INTELLECTUAL THEFT AND ITS FORMS OF MANIFESTATION

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Abstract

Intellectual theft is a deeply rooted problem in contemporary society, affecting not only the process of creation and innovation, but also the moral and economic balance of the community as a whole.

This paper aims to analyse, on a personal note, the forms of intellectual theft, both from a criminal, and deontological and moral perspective, focusing particularly on the complex manifestations of this phenomenon specific to the academic environment, paying particular attention to data fabrication, data falsification, plagiarism and self-plagiarism, but also on the methods of combating and preventing intellectual "thievery".

I wish to explore in depth the concept of intellectual theft, to analyse the complexity of this phenomenon as well as to eloquently convey the depth of its impact on our cultural and intellectual evolution.

A deep commitment to respect for intellectual integrity is reflected in a community aware and responsible for excellence and innovation, shaping the direction in which society evolves in accordance with individual and collective needs and aspirations.

Keywords: intellectual theft, data fabrication, data falsification, plagiarism, self-plagiarism.

1. Introduction

Intellectual theft is a concept of great interest in the current landscape of our society, where information becomes a currency, with a vital impact on the development and research process.

Beyond the boundaries of the academic field, the complex phenomenon of intellectual theft is particularly important, representing a violation of intellectual integrity that produces serious consequences for innovation and the progress of society as a whole. In an interconnected world, the complexity of acts of intellectual theft has seen a development, from common practices, such as plagiarism, to modern alternative methods, such as digital piracy or industrial espionage.

The issue of intellectual theft has generated, at the international level, efforts to standardise a common regulation. Thus, organisations such as WIPO had an essential role in aligning general rules for the protection of intellectual property and copyright.

In Romania, in the context of the post-communist legislative evolution, the accession to the European Union represented a crucial moment of transition, which required adaptation to international standards in the matter.

Through this work, I want to contribute to promoting a culture of respect for creativity and innovation, strengthening the awareness and application of effective practices in protecting intellectual property in modern society.

The work presents originality through a novel approach, highlighting concrete examples, both from the historical past and from contemporaneity.

The main purpose of this approach is to expose not only theoretical issues related to the legal dimension of intellectual theft, but also ethical, social and economic aspects, emphasising the importance of protecting intellectual property to stimulate innovation and progress, as well as the way in which this form of fraud undermines the fundamental values shown.

2. Notion and regulation

The notion of copyright is regulated in Romania by "Law no. 8/1996, regarding copyright and related rights". This law established rules for the use and distribution of artistic and literary works, providing a legal framework for protecting the copyrights of creators, and still represents the main regulation of these aspects at the national level.

According to the provisions of art. 196 para. (1) letter a) from Law no. 8/1996, "It shall be offences and punishable with imprisonment for one month to one year or with a fine, the following deeds committed without the authorization or consent of the owners of rights acknowledged by this law: a) reproduction of works or

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products involving neighboring rights".1

According to the provisions of art. 197 para. (1) from the same Law, "It shall be an offence and punishable by imprisonment for 6 months to 3 years or with a fine, the deed of the person who appropriates, without right, in whole or in part, the work of another author and presents it as own intellectual creation".²

With its entry into force, "Law no. 206/2004 on good conduct in scientific research, technological development and innovation" established provisions related to scientific integrity and protection against illegal practices, which could alter the integrity of the research process. This law defined the concepts of data fabrication, data falsification, plagiarism and self-plagiarism, bringing accuracy to the legislative framework.

