

Limits of the freedom to perform the research profession and significance of research ethics and researcher's deontology. A case study of respect for intellectual property rights when publishing research results – part I

Anna Chorążewska^{1,3}, Jerzy Dajka^{2,3}

¹ Institute of Law, Faculty of Law and Administration, The University of Silesia in Katowice,
11b Bankowa Street, 40-009 Katowice, Poland

² De Institute of Physics, Faculty of Science and Technology, The University of Silesia in Katowice
ul. 75. Pułku Piechoty 1A, pokój E/1/07, 41-500 Chorzów, Poland

³ The Professor Tadeusz Widła Interdisciplinary Research Centre for Forensic Science and Legislation, The University of Silesia in Katowice
Katowice, 40-007, Poland

Abstract— The term ‘profession in which the public repose confidence’, under Article 17 of the Polish Constitution, is a constitutional term in Poland. The Constitution provides that the legislator may create professions of public trust to protect important categories of public interest. Self-government of a public trust profession, within the limits of that interest and for its protection, is entitled to represent the interests of persons exercising such professions and, moreover, to supervise the proper exercise of the profession. This paper demonstrates that the profession of a scientist fulfils the prerequisites of a profession of public trust. Scientists performing professional research activities in the institutions within the system of higher education and science form an international scientific community. At various jurisdictional levels, this community has been universally mandated to define the principles of ethics in science and the deontology of the research profession. In shaping these principles, the research community must safeguard the public interest by protecting public faith in science and its achievements. The task of overseeing proper conduct of research by scientists as persons of public trust is, in turn, entrusted to the ethical and disciplinary committees established in the system of science. In this paper, we examine the rules in force in the scientific community for respecting intellectual property rights when publishing research results and then, in a survey, clarify whether these rules are known to and applied in the international academic community.

Keywords— research responsibility, public trust, constitutional characteristics of public trust profession, freedom of science, intellectual property rights, ethical rules of authorship attribution

I. PUBLIC TRUST PROFESSION AS A CONCEPT WITH CONSTITUTIONAL CHARACTERISTICS

The term profession of public trust has the status of a constitutional term in Poland. The term is contained in Article 17 of the 1997 Constitution of the Republic of Poland (hereinafter: the Constitution), empowering the legislature to establish self-governments of public trust professions. Pursuant to Article 17(1), self-government of a profession of public trust, by virtue of the Constitution and the statute establishing it, is founded "within the limits of the public interest and for its protection" to supervise the proper exercise of that profession and to represent persons exercising that profession. Authorities of other types of self-government, created under Article 17(2), are not equipped with such powers. Moreover, the legislator has forbidden the latter self-governments to infringe on the freedom to practice a profession and to restrict the freedom of economic activity. Reasoning a contrario, it should be assumed that since no such exemption has been provided with respect to professional self-governments of persons exercising professions of public trust, this means that they may limit these freedoms (Sarnecki, 2001, pp. 75-76).

Literal and functional interpretation of Article 17(1) leads to two major findings. Firstly, it allowed the Polish Constitutional Court to identify the characteristics of a profession of public trust. According to its position, 'public trust' is something real,



which 'consists of a number of factors, among which the following come to the fore: the conviction that the practitioner of the profession maintains good will, proper motivation, due professional diligence and the belief in the observance of values relevant to the profile of the given profession' (Judgment of CT of 18.02.2004, P 21/02). Statutory foundation of a professional self-government for a given profession, on the other hand, means, for professionals, the establishment of "a compulsory organisation, endowed with a certain public authority, a closed organisation with formalised membership, whose members have a monopoly in the practice of the profession. Their position sometimes comes clearly close to that of a public official (e.g. notaries, patent attorneys)" (Garlicki & Zubik, 2016). The above findings lead to a second fundamental conclusion. Under the terms and within the limits set out in Article 17(1), in conjunction with paragraph 2 of the same Article and taking into account the provision of Article 31(3) of the Constitution, the legislator may interfere with the freedom of choice and exercise of a profession (Article 65(1)). Indeed, the establishment of a professional self-government by definition implies restriction of both these freedoms. Those restrictions are concretised by, firstly, defining, in the statute itself, the rules for taking up and conducting a given type of professional activity (Sarnecki, 2002, pp. 186-187), and then at both the statutory and intra-corporate level - within the scope of the statutory powers of the members of a given corporation - the rules for exercising that profession as a profession of public trust. As noted by the Constitutional Court in the above-cited case P 21/02 (reasoning a maiori ad minus), the legislator decided that also the self-governments of the professions of public trust, "may, and sometimes even should, restrict, to a certain extent, the freedom to exercise a profession or economic activity in view of the objectives for the realisation of which they were established, always, however, within the limits of the public interest and for its protection".

