# WTMC SERIES

## ON TEACHING & LEARNING STS

# OPEN

Workshop

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WTMC

*Netherlands Graduate Research School of Science, Technology and Modern Culture*

WTMC Series on Teaching and Learning STS

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# Introduction to the workshop

Welcome to the workshop. It starts here. Before the actual workshop begins, read through this Programme to make sure you know what you are supposed to do in advance. You need to prepare for assignments, as well as read all the literature – best not to leave these until the last minute. Preparing for the workshop will take about one week of full-time work. There are not many gaps in the programme, so it is important that you do the reading before you arrive. Make notes of any questions you may have or anything you do not understand – that will remind you to raise them during the workshop. Read through the detailed programme as well so that you know in good time what you need to prepare, write and think about. Pay special attention to the activities, as these require extra preparation. Discussants have been assigned for the presentations that some of you will be giving. The names are listed in the Programme – do check to see if you need to be prepared for that. We have tried to include people as discussants who have not done that task recently, and who do not work in the same university as the presenter. Some of you may have to think hard about what you can say – it's good practice.

Each of you will get something different out of this workshop, depending on where you are in your own research and on what exactly you are studying. As a more informal part of the preparation, it is worthwhile to spend time thinking about what it is you want to learn and how you would be able to achieve that. Of course, you should also be prepared to be surprised, to learn something unexpected and then afterwards reflect on how that relates to your own development as a scholar.

The topic of the workshop, Open, evokes a qualifier that has been associated to many aspects of scientific and scholarly practice: open access (publications), open data, open notebooks. We aim in this event to consider how the diversity of practices and structures that make up systems of knowledge production might be opened up, from agenda-setting to data gathering to innovation. What would all these diverse facets of academic work look like, if they were 'open? Might we discover in the course of this exploration that there are some good reasons why they are (at times) closed? Does it have to be a case of one or the other? And if we are seeking a system change, do we need to consider transition theory to guide us, using our own STS tools?

Another line of inquiry that we hope to foster with this workshop is the diversity of the qualifier open itself. If 'open science' can be described as a movement, then it is not surprising that a number of different schools of thought, political agendas and values can be found beneath this banner of 'open'. Can mapping these streams help us understand the different opportunities for reform and the kinds of alliances being formed?

Finally, a number of discussions and exercizes will also enable us to consider the messages of openness in relation to our own practices and projects. For the coordinators, the preparation of this workshop marks an opening up of the programme to the expertise of the participants, with a new component: a poster session for participants to share their insights on the topic of the workshop.  A little bit of background: Faced with an offer from one of the participants in the run up to the workshop, we were sparked to think about how we could include it in the programme and also, more fundamentally, about how we deal with existing expertise among the participants. It's no longer the case that all PhDs are 22 or 23 years old whose main experience is being a student! So how to do justice to the expertise we may 'already have in the room', even before we start inviting speakers?! This led to lots of brainstorming and we have come up with a new element in the workshop, which we will try out at this workshop. If successful, we will make it a standard part of the programme and invite participants with expertise on the topic of the event to also present in the course of our new  session. We have chosen the format of an

extended poster session, which will be something new in the WTMC training programme and a nicely interactive form.

Looking at the workshop in more detail: Day 1 will, as always, start with a round of introductions, so we get a sense of who we will spend the next three days with. After lunch, Frank Miedema will open the workshop with a lecture on the transition to Open Science, drawing on his expertise and his experience as a scholar, activist and leader. Next, Colette Bos will take us behind the scenes of the (Dutch) National Research Agenda – an effort to 'open up' the process of agenda setting for research to Dutch citizens, which will lead us, after diner, into a session where we will engage with some of its dilemmas through re-enacting specific processes.

On day 2, we will start with PhD Presentations, and then move to a lecture from Evelyn Wan who will unpack the notion of 'open' from a post-colonial angle. In the first part of the afternoon, and the evening, you will experiment with opening up your own research to different kinds of audiences or publics – this is an exercise in the skill of 'translating' your results (or plans). In between these two sessions, Ismael Rafols will share his insights on Evaluation and Open Science: the need for contextualisation for assessing open knowledge practices.

On day 3 we will work on this workshop's core reading in light of what has been addressed in the past days, and then move on the second set of PhD Presentations. After lunch, we will end the workshop with Paul Wouters' lecture on The university and the challenge of open science policies and, of course, our traditional round of farewells and the group picture.