According to the provisions of art. 2¹ para. (1) letter a) from Law no. 206/2004, "The deviations from the rules of good conduct provided for in art. 2, insofar as they do not constitute crimes according to the criminal law, include: a) the fabrication of results or data and their presentation as experimental data, as data obtained through calculations or numerical simulations on the computer or as data or results obtained through analytical calculations or deductive reasoning; b) falsification of experimental data, data obtained through calculations or numerical simulations on the computer or data or results obtained through analytical calculations or deductive reasoning", and according to para. (2) of the same article, "Deviations from the rules of good conduct provided for in art. 2 letter b), to the extent that they do not constitute crimes according to the criminal law, include: a) plagiarism; b) self-plagiarism (…)".³

According to the provisions of art. 4 para. (1) from Law no. 206/2004, "For the purpose of this law, the following terms are defined as follows: (...) b) fabrication of results or data - reporting fictitious results or data, which are not the real result of a research - development activity; c) falsification of results or data - selective reporting or rejection of data or unwanted results; manipulation of representations or illustrations; altering the experimental or numerical apparatus to obtain the desired data without reporting the alterations made; d) plagiarism - the exposition in a written work or an oral communication, including in electronic format, of some texts, expressions, ideas, demonstrations, data, hypotheses, theories, results or scientific methods extracted from written works, including in electronic format, of other authors, without mentioning this and without referring to the original sources; e) self-plagiarism - the exposure in a written work or oral communication, including in electronic format, of some texts, expressions, demonstrations, data, hypotheses, theories, results or scientific methods extracted from written works, including in electronic format, of the same author(s), without mentioning this and without referring to the original sources".⁴

2.1. Data fabrication

As it results from the definition provided by the aforementioned legal provisions, data fabrication is the deliberate process of generating unreal information, in order to expose fictitious results, inconsistent with reality, in order to obtain unfair benefits, seriously affecting the correctness, validity and the credibility of the academic and scientific environment.

This notion cannot be associated with a specific moment, or with an event that marked its occurrence, but the concept has evolved with the development of data analysis in scientific research, especially in the context of IT evolution, which facilitates the manipulation of information.

Even if data fabrication represents an alternative way of committing intellectual forgery, being addressed and defined by Law no. 206/2004, together with the notion of plagiarism (criminalised as a crime by domestic legislation), this practice does not find an independent criminal regulation, neither in the Criminal Code nor in other special laws. However, by reference to the context of the execution, data fabrication may fall under specific regulations, which place it under the auspices of the illegal action, liable to attract administrative consequences as well as civil liability, or, in relation to the method of execution or the result produced, it may be associated with forgery crimes, provided by the provisions of the Criminal Code.

In this sense, in accordance with the provisions of Law no. 206/2004, stated above, data fabrication represents a serious deviation from the norms of good conduct in scientific activity, which produces significant consequences, in accordance with the norms detailed in the Code of Ethics, established for the purpose of monitoring and coordinating moral and professional conduct in research - development activities. Thus, following the finding by the members of the commissions tasked with following the compliance with the ethical codes specific to the field of scientific research, of some deviations in the manner of data fabrication, severe sanctions can be enacted against the author such as "written warning, withdrawal and/or correction of all works published

¹ Art. 196 para. (1) lit. a) of Law no. 8/1996.

² Art. 197 para. (1) lit. a) of Law no. 8/1996.

³ Art. 2¹ para. (1) lit. a) of Law no. 206/2004.

⁴ Art. 4 para. (1) of Law no. 206/2004.

in violation of the rules of good conduct (...), withdrawal of the university teaching title or research degree or demotion, dismissal from the management position in the research-development institution, disciplinary termination of the labor agreement, the prohibition, for a determined period, of access to financing from public funds intended for research - development (...)" etc.⁵

Under another aspect, in relation to the purpose and method of using a document with academic content, in which *"fabricated"* information, data or results were inserted, this procedure may meet the typical conditions of the crime of *"forgery in documents under private signature"*, provided by the provisions of art. 322 CP, carried out in the form of alteration by plagiarism, fabrication, or *"use of forgery"*, provided for by the provisions of art. 323 CP.

However, in these situations, the employment of criminal liability is conditioned by the nature of "document under private signature" attributed to the document in which the false data was inserted, but also by the purpose of using this document, but not by the result obtained.

