

## CASE OF SCIENTIFIC INTEGRITY

2017

### Quality of supervision and possible instances of plagiarism

Eindhoven University of Technology

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#### *Executive summary*

*A complaint was filed with the Complaints Committee for Scientific Integrity of the TU/e by a former PhD-student, whose project was discontinued as a result of a disagreement between the student and his supervisory team concerning the direction of the research. The complainant accuses his thesis supervisor of violation of the Code of Scientific Conduct by neglecting his duties as mentor, acting improperly around the submission of an article to which the student had contributed, and inaccurate referencing and plagiarism therein. After reviewing all the evidence, hearing the complainant and defendant as well as two witnesses, and a detailed analysis of the alleged plagiarism, the committee concluded that the complaint is ungrounded on all counts.*

#### **1. Concerns**

Possible violation of the TU/e code of Scientific Conduct in relation to the supervision of a (then) PhD-student, and the submission of a paper allegedly concerning (partially) his work and possible instances of plagiarism therein.

#### **2. Preliminaries: Review Committee, procedure and timeline**

The Complaints Committee for Scientific Integrity (CCSI) has received a complaint on ..... 2016. The complaint was submitted by the complainant, a former employee (promovendus) of the TU/e, and was directed against his intended first promotor, the defendant, part-time professor at the TU/e.

In agreement with the Rules of Procedure, the chair and secretary of the CCSI set up a Review Committee (RC) to handle the complaint. None of the members of the RC are associated with the respective department.

#### **3. The complaint as deemed admissible by the committee**

##### **3.1 Summary of the complaint**

The complaint pertains to the research project that was carried out in the frame of a EU FP7 project within the .... Department of TU/e, in which the complainant was employed as PhD student, with the defendant as first promotor and project leader, witness 2 as second promotor and witness 1 as daily supervisor.

For the remainder of this report, it is necessary to define 3 different papers, as they are at the core of the contention.



- Paper 1 (P1), entitled “...”, with the complainant as first author, was submitted for publication in ‘XX’ on ... 2015 and has not been published yet; the submitted version is referred to in paper 3 as ‘beta working paper’, which is a publicly available report, but – as was pointed out by the complainant - it has not in fact been filed as such..
- Paper 2 (P2) is an unfinished manuscript of the complainant entitled “.....”. According to the complainant he was asked to stop working on this paper.
- Paper 3 (P3) is the article ....., published in the Journal ....., This article was submitted in ... 2016, accepted for publication on ...2016, and published online on ...2016. Upon submission the complainant objected to his name being listed as author of this paper, after which his name was removed from the author list.

The RC distinguished the following 5 components of the complaint:

1. the complainant’s allegation that he was asked to stop working on P2 by the defendant.
2. the complainant’s allegation that the defendant suggested that he should ‘adjust his writing’ in anticipation of the reviewer’s opinion.
3. the complainant’s allegation that there was negligence on the part of his supervisor with respect to his guidance.
4. the complainant’s allegation that P3 was submitted with him as coauthor despite his prior objection to submission.
5. the complainant’s allegation that P3 contains copied paragraphs and sentences from papers 1 and 2 without any referencing.

### 3.2 A priori considerations by the committee

The RC observes that it is important to separate the appeal against the contract termination from the Scientific Integrity complaints. Notwithstanding the fact the complaints were submitted as integral part of the appeal, the RC has made an effort to strictly limit its discussion to only those aspects of the complaints that can be related to elements of the Code of Scientific Conduct of the TU/e or the more extensive Nederlandse Gedragscode Wetenschapsbeoefening of the VSNU.