As usual, we have tried to connect a particular theme to a wide range of angles and topics. We are confident that you will find many opportunities to link the workshop to your own research interests and that this workshop will serve you in your future teaching and research activities.

We hope you will enjoy preparing for this workshop and look forward to meeting you (again) in November!

Bernike and Anne, also on behalf of the speakers

# Practical Notes

**How to proceed**
- Allow about a week (40 hours) for preparation of this workshop.
- Read the detailed programme and pay special attention to the 'Activities' so that you know in good time what you need to prepare and think about.
- Read all literature before you arrive. Make notes about what you don't understand, questions you would like to ask.
- Check the programme to see if you are one of the discussants for one of the PhD presentations.

**What to bring with you**
- The weather might be OK – so you may want to bring a Frisbee or a football for the breaks. Running addicts, take your running gear (one of your coordinators is guilty as charged).
- Money (cash) for drinks. Wine and soft drinks are offered with dinner, but you must pay for any other drinks you have before you leave on Friday. (For those attending for the first time – there are informal drinks later in the evening once the formal programme has finished.)
- For the exercises, an object.

**Attendance/cancellation**

If, for any reason, you are unable to attend the workshop, please let Elize Schiweck (e.schiweck@utwente.nl) know **as soon as you can**. We may be able to offer your place to someone on the waiting list if we know soon enough. If notice of cancellation is received more than 10 days prior to the start of the workshop, you will receive a refund for all of the fees, minus €50 to cover the costs of administration and course materials. In the case of cancellations received less than 10 days before the start of the workshop, fees and any other costs that have been incurred by WTMC will not be refunded. In order to receive credit for attending the workshop, you are required to be present for the entire event. If this creates problems, then please contact the co-ordinators beforehand and as soon as possible.

# Programme

NOTE: preparations needed for sessions 1.1 (bring something), 1.4 (make a poster), and 2.3/2.5 (make and bring three descriptions)

Monday:
| | |
|---|---|
| 11.00-11.30 | Arrivals and coffee |
| 11.30-12.30 | 1.1 Opening & introductions |
| 12.30-13.30 | Lunch |
| 13.30-15.00 | 1.2 Frank Miedema |
| 15.00-15.30 | Tea |
| 15.30-17.00 | 1.3 Colette Bos |
| 17.30-19.00 | Dinner |
| 19.00-20.30 | 1.4 Re-enacting NWA |

Tuesday:
| | |
|---|---|
| 09.00-09.15 | What kept you awake |
| 09.15-10.15 | 2.1 Poster Presentations |
| 10.15-10.45 | Coffee |
| 10.45-12.15 | 2.2 Evelyn Wan |
| 12.15-13.30 | Lunch |
| 13.30-15.00 | 2.3 Imagining Publics #1 |
| 15.00-15.30 | Tea |
| 15.30-17.00 | 2.4 Ismael Rafols |
| 17.00-17.15 | Serge Horbach (PhD representatives) |
| 17.30-19.00 | Dinner |
| 19.00-20.30 | 2.5 Imagining Publics #2 |

Wednesday:
| | |
|---|---|
| 09.00-09.15 | What kept you awake |
| 09.15-10.45 | 3.1 Core Reading |
| 10.45-11.00 | Coffee |
| 11.00-12.30 | 3.2 PhD Presentations |
| 12.30-13.30 | Lunch |
| 13.30-15.00 | 3.3 Paul Wouters |
| 15.00-15.30 | Endings |

# Detailed overview

## 1.1 Opening and introduction

As usual, we will start the workshop with a round of introductions, asking you to briefly explain who you are, where you work, and what your research is about. Also, we will briefly discuss what each of us hopes or expects to get out of this workshop.

*Preparation:*
- Read the blurbs about everybody's research in the back of this reader.
- Bring an object related to your work and secretly hand to Bernike or Anne, who will curate a small exhibition to present your work to the group.

## 1.2 Frank Miedema: Transition to open science

Open Science is the opening up of science also at the front, thus in the phase of problem choice and at the end phase of knowledge production through Open Access publication, including sharing of data if possible. To achieve this change in behavior, we need open access policies and at the same time to enforce a change in the incentive and rewards system. Even in 2019 for many this is an important change in the thinking about science in society. It will change the discourse and indicators of quality and excellence and thus the power structures and resource allocations.