A situation that circumscribes the problem set out above, is represented by the criminal action brought in 2023 against Mr. Nicolae Ciucă, the Prime Minister of Romania at that time, following a denunciation by which he was requested to be held criminally liable, among others, for committing the crime of "use of forgery". «The whistleblower considers that "the crime of use of forgery is committed in a continuous form, the plagiarised doctoral thesis being used at different time intervals, but in the achievement of the same resolution (art. 35 CP), as a notable professional achievement and support for further advancements»."⁶

Although the legal classification of the denunciation mentioned in the previous paragraph was made judiciously, referring to the doctoral thesis of the former prime minister, and not to the degree certifying his "doctor" title, the case was resolved in advantageous way, by dismissal, motivated by the fact that the act does not exist, the Prosecutor's Office attached to the High Court of Cassation and Justice arguing that "The use of the doctor's degree is not circumscribed, therefore, to the constitutive content of the crime of use of forgery provided for by art. 323 CP, since the doctor's degree is only an act that certifies/attests the doctor's title and does not constitute a false official document within the meaning of the criminal law, not having the meaning of the provided for by art. 320 CP or art. 321 CP (altered or forged document)".⁷

2.2. Data falsification

Very similar to data fabrication, discussed above, data falsification is a similar process of intentionally "adjusting" data contained in a scientific or academic paper in order to gain undue benefits.

While data fabrication refers to the presentation as authentic of completely fictitious information or results, data falsification involves the manipulation of existing, truthful documented information, in the sense of selectively highlighting the advantageous ones or the deliberate omission to present the unwanted, or subtle or complete modification of these data, in order to mislead readers or auditors.

In essence, data falsification enjoys the same regulations and sanctions as data fabrication, representing an illicit practice that seriously affects scientific and academic integrity.

2.3. Plagiarism

As a manifestation of intellectual theft, plagiarism represents taking over and presenting some data and information created or discovered by other authors or researchers as one's own (without proper attribution of the source), in order to obtain unfair advantages.

The term plagiarism has ancient origins, coming from the Latin word *"plagiarius"*, which refers to child or slave kidnappers.⁸

The Latin poet Martial (1st century BC) was the first to use the term to plagiarise, in the sense known today, attributing it to his rival, for the act of reciting his works in public, thus destroying his artistic prestige.

With the advent of printing, the sense of ownership of ideas and their form of expression grew, intellectual property being protected, initially, by royal decrees. Then, in 1557, in London, the first society was established with the aim of protecting the rights of authors, following that with the evolution of technology, but also of legislation, plagiarism detection tools took the form of software.

In Romania in recent decades, the notion of plagiarism has acquired a new dimension, with the interest

⁵ Art. 14 para. (1) of Law no. 206/2004.

⁶ The dismissal ordinance enacted on 15.03.2023 by the Prosecutor's Office attached to the High Court of Cassation and Justice - Criminal Investigation and Forensic Department, https://cdn.g4media.ro/wp-content/uploads/2023/05/Ordonanta-clasare_15-martie-2023.pdf.

⁷ Ibidem

⁸ https://wwnorton.com/college/english/write/writesite/plagiarism_tutorial/link_03.aspx.

shown in academic ethics and with the adoption of specific legal provisions in higher education, in order to preserve integrity, originality and correctness, considered fundamental for scientific and academic progress.

Being the most popular way of committing intellectual theft, plagiarism enjoys an express, distinct regulation in Romania, Law no. 8/1996 defining "the reproduction of works or products bearing related rights" but also "the act of the person who appropriates, without right, in whole or in part, the work of another author and presents it as own intellectual creation" as being the material element of some crimes punishable by fine or even imprisonment.

The "reproduction" referred to in the aforementioned legal provisions can be achieved in several alternative ways:

- by copying being the most widespread form of plagiarism, carried out by directly taking over a part or the entire work of another person, without proper attribution of the original source. The common character of this practice is also supported by the easy method of execution, being necessary to copy and paste a text, most of the time requiring the manipulation of a computer system by acting on a simple copy-paste formula. What is a matter of interest regarding the previously described practice, is the fact that specific computer programs, used in the evaluation and anti-fraud verification of scientific and academic works, can detect not only the plagiarised text, but also the Internet page source, as well as the date and time it was taken;
- by paraphrasing reformulation process, by using synonyms or by changing the topic of the text belonging to another author, keeping the ideas, meaning, or structure, without attributing it to the original author. This practice aims at expressing the same basic content, in other words, or changing the order of words in sentences, in order to lose the origin of the original text and present the content as one's own creation. Even this procedure can be identified by computer anti-plagiarism checking programs, by highlighting the words whose order has been changed, so that, by similarity, the original text that has been tampered with can be established; A variety of plagiarism through paraphrasing is plagiarism through translation, which involves translating a text written in a foreign language and inserting it into one's own work, without indicating, between quotation marks or in a footnote, the original text, or at least mentioning the source;
- by juxtaposition (mosaic or *"patchwork"*) consists in joining several fragments taken from different works, without mentioning their origins;
- self-plagiarism (which will be dealt with separately below) consists in the repeated presentation by a person of the same own ideas, without making the public aware of the repeated character, etc.

An "innocent" form of plagiarism is that committed by people suffering from cryptomnesia, "a paramnesia characterised, on the one hand, by the forgetting of important dates or important people, and, on the other hand, by the subject attributing mnesic material to oneself (read or heard), the patient presenting the works or creations as their own production (also called involuntary plagiarism). This illusion of memory must be distinguished from voluntary plagiarism, where it is a conscious action taken to achieve a certain goal (...)". ¹¹

Even in these circumstances, regardless of the motivation or circumstances surrounding plagiarism, it remains a serious breach of academic and professional ethics and standards.

2.4. Self-plagiarism

Being a variety of plagiarism, as a way of committing academic fraud, self-plagiarism is the conduct of an author to reuse own works, texts or ideas, in multiple contexts, without informing auditors or readers of the previous origins of the content.

Although self-plagiarism does not represent the material element of the crimes regulated by Law no. 206/2004, this practice is liable to damage the reputation and lose credibility in the academic community, but also unfavorable administrative consequences, among those regulated by the same law, previously mentioned.

However, in addition to the academic sanctions self-plagiarism can also attract, in certain cases, criminal liability, depending on the way it is committed, the purpose and the legal consequences produced.

Thus, although self-plagiarism may represent a practice bringing apparent temporary benefits to the author, the consequences it produces can profoundly affect the professional direction, as well as his image and credibility in the academic environment.

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⁹ Art. 196 para. (1) lit. a) of Law no. 8/1996.

 $^{^{10}}$ Art. 197 para. (1) of Law no. 8/1996.

3. From a deontological point of view

The deontological approach to intellectual fraud involves analysing the act itself from the perspective of ethical norms and fundamental principles such as honesty, transparency and accountability.

Intellectual theft, in all its forms of manifestation, brings serious damage both to the private interests of the persons directly targeted and damaged by the fraudulent activity, as well as to the general interest, characterised by the impact on academic culture, but also by the disastrous consequences that could produce, to the extent that false information or obtained by fraudulent means would be exploited in different fields of interest.

Intellectual fraud, especially that committed in the form of plagiarism, represents an intellectual injustice and a flagrant violation of copyright, which, according to the provisions of art. 12 of Law no. 8/1996, "(...) has the exclusive patrimonial right to consent to the use of the work by others". 12

Therefore, these practices contravene the right of the authors of the original works to be credited with their intellectual effort and contribution to the generation of the ideas and information that form the object of the fraud, discrediting their work and creativity.

Equally, intellectual theft represents a practice that is clearly contradictory to the norms of good conduct in scientific research, as regulated by the provisions of law no. 206/2004, shaking the foundation of academic ethics.

The practices analysed above bring serious damage to the principle of honesty, in the context in which researchers and academics have a fundamental obligation to present their own contribution to the realisation of scientific works and to properly recognize the work of others, encouraging truth and transparency to represent the foundation of knowledge.

At the same time, the perpetuation of this phenomenon would compromise the credibility of the scientific and academic community, seriously affecting the validity and reliability of discoveries and results, but also undermine education and the learning process, in the context where exposure and access to intellectual fraud compromises its fundamental objective, that of developing the critical thinking and analytical skills of pupils and students.