The following considerations were the basis of the admissibility of the complaints:

**Complaint 1, 2 and 4** relate primarily to the articles on ‘Openness’, in particular the first two bullets, in the TU/e code:

- *They contribute actively to an academic climate in which insights and criticisms are welcome from all, regardless of academic rank and personal characteristics.*
- *They give room to others to develop or take their own intellectual stance in research, design and education.*

and the similar articles in the VSNU code, especially article IV.1:

- *IV.1 Wetenschapsbeoefenaars geven anderen ruimte om zich intellectueel onafhankelijk op te stellen. Dit geldt met name wanneer er sprake is van een hiërarchische relatie, zoals tussen promotor en promovendus, of tussen docent en student.*

**Complaint 3** relates to the principle of ‘zorgvuldigheid’ as described in the VSNU-code, in particular art. I.5 and I.6, which speak of good mentorship.

**Complaint 5** relates to the article 2 (Intellectual Honesty), first bullet, of the TU/e code:



- They acknowledge and respect intellectual property and authorship. Plagiarism is unacceptable.

and similar articles in the VSNU code, in particular I.3 and I.4:

- *I.3 Door correcte bronvermelding wordt duidelijk gemaakt dat er niet wordt gepronkt met andermans veren. Dit geldt ook voor informatie die van het internet is gehaald.*
- *I.4 Auteurschap wordt erkend. In het vakgebied gebruikelijke regels worden daarbij nageleefd.*

#### **4. Response by the defendant**

##### **4.1 Summary of the response**

The central argument in the response of the defendant is that the complainant is an immature researcher who moreover is not open to guidance, ignores feedback, and does not stick to agreed work plans. Despite efforts of the supervisory team to structure the work and guide the complainant, this did not work out, which finally led to serious disagreement and subsequent termination of the contract. The defendant also comments on each of the individual complaints. The response to complaints 1 to 3, all having to do with the level and quality of supervision, is as above: according to the defendant the supervisory team made an effort to guide the complainant, but he was not open to guidance and in the end appeared to deliberately steer towards a conflict. The defense is substantiated with examples. Concerning complaint 4, the defendant gives an extensive explanation why he decided to take the lead in writing the paper, why he did propose the complainant as coauthor in the complainant's own interest, even when the latter indicated that he did want to have anything to do with the paper, and that he removed him as coauthor when explicitly asked again. Finally, the defendant points out that he contributed many text elements to P2, as the writing of the complainant was 'not up to standard', and that it is therefore possible that there are commonalities between certain parts of P3 and P2, but that this does not concern anything of substance.

##### **4.2 Consideration by the committee**

The committee has taken the reply to the complaints and the supporting evidence presented therein at face value, has considered the reaction of the complainant to this reply, and has decided that a hearing is needed to properly weigh the arguments brought forward by both parties.

#### **5. Summary of the Hearing**

The hearing took place on ... 2016. Participants were the full RC, the complainant, the defendant, and in the second part of the hearing also the witnesses 1 and 2, as well as two secondants that the complainant had asked to accompany him. All participants were present in person.

##### **5.1 Hearing of the Complainant**

The complainant starts by stressing that the common cause of all elements of the complaint lies in a scientific dispute, and states that the case cannot be understood without a proper investigation of the science. In short, he is of the opinion that the project needs to develop a more complex mathematical treatment of the data, which he had started to develop. But his



supervisors had urged him to first apply an established method to his (newly collected) data, an approach he judged scientifically shallow and of limited use. He holds it against the defendant that he has never made an effort to understand his (the complainant's) approach. He expresses frustration at the fact that his (great) efforts were not appreciated, and that while he was told that his method was too complex and possibly incorrect, these assessments were never substantiated or explained in any detail. He attributes this to the fact that the defendant is not an expert in the particular specialization at hand. This, he said, also caused him (the complainant) to need much more time for the literature review, due to ineffective coaching. And he sees it as a general violation of the code of conduct that, in his view, the defendant undertook research in a field in which he is not an expert.