Open Science is a new Social Contract for Science in the 21$^{st}$ century that will change the daily practice of our research and will affect all of us in the science community and academia. It is now widely understood that this requires a change in the publishing and incentive & reward system that can only be brought about from the top. Academic leadership is critical to bring about this transition to implement Open Science.

*Readings:*
Dijstelbloem, H., Miedema, F., Huisman, F., Mijnhardt, W., 2014. Debate, progress and recommendations.

Miedema, F., 2012. The Players and the Game, in: Science 3.0: Real Science, Real Knowledge. Amsterdam University Press, pp. 9–26.

## 1.3  Colette Bos: Policy for open science or opening up science policy? The case of the Dutch National Research Agenda

The Dutch National Research Agenda (Nationale Wetenschapsagenda, *NWA* in Dutch) is an initiative that started in 2015. Led by the 'knowledge coalition', different organisations representing the Dutch research and innovation field, this initiative to strengthen the connection between research and society, started with asking all Dutch citizens for their research question for science. Almost four years later this initiative has led to 12.000 questions, 140 cluster questions, 25 'routes' (thematic networks), many science communication initiatives and has resulted in a substantial structural investment in research and innovation (400M€ per year). For this presentation I will describe the NWA process and reflect upon the 'opening up' of research

agendas, the role (and creation) of public(s) in this process and the implications for practices and requirements of scientific research.

*Readings:*
Claassen, R.J.G., Düwell, M., 2017. A National Research Agenda and the Self-Understanding of Modern Universities, in: The Dutch National Research Agenda in Perspective. Amsterdam University Press, p. 193null.

European Commission, Directorate-General for Research and Innovation, 2016. Open innovation, open science, open to the world : a vision for Europe. ONLINE

Marres, N., 2007. The Issues Deserve More Credit: Pragmatist Contributions to the Study of Public Involvement in Controversy. Soc. Stud. Sci. 37, 759–780. https://doi.org/10.1177/0306312706077367

## 1.4 Poster presentation (participants) (skill)
This is a brand new element to the Workshop programme. Participants whose projects and/or expertise relate to the theme of the workshop, may put up a poster about their work. The session will be devoted to the consultation of the posters and conversations with the 'owners' about their work.

## 1.5 Exercise: Re-enacting the NWA
This exercise involves playing out some of the key dilemmas that emerged in the NWA-process. Instructions will follow during the workshop.

## 2.2 Evelyn Wan: A Place for indigenous knowledges: What belongs to 'citizen science' in times of climate crises?
Public participation in scientific research gains more and more momentum and is deemed increasingly valuable in light of the climate crisis. "'Citizen science' offers to turn anyone into a scientist, promising to produce new knowledge, educating the public and above all reconfiguring science from a closed to an open activity—in short, "democratizing" science." (Strasser et. al 2019, 66). Coupled with the wide availability of smart gadgets and digital tools, many citizen science projects are conducted through generating data-sets that monitor plant and wildlife populations, weather and astronomical data, while others can also participate digitally by tagging and sorting collected data, or by donating processing power of their computers at home. This epoch of 'citizen science' brings back some age-old questions of whose knowledge counts as science, and where certain historically left-out knowledges fit within the epistemic practices of participatory research. Data is often understood in the narrow form of mediated computational data collected by sensors, and humans aided by digital devices.

This presentation focuses on the challenges of bringing indigenous knowledges into the folds of climate science, and how to deal with the postcolonial legacy of hierarchised knowledge, in a time when the global community has much to learn from indigenous and community-based approaches to climate change adaptation and resilience. Could there be an effective bridging

between climate science and indigenous knowledges? Are 'Western' sciences and indigenous sciences and epistemologies fundamentally at odds? Could technology play a role in mediating these different sets of knowledges?

*Readings:*
Chisholm Hatfield, S., Marino, E., Whyte, K.P., Dello, K.D., Mote, P.W., 2018. Indian time: time, seasonality, and culture in Traditional Ecological Knowledge of climate change. Ecol. Process. 7, 25. https://doi.org/10.1186/s13717-018-0136-6

Povinelli, E.A., 2016. Ch 6, Downloading the Dreaming. Geontologies: A Requiem to Late Liberalism. Duke University Press. https://doi.org/10.1215/9780822373810

Recommended for those who are interested: background reading on Povinelli's theoretical framework of geontologies: https://www.e-flux.com/architecture/liquid-utility/259667/the-urban-intensions-of-geontopower/

## 2.3 Exercise: Imagining publics part 1 (skill)

This skills exercise requires you to think about the publics of your work. Too often, we simply assume that our academic writing will just find its way to its readership, and too often, we assume that only written texts are fit to create publics for our writings. But publics are not out there, eagerly waiting to digest our work. We must make our audiences, and to do that we might not only employ different linguistic genres, but other mediums and formats as well. The exercise relates to the re-enactment about NWA dilemmas – some of which clearly involved the creation of publics – as well as to the lecture of Evelyn Wan who pointed out that 'opening up' comes with specific assumptions about the qualities and capacities of publics, and with related in/exclusions. This is also an opportunity to explore the systemic changes that might be required, as put forth by Frank Miedema.

