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UPRAVLJANJE ETIČNIH TVEGANJ V VOJAŠKEM ŠOLSTVU

MANAGING ETHICAL RISKS IN MILITARY EDUCATION

Povzetek Članek obravnava medsebojno povezanost in pogojenost etike in znanstvenega raziskovanja. Opisuje načine in vzroke neetičnih dejanj, ki jih razvršča v skupine. Opisuje pristope k obvladovanju neetičnih dejanj in opisuje stanje v slovenskem znanstvenem prostoru. Opisuje stanje po vzpostavitvi Visoke vojaške šole v sistemu vojaškega izobraževanja. Opisuje edinstven način upravljanja etike v vojaški organizaciji na splošno in primernost uporabe istega načina v vojaškem izobraževanju. Po analizi dosedanjih izkušenj so opisane podobnosti in razlike med vojaškim in civilnim izobraževalnim sistemom na področju etičnega obvladovanja tveganj.

Ključne besede *Etika, znanost, raziskava, vojaški izobraževalni sistem, neetičnost, etično tveganje.*

Abstract This article deals with the interconnection and conditionality of ethics and scientific research. It describes the different types and causes of unethical actions, which it classifies into groups, as well as the approaches to the management of unethical acts, focusing on the situation in the Slovenian scientific area. The article goes on to discuss the situation after the establishment of a National Military College in the military education system, and describes a unique way of managing ethics in a military organization and the suitability of applying the same in military education. After an analysis of the experience to date, the similarities and differences between the military and civilian education systems in the field of ethical risk management are explained.

Key words *Ethics, science, research, military education system, unethicality, ethical risk.*

Introduction The relationship between ethics and science has always been considered very complex. In essence, it is a reciprocal relationship which characterizes and values individuals' trust in science and, above all, in its practitioners and promoters. Science has long had an undeniable positive ethical connotation in society. Some authors have argued that science should be absolute and based solely on the search for truth and its demonstration by data; ethics would be redundant in this relationship. In modern times, views and knowledge are no longer accepted on the basis of sole authority, but on the basis of critical reflection.

Practice has shown that not even science is immune to unethical phenomena. The media report daily on new phenomena of unethical practices in science, and on its growing dependence on the causes that generate these unethical practices. It is an interesting observation that almost all rules, regulations or social requirements are set very high, so that it is impossible to fully comply with them in everyday life. This is often the biggest and the first traditional cause of the ethical conflict that arises between the ideally set ethical norms and the difficulty of meeting them.

The English moralist Samuel Johnson said that integrity without knowledge is weak and useless, and knowledge without integrity is dangerous and terrifying. With this thesis, he placed science and ethics in a very close, interdependent relationship. Today, more than at any other time in history, science is the key to finding the right answers to pressing questions. Over the past twenty years, various organized social formations have sought to control and regulate the ethics of science. This is necessary in order to ensure trust and to counteract the impact of science on society; otherwise, it is essentially a negation of civilization and the development of humanity. In view of the growing number of unethical practices, the regulators of social processes are aware of the urgent need to act.

What do we actually mean when we talk about unethical action in the scientific research environment? The 21st century is a time of public confrontation with abuses in science, especially in human and animal experimentation, but also with the problems of authorship of academic papers.

1 METHODOLOGICAL APPROACH

This paper was prepared using a methodology that allows us, as far as possible, to process the results in accordance with the purpose of the research. In the introductory part, the purpose of the study is formulated on the basis of commonly known data and estimates of the situation. In terms of content, it is a matter of applying social science research methods, mainly qualitative.

The method used to establish the relationship between ethics and science was the study of relevant sources and the identification of their individual attributes using the descriptive method. The interrelationship between the two concepts was established and synthesized using the compilation method. The historical method was used

to analyse the significance of this link and the basic historical development of the interaction. After examining the sources, a synthesis was carried out in which typical manifestations of unethical behaviour were grouped together and, where possible, linked in a cause-and-effect relationship.