It is really this lack of in-depth interest from his supervisor that led him to formulate the first 3 complaints, of which he considers complaint 2 as minor. It is also the root of the conflict that arose around the submission of P3, in which the simpler approach is taken that the complainant rejected. He therefore did not want to be co-author. When asked by the RC if he believes paper 3 to be scientifically incorrect, he answered that he mainly believes it to fall short in novelty. Secondly, he restates that the paper as published uses material and analysis that he had prepared, as well as literal sentences and near literal paragraphs from P1 and P2. He also points out that P3 makes reference to P1 as 'beta-working paper', but that this manuscript had in fact not been filed as such, and that therefore the reference was void.

## **5.2 Hearing of the Defendant**

The defendant mostly underscores the arguments already made in the written defense: in his opinion the work of the complainant is scientifically immature and while he and the team tried to coach the complainant, this turned out to be impossible because the complainant did not stick to agreed tasks, even if they were written down and agreed by the complainant at the end of a meeting.

While he admits that the fact that he is only part-time at the TU/e, he believes that the complainant has received adequate supervision, to at least the same level that is normal for PhD guidance. In his opinion, the problem was that the complainant was not receptive to guidance, and in particular did not respond well to feedback.

The defendant is adamant that the complainant was never asked to stop working on P2. Instead, he was asked to prioritize and first finish the work that would lead to the simpler P3, in view of both an upcoming deadline and deliverables of the project on which the complainant has been hired. But this was never intended to imply that the work on P2 should be stopped altogether.

As to the submitted P3: in view of project deliverables and deadline for a special journal issue, the defendant decided to take the lead. This paper was written entirely by himself and witness 1, although it makes use of data of which the collection procedure had been started by the complainant. He was of the opinion that the complainant deserved to be co-author on the basis of the contributed data, which is why he included him as author initially. When the complainant insisted his name be taken off, this was done and an explicit acknowledgment to the complainant's contribution was added.



As to the sentences that were copied from P1 and P2, the defendant points out that the supervisors had contributed considerably to formulations in those earlier papers, too – a statement he substantiated with the printout of a Word-version with his comments in track-changes. He further states that the sentences and paragraphs in question are very generic and can be found in many texts on the topic, most likely also in the project application.

Finally, he concedes that he himself is not an expert in the mathematical methods for data analysis, but points to the fact that there is ample mathematical expertise available in the group.

### **5.3 Hearing of the Witnesses**

The RC asked the witnesses about the level of intensity of the supervision. Both attested that the frequency of contacts was normal. According to witness 2 it was similar to that in another case in which witness 2 was second promotor and the defendant first promotor.

Witness 1: 'we had a meeting about once every two weeks, sometimes more often. And I was in immediate proximity'. He did not work in isolation, though, he had other students around with whom he shared office space, and the staff, including witness 1, was in the immediate neighbourhood. The supervision was not effective because the complainant did not appear to listen, kept following his own track, also when another approach was agreed upon (also by himself), and defaulted on tasks he had taken upon himself. He agreed to make minutes of the meetings but failed to do so, so that later others had to take over this task.

Witness 1: 'we had a meeting about once every two weeks, sometimes more often. And I was in immediate proximity'.

As to the process that led to P3, witness 1 gives a detailed description. He states that in his mind P2 and P3 were part of the same activity, but at some point –most probable the end of 2015- it became clear that the complainant was not able/willing to proceed along the lines that they had agreed upon to successfully finish a (special issue) journal submission in time. The supervisory team then decided to take over the writing initiative towards completion of – what became- P3. In P3 an existing methodology is applied to a new field. Not shocking, but of sufficient novelty. Witness 1 tried to make clear to the complainant that research benefits from a (small) step-by-step approach.

The RC asked if the dispute was brought to the dean (this is what the regulations concerning the conferral of the doctorate prescribe when there is such a dispute).

Witness 2: 'I did indeed bring this to the dean, but advised not to continue because I did not think there was a path to success with the complainant, I did not want to advise any colleague to take over the supervision.' When asked for the reason for this advice, witness 2 responded that he thought that the complainant was insufficiently capable of handling supervisory feedback to warrant the successful completion of a PhD project.

Witness 2 did step in to structure the process. He made sure there were written summaries/task lists at the end of every meeting, but the complainant did not follow up on the agreed action list.



