ADDRESSING PLAGIARISM THROUGH FORMAL AND INFORMAL REQUIREMENTS IN SCIENTIFIC JOURNALS: EMPIRICAL FINDINGS FROM JOURNALS PUBLISHED IN LITHUANIA

Aurelija Novelskaitė, Raminta Pučėtaitė

Abstract:
Scientific journals are primary resources where specific forms of academic misconduct (e.g. (self-)plagiarism, “salami slicing” etc.) are defined and which maintain the control function of misconduct by review procedures. However, there is little empirical research how scientific journals actually work to prevent academic misconduct and, particularly, plagiarism. Therefore, this paper attempts to make a contribution at the discussion of academic community’s control and self-control reducing plagiarism through (international) scientific journals published in Lithuania. Empirically, the paper is based on quantitative and qualitative content analysis of the data collected in autumn 2014: (a) Lithuanian scientific journals’ \( N = 266 \) requirements for authors \( n = 219 \) found available at journals’ websites; (b) semi-structured interviews with chief editors of the journals \( n = 25 \). More specifically, the analysis is focused on the topic of plagiarism as it is presented in the journal requirements and as it is discussed by the editors. Quantitative content analysis of the requirements shows that most journals specify the rules for citation but just few (i.e. \( 6 \) or \( 3\% \) of all analysed) mention plagiarism; self-plagiarism is mentioned just by one journal. Meanwhile qualitative content analysis of the interviews reveals different attitudes and practices among the editors: plagiarism detection systems are used by some journals but others have no resources for buying them; plagiarism-related questions are discussed in some editorial boards informally but some journals keep the position “there is no problem”; some editors insist that detection systems are a perfect instrument for disclosing cases of plagiarism, meanwhile others are sceptical about efficiency of electronic systems and claim that “a good reviewer is the best detector of plagiarism”. In general, the editors suggest that the “number of plagiarism is decreasing” and it “appears because of the lack of knowledge”. The paper concludes with a discussion of the role of scientific journals in plagiarism prevention, considering the tools which can address the gaps left by journal requirements and editors’ attitudes.

Key words: editors; journal requirements for authors; plagiarism; science culture

1 Introduction
It is widely known that plagiarism (in addition to fabrication and falsification) is one of the main forms of unethical behaviour in science and as such relates to a number of other issues of scientific work (Goodale 1938; Masterson 1940; Parker 1945; Chester 1949; Furtado 1950; Jameson 1993; Martin 1994) as well as raising a series of challenges to various actors in the field of science, e.g. journal editors and members of university councils, research funding institutions, researchers and their students, etc. (Seadle 2009; Phillips & Horton 2000; Shahabuddin 2009; Walker 2010). It is so because plagiarism is a rather multidimensional matter. That is, it covers a number of forms (e.g. copying, parallelism, duplication, etc.) (Kitchin & Fuller 2005: 32–36), which
might be more or less typical of different groups of actors and in different fields of science. Moreover, although most of the plagiarism practices are treated as unethical and are punishable, some of them (e.g. unconscious plagiarism or cryptomnesia (Merton 1973: 402–3)) are not. Furthermore, not only others’ work can be plagiarised; wasteful publications including “salami slicing” and self-plagiarism (Huth 1986) are among unethical practices limiting progress in science (Carver et al. 2011: 124–126).

Although plagiarism (as well as many other unethical practices in research) can be predetermined by institutional factors such as pressure to demonstrate academic accomplishments by a number of publications (known as “publish or perish” effect, e.g. Pedersen 1998; Bennett & Taylor 2003; Jones 2003), there are numerous efforts from various legislators, editors and research communities to prevent such practices (Christodoulou 2008:114), e.g. by publicizing plagiarism cases after they are detected (Smith 1999:778) and prohibiting plagiarists’ publications (Shahabuddin 2009), using internet-based checking systems or specific software, asking authors to sign authorship licences (Carver et al. 2011; Shahabuddin 2009), etc.