The formulation of Article 17(1) determines that two prerequisites must be met in order for a profession to qualify as a profession of public trust. Firstly, the occurrence in the market of a professional activity requiring the protection of public trust in its exercise. Secondly, the organisation of this profession by law into a professional self-government, which includes furnishing its authorities with powers under Article 17(1). The constitutional task of such self-governments is: (1) to represent persons exercising a given profession, (2) to exercise supervision over the proper pursuance of the profession by members of the professional association, which is determined by and for the protection of the public interest. It follows from the above that the mere naming of a particular profession as profession of public trust under a legal provision (a formal criterion) is not sufficient. On the other hand, the fulfilment of the substantive criterion, i.e. the attribution to a given self-government of the constitutive features of self-government of a public trust profession under Article 17(1), should be considered sufficient. Consequently, non-fulfilment of the formal criterion does not exclude the possibility of qualifying a particular profession as a profession of public trust as long as the substantive prerequisites are met. The adoption of a

different assumption would be contrary not only to the intention of the legislator, but also to the literal and functional interpretation of the Basic Law. It would also lead to a radical limitation in the number of professions of public trust. In the Polish legal system, such a status is expressly ascribed only to the profession of patent attorney. Article 1(2) of the Patent Attorneys Act is the only provision to explicitly provide that "the profession of patent attorney is a profession of public trust." There is a consensus in legal science that the statutorily regulated legal professions of advocates, legal advisers or notaries are professions of public trust (Winczorek, 2000, pp. 30; Błaś, 1998, pp. 47; Skrzydło, 1999, pp. 23; Smaż, 2012, pp. 125; Biuletyn KK ZN: XXIX: 29-44 & 59-67 & XXX: 12-17), however, legal professions certainly do not exhaust that list.

II. SCIENTIFIC PROFESSION AS A PROFESSION OF PUBLIC TRUST

The authors of this thesis argue that the constitutional characteristics of a profession of public trust also correspond to the profession of scientist. In Article 73 of the Constitution, the legislator provided that: the freedom of scientific research as well as dissemination of the fruits thereof shall be ensured to everyone. An analysis of the content of this freedom led M. Jabłoński to the conclusion that its essence is expressed in several partial freedoms, which are realised in the possibility to engage in various thought processes in the pursuit of scientific cognition; the freedom to undertake and conduct research in any field; the freedom to choose the place of conducting scientific research; the freedom to choose research methods and techniques; the freedom to publish research results obtained; the freedom to disseminate information and knowledge obtained in the course of research in any form; the freedom to cooperate with many partners (Jablonski, 2002, pp. 562). In turn, L. Garlicki explains that the content of the freedom of scientific research includes the right to make a mistake, as well as the right to formulate a false scientific theory (Garlicki, 2003, pp. 6-7). W. Brzozowski emphasises that the freedom of research guarantees the right of a researcher to conduct research in an area in which results are controversial, shocking or disturbing to the public (Brzozowski W, 2014: 33-34).

Freedom of science as a distinct freedom does not have a long history. International human rights systems are limited to warranting the freedom of expression (Article 19 UDofHR; Article 19 IConC&PR; Article 10 CRofHR&FF). However, freedom of science, alongside freedom of thought and freedom of expression, has been singled out as a stand-alone norm at the level of EU law, in Article 13 of the Charter of Fundamental Rights of the European Union. Under this provision, "the arts and scientific research shall be free from restrictions. Academic freedom shall be respected." This establishes a normative benchmark for academic freedom, which in the European Union area is supplemented by recommendations from the European Commission, including those contained in The European Charter for Researcher. The aim of this legal regime is to create a European Research Area, unifying the standards of European research policy and the rules of scientific research (Królikowski & Szczucki, 2016, pp. 1676).

By sanctioning the freedom of science as a separate subjective right, the Polish legislator has, as is the case in other countries, specified, in a qualified form from the point of view of the recipient of researchers' statements, a more general freedom of speech under Article 54 (Starck, 2007, pp. 45). The freedom of expression implies the right of an individual to hold an independent opinion and the right to express it freely, as well as the freedom to seek, receive and disseminate - without interference from public authorities and regardless of state boundaries - information, views and ideas by all available means (Królikowski, Szczucki, 2016, pp. 1672-1678; Garlicki, Derlatka, 2016, pp. 789-790). However, so understood freedom of expression does not capture the essence of the freedom of scientific research. The information obtained and analyses carried out in a scientific creative process is more than simple formulation and expression of subjective opinions by its author. The freedom of scientific research is the freedom to undertake and conduct professional activities to collect and systematise the results of previously implemented cognitive processes using only recognised, i.e. legitimate research methods, and then to publish their results in a form adequate to the purpose of communicating the findings to the public. Researchers inform the world about the results of their scientific findings by publishing scientific articles in recognised scientific journals (Sorokowski, Kulczycki, et al., 2017, pp. 481-483), by presenting papers and posters at scientific conferences or congresses, and by applying to patent offices for legal protection for their inventions (patent). The freedom of research does not create a legal environment for researchers to formulate their own subjective (not previously verified by a scientific method) judgements about the analysed phenomena or objects (Sobczak, 2007, pp. 62).