The analysis of legal acts was carried out with the aim of showing the current state of play in the process of formal ethics management; the descriptive method was used to explain them. The synthesis method was used to conclude the assessment of the current situation. Historical and descriptive methods were then used to describe the situation in the Slovenian Armed Forces with regard to the re-approximation of the standards of the public education system. Given the lack of data, the comparative method of comparing data in the Slovenian Armed Forces and in the public education system was only partially applied. The comparison of the occurrence of unethical acts was made on the basis of subjective perceptions and personal experience. The analysis of the results enabled the comparison and final analysis through the synthesis of the same into similar groups of occurrences of unethical acts.

After the comparison phase, the descriptions of the legal regulation of the public system and of the Slovenian Armed Forces enabled an analysis to be carried out in the direction of similarities and differences, and synthesized into a conclusion of relevance. In the discussion, the most frequently used method was first the descriptive method and then the comparative method. The synthesis of the results allowed conclusions to be drawn and the hypothesis to be verified. In the conclusion of the paper, the method of logical analysis was used, which led to the synthesis of the data, on the basis of which a system analysis was carried out and the results were generalized and written in the form of conclusions. All the questions raised in the introduction can be answered in the conclusion of the paper. The conclusions are formulated into proposals using concretization.

2 SCIENCE AND ETHICS

Riha, on the basis of Descartes' thesis of *thought without qualities*, uses the argument of Milner, "Does Science Think?" (Milner in Riha, 2005, p 97). In his article of the same title, Riha explains that if we take away the fact that science is not a subject, then only facts and truth remain as attributes. This dilemma, of course, says nothing about the actual existence and functioning of the system of the various sciences: it is clear to everyone, not only scientists, that the sciences are based on a huge intellectual effort, supported today by extremely sophisticated technical instruments (2005, p 95).

In describing the relationship between science and ethics, Malnar points out that when we talk about research ethics, we usually think first of the welfare of the participants – they must not be harmed or adversely affected by the research if it is to meet ethical criteria, as can be seen from codes of ethics. Malnar concludes: whenever we speak of trust, we are forced to speak of influence in the same sentence,

from the Greek philosopher Aristotle onwards. For people, to believe in the results of science, they must first trust it. Only when this condition is fulfilled can we also speak of the impact of science and the fulfilment of its mission (2010, p 9).

Musić argue that one of the major delusions of modern society is the view that science is the only guide to truly knowing the world. They argue that what was once the role of philosophy and religion in the Dark Ages is now passing to science. It is generally accepted that a Copernican turn has taken place, as views and insights are no longer accepted on the basis of naked authority, but on the basis of critical reflection (2019, p 351–358).

Taking this into the consideration, we can conclude that even science is not immune to unethical practices. A very good example was the Covid-19 pandemic crisis, when we as humanity were confronted with a disease. Science was quick to offer vaccines, which some people took up, while others were sceptical about taking advantage of the solutions offered. It was trust that was put to the test.

Knezović argued that society always starts to turn to ethics when morality is sinking and society is in crisis. The media report daily on new manifestations of unethical practices in science, and its growing dependence on the causes that generate these unethical practices. Thus, even in organized pedagogical processes, the teacher and the professor are no longer the alpha and omega of the formulation, interpretation and thus the correct multi-stage dispensing of knowledge. Knezović concludes that this primacy has been thoroughly shaken by the expansion of information technology and the ability of users to find results for themselves, since people themselves can access several different sources in a very short time and autonomously, and on the basis of these sources form what is called and often misunderstood “non-formal education”. One reason is the attempt to subordinate everything in society to efficiency and effectiveness (2002, p 73).

Concluding on these two criteria (efficiency and effectiveness) have also set a new threshold between being or not being in science. We could agree that humanity is at a point where all the cheap solutions have probably already been discovered. Modern science is focused on complex, demanding and time-consuming processes, which are characterized by their dependence on enormous resources. According to all quoted authors, this is where a large space of interest has been created for those who will offer these solutions on the market, be they products, services or intellectual solutions. Why is it so? We could answer as follows; at the one hand, we want to limit the influence of the rich on science, because we know that they will benefit most from the results, but on the other hand, we ourselves, as taxpayers, are unable and unwilling to support these costly processes. How can we strike a balance between capabilities and desires? It is well known imperative that those individuals who are engaged in scientific research, are aware that it must be carried out in accordance with the argument about the link between integrity and knowledge.