Most studies on plagiarism, its forms, causes and outcomes as well as related practices were accomplished in the USA and Western European countries. However, the phenomenon has been little empirically explored in East European context. This context is of specific interest because of quite widespread practice of diverging normative requirements and factual requirements (Pučėtaitė & Lāmsā 2008). Hence, this paper aims to address the gap in the respective studies by discussing empirical findings from a study on academic community’s efforts to control quality of scientific research by inspecting ethical issues in scientific publications in Lithuania. More specifically, the paper concentrates on the practices dealing with plagiarism in (international) scientific journals published in Lithuania. In this respect, authors attempt to add to a discussion on science culture which tolerates (or not) plagiarism, in particular highlighting the role of journals editors.

It should be noted that the paper is a result of a larger research project “Academic authorship: normative definition and empirical reality” (funded by Lithuanian Research Council, no. MIP-082/2013) carried out in 2013–2015 and an extension to an empirical research project “Scientific research ethics in Lithuania: the status of art” (funded by Lithuanian Research Council, no. MIP-037/2010) which was accomplished in Lithuania in 2010–2011. This paper is of descriptive nature, and the authors’ contribution rests on developing the background for further (including comparative) explorations of the theme.

2 Study methodology

As mentioned above, the paper is based on some results of research project “Academic authorship: normative definition and empirical reality” (funded by Lithuanian research Council, 2013–2015). More specifically, the presented analysis is focused on the topic of plagiarism in two closely interrelated domains: (a) formally, as it is presented in the requirements for authors in Lithuanian scientific journals and (b) informally, as it is discussed by chief editors of the journals.
In methodological terms, the data were collected in several stages in 2013–2014. First, a list of Lithuanian scientific journals ($N = 266$) was developed following the information provided by the library of Lithuanian Academy of Sciences (http://www.mab.lt/lt/istekliai-internete/mokslo-zurnalai). That is, all journals, which were listed in the list of Lithuanian scientific periodical editions (in Lithuanian: Lietuvos mokslinių periodinių leidinių sąrašas su papildomais duomenimis) were included in the study. Next, visiting a public website of each journal, requirements for authors were downloaded as a pdf file or simply copied from the websites in a MS Office word file. In total, 219 (86% of all) documents were found on the websites of the journals. These documents composed the entire corpus for further data analysis.

Quantitative analysis of the content (Babbie 2013: 300–302) of the collected journals was carried out using a keyword “plag*” as a recording unit (Nachmias & Nachmias 1987: 336–337). Hence, such statements as “All publications cited in the text should be presented in a list of references” or “The manuscript is your own original work, and does not duplicate any other previously published work, including your own previously published work” or “The author must guarantee that he has not been violating authorship rights of the third party and that he provides due references to other authors’ ideas which are used directly or indirectly [in the work]” were not included into analysis as providing indirect references to potential cases of plagiarism and, thus, denoting the latent content. Also documents of international publishers and/or consortiums (e.g. COPE http://publicationethics.org/, Taylor & Francis http://journalauthors.tandf.co.uk/submission/ScholarOne.asp) which were referred by some journals, were excluded from the analysis. Hence, the analysis was concentrated on national definitions exclusively.

Next steps after identification of the term “plagiarism” and its semantic forms (e.g. “plagiarize”, “plagiarist”, etc.) were exploration and classification of the contexts in which the terms were used, and calculation of the number of times the sememes were mentioned in the identified contexts.

Further, the combined list of journals was used for identification of informants (i.e. chief editors) for semi-structured interviews. The final sample of the study participants ($n = 25$) was predetermined by the number of publicly available contacts (i.e. some journals do not provide contact information on their websites; some journals provide contact information which is not active), the editors’ willingness to take part in the study, and limits of time. Hence, in methodological terms, despite the population was small and clearly defined, development of the actual sample was featured by both expert (Kvale 2012:70) and convenience sampling techniques (Layder 2013:126; Emmel 2013:35, 42).