## 6. Consideration and conclusion

Having considered the complaint and all the supporting evidence for it, the response by the accused and its supporting evidence, having heard the complainant and defendant and witnesses in the joint hearing, the committee has the following considerations:

- **Complaint 1:** the RC observes that parties and witnesses agree on the facts: the complainant was asked to dedicate his time to P3 before continuing with the more complex analysis methods in P2. However, the RC is satisfied with the explanation of the defendant, corroborated by witness 1, that this was a question of phasing the research, also in view of milestones to be achieved in the frame of the project, and not a matter of 'forbidding' the complainant to work on his more complex analysis method. Therefore the RC cannot see this point as a violation of openness and/or good mentorship.

**The RC therefore concludes that the complaint is unfounded.**

- **Complaint 2:** this complaint was not very articulated and also in the oral explanation the complainant did not elaborate or substantiate the complaint, other than by giving a generic reference to the fact that the defendant and his colleagues ('the referee') knew each other and that he – the complainant – did not have great confidence in the rigor of the refereeing process. The explanation of the defendant that he did advise the complainant – as any other PhD student - to write the paper in such a way that it would stand up to the scrutiny of the referees, is accepted by the RC as sound scientific behavior. **The RC did not receive any other evidence that substantiated the complaint and concludes that it is unfounded.**

- **Complaint 3:** the submitted evidence, including that contained in the appendices of the complaint, and including the witness statements, make clear that the amount of coaching, the number of progress meetings, the proximity of witness 1, and the fact that the work was carried out in a team of colleagues (not isolated in a lonesome office) cannot be considered to fall short of what is considered normal or adequate in the field. The RC does recognize that, as was stated by the defendant himself, the fact that he was mostly not at the TU/e was a drawback for the supervision, and the RC also notes that with hindsight, in view of the fact that the complainant was a difficult student to coach, it was not optimal to put the main supervisory task on the shoulders of a relatively inexperienced researcher. But despite these observations, the RC sees no evidence of willful neglect or gross negligence. **The RC therefore concludes that the complaint is not justified.**

- **Complaint 4.** The RC considers the following:

- First, there is the practical matter of the submission with the complainant as coauthor despite his clearly expressed wish to have nothing to do with the paper. Here, the defendant appears to have acted correctly in the sense that he did in fact ask the complainant if he wanted to be coauthor, indicating that he – the defendant – was of the opinion that he should be coauthor; and upon the negative answer by the complainant, he immediately removed the complainant from the author list. The fact that he only asked (directly) after the paper was submitted was not correct, but since there was ample time and opportunity to still correct the author list, this was inconsequential. The RC further observes that the published paper does give a generous acknowledgement/statement of the contribution of the complainant to the



paper. So, although – under time pressure - the order of acts may not have been ideal, **the RC cannot construe this as a violation of the Code.**

- o Second, the RC takes into consideration that the complainant did not object to publication of the paper as such, despite his strong objections against the quality of the contents. The further point the complainant made on passing on his work as the defendant and co-authors own work will be discussed below with Complaint 5.

**In summary, the RC concludes that complaint 4 is unfounded.**

• **Complaint 5:** plagiarism. Also this complaint was discussed at length. The RC distinguishes several aspects.

1. Instances of exact reproduction of sentences in P3 that appear in the submitted P1, or in the draft paper P2. These are discussed below.
2. The question if the referencing was done correctly in all cases. In particular the reference to P1 as 'beta-working paper', where in fact P1 was never filed as such.
3. The question if P3 uses ideas from P2, and if this qualifies as theft of intellectual property.

As a preliminary remark, the RC observes that P3 makes ample reference to P1 and extensively acknowledges the contributions of the complainant, so in a general sense the paper is clearly not guilty of passing someone else's work or words as those of the authors. The question is primarily if the referencing has been done correctly.

Annex I gives a comparison of paragraphs with identical or comparable phrasing in P1, P2 and P3, as well as the project proposal.