Tomašević argue that today we prefer to think of human beings as individual beings and expect each person to act in accordance with their individual conscience. However, we often forget that it is consciousness that is subject to and shaped by certain rules, be they social, legal or religious. It is an interesting observation that almost all rules, regulations or social requirements are set very high, so high that it is impossible to fully comply with them in everyday life. According to them, This is often the biggest traditional cause of the ethical conflict that arises between ideally set ethical norms and the difficulty of meeting them. Is it even possible to accept that in science and research, individuals are not sufficiently aware and educated to distinguish between what is right and what is wrong? We can agree that it is not (2011, p 241–246).

So where is the problem of unethical behaviour that causes doubts and mistrust? Obviously, it is a problem of integrity. There are different definitions of integrity.

Fedran described different types of integrity; to summarise them, what is common to all the different definitions is that it is about the consistency of what we think, say and stand for at a declarative level with what we actually reflect and do, not only when we are in the public eye, but all the time. However, the existence of different types of ethics within the wide range of scientists and researchers, each working in their own field, often leads to unethical actions being attempted to be covered up or even excused by special circumstances. The existence of these, most often cloaked in a veneer of efficiency, effectiveness and impasse, serves only to launder the name once the unethical act has been committed (2020, p 43).

It is also a colossal departure from Kantian ethics and from the substance necessary to build trust. Is it possible to unify the perception of stakeholders in science?

Toth, a Slovenian philosopher, proposed the following for reflection: a modern Catholic theologian of Swiss origin, Hans Küng, who was even deprived of his lectureship at the Catholic faculty in Tübingen in 1979 for his principled heretical stance, is the creator of a *new world ethos*. According to Küng, this world ethos does not in any way mean a new world religion, but rather an ethical coordinate system that is binding upon all. Toth is insisting that the ethics on which the world ethos insists are universal and as such apply to everyone – from the common man to the politician, the scientist, the artist. In short, it applies to all people, however professionally diverse, irrespective of race, culture, religion, worldview, believers and non-believers, religious and non-religious (2002, p 1–3). The proposal emphasizes in particular the importance of fundamental trust of saying yes to the world and to reality, because, according to Küng, it is only out of this that one's inner autonomy grows, one's self-giving of laws, one's sense of self-responsibility in the way in which one fulfils oneself in life and, at the same time, co-shapes the world (ibid., p 7).

Such a form of world ethos might not prevent all unethical acts, but it would certainly reduce the field of manipulation by excuses.

2.1 Ethical risks in scientific research

What do we actually mean when we talk about unethical behaviour in a scientific research environment? The 21st century is a time of public confrontation with abuses in science. It is obvious that ethics are very necessary, and that scientists and researchers must follow and respect the rules. Despite much guidance and many recommendations, there are still many individuals who believe that this does not apply to them.

Klampfer notes that science and higher education are not exactly among the priority topics of the Slovenian media and the general public. Like culture, and unlike politics, the economy and sport, they make the front pages of newspapers and the headlines of television only exceptionally – when our scientists have an internationally high-profile achievement, when university teachers or researchers strike or demonstrate, or in the case of juicy, exciting scandals (2018, p 4–7).

The opinion of Lackovič is that ethics in science are closely linked to the internationally recognized term Responsible Conduct of Research (RCR). RCR covers a range of issues from conflicts of interest, authorship and research collaboration, to various forms of deception and manipulation of research data (2009, p 92–95).

In this brief overview, I highlight only some of the most important and widespread unethical phenomena.

Lackovič thus classifies the most common unethical acts into four groups:

- Conflict of interest,
- Mentoring,
- Scientific collaboration and authorship,
- Scientific misconduct or fraud.

Mentioned are the most often, but not all of the phenomena. Further Lackovič explains each of them as individual. A conflict of interest is a situation in which financial and other hidden influences cause professional, scientific, objective judgement to become biased. Such a conflict of interest can arise for institutions as well as for individuals. It is very important to understand that such a conflict exists regardless of whether or not there has been any influence on decision-making, because it is the existence of the conflict that casts doubt on the outcome. Recognized reputable institutions involved in the publication of scientific work today require authors to declare the existence of a potential conflict of interest at the time of submission. If it exists, authors must thoroughly explain it. The same applies to all reviewers of scientific works (2009, p 92).

