Npof.

Date: 17 December 2021

Ref.: 3.1-21/0055

Decision on research misconduct

Decision

The Swedish National Board for Assessment of Research Misconduct ("the Board") finds guilty of research misconduct.

Background

On 30 March 2021, pursuant to the transitional provisions of the Swedish Act (2019:504) on responsibility for good research practice and the examination of research misconduct ("the Act"), Linköping University submitted a case of suspected research misconduct to the Board. The person suspected was _______. At the time of the suspected misconduct, _______ held a junior research position as a PhD student at the University of Skövde and had gained admission to research education at Linköping University. According to the documents submitted, both Linköping University and the University of Skövde judge that research misconduct may be suspected.

According to the original allegation reported, which was the basis for submitting the case to the Board, the suspicion relates to plagiarism in the draft introductory chapter of the applicant's PhD thesis, a compilation thesis entitled , which was presented on 19 February 2021. It was reported that there are several cases of plagiarism of substantial passages of text, and that at least three images have been directly copied from other sources. In the complainant's view, this plagiarism came to light after a quick search in the introductory chapter. The complainant suspects that there are other examples of plagiarism in the text, and alleges that 13 scientific articles may have been plagiarised.

The respondent contests the allegation of research misconduct. He relates that, while working on his thesis, he was funded by three higher education institutions (the University of Skövde, Linköping University and Karolinska Institute) and had three supervisors who continuously followed his work. This division into three HEIs, he states, meant some splitting, since it was unclear which of the HEIs' rules he should follow. In his opinion, there are some instances of the introductory chapter exhibiting similarities to the sources on which the text is based, but he has quoted and specified the authors of the original sources, referencing their articles, and thus acknowledged them. As also states, the passages alleged to be plagiarised are in the introductory section, but not in the chapter containing the results. The introductory chapter is a compilation: he has quoted and referred to many articles that formed the basis for his introduction to the subject, but he has not claimed that this chapter was his own work. Instead, his view is that the allegation of plagiarism relates to similarities that have been misunderstood. He also asserts that the errata list he has drawn up since defending his thesis publicly on 19 February 2021 corrects the possible shortcomings in quoting and referencing that, in the case

submitted, are mentioned as warranting suspicions of plagiarism. He states that this errata list was presented on the next working day, 22 February 2021, and discussed with the supervisor and others. On 19 November 2021, the errata list was published. The respondent also states that "My firm conjecture is that this found similarity in my PhD thesis is quite coincidental, but it is neither intentional nor willingly done. It never was or never will be my intention to cheat or steal other persons work as my own."

The Board obtained an expert statement in the case. The expert appointed¹ initially assessed the first section of the introductory chapter, which is a summary of scientific articles in the field. His assessment is that the first section has shortcomings in terms of citation and reference management. There are many examples of direct quotations without quotation marks and of reformulations without correct referencing. In some cases the source is specified, but the sources are misplaced and incorrect. There are also cosmetic changes to figure illustrations, which might be traces of deliberate concealment of reformulations. The errata list drawn up was judged by the expert to have been produced after the public thesis defence, and not published with the introductory chapter until August at the earliest. In summary, according to the expert, the first section of the introductory chapter contains plagiarism.

Regarding the "Results and Method" and "Summary and future perspectives" chapters, there is a section that resembles another source, but this is one of the respondent's articles that had not yet been published. The introductory chapter in the thesis appears to be based on this article. Otherwise, according to the expert, there is no plagiarism in these chapters.

In summary, the expert's assessment is that the initial section contains extensive plagiarism that constitutes a deviation from good research practice, but which is of minor importance. In the other sections, which contain the essence of the scientific contribution in the introductory chapter, although the text shows a sloppy writing style, there is no plagiarism.

Grounds for decision

Legal regulation

The Board's remit is to examine issues of research misconduct under the Swedish Act (2019:504) on responsibility for good research practice and the examination of research misconduct. Section 2 of the Act defines research misconduct as a serious deviation from good research practice in the form of fabrication, falsification or plagiarism, committed with intent or through gross negligence, in the planning, conduct or reporting of research.