- o The RC firstly distinguishes the 3 instances of text similar to that in P1, and notes that as the authors of P3 were coauthors of P1, and the sentences in question do not pertain to new work but rather are statements of literature, there is no question of theft of ideas. But where literal quotes of P1 were used, a quotation or more precise reference should have been used. With reference to 'LOWI-advies 2014-10, 2015-2 and 2015-09', the RC does not consider this to be plagiarism, but rather negligence.
- o The reference to P1 as a 'beta-working paper' is incorrect. It should be amended as soon as possible by filing the submitted manuscript of P1 as 'beta-working paper', so that it is available to readers of P3 who want to follow up the reference.
- o The instances of similarities to P2 are of a different nature. P2 is the intermediate result of the work of the team, with the complainant and witness 1 being the main contributors to the text. The question is if it can be maintained that the complainant's text and ideas were used in P3 without proper referencing or acknowledgement.

There are 5 text elements that show similarities between P3 and P2. Of these, 4 can be characterized as summaries of the literature (including P1), with similar but somewhat different phrasing. The RC considers that as there are only so many ways in which an external fact can be stated, similarities in such texts are unavoidable.

There is one paragraph, however, which requires a deeper analysis:

- P3: '.....'
- P2: .....

While there are differences in phrasing, clearly the same idea is put forward here.



The RC investigated the origin of this idea, and found that it is already present in the research project application, where reference is made to the paper by ..... et al.

..... P3 refers to ..... et al in the paragraph at hand with a footnote.

In conclusion, the RC considers that the idea that both paragraphs in P2 and P3 invoke was already implicit in the research application and appears to have been a shared approach by the research team. Moreover, the work on P2, as was also testified by the defendant and witness 1 during the hearing and substantiated with commented earlier versions of the paper, was a joint effort in which it is hard to separate individual contributions. Therefore the RC concludes that the quoted sentences in P3 cannot be construed to be theft an original idea of the complainant.

**In summary, the RC concludes that complaint 5 is unfounded.**

## **7. Conclusion**

In conclusion, the RC does not find any ground for the complaints about the violation of scientific integrity.

While it is clear that the collaboration in the research project did not work out and ended in unbridgeable conflict, the nature of the disagreement appears to lie outside the realm of scientific integrity. The five counts of the complaint were found ungrounded, and even when scrutinized the alleged irregularities in the referencing were found to be minor and in no way a violation of the spirit of the Code.

### **Initial Judgement of the Executive Board**

The Executive Board followed the advice of the Committee.

The Executive Board followed the advice of the Committee. The complainant did not agree to the decision of the Executive Board and filed the complaint to LOWI for advise on (date) 2017.

### **LOWI**

The opinion of The Netherlands Board on Research Integrity (LOWI), dated .... 2017:

The conclusion is that the complaint is justified in so far as it concerns:

- (i) the exceeding of the processing period of the complaint, and
- (ii) the lack of review of the expertise of defendant by the commission for scientific integrity (CWI).

For the remainder, the LOWI concludes that the complaint is unjustified.

The mere fact that your complaint was not timely dealt with, does not raise any doubts with the LOWI concerning the correctness of the contents of the advice of the CWI. In addition, the LOWI has determined, based on its own review, that it has no proof or indications that has accepted any tasks for the execution of which he lacked the necessary expertise.

Overall, the LOWI advises the Executive Board to confirm its initial judgement with due observance of the considerations of the LOWI and to amend the complaints regulations of TU/e to bring it in accordance with the terms of the Algemene Wet Bestuursrecht (General Administrative Law Act).



The full advise of LOWi can be found on their website.

**Definitive Judgement of the Executive Board (12 October 2017)**

The Executive Board followed the advice of LOWI by letter dated 12 October 2017.

The definitive decision is to fully adopt the recommendations in the opinion of the LOWI. The Executive Board has therefore decided to confirm and maintain its initial judgment in this definitive decision.