At this point, I must point out that conflict of interest does not fall under the category of misuse of science, such as for example, tampering with data, falsification of data and plagiarism. Lackovič is continuing with description of improper mentoring.

Mentoring is the next category of unethical acts, where unwanted relationships between mentors and young researchers, including students, occur. The root of the unethical behaviour here is an unequal power relationship.

Scientific collaboration and authorship Is an area where there are often disagreements and even hostility between scientists. The most common causes are competition and project planning and funding, and in the authorship and publication of scientific work. Ghost authorship is a phenomenon where some researchers write scientific papers on commission, but are then not listed as authors. This problem is particularly acute when such scientific works are awarded prizes, or have a global impact and thus scientific recognition. It is common for authors to be listed among the authors of scientific papers who have not actually been involved in the research, or whose contribution has not been noteworthy. It is also common to cite other people's results and ideas as one's own work. Often when authors produce a scientific work for the purpose of scientific promotion or habilitation process, they cite themselves without justifiable need (self-citation) in order to raise the level of citation. The issue of intellectual property and patent rights is already a higher form of unethicality, usually linked to financial figures. Most often it involves the theft of patents or the late filing of patents, but there are also reverse situations. Scientists receive benefits from patent rights, and sometimes they do not want to publish their new results because they are waiting for existing patent rights to expire. This makes it impossible for them to use the results of their research. Most of these cases are in pharmaceuticals and bio-medicine. This is holding back the development of entire research projects or fields, and also the development of new research techniques (ibid, p 92–94).

The last group of unethical research acts, according to Lackovič, is scientific misuse or fraud, which is also the most widespread form. This includes, first of all, the fabrication and falsification of research results and plagiarism. In some cases, scientists invent data that is not based on research and present it to the public. Falsification is the alteration of data to fit a hypothesis or expected or even desired research results. Falsification or plagiarism is essentially stealing someone else's data or text and passing it off as one's own; it is the surreptitious appropriation of the results of the work of others, including plagiarism, the misuse of entrusted unpublished material or the theft of physical documents; there are specific rules and review procedures involved here, as copyright is well-protected in scientific research work (ibid, p 95).

Ercegovac, specifically addressed this phenomenon in the digital environment. They argue that the simplest definition of plagiarism is "the deliberate and conscious representation of another person's words as one's own in any academic work." Omitting individual words or replacing them with synonyms and changing the grammatical structure does not change the qualification of the act. Indeed, a whole methodology of plagiarism has developed: direct copying, abbreviations at the beginning or end, omission in the middle, insertion of new words, reversing the order of words, substitution, changing the tense, changing the singular to plural

or vice versa, failing to document information, incorrect use of quotation marks, paraphrasing, and so on. All of the above are “classics”, as plagiarism is now replaced by the phrase “cut and paste”. Based on many surveys, it can be assumed that 80% of students have used such a procedure, which is comparable to plagiarism. The same tendency has also been found in a third of researchers. Specifically for students, but not only for them, the following actions should be added:

- Cheating by using unauthorized aids in examinations, including covering up cheating by other students,
- Repeatedly proposing the same product in different subjects,
- Falsifying academic documents,
- Gaining an unfair advantage over other students (Ercegovac, 2004).

We can conclude that this phenomena of such dishonesty infects the school, and the internet is only the space in which it happens, not the cause. Plagiarism is most common in business schools and most rare in art schools. Those who do it most often use the excuse of lack of time; those who never do it say that their personal pride does not allow them to do it. We see a Gordian knot of academic integrity, the internet and intellectual property in higher education that can only be cut by a new higher education ethic.

Booth argues that students, who have long since ‘migrated’ to the internet, have two major problems with this: the first is related to intellectual property, since they no longer know whether to treat the knowledge circulating in higher education as a common good, which is what the declarations, in the spirit of Humboldt, are still telling them about, or whether they must reckon with paying its market price, which is the reality; the second is related to the understanding of the mission of the university, which still presents itself as an idealistic community dedicated to truth and beauty, but from the inside is seen as an industry in which everything is subordinated to making money (2002).

Two logical questions arise: do we want to curb these unethical acts, and if so, how will we do it?