4. From the moral point of view

A moral approach to intellectual theft and an understanding of the significant impact it has on human relationships, personal integrity and social responsibility are essential to promoting a sound, ethical and healthy environment.

Under the first aspect, the practices of intellectual fraud can have a major influence on the author's personal integrity, bringing him, in addition to the loss of credibility and professional recognition, also processes of conscience and a decrease in self-esteem.

On the other hand, the practices highlighted above contravene the principle of academic *"fair play"*, bringing a significant imbalance to the competition between students, researchers and institutions.

From a moral point of view, researchers have a duty to scientific progress and the common good, so engaging in fraudulent practices in the context of knowledge-seeking affects their ability to respond to challenges and bring benefits to society.

Last but not least, the popularity of such practices and their approach by significant personalities of the scientific and academic world, can negatively influence the confidence, aspirations, decisions, behavior and professional direction of the new generation, discouraging the thirst for knowledge and the exchange of ideas of students and young researchers.

5. Case studies

Paolo Macchiarini - intellectual forgery committed by fabricating / falsifying data

Paolo Macchiarini is a renowned Italian doctor, internationally recognized for the research activity carried out in the field of thoracic surgery, who carried out lucrative work in several prestigious medical and academic institutions at the international level.

Previously considered a pioneer of regenerative medicine, through the simultaneous use of biological and artificial tissue (supposed to have been obtained with the help of stem cells taken from patients undergoing treatments) in performing artificial trachea transplant operations, the doctor performed several such interventions, even on some patients whose conditions did not require emergency surgical treatment, under the

¹² Art. 12 of Law no. 8/1996.

pretext of the possibility of improving the medical condition.

The doctor's practices began to be called into question after seven of the eight artificial trachea transplant surgeries performed in Sweden resulted in the death of the patients.

Proceeding to the thorough investigation of this situation, it was found that the works that were the basis of his academic accreditation were based on the fabrication of data, since the doctor had not obtained ethical approval for his procedures, but also on the falsification of data, since he distorted the result of some of the experimental procedures carried out.

Thus, it was established that Paolo Macchiarini performed experimental surgical procedures on human subjects, without a prior assessment of the impact of the procedures on living organisms and without obtaining the informed and voluntary consent of the patients.

Therefore, the ethics committee empowered to analyse the inappropriate scientific behavior of the doctor and take appropriate measures, established the retraction of 11 research papers, and 3 others were corrected. Equally, the employment agreement signed with the medical institution in which the controversial procedures were carried out, as well as his research agreement, were terminated.

The case of doctor Paolo Macchiarini had a resounding international media impact, even forming the subject of a very popular documentary on the Netflix streaming platform. At the same time, the notoriety of the case determined the resignation from important positions of several people considered to have been closely related to the doctor's research activity, including even the secretary of the "Nobel Committee for Physiology or Medicine", or the president of the most prestigious academic medical research unit in Sweden.

Regarding criminal liability, after a medico-legal investigation that lasted a year, Paolo Macchiarini was found guilty in 4 of the 5 cases under investigation, but not for murder or manslaughter, but for bodily injury, establishing that the patients would have died even under the administration of a different treatment. A sentence was pronounced against him by which he was sentenced to a punishment whose execution was suspended under supervision, its amount being increased on appeal to 2 years and 6 months.¹³

Albert Einstein - plagiarist of the 20th century?

Among the most controversial cases of intellectual theft, which has generated numerous debates over time, is the accusation of the most famous scientist in history: is Albert Einstein, or not, the true author of the theory of relativity?

The one declared by the famous publication Time Magazine as the "man of the century" published in 1905 the most famous equation in history: "E=mc2", in his work on the theory of relativity, but without citing any reference.

Critics appreciated at the time that several of the concepts supported in the previously mentioned work belonged to the mathematician and physicist of Dutch origin Hendrik Lorentz, but also to his French counterpart, Henri Poincare.