**PREPARATION**
**Make three versions** of a specific part of your PhD project. Each version should aim to reach/make a *different* (imaginary) public or audience or readership. Use the project description, a specific chapter or article, or any other elements of your project, to produce these 'translations'.

The *first version* is a text (an abstract, conclusions, recommendations, conference proposal, etc.).
The *second version* is another medium (a video, a soundtrack, pictures etc.).
The *third version* is (a plan for) an event or an experiment with a concrete public (a focus-group, an experiment, a game etc) related to your project.

**Bring these three versions with you** in a format that can easily be shared with others. Make sure they are presentable (read, view, explain) in about 5 minutes.
For each version, be ready to articulate:
- who do you want to reach with this?
- how does the medium or the format matter?
- could version 3 or 2 also work for the audience of version 1 (or version 1 for the audience of 2 or 3, etc.)? Why, or why not?

- what do the specific translations assume about your imagined public? (think of capacities, knowledges, skills etc.)

**In this session** you will work in groups of 3, and in three rounds of 30 minutes. Each round is dedicated to a specific version (so round 1 is about the written text, round 2 about the other medium, round 3 about the event).

## 2.4 Ismael Ralofs: Evaluation and open science: the need for contextualisation for assessing open knowledge practices

Research evaluation systems are seen as one of the major hurdles for the development of Open Science (OS). This is due to the use (direct, indirect or implicit) of journal impact factors or rankings in a variety of evaluation processes. In order to foster OS, various European bodies have requested the development of new indicators (e.g. *Altmetrics*) that would foster, rather than inhibit OS. This search for new indicators has clashed with the ambiguity of the task. The diversity of practices and contexts at which evaluation and science operate makes the goal of coming up with specific indicators very challenging. What should be understood as Open Science in evaluation? How should OS by interpreted in the face of diversity of practices and contexts? How can this be captured with a set of indicators? How to account for inequality in resources? How are these choices influenced by the policy goal of evaluation? The session aims explore the diversity of open knowledge practices with examples from the studies by the course participants. We also hope to generate new ideas on how assess these open knowledge practices with their participation.

*Readings*:

Bezuidenhout, L.M., Leonelli, S., Kelly, A.H., Rappert, B., 2017. Beyond the digital divide: Towards a situated approach to open data. Sci. Public Policy 44, 464–475. https://doi.org/10.1093/scipol/scw036

Interview Leslie Chan, https://ocsdnet.org/confessions-of-an-open-access-advocate-leslie-chan/

European Commission, Expert Group on Indicators for Researchers' Engagement with Open Science, 2019. Indicator Frameworks for Fostering Open Knowledge Practices in Science and Scholarship.

## 2.5 Exercise: Imagining publics part 2 (skill)

With your group, you spend 30 minutes discussion your findings and insights from the first round, to choose from these at least one salient point, and to prepare a short presentation of this point to the plenary with the use one or more of the formats (text, other medium, event). We will then present to each other and discuss the presentations.

Important: given that your audience here is made up of people who have done the exact same exercise, try to think of salient points that might be less obvious so that there is a possibility of surprise, novelty or disruption.

## 3.1 Core reading and discussion questions: Irwin& Michaels 2003.
*Science, Social Theory and Public Knowledge*

Irwin, A., Michael, M., 2003, 'Ethno-epistemic assemblages: heterogeneity and relationality in scientific citizenship'. In *Science, Social Theory and Public Knowledge*. Maidenhead (Philadelphia): Open University Press, pp. 111-136.

Read this classic text carefully, and write down things you have difficulty grasping, find inspiring or illuminating given the topic of the workshop, or find questionable.

During the core reading session, you will work in small groups of 3 to discuss this text. Questions to aid the discussion will be handed out during the meeting. We will end with a small plenary discussion.

