

Decision regarding research misconduct

Decision

The National Board for Assessment of Research Misconduct (“the Board” or “NPOF”) finds [REDACTED] not guilty of research misconduct.

Background

On 27 April 2021, allegations of research misconduct were reported to the Board. It was suspected that results produced through research at KTH Royal Institute of Technology in Stockholm, under the leadership of [REDACTED], had been manipulated. The results have been reported in several different ways. The purpose of the research was to develop a technology known as Evolvable Production Systems (EPS). EPS is intended for use as a flexible system for producing various machines, such as washing machines, in which a number of modules in the production chain are automatically configured to work with one another.

The complainant asserts that the EPS installations presented do not exist, and provides 13 different cases to exemplify this. As a basis for this claim, he cites the fact that images of the same machines have appeared in differing contexts where they purport to illustrate various EPS systems. He also states that he has searched for “evolvable production systems” in various research databases without success. The allegations reported also relate to plagiarism and/or self-plagiarism in various types of articles. As documentation for the allegations, the complainant refers to numerous articles, project reports, theses, a video and websites. He also asserts that the alleged offender (the respondent) fabricated his CV in connection with an application for a professorship in February 2010.

The respondent contests the allegation that he has committed research misconduct. He addresses all the suspicions listed in the report, and takes the view that the complainant has misunderstood the nature of EPS technology. He explains that the key elements consist not in various machines but in software and computer systems, which are not visible in illustrations, and that the recurrence of images of machinery in various contexts cannot form the basis of allegations of misconduct. To support his assertion that various systems using EPS technology have existed, exist currently or are being developed, he has attached images, references to films and articles, contact details of people who can testify that his assertions are correct, and two letters from people who corroborate his statement. As for the accusations of plagiarism, he explains that it is his own text that recurs a few times, and that his name has always been included as author when his text has been used.

The Board obtained a statement from an expert witness in the case. In the view of this expert,¹ it is probable that the systems developed in conjunction with ██████████ research mainly consist of various software programs and, accordingly, it is difficult to assert that these do not exist. He thinks the respondent has addressed the accusations that EPS technology does not exist in a thorough manner.

The expert witness also points out that there are sound reasons for assuming that a certain overlap among various articles describing concepts and simple prototypes is justified. He supports the explanation (which has also been given by the respondent) that companies prefer to give their own names to their own systems. He points out that since the technology is not patented, there is no reason to suspect research misconduct just because the term “evolvable production systems” does not appear on different companies’ websites. He states that there are probably certain shortcomings when it comes to the management of references in the portion of the publications to which the allegations relate but, at the same time, does not think these shortcomings are of a serious nature.

The respondent has stated that, after reading the expert witness’s statement, he has nothing further to add.

In this case, the Board has investigated only ██████████ responsibility. The other co-authors’ responsibility has not been examined.

Grounds for decision

Legal regulation

Under the Act (2019:504) on responsibility for good research practice and the examination of research misconduct (“the Act”), the Board is tasked to investigate issues of research misconduct. Section 2 of the Act defines research misconduct as a serious breach of 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.

The part of the allegations reported that relates to fabrication of a CV in connection with an application to a professorship has not been examined by the Board, since a CV does not constitute planning, conduct or reporting of research.

Fabrication, falsification or plagiarism

The Board’s remit is to investigate three forms of research misconduct: fabrication, falsification and plagiarism. These terms are not defined by law, but are described in research ethics codes (codices) and guidelines, 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 Fabrication is often described as making up

¹ Professor Jim Tørresen, University of Oslo, Norway.

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

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

⁴ *Good Research Practice*. Stockholm: Swedish Research Council 2017, Chapter 8.

results and documenting them as if they were real. Falsification refers to manipulation of research materials, equipment or processes, or unjustified alteration, omission or suppression of information or results. Finally, plagiarism is defined as a researcher's use of other people's texts, ideas or work without duly acknowledging the original source.⁵

The report concerns suspicions of fabrication, falsification and plagiarism in a large number of articles, project reports, theses, a video and websites. Fabrication and falsification are alleged by the complainant in claiming that the EPS technology and systems referred to or presented in various contexts do not exist. The accusation of plagiarism is based on recurring similar descriptions of the systems in some of the different contexts.

The alleged offender has explained that the technology consists not primarily of different machines but of software and computer systems. He states that there are therefore no grounds for allegations of fabrication or falsification based on recurring images of various machines for which EPS systems may be included in the production chain. Every instance described in the report is addressed and the complainant's statement is supported by various types of evidence, such as images and videos showing different parts of the system, or certificates from contacts at companies that have used the technology or developed it further. He believes that the text that recurs is his own and that he is listed as the author in the contexts where it appears.

According to the expert witness, the respondent's opinion is well substantiated. In his assessment, there is no basis for the fabrication or falsification allegations. He thinks there may be some shortcomings in reference management in some of the publications reported, but concludes that these do not constitute serious breaches of good research practice.

The Board's assessment is that the respondent has shown that the work on EPS technology described in the various contexts raised in the allegation report has been carried out, and that the suspicions of fabrication or forgery are unfounded. Furthermore, the Board considers that the suspicions of plagiarism relate, in fact, to suspicions of self-plagiarism, which is a matter outside the Board's sphere of action.

Accordingly, in summary, the Board therefore finds [REDACTED] not guilty of research misconduct.

The Board has made a decision in this matter, following a presentation by Sofia Ramstedt, caseworker. Dorota Green, caseworker, has also taken part in the proceedings.

Catarina Barketorp
Chair

Sofia Ramstedt
Caseworker

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