In his 1907 paper, Einstein expressed his opinion about plagiarism: "It seems to me that, in the nature of things, what follows has already been partially worked out by others. Notwithstanding this, as the subject at hand is treated here in a different way. From my point of view, I feel disconnected from having to do extensive literature research"¹⁴, implying that plagiarism, when properly disguised, is an acceptable tool in research.

The allegations regarding the intellectual fraud committed by Einstein are not limited to the publication of the work shown above, but also concern the falsification of data allegedly carried out in order to demonstrate the theory of relativity, on the occasion of the solar eclipse of 1919.

"There can be no clearer definition of scientific fraud than what happened in the tropics on May 29, 1919". ¹⁵ The total solar eclipse of May 29, 1919 motivated the astronomer Arthur Eddington to travel to West Africa, in a location whose positioning favored its observation, in order to verify Einstein's general theory of relativity.

What is claimed in the works of several critics is that Eddington falsified the coordinates of the solar eclipse in order to influence the results of the study to conform to Einstein's works on general relativity.

It is well known that Eddington was not familiar with the basic principles of science, his task being exclusively the collection of data in order to verify theories.

The fraud perpetrated in favor of the scientist can easily be inferred from Eddington's own statements according to which "It appeared that the effort, as far as the Principe expedition was concerned, might have failed. I developed the photos, two each night, for six nights after the eclipse. Cloudy weather messed up my plans and I had to interpret the measurements in a different way than I intended. Consequently, we could not make any preliminary announcement of the result". ¹⁶

¹³ Netflix documentary – Bad Surgeon – Love under the Knife.

¹⁴ https://www.impact.ro/plagiate-celebre-din-istorie-hotia-intelectuala-ca-mod-de-parvenire-301674.html.

¹⁵ translated text - https://www.techcounsellor.com/2017/04/albert-einstein-plagiarist-century/.

¹⁶ R.W. Clark, Einstein: The Life and Times, Avon Books, New York, 1984.

Eddington's obvious falsification of data represents a blatant undermining of the scientific process, which resulted in the scientist Albert Einstein's overnight rise to international fame, despite the fact that the data underpinning the study in question were fabricated and do not represent a solid argument for general relativity.

However, Albert Einstein is still recognized worldwide for his significant contributions to science, and the originality and authenticity of his theories are accepted by the international scientific community.

6. Other famous cases of intellectual fraud

• The case of Saddam Hussein

In 2003, Saddam Hussein and his government prepared an official document for the UN on Iraq's military operations and weapons. The content of this document reproduced large fragments of reports prepared by the UN itself, modified in such a way as to give the impression of an original document.

This form of political plagiarism concealed important information about Iraq's weaponry, and the alleged possession of weapons of mass destruction was one of the reasons behind the 2003 invasion of Iraq, which led to the fall of Saddam Hussein and his regime, as well as the political and civil unrest in Iraq in the following years.

The case of Martin Luther King

The intellectual fraud alleged to have been committed by the political activist - fighter for the civil rights of black people in the USA - Martin Luther King, aims at two alternative ways: on the one hand, plagiarism in his academic research works, including the doctoral thesis defended in 1955 and, on the other hand, the use of borrowed phrases in his speeches.

According to civil rights historian Ralph Luker, King's work, "The Chief Characteristics and Doctrines of Mahayana Buddhism" was taken almost entirely from secondary sources.

However, the doctor title was not withdrawn, and Martin Luther King's great achievements were not overshadowed by this discovery. 17

• The case of Barack Obama

In 2008, before he became the world's most influential leader, Barack Obama was put in the position of giving explanations for a speech given on the campaign for the Democratic presidential nomination. It has been argued that this speech is similar to one previously given by another politician, Massachusetts Governor Patrick Deval, both of which contained famous quotes from other American leaders, such as Martin Luther King's famous "I have a dream".

The situation remained only a circulating media topic, without producing other consequences, with Deval publicly declaring his friendship with Barack Obama, and the latter publicly apologising to him for not mentioning him as a co-author of the speech.¹⁸

• The case of Joseph Biden

Even the American politician Joseph Biden, the current president of the USA, did not escape the scrutiny of the anti-plagiarism "police".

