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Foreword – by *Fenneke Blom*

In my previous foreword, I looked back on two years of NRIN. The development of the network, the website and the events we organized. Looking forward might be a tricky foreword to write. I might create expectations that I might not be able to live up to. However, I do want to look forward with you, because there is so much to look forward to. Not only in the ambitions I have for the future of NRIN, but also in the near future, the next months even.

I eagerly anticipate the launch of our new website. The last couple of months the new website was under development and in this newsletter we introduce our new logo. I'm currently busy filling the new website with all the information from the original website. It is nice to be reminded of the first things we've published, and great to see the growth. Moreover, I am pleased with the help from

my previous intern Isabella Vos (she participated in the Fiction movie project about which you will read more in this newsletter), who now helps me with writing contents for our website. Together we collected some publications that are worthy of a read, in 'The persistent p-value' (also in this newsletter).

I look forward to the work of colleagues, in the recently funded research projects. We had a first meeting with researchers of these projects, which was really inspiring! In this newsletter you find some advice these researchers gave to each other. Concrete ideas to make a change now.

I also look forward to collaborate with the new member of the NRIN working group. Prof. dr. ir. Anthonie Meijers (Eindhoven University of Technology) who joined our team. One of his main concerns is the implementation of the Code of Conduct for Scientific Practice. Our national code is currently under revision. Next to looking forward to the results of that revision, I also look forward to engage with the scientific community to find creative ways to bring and keep it under the attention of everybody involved in scientific research in the Netherlands.

And together with some colleagues, I look forward to the World Conference on Research Integrity. And as usual, upcoming events are listed at the end of this newsletter.

These are some of the things to look forward to in the near future. But moreover, I look forward to meeting many of you at the various upcoming events, to reading about your work in a diversity of publications and to be inspired by the research integrity community!

Sneak preview: new logo and website

This is the last newsletter in it's current format. We are happy to announce the renewed website that will be online next month!

And with a new website and style, goes a new logo →



NRIN meeting for Research Projects

Recently the Netherlands Organisation for Health Research and Development (ZonMw) granted several research projects in their program Fostering Responsible Research Practices. To introduce them to each other, the first NRIN meeting for researchers of these and other recently funded research projects was organized on April 25th.

During the morning the researchers presented their projects. Abstracts are available on our [website](#). In the afternoon subgroup discussions were held on challenges we face, and four young



The majority of the participants joined us for drinks after the meeting

researchers shared their ideas in a panel discussion about what researchers can already do today to foster RCR.

The atmosphere was good and the discussions lively. The participants had a lot of questions and interesting ideas to share. A more detailed report on the afternoon program will follow on our website, but here are some of the concrete plans and tips of the participants:

- A lot of things happen between a protocol and the result of research. A good protocol still doesn't necessarily mean good research. We need peer review in several stages.
- Moreover, a protocol is a guide, not necessarily a fixed route. You can learn along the way (reinforced by interim peer review), but be transparent about it! Update your protocol.
- However, the peer review system should be improved too (hence the [IMPER project](#)).
- Ask others when in doubt.
- Admitting that you don't know everything, is key. Your students should search for answers themselves too.
- Pre-register your project.
- Reflect. Think about your own allegiance: am I right or am I biased?

Codes of Conduct

Revision of the National Code of Conduct (the Netherlands)

Last year, a committee was asked to give advice on the (need for a) revision of the National Code of Conduct for Scientific Practice. Their report is published [online](#) (Dutch language). Following this advice, the committee has now been asked to rewrite the code. A round of feedback on the draft version will be organized after the summer.

ALLEA's European Code of Conduct

Not only in the Netherlands the need for revisions was felt. Recent developments in the European scientific landscape and in academia itself, gave rise to the revision of the ALLEA code. One month ago, the revised [European Code of Conduct for Research Integrity](#) was published.

Danish Code of Conduct

A good example of what a national code of conduct could look like, is the [Danish Code of Conduct for Research Integrity](#). In this code the grey areas are well explained. Also, aggravating or mitigating factors are discussed. For example, a difference between PhD-students and senior researchers should be taken into account in the assessment of the (alleged) deviation. In Denmark the research misconduct cases are dealt with on a national level and QRP on institutional level.

Australian Code of Conduct

Another excellent example is the Australian Code for the Responsible Conduct of Research. The code, as well as the guide on investigating and managing potential breaches of the code, were open for public consultation (closed in February 2017, the documents are still [available](#)). This code makes a distinction between responsibilities on national and institutional level.