In doing so, the freedom of science does not have the status of *ius infinitum*. The scientific processes implemented by researchers and their teams are intended to establish objective truth about the world and the phenomena under investigation. The freedom of research is naturally linked to such categories of public interest as the social responsibility of science (Ławicka, 2016, pp. 207-220) and public faith in the reliability of published research results. Because of these links between the freedom of science and important public interest, it is a subjective right of a limited nature. In exercising this freedom, an individual may not violate the public interest of preserving the public faith in scientific achievements. The conduct of scientific research must also not lead to an infringement of legally protected interests, or subjective rights of others exercising the same freedom. Such a view shifts the focus of the considerations on the freedom of scientific research to the specification of the grounds and methods of its limitation (Strack, 1989, pp. 172). Thus, it is only by delimiting its boundaries that the actual scope of this freedom can be established (Lamentowicz, 1995, p. 402).

When undertaking a research activity, an individual imposes on him- or herself a certain rigour in initiating and conducting various types of research processes. Using a scientific method, these processes should lead to scientific truth, i.e. an objective judgement about the objects and phenomena under study. The

freedom of research is subject to further restrictions when an individual obtains the status of an employee in the system of higher education and science. The Polish system of higher education and science is formed by the following institutions: higher education institutions, federations of entities of the system of higher education and science, the Polish Academy of Sciences (hereinafter: PAN), scientific institutes of the PAN, research institutes, international scientific institutes established under separate statutes in force in the Republic of Poland, the Łukasiewicz Centre, institutes operating within the Łukasiewicz Research Network, the Polish Academy of Skills, other entities conducting mainly scientific activity in an independent and continuous manner (Art. 7 of the Act of 20 July 2018 - Law on Higher Education and Science, hereinafter: Act on HE&Sc). Article 3 of the Act on HE&Sc provides that the basis of the system of higher education and science shall be the freedom of teaching, artistic creation, scientific research and publication of their results, and the autonomy of universities; and adds that this system operates with respect for international standards, ethical principles and good practices in education and scientific activity, and with special regard to the social responsibility of science. Consequently, by acquiring the status of a researcher in one of the entities within the system of higher education and science, an individual, by his/her own decision, joins an international community of researchers, with formalised rules for the exercise of the research profession, which is endowed with a certain public authority over the members of this peculiar organisation. Importantly, this organisation is closed because membership is formalised. Membership is acquired by operation of law from the moment of becoming a doctoral student or an employee of a university or research institute. The law affords to this community specific public authority, which should serve the realisation and protection of the public interest, namely preservation of public faith in scientists and the reliability of their published research results. The requirement to guarantee public faith in science therefore necessitates specific protection of the recipients of services provided by scientists.

In this way, the basic prerequisites specified in the jurisprudence of the Constitutional Court for the inclusion of a specific profession into the category of professions of public trust are met. The basis for such inclusion is imposition, by law, of restrictions on the freedom to practise a profession, which does not serve to create privileges for a specific professional group, but exclusively the public interest, and, at the same time, the scope of these restrictions should be adequate to its protection. The legislator may also equip a professional self-government created by the law with the constitutional authority to exercise supervision over the proper exercise of a profession (Judgment of CT of 19.04.2006, K 6/06), including the authority to enact intra-corporate regulations, setting the limits on the freedom of professional activity of members of a given profession as persons of public trust.

The achievement of the objective of providing an adequate guarantee for the protected public interest may consist, firstly, in the introduction of a whole series of restrictions on the freedom of exercise of a profession (Judgment of CT of

22.05.2001, K 37/00) and, secondly, in the specification of procedures for the enforcement of liability for their violation. The Constitutional Court "has never questioned the legitimacy of introducing, in so-called professional regulations, the disciplinary liability of representatives of certain professional groups." In the opinion of the Court, "specification of disciplinary liability procedures and giving them – in the first place – an extra-judicial character, may find a basis in the specificity of particular professional groups and the protection of their autonomy and self-governance" (judgments of: 8 December 1998, ref. K 41/97, OTK ZU no. 7/1998, item 117 and 4 March 2008, ref. SK 3/07, OTK ZU no. 2/A/2008, item 25). These procedures, in case of public trust professions, are even approached as follows: "A guarantee of the provision of services at an appropriate level is also provided by the existing system of sanctions and procedures within the organisation of the professional self-government to ensure compliance with the rules of deontology" (Judgment of 18 March 2003, ref. K 50/01, OTK ZU no. 3/A/2003, item 21, concerning veterinary surgeons) (Judgment of CT of 18.10.2010, K 1/09).