In 1988, Joe Biden ran for president for the first time. During the campaign, controversies related to accusations of plagiarism against him arose, both by taking, in his speeches, some fragments from the speeches of other politicians, and by plagiarising 5 pages, out of 15, of an academic paper produced in the first college year.

The politician did not dispute the allegations and withdrew from the race for the Democratic Party nomination before the primary election. ¹⁹

• The case of Melania Trump

The case of plagiarism of the speech given in 2016 by Melania Trump, at the Republican National Convention, shortly after the inauguration of President Donald Trump, is also in the sphere of contemporary daily life

The speech contains passages and is clearly structured very similar to the one delivered by Michelle Obama in 2008: "From a young age, my parents instilled in me the values of working hard for what you want in life, of doing what you say and keeping your promises and treating people with respect. (...) We must pass on these lessons to more future generations. Because we want all the children of this nation to know (...)" - Melania Trump 2016.

"Barack and I were raised with so many similar values: to work hard for what you want in life, to do what

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 $https://en.wikipedia.org/wiki/Martin_Luther_King_Jr._authorship_issues\#: ``:text=Boston\%20University\%2C\%20where\%20King\%20received, who\%20wrote\%20about\%20the\%20topic.$

¹⁸ https://evz.ro/cazuri-celebre-de-plagiat-987678.html.

¹⁹ https://www.politico.com/news/2021/01/19/joe-biden-1988-campaign-redemption-460332.

you say, to keep your promises, and to treat people with respect (...) Barack and I set out to build lives guided by these values and to pass them on to the next generation. Because we want all children (...)" - Michelle Obama 2008.

This circumstance, although it did not produce administrative or legal consequences, represented a sensational media topic and was debated with great interest internationally, including on social networks.²⁰

• In Romania

Plagiarism has become a phenomenon worthy of consideration in Romanian society, especially in the sphere of public office holders.

Among the well-known cases that drew attention to research integrity are: the case of former Prime Minister Victor Ponta, accused of plagiarism in his doctoral thesis. These accusations generated civil lawsuits, aiming to suspend the decision to withdraw the title of "doctor", but also numerous controversies in the public space. In the end, the former Prime Minister voluntarily renounced his academic degree.

Equally, other personalities from Romania have been the object of extensive investigations regarding the plagiarism of academic works, among them Laura Codruţa Kovesi - Chief Prosecutor at the European Public Prosecutor's Office, former Chief Prosecutor of the National Anticorruption Directorate, Robert Negoiţă - Mayor of Sector 3 of Bucharest, Mihai Tudose - Deputy and former Prime Minister of Romania, Florin Roman - Deputy and former Minister of Research, Innovation and Digitization, as well as other personalities, especially from the academic environment.

7. Preventing and combating intellectual theft. Strategies and technologies

Intellectual fraud is, as I have shown before, a constant threat to creativity, innovation and scientific and academic integrity. In the current context, where technology is rapidly evolving and digitization is taking control worldwide in more and more fields, it is crucial to properly adapt the methods of preventing and combating intellectual theft.

Under the first aspect, the implementation of educational programs is essential for awareness of the phenomenon and prevention of its spread. Both academic institutions and other levels of education should focus their efforts in the direction of informing pupils and students about the forms of manifestation of this phenomenon, but also about the associated risks and the legal consequences it can generate.

The development and constant revision of clear organisational anti-fraud policies is particularly relevant in the context of the prevention of intellectual theft, all the more so as the regulations aim at harsh sanctions for the persons responsible for such practices, both in the manner of academic, disciplinary, financial and professional sanctions, as well as criminal liability.

Another concept of interest for the defense of the values in question is the transparency in the publication of scientific works, but also the collaboration between governments, academic institutions or organisations, for the development of common strategies or, at least, for the maintenance of similar practices.