Fabrication, falsification or plagiarism

The forms of misconduct the Board is tasked to examine are fabrication, falsification and plagiarism, These concepts are not defined by the Act, but the preparatory legislative work on the Act refers to the fact that they are described in codes (codices) and guidelines on research ethics, such as *The European Code of Conduct for Research Integrity*.^{2,3} They are also explained in the Swedish Research Council's publication *Good Research Practice*.⁴ According to the preparatory legislative work, "fabrication" is often described as inventing results and documenting them as if they were genuine. "Falsification" refers to manipulation of research

¹ Jan Komorowski, Senior Professor of Bioinformatics, Uppsala University.

² The European Code of Conduct for Research Integrity, revised edition 2018, All European Academies (ALLEA), section 3.1.

³ Swedish Government Bill 2018/19:58, pp. 45, 100.

⁴ Good Research Practice, Swedish Research Council 2017, Chapter 8.

material, equipment or processes, or alteration, omission or suppression of data or results without justification. Finally, the description of plagiarism is a researcher's use of other people's texts, ideas or work without due acknowledgement of the original source.⁵

The documents in the case make it clear that, in the initial section, quotation and referencing have not been done in the correct manner. Sentences have been copied straight from other sources without quotations being marked and sources specified. Nor, in sentences based on other sources, have these sources been given. It is also evident that certain minor changes in figure illustrations have been made in order that they should not appear plagiarised.

In summary and in line with the expert's assessment, the Board judges that the introductory chapter contains plagiarism. An errata list does not correct plagiarism to the extent that has taken place.

Severe breach

Only serious breaches of good research practice constitute research misconduct and fall within the scope of investigation by the Board. Other breaches are, instead, dealt with by the entities responsible for the research (the higher education institutions), pursuant to Chapter 1, Section 17 of the Swedish Higher Education Ordinance (1993:100). It is stated in the preparatory work for the Act that fabrication and falsification are always, in principle, severe breaches of good research practice. In certain cases, for example concerning a minor infraction on a single occasion, plagiarism should not be considered a serious breach of good research practice.⁶

The Board judges that there are many passages in the initial section of the introductory chapter that have been plagiarised, and that this plagiarism relates to numerous scientific articles. Accordingly, this is not a minor infraction. On the other hand, the case concerns only one part of the thesis, the introductory chapter. However, the scale of the plagiarism means that the Board judges the plagiarism to be a serious breach of good research practice.

Intent or gross negligence

Under Section 2 of the Act, the serious breach of good research practice must have been committed with intent or through gross negligence to be considered research misconduct. "Intent" means, according to the preparatory work on the Act, that the researcher understands what (s)he has done, while "negligence" means that the researcher should have understood this in any case. "Gross negligence" requires the conduct to stand out as particularly serious or reprehensible. Oversights, carelessness or misunderstanding should not, as a rule, be regarded as gross negligence according to the preparatory legislative work.⁷

Since 1 January 2020, researchers' responsibility to follow good research practice in their research has been subject to statutory regulation under Section 4. There must be investigation and assessment of how far-reaching this responsibility may or should be in each individual case.

The Board notes that, within the framework of research education, a doctoral student must receive training and supervision in how to reference original sources, especially if the student does not already possess this knowledge.

In his statement, writes that he has quoted and referred to the sources he used, and

⁵ Swedish Government Bill 2018/19:58, pp. 45, 100.

⁶ Swedish Government Bill 2018/19:58, p. 100.

⁷ Swedish Government Bill 2018/19:58, pp. 50–51, 100.

never intended to cheat or steal anyone else's work.

As the Board states above,	the initial section of the introductory	thesis chapter contains
extensive plagiarism. This of	chapter has been drawn up in the fina	l stage of his research
education, when a doctoral	student is intended to possess knowle	edge of how to acknowledge
original sources of origin pr	coperly. statement that he be	elieved his conduct was correct
or that his knowledge of the	e rules of research ethics had been ina	idequate does not constitute an
acceptable excuse. The Boa	ard's overall assessment is that	actions were particularly
*	ore considers that he has been grossly	*
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In summary, the Board ther	efore finds that	is guilty of research
misconduct.		
The Board has decided in th	nis case following its presentation by	Karin Nylén, Office Manager.
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Chair	Office Manager	