The semi-structured interviews started with introductory notes about confidentiality of the provided information and with general questions about experience in editing the journal and usual practices of the editors. Next, the questions were structured in several blocks: questions about authorship (definition, requirements, control, violations and reasons for violations, etc.), questions about citing other sources, including plagiarism (again: definitions, rules, control, violations, etc.), questions about authorship rights (ownership, violations, etc.), and questions about reviewing (general procedures, selections, control, etc.). The interviews were finished with more general questions...
about the main problems the editors have been dealing in their work and general challenges for the authorship and related issues. All interviews lasted about 1 hour and were accomplished at editors’ work places.

For the purposes of exploration of the plagiarism-related issues, answers to the questions about the plagiarism and thematically significant comments were selected. The recorded interview data were analysed using the meaning condensation approach (Kvale 2012: 106–108): selection of relevant pieces of the material was followed by identification of the central themes in responses of each informant. Then the themes were connected into separate narratives defining varying contexts (if they were found).

3 The findings

This section of the paper presents results of content analysis in two parts. First, results of formal descriptions of plagiarism-related issues in the journals requirements for the authors are present. Second, the editors’ informal considerations of the issues are presented.

3.1 Formal descriptions of plagiarism related issues in the Lithuanian scientific journals’ requirements for the authors

Quantitative content analysis of requirements for authors in Lithuanian scientific journals reveals that most of the journals provide detailed descriptions of review procedures and specify rules for citation, but few of them (i.e. 10 or 5% of all analysed) mention plagiarism directly. Three contexts in which the term occurs can be distinguished: one that expresses the editors’ position, the other related to authors’ responsibilities and still another one to the journal’s practices and tools used to prevent the phenomenon.

The first context can be characterized by normative rigour from the viewpoint of the editors, as demonstrated in the statement of the editorial board’s position in respect to plagiarism: “The journal’s editorial board fight against plagiarism actively”¹ (one document, bold by the authors). The term was mentioned among other issues right after the statement of a general character expressing overall position to academic misbehaviour (i.e. the journal is “committed to upholding the highest standards of publication ethics and takes all possible measures against publication malpractice”). Such finding suggests that plagiarism is approached as one of the most important (or even of exclusive importance) ethical issues at least in some Lithuanian scientific journals.

Second, two journals were found as re-citing each other by giving guidelines to the authors against undesired behaviour: “Originality is a very important aspect of a research paper. Take great care to avoid plagiarism in your writing and be sure that any text you pull from outside sources is properly quoted and referenced” (bold by the authors). Another two journals were even more specific in defining the author’s/authors’ responsibilities, i.e.:

¹The terms here and bellow in following citations are bolded by the authors.
“Authors [...] assure that their work is original and unpublished, and is not under consideration for publication elsewhere. In addition, authors confirm that their paper is their own; that it has not been copied or plagiarized, in whole or in part, from other works; and that they have disclosed actual or potential conflicts of interest with their work or partial benefits associated with it.”

Hence, in addition to the found repetitive formulations of the requirements, the second context of mentioning plagiarism is related to the author’s responsibilities and obligations which shall be undertaken while submitting the paper for publishing. Also other forms of plagiarism such as copying, passing, duplication, etc. (Kitchin & Fuller 2005: 32–35) are mentioned directly or indirectly in this context.

More frequently, the term plagiarism was mentioned in the context providing information for authors that the “manuscripts are to be submitted to the plagiarism checking system” and detailing the subsequent actions. The respective warning was found in five documents. However, just one journal provided a more detailed explanation of how the system works: the system “compares the content of the manuscript with vast database of web pages and academic publications”. From the perspective of the journal’s actions, specifications about the actions which will be undertaken in the case of identified plagiarism before publishing the paper (i.e. “Manuscripts judged to be plagiarised or self-plagiarised, based on any source of information, will not be considered for publication”) and after the paper had been published (i.e. “In case of [published] plagiarism, the editorial board publishes public apology to the readers”). These two actions were indicated in two separate journals. In addition, other forms of the plagiarism such as “dualism” and “self-plagiarism” were mentioned exactly in this context.