2.2 Ways of detecting and limiting unethical behaviour in the scientific area

The issue of regulating ethics in scientific research is also subject to common content regulation in the European Union. The Berlin Declaration (2007), the Lisbon Treaty (2009) and a very general document, the Charter of Fundamental Rights of the European Union (2000), regulate the issue. To summarize the provisions of these strategic acts, the European model is primarily about values, and is based on trust in political, social and economic standards and concern for the promotion of citizens’ rights.

How is this concern for values expressed in science? The European Union has devoted a great deal of attention to science, i.e. research and innovation, to ensure that it is aligned with societal needs and values. Eurobarometer surveys have shown that the public no longer has confidence in science. The increasing scandals in research are certainly to blame. Of course, this decline is anything but in line with the idea of a socially inclusive and responsible science, as defined, for example, by the European research and innovation programme *Horizon 2020* or the *Common European Research Area*. The Committee on Publication Ethics (COPE) deals with promoting honesty, transparency, and accountability among authors, editors, reviewers, publishers, and readers (2023). COPE notes that there are systematic attempts to manipulate peer review in some journals.

According to the Academia the reason for such cheating, in a publish or perish dictatorship that damages science at any cost, abuses public funds and undermines public trust, lies in the desire of researchers to be recognized, cited and promoted, as well as in the search for research subsidies (2008). Falsification of results and plagiarism are being curbed by the relevant European institutions through legislation in all areas of science and research.

In this context, it must first be honestly acknowledged that, despite the high level of education of those carrying out scientific research, abuses and unethical practices do occur (ibid, 2008).

The question arises of whether we want to control and manage such unethical practices; if the answer is yes, then the next question that arises is: Should abuses be prevented by science, by universities or by a central and independent body?

The Organization for Economic Co-operation and Development (OECD) already knows of ad hoc committees to deal with a specific case, permanent committees within the scientific institutions themselves, or committees at the national level: it is the latter that are more appropriate in smaller countries, where it is otherwise difficult to set up bodies of impartial scientists who do not have personal conflicts or common interests. Such a body can achieve the best results; establish a quality relationship with the funding agencies; not be disturbed by changes in national governments; suggest improvements because of its good oversight; advise the government on abuses in science; maintain a database; and cooperate with similar committees in other countries. Considering this, we can make a comparison within Slovenian regulation.

The Resolution on Slovenia's Research and Innovation Strategy for the period 2011–2020, which was already adopted, stipulated, among other things, that Slovenia should establish an Honorary Court of Arbitration for Science. This would bring together scientists outside the current institutional framework to reflect together on ethical issues, both in terms of good practice in science and the role of scientists in society (2023). The decision to establish an Honorary Tribunal for Science was taken

by the Slovenian Academy of Science and Art (SASA) and the Ministry of Higher Education, Science and Innovation in 2014. Several public consultations have been held on this topic, but the special group that would have formulated the guidelines and mechanisms for its establishment has not yet been finalized. Currently, ethical dilemmas in science are decided by committees within the SRA (Slovenian Research Agency) and a number of independent sectoral research ethics committees.

As a solution to the problem of the small size of research environments such as Slovenia's, and the overburdening of oversight institutions, the European Commission encourages the creation of a national network of researchers and an ethics commission, which would also have a political counterpart. Three strategic documents were adopted in the Slovenian National Assembly in 2022:

- Resolution on the National Programme of Higher Education 2030;
- Resolution on the Slovenian Scientific Research and Innovation Strategy 2030;
- Resolution on the National Programme of Adult Education in the Republic of Slovenia 2021–2030.

The proposals for the two national strategies for the next decade – for higher education and for research and innovation – also include ethical orientations, which we comment on in the light of national and international practice in this area. The transition to a knowledge-based society is increasing the responsibility of academia for social development.

European Credit Transfer and Accumulation System (ECTS) raises new issues of intellectual property and plagiarism; a new consensus on ethical guidelines for research is required. The responsibility of academic institutions is also reflected in whether and to what extent they have adopted codes of ethics.

The National Agenda for Higher Education 2030 is a strategic and development-oriented document which has been prepared by a broad consensus of experts and stakeholders. It defines the ethical and socially responsible performance of higher education institutions in Slovenia. Higher education institutions must be ethical and socially responsible and efficiently managed and organized; responsible for ensuring high quality education and research activities, accompanying students from enrolment to graduation and their employment, preparing them for active citizenship and careers, and facilitating the personal and professional development of students, including through the promotion of lifelong learning, all while maintaining a broad spectrum of knowledge at a high level (2022, section C.1.1).