**Questions for discussion**

In the last decades of the previous century, STS conceptualized efforts (and obligations) of opening up conversations on (controverial) scientific developments to non-academics in terms of *Public Understanding(s) of Science*. Irwin and Michael seek to radically open up this paradigm of PUS with its proposition/assumption of 'publics' and 'academics' as given and pre-existing, and operating as a binary or an opposition. These authors question PUS' often simplistic and unexamined notions of 'publics' and 'academics'.

- What gets 'blurred' and 'mixed up' when hybrid publics engage with matters of concern, and with what kinds of effects?
- What do Irwin and Michael mean with '*ethno-epistemic assemblages*'? (Try to unpack the individual terms of the concept as well.) In which ways do they find the concept helpful?
- How does it relate to and differ from other conceptualisations of deliberation: discourse coalitions, actor network theory, epistemic communities and social worlds' theory?
- What are the ramifications of the concept 'scientific citizenship'?
- What do you think of the usefulness of the concept (as articulated in the conclusions of the chapter)?

- Use the concept of ethno-epistemic assemblages to critically look back at at least one of the lectures of this workshop so far (Miedema, Bos, Wan, Ralofs). To what kinds of assemblages did the lecture (explicitly or implicitly) propose science to 'open up' to?

Can you pick an example from a lecture (an example, or a problematization, or a proposal of opening science) and re-interpret it with this concept? Would it become an example of something else, would other things become problematic, or would you have a different proposal?


## 3.2 PhD presentations (skill)

Ivan Veul - Tessa Roedema (discussant)
Andre Luiz Brasil - Lea Beiermann (discussant)
Luc van Summeren - Denise Petzold (discussant)

- The discussants may want to get in touch with the presenters to prepare some comments (under 5 minutes, to allow for more general discussion).
- Please take note of the 'feedback form for presentations' at the end of the reader.
- Presenters: a projector and PC are available. Please stick to 15 minutes maximum!

## 3.3 Paul Wouters: The university and the challenge of open science policies

"Open Science" is all the rage in science policy. European funders have joined in an effort to tip the academic publication system in a new open access framework with Plan S, supported by the European Commission. But what do these policies actually mean and what future do they create for researchers? This is by no means clear. Part of the problem is that under the slogan of "open science" quite different theoretical and political agendas are pushed. How the details of open science policies are implemented is therefore crucially important, leading to quite different futures of knowledge creation and circulation.

In this talk, I will first give an overview of the most important frameworks that are relevant for our understanding of open science policies. An important role in this debate will be played in the near future, I will argue, by the bottom-up creation of "open science communities" in universities, usually initiated by early career researchers. Then I will describe the most important aspects of the open science policy of the European Commission (at least as I understand it) and the challenges this creates for the universities in our continent. Third, I will discuss what this means for the debate about the career prospects for early career researchers and the way we should evaluate open science activities. Last, I will give an overview of relevant work on open science indicators.

*Readings:*
Ayris, P., 2018. Open Science and its role in universities: A roadmap for cultural change, Advice Paper #24. LERU.

Mirowski, P., 2018. The future(s) of open science. Soc. Stud. Sci. 48, 171–203. https://doi.org/10.1177/0306312718772086

# About the speakers

**Frank Miedema,** PhD, professor of Immunology**,** is Vice Rector for Research and chair of the Utrecht University Open Science Program. He studied biochemistry in Groningen and obtained a PhD from the University of Amsterdam. After a career in biomedical (HIV/AIDS) research in Amsterdam, from January 2009 to March 2019 he was dean and vice chairman of the Executive Board at the University Medical Center Utrecht. He is one of the initiators of Science in Transition (2013) who argued that science and in particular the academic incentive and reward system are in need of fundamental reform to increase quality and impact. Next to Science for Science, the impact on society must be valued more and societal stakeholders should be involved more in the production of knowledge.

**Colette Bos** has worked at the NWA program office since 2015. She received her PhD from Utrecht University, where she researched how large societal goals (like sustainability or the ageing society) were articulated as these goals moved from science policy to researchers in nanotechnology and how the different articulations of broad societal challenges are used by many different actors to specify, justify and legitimate different directions of research.

**Evelyn Wan** is a postdoctoral researcher at the Tilburg Institute for Law, Technology, and Society at Tilburg University, and an affiliated researcher at the Institute for Cultural Inquiry at Utrecht University. She graduated cum laude from her PhD programme with her dissertation, "Clocked!: Time and Biopower in the Age of Algorithms", and was awarded a national dissertation prize by the Praemium Erasmianum Foundation in the Netherlands. Her work on the temporalities and politics of digital culture and algorithmic governance is interdisciplinary in nature, and straddles media and performance studies, gender and postcolonial theory, and legal and policy research.