From the perspective of Polish legislation, all of the above-discussed prerequisites for the establishment of the profession of scientist as a profession of public trust, in the social and economic dimension, have been fulfilled. To conclude this process, the Polish legislator included in the Act of 30 April 2010 on the Polish Academy of Sciences [hereinafter: Act on PAN] an authorisation for a specialised entity, that is the Polish Academy of Sciences (PAN), to define the rules of ethics and deontology of the scientific profession. Then, under Article 275.1 of the Act on HE&Sc: "An academic teacher shall be subject to disciplinary liability for any disciplinary misconduct which constitutes an act which defaults on the duties of an academic teacher or which offends the dignity of the academic profession." In turn, Article 287. 2. of the same Act resolves that "The investigation process [disciplinary case] shall be initiated ex officio in case of an act consisting in:

- 1) misappropriating the authorship or misleading as to the authorship of the whole or part of another person's work or artistic performance;
- 2) distribution, without providing the name or pseudonym of the author, of another person's work in its original version or in the form of a derivative work;
- 3) distribution, without providing the name or pseudonym of the author, of another person's artistic performance or public distortion of such work, artistic performance, phonogram, videogram or broadcast;
- 4) infringement of someone else's copyright or related rights in a manner other than specified in points 1-3;
- 5) falsification of scientific research or its results or other scientific fraud; (...)".

According to the Act of the Polish Academy of Sciences, the Polish Academy of Sciences has been established to serve the development, promotion, integration and dissemination of science and the Academy contributes to the development of education and enrichment of national culture. Its tasks include: formulating principles of ethics in science. These principles are set out in the Code of Ethics for Researchers developed by the

Science Ethics Commission (Commission for Research Integrity) and adopted by the General Assembly of the Polish Academy of Sciences on 25 June 2020 (Article 39(3) Act of PAN). The Commission for Ethics in Science has been authorised by the legislator to express its opinion in cases of violation of the principles of ethics in science by an employee of the system of education and science (Article 39(1)). The Commission for Ethics in Science, which operates in the Academy, exercising its competence under Article 39 of the Act on PAN, has, since the beginning of the 1990s, prepared and updated sets of principles, recommendations and standards, and then the Code itself. The Commission has also repeatedly issued opinions in cases involving violations of the principles of ethics in science. In doing so, the Commission has interpreted the provisions of the Code of Ethics for Researchers, specifying the binding understanding of its provisions for disciplinary committees adjudicating individual researcher cases. Against this background, the question arises whether codes of ethics for researchers have a binding force and how they can interfere with the constitutional freedom of science.

III. CONSTITUTIONAL PRINCIPLES FOR LIMITING THE FREEDOM OF SCIENCE AND THE STATUS OF UNIVERSITY TEACHERS

In delimiting the boundaries of scientific freedom, the positive legislator may introduce prerequisites of restricting the freedom of scientific research into the legal system. The legal basis for their introduction in public international law is provided by Article 29(1) and (2) UDofHR; Article 19(3) IConC&PR, and in European law by Article 10(2) UDofHR and Article 52(1) CHFofUE. In the Polish legal system, an enumerative list of such prerequisites is contained in Article 31(3) of the Constitution. In limiting the freedom of science, the legislator should follow the formal and substantive requirements under this provision (Wyrzykowski, 1998, Podkowik, 2019, pp. 21-45), as well as the prohibitions of: excessive, disproportionate interference (Selera, 2017, pp. 48-63) and violating the essence of these freedoms (Garlicki, 2001, pp. 5-24; Tuleja, 2023; Garlicki & Wojtyczek, 2016; Complak, 2014). The former prohibition represents the principle that restrictions are only permissible if they are capable of producing the intended effects (principle of utility), are required (necessary) for the protection of the public interest to which they relate, and serve to safeguard the private interest (principle of indispensability), and the benefits of the restrictions are in appropriate proportion to the burdens imposed on citizens (principle of proportionality *sensu stricto*) (Judgments CT of 11.04.2000, K 15/98; 11.04.2006, SK 57/04; 02.07.2007, K 41/05; 02.07.2009, K 1/07; 04.11.2014, SK 55/13). The latter prohibition allows to modify additional elements that make up the freedom of science, excluding the possibility to interfere with the essence of the freedom of research.

Two requirements require closer analysis: formal and substantive. The formal criterion implies a requirement to sanction restrictions only under an act of statutory rank. In respect of this requirement, the Constitutional Court, having regard to the special role of deontological rules and the way in