Summing up at this point, it is important to highlight two tendencies. One tendency is the absence of a more or less precise definition of plagiarism and consistent enumeration of its possible forms. Meanwhile practice demonstrates² that the community lacks knowledge in this realm. The other tendency is that all the mentioned references and contexts appear in the journals operating in the fields of social sciences and humanities, but not in the fields of biomedical or exact or technological sciences where ethical issues are of high importance (Van der Burg & Swierstra 2013). One of the explanations to that can be the editors’ attitude that the purpose of their journals by far “is not to educate the authors”.

4 Attitudes to plagiarism-related issues among Lithuanian scientific journals editors

Qualitative content analysis of the interviews with the journals’ editors reveals existence of different attitudes towards plagiarism and reports employment of several types of practices while coping with plagiarism prevention and detection.

²The recent case of plagiarised part of PhD dissertation [http://www.delfi.lt/news/daily/education/akademikai-susipyko-informacija-vieno-o-darbai-du/?id=67042320] could serve as a typical example here. Also several relevant examples could be found on the webpage of the Lithuanian Ombudsmen for Academic Ethics and Procedure [http://www.etika.gov.lt/]. N.B. All information is in Lithuanian only.
More precisely, the issue of a lacking definition of plagiarism and clarification of the related issues in the journals’ requirements for authors may be extended with the editors’ reporting about absence of plagiarism policy in the journals in general. Few editorial boards had it and admitted that they had discussed possible models of actions in the case of detected plagiarism just informally. The editors’ reasoning for such a situation is twofold: on the one hand, a policy and procedures are not necessary because either there will be no actual demand for them or “the question will resolve by itself when it arises”; on the other hand, the situation is deficient, i.e. a principled position regarding improper citing should be defined in the journal. However, as it was established in the journals’ document analysis, the latter position turns into actions in few journals and in a rather general or fragmented form.

In procedural terms, all editors mentioned a plagiarism checking system as the primary tool for detecting plagiarism. The general tendency which was pointed out by editors is that “formerly, cases of plagiarism were frequent; now, when there is a checking system of databases, cases of plagiarism are rare”. However, as it was noticed by some editors, “there are a number of refined ways of evading the red-light percentage”. For example, the checking systems are helpful in detecting plagiarism cases in the articles which are written in the same (i.e. English) language only. Meanwhile a typical practice of duplication is publishing (almost) the same text in several different languages (e.g. English and Lithuanian), arguing that the findings might be interesting and more easily accessible to international and national academic communities. Moreover, some of the editors reported that they were not able to use such plagiarism detecting systems simply because the journals lack funding and they are not able to purchase the systems. To some extent, the problematic issues are resolved by additional efforts of the chief and vice editors, language and general editors and/or reviewers, i.e. the persons, “who are responsible for detection of plagiarism and self-plagiarism, and tendentious citing” in different journals. The efficiency of such (though time demanding) activities is predetermined by a small size of Lithuanian scientific community where “everybody knows most of the authors well” and “it is easy to suspect where something wrong is – following structure of the text, flow of argumentation one can see that something is missing”. Then, “it is enough to enter a phrase in google and you can find it”. Hence, the editors pointed out several measures as being of the highest efficiency in fighting against plagiarism. One measure is anchored in the editors’ work: it is a proper database of selected reviewers and/or a high professional level of the editorial board: “working in separate fields of science, usually it is known who have been exploring certain topics, what one has been writing about. That is why it is possible to retrace ways of ideas and knowledge; and then they just have to be checked thoroughly.” Another measure, which denotes cooperation between the journals and ethics commissions at research organizations, is publicity: “a publicised case of plagiarism would preclude person’s further career in science”. In this context, it is important to note that the function of ethics education among community members is transferred to the organizational ethics commissions. Although the editors reported that they carry out educational work to some extent (e.g. explanations how and why malpractices should be avoided), this function is not considered as the duty of the editorial board/journal and its further elaborations (e.g. presentation of definitions of
different forms of malpractice in the journal’s policy declarations) is not considered as an editorial task.