The Resolution on the Slovenian Science Research and Innovation Strategy 2030 sets new foundations for the development of scientific research and innovation activities in this decade. The document has been produced in dialogue with a wide range of stakeholders, both experts and the general public. The most important expected result and impact of the implementation of the strategy is Slovenia's inclusion in the

group of leading innovator countries in the European Innovation Index by 2030. The document does not mention ethics and is not used as a source for this article (2023). The National Programme for Adult Education is the most recently adopted strategic document. In terms of the acquisition of public education, the document is limited to adult education in primary, vocational, secondary vocational, lower secondary and higher vocational education (2022). This document also does not mention ethics and is not used as a source for this article.

In the meantime, however, some institutions have set up their own bodies to monitor and manage these unethical practices. For example, the Faculty of Social Sciences of the University of Ljubljana has established its own ethics tribunal and ethics committees.

3 ETHICAL RISKS IN MILITARY SCIENTIFIC RESEARCH

By 2021, the SAF was again moving towards a more serious approach to the Public Education System (PES). After thirty years, the quality conditions for the creation of military sciences are being re-established. The challenges posed to military professionals by rapidly unfolding adverse geopolitical scenarios also require a rethinking of the content and modalities of military education and training (MET). Due to the specificities of the organization, tasks and functioning of each military institution, an in-house mode of MET has so far been the only logical choice. In view of the necessity for scientific research on military topics, the Slovenian Armed Forces has also taken certain decisions to improve the situation.

The central institution where professional military education is carried out is the Centre of Military Schools (CMS) in Maribor. The CMS is an organizational unit of the Slovenian Armed Forces which directs the development, planning, organization and implementation of MET in the Republic of Slovenia, and is a carrier of scientific research activities in the Slovenian Armed Forces in the field of military sciences. It ensures the development of military knowledge, the implementation of the common achievements and norms of the Alliance and the EU, and the upgrading of the content of the CMS programmes. The Chief of the General Staff of the Slovenian Armed Forces has decided to establish a National Military College (NMC) as an internal organizational unit of the CMS (2021). This decision signalled the beginning of a process of moving towards a public education system.

What is the relationship between ethics and scientific research in the Slovenian Armed Forces? Integrity is one of the cornerstones of military management, in line with the Concept of Military Leadership of 2007. Ethics is still subordinate to effectiveness, especially when it comes to the strict combat operations of a military organization. In making academic efforts to recognize our own military professionalism and scholarship, we will all certainly find ourselves in at least one of the three levels or essences of scholarship: the first is research-based, the second is pedagogical and the third is organizational. In the course of more than thirty years of

military education, we have already learned and developed two of these, but we are still left with the most difficult one; that is, the research level for the establishment of military expertise and science. Military scientific and research work has changed considerably since the abolition of the Doctrine Development, Education and Training Command (DDETC), and following the abolition of the organizational unit the Centre for Doctrinal Development (CDD), tasks and functions were reassigned according to the new organizational structure.

3.1 Managing ethical risks at the National Military College

The National Military College is an attempt to reunite scientific research work in one institution (2021, p 1). We note that the military field is comparable to the civilian field in terms of content. In the past, the Slovenian Armed Forces has not produced any studies or analyses demonstrating the existence or non-existence of unethical practices in scientific research. As well as the Ministry of Defence, there are lists of credible referees who are obliged to warn of the possibility of this before publication. Summering those facts, I try to make a comparison and to present possibilities for managing upper mentioned ethical risks.

Mentoring is the group of unethical acts, where unwanted relationships may arise between mentors and young researchers or students in military education and training programmes. The root of the unethical behaviour is the unequal balance of power arising from position and military rank. Ercegovac believe, that mentors have an obligation to help, motivate, develop and support, but abuse is also possible. Especially in the environment with non equal power players. (2004, p 23–31). In a military organization, this can also manifest itself in “intellectual prostitution”, where mentors use their power without restraint to take undue advantage of the work of mentees. This is manifested in the way that mentors do not even mention those who have done most of the work in the authorship, i.e. their mentees. We can agree, this can mean that the students spend most of their time doing various research tasks for their mentor, but they run out of time to develop and produce their own research and fulfil their study obligations. Another problem can be too few mentors working with a student; this results in less time and attention from mentors. It is the task of every mentor to provide professional help, support and motivation to young researchers and trainees to get them involved in military scientific research as quickly and as well as possible.