**Ismael Rafols** is a science policy analyst at Ingenio (CSIC-UPV, Universitat Politènica de València), visiting professor at CWTS (University of Leiden) and adjunct faculty at SPRU (Science Policy Research Unit at the University of Sussex). He develops more plural S&T indicators for informing evaluation, funding and research strategies. Ismael received a PhD in biophysics from Tohoku University (Sendai, Japan) and was postdoctoral researcher in nanobiotechnology at Cornell University (NY, US). Currently, he is working on research portfolios as tools to facilitate deliberation on research prioritization for grand challenges such as bird flu or obesity. He is also exploring inclusive metrics, to correct for indicator biases and their effects, for example regarding local knowledge.

**Paul Wouters** is professor of scientometrics and Dean of the Leiden University Faculty of Social and Behavioural Sciences. He has a Masters in biochemistry (Free University of Amsterdam, 1977) and a PhD in science and technology studies (University of Amsterdam, 1999). In between these degrees he has worked as science journalist and as editor-in-chief of a daily newspaper ("De Waarheid"). Paul was coordinator of WTMC and was recently chair of the WTMC board. He has published on the history of the Science Citation Index, on and in scientometrics, and on the way the criteria of scientific quality and relevance have been changed by the use of performance indicators. He has also studied the role of information and information technologies in the creation of new scientific and scholarly knowledge. In this area, he was appointed as leader of 2 research programmes by the Royal Netherlands Academy of Arts and Sciences: *Networked Research and Digital Information (Nerdi)* (2000 - 2005) and *The Virtual Knowledge Studio for the Humanities and Social Sciences (VKS)* (2005 - 2010). The experiences and

insights gained in the VKS were condensed in *Virtual Knowledge. Experimenting in the Humanities and Social Sciences*, (MIT Press 2013). He is also member of the international advisory board of the Network for Advancing and Evaluating the Societal Impact of Science (AESIS Network).

## About the co-ordinators

**Bernike Pasveer** is an assistant professor at the department of STS of the Faculty of Arts & Social Sciences (FASoS) at Maastricht University. She has worked on medical (imaging) technologies; on the work through which are constituted the so called 'natural' achievements and doings of the human body such as childbirth, reproduction, sports, dying, and (her current research) food. She has recently co-edited a book called *Ways of Home Making in Care for Later Life* (forthcoming in 2020). She has a PhD in STS from the University of Amsterdam, is member of the NIAS-Lorentz Advisory Board, of the NIAS Scientific Advisory Board, and programme director of the debating centre Sphinx in Maastricht.

**Anne Beaulieu** is associate professor of Science and Technology Studies at Campus Fryslan, University of Groningen and director of the Data Research Centre. She works on creating knowledge infrastructures for sustainability and is responsible for the major Responsible Planet in the programme Global Responsibility and Leadership. She also writes and teaches about the societal aspects of energy and Big Data at the Johan Bernouilli Institute of Mathematics and Computer Science. She is the co-founder of the Groningen Energy Summer School for PhDs and acted as one of its scientific directors for 6 years. She is a member of the Board of Studium General Groningen and of the NIAS-Lorentz Advisory Board.

## Readings for this event

Ayris, P., 2018. Open Science andits role in universities: A roadmap for cultural change, Advice Paper #24. LERU.

Bezuidenhout, L.M., Leonelli, S., Kelly, A.H., Rappert, B., 2017. Beyond the digital divide: Towards a situated approach to open data. Sci. Public Policy 44, 464–475. https://doi.org/10.1093/scipol/scw036

Chisholm Hatfield, S., Marino, E., Whyte, K.P., Dello, K.D., Mote, P.W., 2018. Indian time: time, seasonality, and culture in Traditional Ecological Knowledge of climate change. Ecol. Process. 7, 25. https://doi.org/10.1186/s13717-018-0136-6

Claassen, R.J.G., Düwell, M., 2017. A National Research Agenda and the Self-Understanding of Modern Universities, in: The Dutch National Research Agenda in Perspective. Amsterdam University Press, p. 193null.

Dijstelbloem, H., Miedema, F., Huisman, F., Mijnhardt, W., 2014. Debate, progress and recommendations.