which they are put in place, confirmed that they fulfil this formal criterion (Zubik, 2008). In Case SK 16/07 (Judgment CT of 23.04.2008), the Constitutional Court used the construction of a 'complex statutory norm', assuming that the provision of the Medical Code of Ethics (hereinafter: MCE) challenged in this case can be subject to review taking into account the provisions of Article 4(1)(2) and Article 33(1) of the Act of 17 May 1989 on Chambers of Physicians, empowering the medical self-government to establish the principles of medical ethics and deontology. In justifying this position, it was explained that: "Indeed, the provisions of the MCE, taken in isolation from the relevant statutory provisions, belong to a separate normative (deontological) order, and acquire legal validity in the area of generally applicable law precisely because of the Act on Chambers of Physicians (hereinafter: u.i.l.) and within the scope defined by its provisions, in particular by Article 4 of that Act, which constitutes the legal basis for the issuance of the MCE. Consequently, the object of the Constitutional Court's review is the provision of Article 52(2) MCE in conjunction with the relevant provisions of the u.i.l., and, strictly speaking, the legal norm derived from the provisions and rules referred to. An analogous concept of a "complex statutory norm" (albeit essentially blanket at the statutory level), further specified by a specific provision of a legislative act adopted by a self-regulatory body, was already adopted by the Court in its ruling of 7 October 1992, ref. U. 1/92 (OTK 1992, part II, item 38)." Hierarchical review of the compatibility of deontological regulations of the professions of public trust with the Constitution may therefore be carried out through the prism of the statutory norm which they 'supposedly specify' (Zubik, 2008) and on the basis of which they gain legal validity in the area of generally applicable law.

The substantive criterion means that the introduced restrictions on the freedom of science must serve to protect one of the categories of public interest listed in Article 31(3) of the Constitution of the Republic of Poland, namely they must be put in place for the protection of democratic state's security or public order, or to protect the natural environment, health or public morals, or the freedoms and rights of other persons. K. Wojtyczek notes that the expressions used to formulate the list of values under Article 31(3) are so general that they cover almost all possible situations conditioning limitation of economic freedom. In turn, according to L. Garlicki, a combined analysis of these values leads to the conclusion that they express the concept of public interest as a general determinant of the limits of individual freedoms and rights (Tuleja, 2000, pp. 81; Wojtyczek, 1999, pp. 201; Garlicki, 2003, pp. 22). At the same time, academic literature points out that Article 31(3) provides a legal basis not only for the establishment of restrictions on the freedom to exercise a profession vertically, but also horizontally (Łabno, 1997), justifying self-limitation of an individual in the name of protecting an important public interest.

Consequently, by specifying the deontology for the research profession in the Code of Ethics for Researchers, the Science Ethics Commission can limit the freedom of research by providing appropriate safeguards and protecting the

preservation of public faith in science, as well as the rights and freedoms of other researchers. At the same time, by joining the community of scientists, the researcher imposes on him- or herself the obligation to abide by the principles conditioning the sound conduct of research as a person of public trust. Arising under the deontological acts for science and in the jurisprudence of the Science Ethics Commission and disciplinary committees, the deontology of the scientific profession serves to establish the highest standards for the conduct of scientific research. From this perspective, the sanctioning of even far-reaching restrictions and limitations in defining actions that are not in keeping with the dignity of the scientific profession will not assume an unconstitutional character. Indeed, the application of these restrictions to an individual will not be a result of an unauthorised, unconstitutional interference in the freedom of research, but of the imposition by the researcher on him- or herself of high standards of exercise of the free scientific profession applicable to the community of scientists. Again, these standards are set by the deontology of the scientific profession.

In legal science, reconstructions of the deontology of the research profession have been carried out based, among others, on the ethical regulations in force at different jurisdictional levels (Starck, 2007, pp. 48). The analyses carried out, for example, lead to the conclusion that research must be conducted according to recognised or new, well-founded methods, research results must be documented, the results achieved must be consistently verified and strict integrity must be maintained with regard to the contributions of others - both inside and outside the research team. The principles of good scientific practice provide criteria for scientific misconduct. These include, but are not limited to: fabrication and falsification of data; selecting results and discarding undesirable results; manipulation in the presentation of results or in the illustration of claims; plagiarism or "idea theft;" misappropriation or unjustified assumption of scientific authorship or co-authorship; falsification of content; unauthorised sharing of information with third parties until a work, achievement, hypothesis or research assumption has been published; sabotage of research activity by damage, manipulation, etc.; deletion of primary data in violation of the recognised principles in the discipline. From the above, it can be concluded, which is obvious from the point of view of logic, that the freedom of scientific research somewhat limits itself. Its ethical definition is in fact a list of conditions whose fulfilment permits legal protection by state institutions.

Ethical standards for respecting intellectual property rights when publishing research results

In order to determine the ethical standard of the obligation to respect intellectual property rights when publishing research results, the authors of this work carried out an analysis of the provisions of the leading codes of ethics for scientists applicable to the scientific community at different jurisdictional levels. A comprehensive comparative analysis using literal and systemic interpretation was carried out of twelve representative codes of ethics for scientists, valid at the level of the European Union and selected countries, universities and recognised

scientific associations. In this way, the following codes of ethics were chosen for the study:

- EU - The European Charter for Researchers & The Code of Conduct for the Recruitment of Researchers (2005);
- EU - The European Code of Conduct for Research Integrity which serves the European research community as a framework for self-regulation across all scientific and scholarly disciplines and all research settings (2017); The European Commission recognises the Code as the reference document for research integrity for all EU-funded research projects and as a model for organisations and researchers across Europe;
- generally applicable codes of ethics adopted by state research institutions for researchers in France, Denmark, Poland and Israel: France - Integrity and responsibility in research practices Guide of CNRS Ethics Committee (2017), Denmark - The Danish Code of Conduct for Research Integrity (2014), Poland - Code of Ethics for Researchers of the General Assembly (2020), Israel - Integrity in Research of Israel National Council for Research & Development (1998);
- applicable at universities of recognised prestige: the USA - Conduct of Research at Stanford University (2007), Authorship Guidelines of Harvard Medical School (1999), the United Kingdom - Authorship Guidelines of the University of Manchester (2021), Israel - Code of Academic Ethics - Ben-Gurion University of the Negev (2007);
- adopted by prestigious scientific associations such as The Code of Ethics of the American Educational Research Association (2011), Authorship Guidelines for Academic Papers of British Sociological Association (2001).

The results of the analysis of these documents were then compared with the scientific authorship attribution policies contained in the guidelines of scientific publishers, such as the Committee on Publication Ethics' (COPE) Guidelines How to handle authorship disputes: A guide for new researchers (2003), Guidelines of the International Committee of Medical Journal Editors (ICMJE), Defining the Role of Authors and Contributors (2021), International Committee of Medical Journal Editors, Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals (2019), and the authorship principles provided in the authorship policy of Nature Research journals (2021) and the Singapore Statement on Research Integrity (2010), which was developed as a global guide to the responsible conduct of research as part of the 2nd World Conference on Research Integrity, 21-24 July 2010, in Singapore. It is not a regulatory document and does not represent the official policies of the countries and organisations that funded and/or participated in the conference.

Based on this analysis, we have established an ethical standard for respecting intellectual property rights when publishing research results. It turned out that the principles of proper authorship and publication practices expressed in this regard in the Code of Ethics for Researchers of 25 June 2020 are representative. Section 3.3, Authorship and Publication, of

the Code reads: "The authorship of a scientific publication must be based on the fulfilment of at least one of the following conditions: a creative and significant contribution to the research, which means a significant contribution to creating scientific ideas, formulating concepts, and designing research, an unquestionable active involvement in the acquisition of data, in the analysis and interpretation of the findings, as well as a substantive and reliable contribution to preparing and critically drafting the article from the point of view of the applicable scientific criteria" (Subsec. 2). "Obtaining funding, providing access to equipment and related training, collecting data, or exercising general administrative supervision of a research group do not give anyone the right to claim co-authorship. The head of a research unit may not be listed automatically as a co-author of articles published by his or her subordinates" (Subsec. 3). "All authors are fully responsible for the content of the publication unless otherwise specified (for example, that they are responsible only for a specific portion of the research in their area of expertise). When the affiliations of authors are listed, it is recommended that the nature of their contribution be specified" (Subsec. 4). "Names of the authors of a publication should be listed in the order that is customary in a given scientific discipline and should be accepted by all co-authors at the initial stage of drafting the publication. Intellectual contributions of other individuals who have a significant impact on the published research should be appropriately acknowledged." (Subsec. 6)

IV. CASE STUDY ON 'HONORARY AUTHORSHIP' CONCERNING THE OUTCOMES OF A SURVEY ON ADHERENCE TO STANDARDS OF AUTHORSHIP POLICIES, WITH A FOCUS ON THE RESPECT FOR INTELLECTUAL PROPERTY RIGHTS DURING THE PUBLICATION OF RESEARCH RESULTS.

In the subsequent phase of our research, we delved into the implemented policies governing scientific authorship and accountability for published research findings in academic science. Our investigation took the form of a survey titled "Team Research and Respect for Intellectual Property Rights in a Team Member's Scientific Creation – Questionnaire." The survey encompassed data collection from five key areas: 1. Research Contribution: Examining the methods employed to acknowledge individual contributions within the research team and the criteria for attributing authorship to scientific works. 2. Leadership: Analyzing the role of the team leader and the criteria for attributing authorship to scientific works, considering established customs within the academic environment. 3. Authorship Attribution: Investigating the correlation between the nature, type, and magnitude of contributions to the research and the customary practices of attributing authorship to scientific publications. 4. Responsibility: Identifying the substantive party accountable for the accuracy of published research results. 5. Legal and Ethical Rules: Assessing the knowledge of legal provisions and ethical standards related to the protection of intellectual property in the realm of research activities.

