating various spheres of the society: it is an acute problem in science, art, education and industry.

In June 2021, Google employee John Mueller explained that Google may rank plagiarism higher than the original content. Mueller explained that this could happen when a site with original content is generally of low quality. Therefore, the situation now is that the better your site is where you post your content, the more "plagiarized" it is recognized by Google. (Montti, 2021)

In addition, the most common causes of violations are the growing acceleration of social change, increasing competition in all areas, and the need for survival of all social institutions. The globalization of the labor market has led to fierce competition at the global level, so specialists from different regions of the world are trying to get to the same places, while the starting conditions, respectively, are different. This is also typical of science, so with increasing competition and employment situation, illegitimate methods of competition, including plagiarism, are becoming more common.

There are other reasons for the widespread plagiarism in the post-Soviet space. Researchers (Abalkina *et al.*, 2014) have found that in the 1990s, all over the post-Soviet space, there were people who suddenly became rich and, as a precaution, invested money in social honors—fake degrees, or purchased

diplomas. Demand gave rise to supply, and custom-made certification became an organized industrial business.

In addition to the “Soviet heritage”, post-Soviet countries have a low level of socio-economic status, which results in a lack of funding for productive research, low teachers’ salaries, and their educational and quasi-methodical work overload, and causes many other negative phenomena, specific to this region. These include, for example, administrative coercion (the ultimate overstatement of innovation and publication as an unintentional encouragement of plagiarism); lack of specific documents in universities regulating publishing activity and sanctions for violations; open information space and free access to the vast majority of publications (Gubanov, Gubanov, & Shorikova, 2021).

Difficult socio-political conditions may prompt a scientist to resort to unfair methods of competition. For example, Professor Sukhoterina (2019; 2021) has shown the complex fates of scientists during wars, revolutions, and significant social upheavals. Morozova and Pankevych (2021) have studied the coverage of environmental issues in the context of the coronavirus pandemic and emphasize that in the context of the global crisis, people are becoming more pragmatic, so they are more concerned about survival, and high moral ideals may have been relegated to the background.

Thereby, local socio-economic factors for various reasons can also intensify and contribute to such a negative phenomenon as academic plagiarism.

Institutional aspects of scientific creativity

Let us consider such institutional forms of organization of modern science that contribute, paradoxically, to the approval and spread of plagiarism. Science, as a social institution, has its own branched structure and uses cognitive and organizational, and moral resources. A group of researchers (Davydova *et al.*, 2019), examining the modern practices of human resource management, determined the fundamental uncertainty of one hundred percent, the complexity, and multifaceted nature of the task of human resource management. The study also emphasized the importance of human resources for the activities of organizations and industries. In this capacity, it includes the following components:

- The body of knowledge and its carriers;
- The presence of specific cognitive goals and objectives;
- Performing of certain functions;

- Availability of specific means of knowledge and institutions;
- Development of forms of control, examination and evaluation of scientific achievements;
- The existence of certain sanctions.

Inconsistencies between the relevant components always cause crises, problems in the implementation of functions, goals and objectives, and so on. Considering the institutional dimension of the problem of academic plagiarism, we can note several difficulties that lead to the imbalance of the entire social institution of science.

D. A. Sevostyanov (2017) emphasizes that the spread of academic plagiarism is a symptom of the mismatch between existing traditions and postmodern trends in education. Current academic ideals and norms correspond to the science of the past: for thousands of years the organization of scientific activity has been such that individuals with great personal interest and those who were truly inquisitive were drawn to science. Now, with the institutionalization of science, masses of scientists choose science for the status and wages. Today, science is no longer a vocation, so this transforms the scientist's "code of honor" in a special way, like the Hippocratic Oath.

In his research, Sevostyanov (2017) refers to inversion as the internal contradiction in the hierarchy between the place occupied by the hierarchical element and its role. He argues that the reason for the inversions is the different direction of the organizational principles of the hierarchy. The development of the inversion of relations leads to the destruction, or radical transformation, of the system. The current situation in science and education is due to the inversion of relations in the system of human activity, which precedes the leap forward in development. In these circumstances, the fight against plagiarism must be based on significant changes in science and education and the abandoning of outdated academic traditions.

The problem of deformation of the concept of scientific knowledge was raised at a round table discussion held at the Russian State University of the Humanities (Abalkina *et al.*, 2014). The authors of more recent studies have proposed that the problem of plagiarism is also that knowledge today is mostly seen as a finished product. In fact, true scientific knowledge is a process of methodical extraction and testing of knowledge. When its product replaces work, there is a temptation to take it all, for example, to download from the internet, without any difficulty.

Another aspect that creates the conditions for plagiarism is the cumulative nature of science. As said above, Merton pointed out that being unaware of previous works often makes the scientist to discover what is already known. It is well known that many scientific ideas, discoveries and inventions have not arisen as a result of the authors' sudden creative enlightenment, but as the result of the process of a long chain of evolutionary transformations, improvements, practical improvements, and adjustments of previously known analogues and prototypes.

Another important institutional dimension in the problem of plagiarism is the ratio of the stereotypical and creative in scientific activities (Rybka, 2013a). The use of mathematization and informatization, of course, is productive in many situations, but stereotypical, standard, speculative and unreasonable use of these methods leads to the emergence of pseudo-scientific areas, parasciences and more.

The contemporary scientific environment is complex, involving about ten million people worldwide. To create effective conditions for the functioning and promoting of academic exchange and communication, new forms of organization are being created, which has led to bureaucratization and unification of science. This, in turn, has led to the massification of such a negative phenomenon as plagiarism. Then again, the still standardized and functional-stylistic stereotypical scientific texts reflect the work of creative thinking.

Conclusion

Plagiarism is thus a phenomenon that accompanies human creativity, and exists around the world, in a variety of cultural circumstances. Plagiarism emerged when it became possible to monetize the products of intellectual activity.

We have pointed out two significant systems of the human brain and the principles of stereotyping work in a way that promotes reproduction, copying and unconscious combinations of memories. As peculiarities of the human brain and psyche, reproduction and repetition are a normal phenomena, especially in such complex forms of activity as creativity.

Cultural factors and features of postmodernism thus influence social attitudes, which in some situations justify plagiarism, calling it new technologies, rethinking, and so on. Researchers of pedagogical methodologies have said that,

for thousands of years, the principle of “Do as I do!” has been almost the only effective and proven one. Thus, the very essence of culture is to reproduce the rules of conduct, the level of assimilation of deep cultural norms, values, ideals, and codes. As a result, modern postmodernist culture, as a factor of influence, promotes, generates, encourages and justifies plagiarism.

Certain socio-economic conditions in general can create conditions in which academic plagiarism, or its more intricate forms, become almost the only way for a scientist to function and compete. Therefore, the institutional structure of science in the global information society creates the preconditions for the emergence of academic plagiarism (for example, such traditions of scientific activity as the need to study and present the research and ideas of other researchers; compete with the world in the number of publications, etc.).

Thus, reproduction, repetition become “plagiarism”, that is, theft, under certain institutional conditions. Hence, society will be able to overcome plagiarism in general and academic plagiarism as well as its individual cases, only if:

- Brain researchers answer the question of whether it is possible to speak about so-called “absolute creativity”, one that is without influences, reflections, repetition, etc. and society will accept and correct the idea of creativity;
- There are such cultural changes that will change how plagiarism is perceived and a type of person who will not be able to act in a similar way (plagiarize) emerges;
- Institutional forms of organization of science undergo fundamental changes.

The authors believe that the changes and transformation outlined above do not take very long to come about, as the present day shows that social changes are now happening as quickly as technological changes.

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