Scientific collaboration and authorship is an area where there can often be disagreements and even hostility between scientists. In the Slovenian Armed Forces we have not yet encountered this issue, due to the fact that there is no competition within the system that would lead to hostilities. “Ghost authors” is a possible phenomenon, where some researchers or students write scientific papers on commission and then are not published as authors. This problem is particularly acute when the scientific works are awarded prizes, or have a global impact and thus scientific recognition in the military environment. It is a common phenomenon for people who have not actually been involved in the research or whose contribution

has not been noteworthy to be listed as authors of scientific military papers. It is also common to cite other people's results and ideas as one's own work. This kind of behaviour is very seldom phenomena so far.

The last group of unethical research is scientific misuse or fraud, which is also the most widespread form. This includes, first of all, the fabrication and falsification of military research results and plagiarism. In some cases, authors invent information that is not based on research and present it to the public. If this is not discovered during the recension, such a work is published as it is. Falsification is the alteration of data to fit a hypothesis or expected or even desired research results; plagiarism is essentially stealing someone else's data or text and passing it off as one's own. Falsification is the surreptitious appropriation of the results of the work of others, including plagiarism and the misuse of entrusted unpublished material or the theft of physical documents; there are specific rules and review procedures involved here, as copyright is well-protected in military scientific research work.

3.2 General measures versus specific measures for the management of ethics in military education

The Slovenian Armed Forces (SAF) has been successfully combating these phenomena by using various plagiarism detection programmes. With the increasing capacity of the internet, we are sometimes unjust in identifying the cause, as the internet is only an enabling environment for such abuse. The culprit must be found among individuals and in the way in which they use the tools available. There has been much talk recently about artificial intelligence, which is supposed to replace much of the pedagogical effort in scientific research. There is still too little information available on this to be able to polarize abuses either to the detriment or the benefit of science. In this text I am trying to explain the situation and to predict some of the possible scenarios, according to the theories of unethical behaviour in the civilian educational system sphere. I try to adopt possible measures and explain the possibilities to be used in the military field of education as well.

The regulation of ethics depends mainly on the formal and general regulation of the field. Compared to the civilian system, the Slovenian Armed Forces has a specific system which is already well-established and operates in all areas of the military organization. The system does not, according to its provisions, isolate the field of scientific research, but defines acceptable ways of behaviour and action as a whole. It could be argued that it is about encouraging behaviour along the lines of what we define as integrity. Of course, most of this depends on individuals, whose ethical maturity is at different stages. The has a well-established system of ethics management, managing its ethical infrastructure through an established model which draws its legal basis primarily from the direct legal acts governing the defence sector. It draws from the Defence Act (1994) the way in which infringements are sanctioned and the range of infringements The Service in the SAF Act defines the competences of the different levels and provides for the adoption and enforcement of the SAF Code of Ethics (2007). The Rules on Service of the Slovenian Armed Forces (2009)

is a sub-legislative act which sets out the duties of members of the Slovenian Armed Forces in the performance of their duties. They also lay down the procedures for sanctioning breaches of military discipline. We often talk about the professionalism and legality of the actions of individuals and the organisation. If the above-mentioned acts are the main sources of legality, then we must add a part defining legality. In the Slovenian Armed Forces, this is the Concept of Military Leadership (2007), which defines the way in which certain processes are carried out in command relationships, and above all explains social skills, psychological principles, communication content and various other ‘soft skills’ that enable individuals to work more easily and to achieve a higher level of ethicality.