As there are no clearly described modes of behaving in the case of detection of plagiarism, a course of action at the factual level by the editors varies depending on the journal and the editor’s personality as well as the perceived seriousness of violations. For example, some editors reported that if mistakes in citing were tenuous, they would just give a remark about the necessity to make corrections. Also, “if a reviewer notices attempts of tendentious citing of particular authors, it is asked to argue the necessity of such citing”. In the cases when the editors considered the quality of the presented paper as low because of many citing mistakes in the text and had an impression that unqualified citing and other malpractices were conscious, the paper would be rejected and the author blacklisted. Moreover, other editors reported just a hypothetical course of action: “if such a case occurred, we would inform the author’s institution”. However, based on the overall data from the interview, most of the editors are more inclined to motivate and encourage the authors to develop their paper than simply reject it. Moreover, there is no information whether the journals have ever informed research institutions about their members’ malpractices in publishing; neither was such a sanction mentioned in any of the journal’s information for authors.

Another key topic mentioned by the editors in the context of “citing mistakes” (i.e. plagiarism) was self-plagiarism. The editors separate two issues here. On the one hand, it is “simple multiplication of texts without bringing any significant contributions”. Such an action is “ethically not acceptable”. On the other hand, repetitive description of research methodology, description of previous studies are “essentially unavoidable” and depend on specifics of the field of science, originality of the study, level of discussion. Such cases are not defined as self-plagiarism by the editors as “it can be reasoned”.

Finally, in the editors’ opinion, the reasons for researchers’ plagiarism are twofold, and both reasons suggest some kind of justification for plagiarism. That is, one set of justifying the reasons is a lack of knowledge and experience, a low level of academic literacy (“people do not know that such an action is not acceptable”); the other set is superficiality, rush to publish as much as possible because of too high requirements for researchers in terms of number of publications. The first set of reasons is more typical of younger researchers and the other is more typical of senior researchers: “a typical plagiarist is someone in the position between associate professor and professor”, the one who already gained reputation. In this discourse, mid-aged scientists who strive to gain reputation seem to risk less.

Summing up, the editors’ experience in dealing with plagiarism varied: some editors reported that they had never been dealing with cases of plagiarism; others reported that cases of plagiarism were rare in their practice; still others reported that plagiarism was rather frequent as “it is known and seen – there are many unethical examples of citing”, admitting that plagiarism “is strongly rooted and is a part of corrupt science system”. However, there is a tendency, that “the higher the level of the journal the smaller amounts of plagiarism and other ethical violations because it is clear that such a paper [i.e. the one bearing characteristics of assumed unethical practice] will not be published”. As the highest level Lithuanian scientific journals tend to be associated
with international publishers, the tendency is related not only to the perceived level of the journal's quality, but also to the international scope of publication.

5 Discussion and conclusion

Content analysis of Lithuanian scientific journals’ requirements for authors and materials of interviews with the journals’ editors show that existent practices of editors’ work and plagiarism are typical as everywhere (Kitchin & Fuller 2005). That is, in general, cases of plagiarism happen, a systemic check for plagiarism before accepting a paper for publication is a usual practice, editors use reviewers not only for general reviewing of the papers, but also for detection of plagiarism.

However, the journals’ tactics regarding plagiarism differs depending on the journal: although most of them do not raise their authors’ awareness of potentially unethical actions, some journals tend to prevent plagiarism by warning the authors that their texts will be checked or simply by drawing authors’ attention to the issue. It is no surprise that editors of different journals report existence of a different extent of plagiarism. It is important to note here that the perceived quality of a scientific journal is negatively related to the extent of plagiarism: the higher the quality, the lower the amount of malpractice.

However, editors’ reasoning about causes of plagiarism and a lack of action in respect to the cases of plagiarism is paradoxical. That is, based on the editors’ report, one of the main causes is lack of awareness what plagiarism is. However, analysis of the requirements for authors and the editors’ reports shows that clear definitions as well as general policy against the malpractice are absent. None of the editors expressed an intention to initiate educational initiatives for deepening the understanding of publication ethics.