The persistent p -value – by Isabella Vos and Fenneke Blom

Everyone who has ever participated in a debate on the validity of science, knows that it never takes long before somebody will bring up the topic of p -values. Although the p -value is still the most widely used index to assess statistical significance, critique has been raised on its usefulness. Numerable papers have pointed out the flaws of this research tool for testing hypotheses and have hackled the strange conclusions it might lead to. But what if the problem is not the p -value itself –which can be a useful statistical measure- but the fact that ‘it is commonly misused and misinterpreted’?

ASA statement on p -values

The [American Statistical Association \(ASA\) Statement on \$p\$ -values](#) (2016) aims to clarify some of the underlying principles of the p -value and gives a clear description of how this index is to be used. Moreover it pays special attention to the importance of contextual factors and the way researchers should take these into account. This report was written for a general scientific audience and it is a real recommendation for all who wish to understand what p -values are but have always been afraid to ask.

Understanding the problems with the p -value

The ASA statement is short, a small effort to read. To better understand where things go wrong with Null-hypothesis Significance Testing (NHST), and especially in interpreting the p -value, several publications are available. We name a few.

One of the supplementary materials of the APA statement, is [Statistical tests, P values, confidence intervals, and power: a guide to misinterpretations](#). After a critical discussion of basic statistics and explanations why 25 misinterpretations of p -values, confidence intervals and power are wrong, the authors comfortably provide guidance in what to do instead.

Steven Goodman earlier discussed [a dozen \$p\$ -value misconceptions](#) (2008), including possible

consequences of the wrong interpretation. It brought Goodman to the conclusion that we must open our eyes for alternative methodologies, such as the Bayes' factor.

Pitfalls not only lay in the interpretation of the p -value, but lurk in all phases of, for example, psychological research. With this disciplinary field in mind, in which NHST is widely used, researchers of the department of Methodology and Statistics of Tilburg University created a list of 34 [Researcher Degrees of Freedom](#). This list gives insight in the many decisions –some more explicit or arbitrary than others– that researchers have to make.

Although publications like these are out there, helping researchers to improve their methodology and reporting, and aiming to improve the interpretation (and application) of study results, this message has not made it into the most widely used textbooks yet. Use publications like these articles to educate the young generation of students and equip them with the knowledge to make sound decisions, assessments and interpretations.

Why not use alternatives?

One of the main points of critique on using ‘null-hypothesis significance testing’, is that the probability of a null effect in the study population, is inseparable from the likelihood of the null-hypothesis being ‘true’. This is avoided by several alternative methods, however the p -value is still widely used. Why does the majority of researchers still hold on to a method that is under fire while alternatives are available? Researchers of the Vrije Universiteit aim to answer this question with their research project [‘The Myth of Null-hypothesis Significance Testing’](#).

Still not significant

Not only NHST itself and the interpretation of the p -value cause problems. Also the reporting of the p -value can be difficult if it’s not quite what you hoped for. But no need to worry. [Here](#) are plenty of examples how colleagues before you tried to make their $p > 0.05$ sound interesting after all. Have fun!

To read more about this topic on our website, use the tag [‘statistical significance’](#) for related posts.

Fiction movies for RCR education

From the March till November 2016 three MA students, Isabella Vos, Bob Hoogenes and Christiaan Grigoleit, did their research internship under the supervision of prof. dr. Lex Bouter (current professor of methodology and integrity) and dr. Fenneke Blom (coordinator Netherlands Research Integrity Network) at the department of Epidemiology and Biostatistics of VU University Medical Center. The primary goal of our research project was the improvement of education on research integrity. We wanted to accomplish this by making a start with the creation of an online database of audio-visual material on research integrity that is easily accessible and can be used for education. The underlying thought was that although much effort is put into teaching students and researchers about the rules and norms that come with conducting proper research, a fictional narrative has the potential of contributing, in an accessible way, to the empowerment of students and researchers to deal with the challenges of moral dilemmas that one inevitably faces when conducting research.

During our project we investigated the usefulness and applicability of a selection of fiction movies for rescuing responsible conduct of research (RCR) education. A variety of movies was analysed, ranging from Silkwood, produced in 1983, to The

Dallas Buyers Club (2013). A format for structured description of (fragments of) movies was developed and after pilot testing of the format, consensus was achieved on what the final format should look like. Subsequently the format was applied to 31 movies. Legal and practical aspects of using (fragments of) movies for educational purposes and of sharing the teaching materials online (creative commons) were explored, as not all movies can be used without consent of the original owner. All though all movies were selected carefully, not all were deemed useful for RCR education. Of the 31 movies we considered, 20 movies remained in the final selection. The main RCR topics addressed in these movies were: conflicts of interest, selective reporting and citation, scientific writing, authorship, research waste and data collection and study design issues.