The Slovenian Armed Forces therefore already has a mechanism in place for sanctioning misconduct, including ethical misconduct, by its members. I have tried to obtain data on the number of disciplinary and other sanctioning procedures involving ethical violations in the Slovenian Armed Forces, but no such record exists. So far, there has been no need to set up a tribunal of honour to adjudicate on ethical breaches, especially those which do not directly violate military discipline but are dishonourable acts that in any way reflect badly on the reputation of the organization and the military profession. This is how a military organization usually works, because military rank is a reflection of competence. The rules are that the “higher up” decide on the “lower down”. Military researchers here will be embedded in the system irrespective of military rank; academic qualifications are more important. In this case, it may turn out that this type of organizational arrangement is insufficient to implement the principle of autonomy in scientific research and teaching. At this stage, autonomy cannot yet be assessed, as no serious research work has yet been carried out at the National Military College. At this point in time, the College is in a position which gives it an advantage over other institutions, as it has all the experience and facts necessary to shape the field of research and science. We can conclude, that ethical failures are far-reaching and very difficult and time-consuming to correct. The National Military College has an advantage here, as it will be able to draw on all the experience and available knowledge of existing stakeholders, both from the public education system and from the internal one.

Conclusion Throughout history, science and ethics have always been interrelated and interdependent fields of human action and perception. Whereas morality used to be shaped by the enforcement of rules on the basis of authority alone, this is quite different today. A Copernican turn has taken place, where science assumes the role of the most important shaper of social norms. This influence is expected to increase in the future, to the benefit of science.

However, during the pandemic crisis that we have witnessed in the past few years, we have seen that the complexity of ethical judgements for the individual today is very difficult and requires constant reflection on the relationship between science and ethics, especially in the direction of a constant examination of trust. With the advancement and accessibility of information technology and media solutions, the

tools are available to the individual to accept or reject the influence of science more than ever before.

Data based on unethical acts in the field of science, generated mainly by conflicts of interest and manifested mainly in economic subordination, is also not acceptable. Theory has identified four groups of particular ethical risks: conflicts of interest, mentoring, authorship dilemmas and scientific misuse and fraud.

Ethical standards are now set very high and in practice, without integrity built up, they are almost impossible to implement. There has been a “Gordian knot” of academic integrity. In search of a solution, society is trying to regulate ethics in research and scientific work with a view to ensuring confidence in an activity in which it is, after all, investing ever more resources.

The European Union is proposing solutions in the direction of the creation of various committees. In Slovenia, the creation of an Honorary Tribunal has been foreseen since 2014, but has not yet taken place, although smaller independent groups on ethics in the field have been set up.

The internal training system of the Slovenian Armed Forces has undergone a qualitative shift in the past two years. The National Military College has been established and has become the central military institution for the conduct of scientific research activities in the Slovenian Armed Forces. Until now, this type of work has been limited mainly to the implementation of pedagogical processes, which is why the SAF does not have data and analyses on possible unethical behaviour.

A comparison by ethical risk groups shows that risks in a military organization are the same as in a civilian organization. Due to the differences in the work carried out so far, unethical actions are mainly in the pedagogical field, linked to the relationship between the providers and the participants in pedagogical processes.

The internal military ethics management system is specific, and its form ensures a high level of ethics, as well as a fragmentation at different levels to ensure a rapid response to perceived unethical practices. The Military College did not organize a specific body for ethical risk management, as it was decided that the content was manageable within the existing arrangements. They emphasize the integrity of the providers of the teaching processes, who are also the promoters and performers of the scientific research work. The in-house mode of military education and training has been in place for more than thirty years and the participants have the experience to make quality decisions.

The organizational positioning of the Military College in the military chain of command and control raises some concerns about ensuring the autonomy of the scientific research work. At the moment, this remains an open question, which may be answered if there are potential conflicts of interest between the requirements of

military management and the needs and demands of scientific research freedom. The Military College is very cautious in taking such decisions, as mistakes in ethics regulation are very difficult and time-consuming to correct. So far, they have not perceived a need for the creation of specific codes or committees, which does not mean that this will continue to be the case.

The management of the Military College clearly expresses its intention to move closer to and integrate into the processes of the public education system, and its primary concern is to implement public standards wherever possible. As a result, there will be convergence and increasing similarity between the two systems without losing efficiency and effectiveness.

Challenges certainly remain in the areas of research into moral discourse, the teaching of ethics, the exercise of integrity, the capacity for moral judgement, and all the other challenges that science in general and the contemporary social landscape in general are dealing with. I believe that the Slovenian Armed Forces will be able to fulfil its long-standing educational ambitions and change certain practices, and above all build an organizational culture based on knowledge and ethics as indispensable values.

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