European Commission, Directorate-General for Research and Innovation, 2016. Open innovation, open science, open to the world : a vision for Europe. ONLINE

European Commission, Directorate-General for Research and Innovation, 2016. Realising the European open science cloud: first report and recommendations of the Commission high level expert group on the European open science cloud. Publications Office, Luxembourg.

European Commission, Expert Group on Indicators for Researchers' Engagement with Open Science, 2019. Indicator Frameworks for Fostering Open Knowledge Practices in Science and Scholarship.

Irwin, A., Michael, M., 2003. Chpater 6. Science, Social Theory and Public Knowledge, 1 edition. ed. Open University Press, Maidenhead ; Philadelphia.

Marres, N., 2007. The Issues Deserve More Credit: Pragmatist Contributions to the Study of Public Involvement in Controversy. Soc. Stud. Sci. 37, 759–780. https://doi.org/10.1177/0306312706077367

Miedema, F., 2012. The Players and the Game, in: Science 3.0: Real Science, Real Knowledge. Amsterdam University Press, pp. 9–26.

Mirowski, P., 2018. The future(s) of open science. Soc. Stud. Sci. 48, 171–203. https://doi.org/10.1177/0306312718772086

Povinelli, E.A., 2016. Downloading the Dreaming. Geontologies: A Requiem to Late Liberalism. Duke University Press. https://doi.org/10.1215/9780822373810

# List of participants

| No. | First name | Surname | University/Organisation | What is the topic of your research (5 lines)? |
|---|---|---|---|---|
| 1 | Lea | Beiermann | Maastricht University | Nineteenth-century microscopy publications invited microscopists in various disciplines to contribute material, facilitating the formation of a diverse microscopy community. By analysing circulating microscopy publications, I investigate how nineteenth-century media enabled microscopists to collaborate. Moreover, building on the nineteenth-century model of collaboration, I invite present-day citizen scientists to help me analyse digitised nineteenth-century publications and track the circulation of microscopy illustrations. |
| 2 | Sanne | Raap | Maastricht University | My research is about the meaning of public places and public life for the well being of citizens. My ethnography focuses on three disadvantaged neighborhouds in Maastricht with low health profiles and looks at how, through care practices, action research and community organizing, public life in the neighborhoods is constituted and understood. |
| 3 | Andre Luiz | Brasil Varandas Pinto | Universiteit Leiden | In order to contribute to the continuous evolution of assessment practices of the Brazilian System of Research and Graduate Education, my research combines Scientometrics and Public Policy in order to upgrade the current evaluation model adopted, valuing the country's strengths while acknowledging and addressing its weaknesses. |
| 4 | Ivan | Veul | Radboud University | In my PhD project, I do research into what users think of the increasing role of Big Tech companies in their lives. Rather than looking at individual technologies, I look at the (data-driven) mechanisms Big Tech companies apply at an aggregate level and how these mechanisms shape their products and affect users. |
| 5 | Joyce | Hoek | University of Groningen | The project is called "Back to Bayesics: Solving the Reproducibility Crisis in Biomedicine." I will be looking into problems with the use of statistics in clinical trials and how different organizations involved with science (regulatory authorities, policy makers, journals, etc.) deal with statistical evidence in general and these problems and insecurities in particular. |
| 6 | Wouter | Van Rossem | University of Twente | European mobility and migration management has increasingly digitized over the last decades with the creation of a complex data infrastructure for capturing the digital identities of people on the move. In my research I look at how different forms of data quality shape and are shaped by the data infrastructure. From document analysis and ethnographic fieldwork of data quality inscriptions and practices we expect to see how data quality have shaped new relationships between actors. That the changing intended use of the data have affected the actual data quality practices. And that different social groups' epistemic cultures and expectations on data quality give rise to different technical design. |