Of course, the most relevant and effective measure to prevent and combat intellectual fraud remains the Big Data analysis, the use of specialised software platforms for detecting plagiarised passages respectively, with the help of which the content of works can be analysed by reporting to extensive databases, drawing up, thus, a detailed report.

The use of AI in the fight against intellectual fraud is a particularly effective approach, as its complex algorithm can identify not only direct similarities, but also topical or semantic aspects.

Adapting to technological evolution, in an increasingly connected and digitised world, requires the adoption of new measures to prevent and combat intellectual theft, or the updating of those already used. Thus, the development of innovative content marking technologies could eradicate the unauthorised taking of protected content.

The biggest challenge of the current times, in combating this phenomenon, remains the implementation of blockchain technology for the authentication and highlighting of copyrights. This technology can automate the process of licensing and distribution of intellectual works, by creating "", "smart contracts" - computer programs that allow the completion of truthful transactions between parties, without the need for the intervention of a third party for validation. At the same time, blockchain could place intellectual or artistic works under the concept of "token" - a digital representation of these assets, which can be used to trace their provenance and confirm their authenticity. The information recorded in a blockchain cannot be altered, modified retroactively, so it can give full evidence of the history of an intellectual work, in terms of content changes.

Educational institutions can implement tamper-proof systems for preserving academic credentials by the

²⁰ https://edition.cnn.com/2016/07/19/politics/melania-trump-michelle-obama-speech/index.html.

valorisation of blockchain technology, thus discouraging fraudulent activities and cultivating the authenticity of academic achievements.

At the international level, there are already educational institutions that have adopted blockchain for digital certification. The implementation of this technology allows students secure access to the documents attesting to their professional qualification, eliminating the need to make copies of the documents in physical format, simplifying the administrative procedure.

At the national level, although blockchain technology has not yet been valorised in education or research, it has made its presence felt as a way to protect intellectual property rights.

A team of Romanians initiated a process of evaluating the NFTs (unique digital assets) existing on the access platforms to the digital assets market, and in the situation where they identify excessive similarities with products already listed for trading, they prevent the publication of a duplicate, especially protecting creators, collectors, artists and traders of digital art.

This initiative appeared after the Romanian state was obliged to pay compensation in the amount of more than one million euros, following the use of the leaf - a symbol copied and slightly adapted, in the content of the Romanian tourism logo. A similar situation took place in 2017, on the occasion of the competition organised by the Bucharest City Hall to designate the city logo. The day after the winning logo was announced, it was determined that it had been plagiarised from the Internet, and the contract was awarded to the next winner, whose symbol was also later identified as having been copied.²¹

To fight academic dishonesty, the educational sector, and even more so the scientific sector, must adopt innovative solutions. Blockchain technology offers solutions for setting new standards of academic integrity, revolutionising data storage, evaluation and verification.

8. Conclusions

This paper addresses, from a criminal, deontological and moral perspective, the complex issue of intellectual "thievery", a real threat to scientific and academic innovation and integrity.

From a criminal point of view, the protection of intellectual property falls under the responsibility of internal regulations, putting the legislator in front of new challenges, to keep up with the evolution of technology but also with the ways of committing this type of fraud.

From a deontological perspective, the responsibility of education in order to respect academic integrity rests with higher education institutions, by promoting good practices, in order to establish and maintain an educational community based on equity and trust.

The essence of society's efforts to combat intellectual fraud practices is, however, the moral dimension of the problem. Recognizing the merits of the authors, encouraging high ethical standards, but also the awareness and prevention of serious, sometimes disastrous, consequences that can be caused by the practice of intellectual fraud in the scientific and academic sphere, are of a nature to preserve the integrity of research.

The products of technological evolution, such as AI or blockchain technology, can represent valuable weapons in the fight against intellectual theft, their implementation contributing overwhelmingly to the management and limitation of illicit practices against intellectual property.

In relation to all the aspects addressed above, it should be noted that transparency, fairness, authenticity, trust and efficient management of progress and academic integrity can be capitalised through the joint activity of all those anchored in the creation and learning process, to build a future where the personal contribution is protected and valued at its fair value.

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