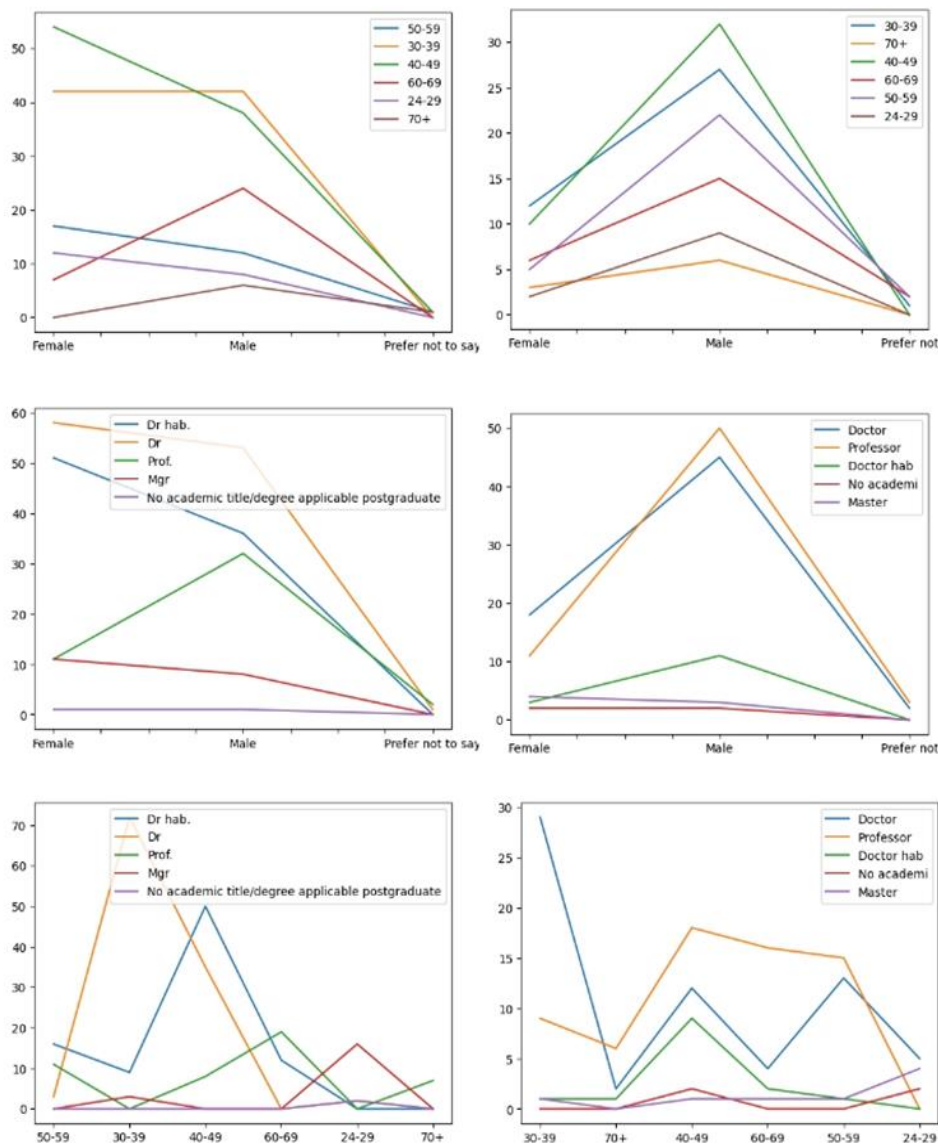


Figure 1. Sex, age and title/degree structure of participants of English language (right panels) and Polish language (left) survey. Missing answers (null values) are not indicated in the figures.

While a comprehensive analysis of the survey responses is deferred to a forthcoming second part of this publication, this presentation confines itself to a singular yet noteworthy facet of authorship custom: the phenomenon known as '*honorary authorship*'. This segment of the analysis can serve as a primary indicator of the scientific community's understanding of the principles governing research and authorship attribution in the dissemination of collaborative scientific output.

The survey was crafted in both Polish and English. Our principal objective is to discern the customs and practices related to authorship attribution among two distinct groups of respondents: the initial group that completed the questionnaire in English, and the second group that provided responses in Polish. This straightforward, albeit somewhat oversimplified,

categorization enables us to identify statistically significant distinctions between the local Polish research community and their foreign counterparts. The exploration of the origins and interpretation of these differences, with the exception of the case study presented below, necessitates further analysis, which is deferred to a subsequent publication.

With the help and recommendation of the authorities of the University of Silesia in Katowice, the Polish version of the questionnaire was distributed to researchers at Polish scientific institutions. The English version of the survey was published at the six universities which, together with the University of Silesia in Katowice, are part of the Transform4Europe - T4E alliance: Saarland University (consortium leader), University of Alicante, Estonian Academy of Arts, St. Kliment Ohridski

Sofia University, University of Trieste and Vytautas Magnus University. Moreover, researchers who wanted to support this research could join it through Research Gate and other social media distributed the English version in other countries. Thus, the survey was distributed to English-speaking researchers in Poland and Bulgaria, Estonia, Spain, Germany, Lithuania, Italy, Spain, the UK and Ireland, the United States of America, Norway, Germany, Italy, the Czech Republic, Slovakia, France, Malaysia, Russia, Ukraine, Morocco, Pakistan, Japan, India, South Korea, South Africa, Saudi Arabia, Israel, China, Vietnam, Serbia, Nigeria, Canada, Denmark. The survey was

filled fully by 265 and partially by 238 recipients for Polish language version and, respectively, 92 and 121 for the English language.