| No. | First name | Surname | University/Organisation | What is the topic of your research (5 lines)? |
|---|---|---|---|---|
| 7 | Tessa | Roedema | Vrije Universiteit Amsterdam | My PhD research is part of the EU-funded RETHINK project. This research aims to address the current changes in the science communication landscape, that occur as a result of blurring boundaries between science and society and digitalisation. RETHINK contributes to making the European science communication ecosystem more open, inclusive, reflexive and adaptive. We aim to improve the quality of interactions between science and society by providing concrete recommendations and training resources for nurturing open and reflexive science-society interfaces. A guiding principle of RETHINK is that the contextual knowledge of citizens and scicomm practitioners across the EU should play a vital role in shaping future scientific and technological developments and the sharing of this knowledge should be facilitated. |
| 8 | Denise | Petzold | Maastricht University | I investigate how works of symphonic music are made obdurate through the use of musical artefacts in practice. With the help of STS and Museum Studies, I want to understand how these works might be 'opened up' from a craft-based perspective in order for musical institutions to address the tension between the current drive for innovation in the classical music landscape and the conservation of artistic heritage. My project is positioned in the Maastricht Centre for the Innovation of Classical Music (MCICM). |
| 9 | Luc | van Summeren | Eindhoven University of Technology | Community-driven energy initiatives receive a lot of interest as potential drivers of the energy transition. Until now they have mainly been involved in energy generation and conservation. Some of them get involved in smart grid projects and energy management. This research aims to further investigate the potential role of community-based virtual power plants in the energy transition. |
| 10 | Jacqueline | Ashkin | Leiden University | I will be exploring the relationship between evaluation practices and knowledge production in marine science. Part of the ERC project FluidKnowledge. |
| 11 | Sarah Rose | Bieszczad | Leiden University | My precise topic is still unknown, as I am in the first month of my PhD, but my work is in Prof. de Rijcke's project Fluid Knowledge, wherein we will look at evaluation practices in relation to the field of Ocean Science. |
| 12 | Selen | Eren | University of Groningen | My PhD dissertation aims to find ways to reconcile the political/historical dimension of knowledge infrastructures and the hope for more reliable and responsible knowledge claims for the survival of biodiversity. It addresses pressing issues of epistemology of big data/algorithms as well as sustainability and governance in the so called 'post-truth' era. |
| 13 | Georgiana | Kotsou | Maastricht University | Convention Conventions. Routines and Rituals in International Scientific Conferences, 1910-1960 |

## Presentation guidelines

**For presenters**

- A projector and PC are available. Copy your presentation onto the PC in advance. You may want to use your own laptop, which usually works fine, but mind that it poses an extra risk of technical issues. Also, if you have video material, make sure you test it ahead of time.
- The duration of your presentation should be **15 minutes**. Then there is another 15 minutes for the discussant and plenary discussion. We keep time very strictly.
- Try to make a sophisticated choice on what you want to present. One typical pitfall is wanting to give an overview of your whole PhD project, which leads to an unfocused and overloaded presentation. Instead, select an interesting aspect of your research and discuss it in-depth.

**For discussants**

- Join the presenter in the front of the room after their presentation
- Present your comments in no more than **5 minutes**.
- Mind that being a discussant is not about pointing out all the flaws in the presenter's argument, but about setting the stage for a constructive discussion. Offering critique is good, but also try to bring out what the potentials of the argument are for improvement, and to identify some questions for the speaker or the group as a whole.
- You may want to get in touch with the presenter to prepare some comments. Feedback should address the quality of the presentation itself (slides, clarity, focus) as well as its content.

**All others**

- Please fill in a **feedback form** for each presentation (they will be provided). They can be found at the end of the reader. They will be collected and given to the presenter.
- Join the discussion after the discussant has given their feedback.
- Chances are that there is not enough time to discuss all questions from the audience. Please write them down on the feedback form. Even without discussion, your questions might be very valuable for the presenter!

## Feedback on presentations

This is to help you give feedback to your fellow participants, some of whom will be presenting their research during this event. Feedback forms will be available at Soeterbeeck. Use a separate sheet for each presentation, put your name and that of the presenter at the top of a piece of paper. That way, if something isn't clear, the presenter knows whom to ask. Write your comments during or immediately after the presentation and give them to the presenter during the next break.

Points to consider when preparing feedback (you don't need to cover everything):

- Attractiveness of title and opening
- Usefulness of summary provided in the reader

- Clarity and significance of problem definition, research questions and aims (refinement of, addition to, clarification or rejection of an existing thesis)
- Use of theory and/or historiography (concepts, interpretations, etc.)
- Embeddedness in fields relevant to WTMC
- Clarity of structure
- Presentation of the method(s) employed
- Validity and reliability of the method(s) employed
- Accessibility of the research data to the audience
- Use of (intriguing and relevant) details and examples
- Clarity of argument
- Relation to the nature and level of expertise of audience
- Use of PowerPoint and other audio-visual resources
- Contact with audience and audibility of speech
- Clarity and significance of conclusions
- Response to questions and comments
- Time management