The final product of our internship: a structured format, an annotated list of useful fiction movie fragments for RCR education, and descriptions of the legal aspects and practicalities, are now available on the website of the Netherlands Research Integrity Network (www.NRIN.nl/fiction-movies-for-rcr-education). Later this will be complemented by first experiences with the use of the selected movie fragments in RCR education.

Announcement: survey on Publication Pressure

Invitations to the survey will be send out next week!

For the improvement of a survey on publication pressure, we are looking for volunteers to provide feedback. Next week, we will send out an invitation to review the survey. Your responses will be analysed anonymously and you will help us improve an instrument. This enables us to gain insight into the publication pressure in academics with a validated tool. The survey will take about 15 minutes of your time. Thank you in advance!

Prof. dr. Lex Bouter, dr. Joeri Tjeldink, Tamarinde Haven – the [ARCA](#) team

European Network for Academic Integrity (ENAI)

The European Network for Academic Integrity is a European platform with the aim to support higher education institutions to work together in the field of academic integrity. The particular activities are creation of educational materials and guidelines for academic integrity, joint educational and training activities, experience exchange and many others.

The network will be officially launched at the end of May at international conference "Plagiarism across Europe and Beyond" in Czech Republic (www.plagiarism.cz). Starting with this launch it will start accepting members - all higher education institutions are welcomed as well as interested individuals. For detail information visit their website: www.academicintegrity.eu.



Upcoming events

Ruysch-lecture by Malcolm Macleod

May 16th, 2017. 17.00-18.00h. Lecturehall 1 (Collegezaal 1), Academic Medical Center, Amsterdam

Malcolm Macleod is professor of Neurology and Translational Neuroscience at the Centre for Clinical Brain Sciences, University of Edinburgh. He argues that the translation of animal studies to human practice is limited, partially caused by the choice of methods. Improvements can be made in for example preregistration, study protocols and interpretation of results (including *p*-values).

Conference: On Plagiarism across Europe and Beyond

24th -26th May 2017. Brno, Czech Republic

Over the last few years many European universities have experimented with new policies in relation to academic integrity and methods of prevention. To share the knowledge and experience they gained, an international [conference](#) on Plagiarism across Europe and Beyond is organized. Its focus will be on cultural differences and experience exchange.

Annual conference of the European Association of Centres of Medical Ethics (EACME)

September 7th -9th, 2017. Barcelona, Spain

The conference website is under construction, and will be available this January. For now you find the latest information [here](#). 'Responsibility and integrity in research' is again on the agenda.

International Congress on Peer Review and Scientific Publication

September 10-12, 2017. Chicago, Illinois, USA

'Our aim is to encourage research into the quality and credibility of peer review and scientific publication, to establish the evidence base on which scientists can improve the conduct, reporting, and dissemination of scientific research.' More information: [here](#).

World Conference on Research Integrity (WCRI)

May 28th -31st, 2017. VU University, Amsterdam

Limited number of places left, register quickly! Find all relevant information on the conference website www.WCRI2017.org. The full program is now online. Difficult to choose which sessions you would like to attend? Here is what your colleagues look forward to!

"For the first time, also the chemical, pharmaceutical, food and cosmetic industry, will formally join the conference in a satellite session on 'research integrity in for-profit organizations. As industrial sponsored research increases and publicly funded research decreases, the building of trust between industry, academia and the general public has never been more important. I can't wait to follow this debate."

Prof. dr. Maurice Zeegers

"I look most forward to the plenary session about fighting the replicability crisis. One of the speakers during this session will be John Ioannidis. His 2005 paper titled "Why Most Published Research Findings Are False" received world-wide attention, and since then he wrote many other influential papers on this topic. Last year I was among the few lucky people who got to attend his inspiring lecture at the annual 'Anatomy Lesson' in the Royal Concert Hall Amsterdam. I am confident that his talk during the plenary session about fighting the replicability crisis will be as inspiring as his talk last year during the 'Anatomy Lesson'."

Judith Rijnhart, MSc

"For all young participants, Master students, PhD-students and Postdoctoral fellows, the 'Meet the expert' sessions offer a chance to meet and interact with keynote speakers. Melissa Anderson, Boris Barbour, Daniele Fanelli, John Ioannidis, Brian Nosek and Ivan Oransky answer the questions of the participants. Participants send in questions upfront and for each session 5 participants will be selected to ask their question before the general discussion starts. Promises to be interesting!"

Dr. Fenneke Blom

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