For our case study, all participants in the survey who (fully or partially) completed the questionnaire were categorized into subgroups based on (i) their gender, (ii) professional scientific title, and (iii) age. Our intention was to differentiate respondents not only by language and gender but also by age and research experience, somewhat associated with their academic title or degree. The structure of these groups is illustrated in Figure 1.

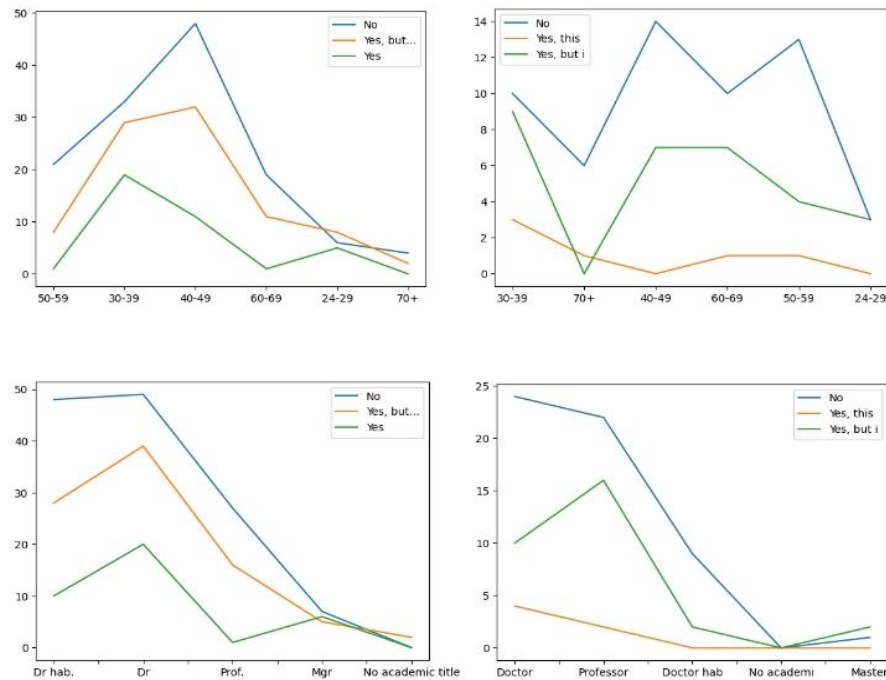


Figure 2. Structure of answers to the question Q concerning 'honorary authorship' differentiated with respect to age and title of respondents. Left (right) panels correspond to the Polish- (resp. English-) language version of the survey.

For the purpose of our case study, we focus our analysis on responses to a single yet pivotal question regarding the possibility of "honorary authorship":

Q: "Is there, in your academic environment and area of expertise, a phenomenon of honorary (guest) authorship, understood as inclusion on the list of the publication's authors of persons who, in fact, have not participated in the research process: either in the preparation of the article or in the form of any actual, independent, creative and significant intellectual contribution to the research?"

There were three possible answers proposed to the respondents:

'No',

'Yes, this is a common phenomenon',

'Yes, but it is a marginal phenomenon'

In the initial stage of our case study, we aimed to determine if there is a statistically significant correlation between

responses to question Q and various respondent groups. Using the chi-squared test, we observed a significant dependence (indicated by a p-value < 0.05) between answers to question Q and both age and scientific experience, qualified by a title of degree, for Polish-language respondents. However, such dependence was not indicated by the chi-squared test for English-language respondents. The structure of answers to question Q concerning 'honorary authorship,' differentiated with respect to the age and title of respondents, is presented in Figure 2.

A detailed examination of the results presented in Figure 2 reveals noteworthy trends that warrant further discussion. Notably, there is a significantly higher acceptance of the possibility of 'honorary authorship' among professors who completed their questionnaires in English compared to those who used Polish in their responses. Similarly, across the age groups 40-49, 50-59, and 60-69, respondents who used English

in the survey show a higher level of acceptance compared to their counterparts who used Polish. The discernible disparity in the potential acceptance of 'honorary authorship' between Polish-language and English-language participants in the survey calls for additional investigation, as it may be correlated with the financial policies of research centres and universities, an aspect beyond the scope of our current study.

V. CONCLUSIONS

Amidst the survey responses, noteworthy features emerge as indicators of both historical (generational) and geopolitical changes impacting scientific communities in Europe. In conclusion, our study underscores the importance of systematically promoting a universal authorship policy and accountability for research results in academic science. Detailed recommendations and reconstruction of standards of scientific authorship attribution both on theoretical and practical ground will be presented upon quantitative statistical and legal analysis in the forthcoming second part of our work.

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