Such findings lead to the conclusion that the role of scientific journals in respect to plagiarism is ambiguous: on the one hand, efforts for avoiding publishing plagiarism is a part of a common procedure of the review; on the other hand, it is accepted that the technical check against plagiarism is not efficient enough. Hence, considering a reported lack of knowledge in the field, there is an obvious need for development of other measures and tools for not only detecting but also preventing plagiarism in Lithuanian scientific journals. Defining plagiarism is a minimum that can be done to raise the awareness of the authors. However, considering the socio-cultural context of a post-soviet society, many instructions may go unnoticed or viewed as “just formal” requirements rather than something that can bring, e.g. loss of reputation or public shame. These potential consequences could be brought to the authors’ awareness by descriptions what anti-plagiarism procedures are applied by the journal and how the journal deals with the detected cases of plagiarism. Knowing that the journal will not tolerate it and will inform, for example, the ethics committee at the author’s academic institution may reduce the motivation to submit a (self-)plagiarised work for review. This step would diminish the personalisation or subjectivity aspect from editor’s or editorial board’s considerations: as academic community in Lithuania is small, editors may feel personally uncomfortable that they are putting a well-known professor to bad publicity. Naturally, the procedure of informing an academic ethics committee should
not end at that point. Committees must have procedures for investigating the case and a set of actions to be taken in response to the malpractice. These actions should involve investigation into the motives of the transgressor and organizational practices which either did not prevent or incentivized to submit a plagiarised work.

However, considering prior research findings on the situation of research ethics management in Lithuanian academic institutions (Novelskaitė & Pučėtaitė 2013), which indicate that the system of research ethics is fragmented and the cases of malpractices are dealt with at individual rather than organizational or procedural level, such a sequence of actions is unlikely, and just two stakeholders, i.e. editorial boards and reviewers will keep the level of academic integrity in the system of science. Efforts of multiple stakeholders are needed. First, attention should be turned to high schools which can develop awareness of plagiarism and stimulate respect to intellectual property at young age. Having stated this, we also call for research of the situation at this level of education. It is common knowledge that high school pupils are given tasks to make presentations or reports, reason a problem for their project work or make an overview of a particular situation disregarding the necessity to provide references. Habitualised practices are transferred to universities and colleges and carried on there unless institutional measures provide moments for (self-)reflection through ethics(-related) training and make integrity a standard in their educational and learning processes.

These measures being absent make considerations about prevention of plagiarism utopian. In particular, as the overall tendencies of establishing ethical standards in professional and business behaviour in Lithuania, which, historically, came top down after the regained independence, e.g. pressed by the EU directives or headquarters of multinational/foreign companies (Pučėtaitė & Pušinaitė 2015; Vasiljevienė & Freitakienė 2002), we propose that effective prevention of plagiarism at this stage depends on the incentives by academic institutions to their researchers to publish in international journals issued by independent publishing houses rather than their universities, unless they are recognized editions in the field. These aspects can be dealt through human resource management practices such as evaluation and promotion.

**Literature**


Acknowledgments

The study was funded by Lithuanian Research Council (project no. MIP-082/2013).

The authors appreciate R. Adomaitiene’s (PhD student at Vytautas Magnus University) work in the process of collecting the empirical data for this study. The authors are also grateful to two anonymous reviewers for their comments.

Copyright statement

Copyright © 2015. Author(s) listed on the first page of article: The author(s) grants to the organizers of the conference “Plagiarism across Europe and beyond 2015” and educational non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to Mendel University in Brno, Czech Republic, to publish this document in full on the World Wide Web (prime sites and mirrors) on flash memory drive and in printed form within the conference proceedings. Any other usage is prohibited without the express permission of the author(s).

Authors

Aurelija Novelskaitė, dr. (novelskaite@ktl.mii.lt), Raminta Pučėtaitė, dr. (raminta.pucetaite@khf.vu.lt), Institute of Sociology, Lithuanian Social Research Center, A. Gostauto str. 12, LT-01108 Vilnius, Lithuania