esdit

ethics of socially
disruptive technologies

2020-2021

Biannual report

June 2022

Overview, research lines and tracks reports, output,
researchers and budget information.

Ethics of Socially Disruptive Technologies (ESDiT)

NWO grant number: 024.004.031

Management Board

Prof. Dr. Philip Brey (programme leader)	University of Twente
Prof. Dr. Sabine Roeser (vice programme leader)	Delft University of Technology
Prof. Dr. Joel Anderson	Utrecht University
Prof. Dr. Vincent Müller	Eindhoven University of Technology
Prof. Dr. Ir. Ibo van de Poel	Delft University of Technology
Prof. Dr. Ingrid Robeyns	Utrecht University
Prof. Dr. Ir. Peter-Paul Verbeek	University of Twente
Prof. Dr. Marcel Verweij	Wageningen University & Research
Prof. Dr. Wijnand IJsselsteijn	Eindhoven University of Technology

Scientific Advisory Board (as per end 2021)

Prof. Dr. Batya Friedman (Chair)	University of Washington
Prof. Dr. Sheila Jasanoff	Harvard University
Prof. Dr. David Keith	Harvard University

Consortium Partners

UNIVERSITY OF TWENTE.

TUDelft — Delft University of Technology

TU/e — EINDHOVEN UNIVERSITY OF TECHNOLOGY

WAGENINGEN UNIVERSITY & RESEARCH

Universiteit Utrecht

UMC Utrecht

Universiteit Leiden — The Netherlands

ESDiT Biannual Report 2020-2021

Introduction

ESDiT 2020-2021

We are at the beginning of a new era of technological innovation in which new generations of the technologies that have emerged since the second world war are converging and undergoing widespread integration, making whole new fields possible, including artificial intelligence, robotics, synthetic biology, nanomedicine, next-generation genomics, neurotechnology and geo-engineering.

These are socially disruptive technologies (SDTs) that have the potential to radically alter everyday life, cultural practices and social and economic institutions. The ethical issues raised by these technologies are profound. These technologies raise into question whether we can maintain our privacy, autonomy and fundamental liberties.

They will also cause redistributions of powers, wealth, and other social goods, raising into question whether they will make society more or less just. They may affect well-being sustainability, and the functioning of democratic institutions. More than enough reasons, therefore, to undertake an ethical analysis of them.

In the Gravitation programme Ethics of Socially Disruptive Technologies, or ESDiT, we undertake such an ethical analysis, in multidisciplinary collaboration between ethicists, social scientists and engineers, over a ten-year time stretch, and involving seven institutions.

The objectives of the programme are not only to ethically analyze 21st century disruptive technologies, however. They also include the development of new methods, approaches, and theories for ethically assessing, evaluating and guiding SDTs.

In doing this, a central point of departure is that we cannot take for granted the key ethical and philosophical concepts that ethicists use for their ethical analysis, because these very concepts are being challenged by SDTs.

SDTs change and affect our understanding of concepts like nature, humanity, freedom, and agency.

For this reason, we need to investigate the disruption of these concepts, and amend them in order to be able to provide better ethical analysis.

This report covers the activities and results of the first two years of the ESDiT programme. Of these two years, only sixteen months have been devoted to actual research. In the first eight months, our focus has been on preparations, hiring new personnel, developing research plans, and establishing procedures.

From September 2020 on, after the arrival of new staff, the research lines started to function, and research was started up. This means that the results presented in this report are the very first results of our programme, from a period in which we were still searching and establishing ourselves.

We were moreover doing so during a period in which we were hardly able to meet face-to-face due to the Covid pandemic. In spite of the challenges we faced, we did manage to have many meetings and events, and establish successful new routines and practices. There has been a good spirit within the consortium, and a drive to make the programme a collective success.

We are confident that the efforts of these past two years have laid a good foundation for the rest of the programme. I therefore present this report with poise and conviction.

Sincerely,

Prof. Dr. Philip Brey

ESDiT programme leader

Overview

Information about ESDiT consortium, governance & organisation of research

Overview

The NWO/OCW funded Gravitation programme *Ethics of Socially Disruptive Technologies* started in 2020. It is a research programme with seven Dutch participating universities, a combined budget of € 28 million and a running time of 10 years. The aim of the programme is to develop new theories and methods that are necessary to understand, morally assess and intervene in the development and implementation of the socially disruptive technologies of the 21st century.

This report comprises both 2020 and 2021. These years have been strange for everyone, the ESDiT consortium included. We have had to build our consortium without being able to physically meet for most of the time. This has been challenging. To counter the effects of the lockdown, we set up a Slack-environment to use as a virtual hub for the consortium. It has been a useful tool, but still a poor substitute for face to face interaction.

Consortium

Our main focus in the first year has been on building the consortium around a strong and diverse group of researchers. We already started out with seventeen applicants and co-applicants. We subsequently invited a number of mid-career researchers from the participating departments to join the consortium, and started hiring new tenure trackers, postdocs and PhD candidates.

For the year 2020, we were able to hire seven Tenure Trackers, two Postdocs, and seven PhD candidates. Most of them started in September. Originally we had planned for one Tenure Tracker at each of the four Technical Universities and Utrecht University. However, Delft University decided to hire their top two candidates, funding the second candidate from their in-kind contribution. And for Wageningen University, using the available funds to fund two Tenure Trackers part-time fit the department better.

Given the central role of the Tenure Trackers in the future of the consortium and of the field, and in line with the diversity goals in our proposal, we were especially committed to hiring a majority of female researchers for this group (see Appendix 2: researchers).

In 2021 we hired an additional six PhD candidates and one Postdoc. We had intended to hire a second postdoc on the project 'Qualitative Investigation of STEM Perspectives', but we were unable to find a suitable candidate for this position at the time.

By the end of 2021, almost sixty researchers had started collaborating in the programme, twenty-nine of which are fully funded through the Gravitation grant (including the six PI's) and another twenty-seven who are partly funded by it (referred to as in-kind fellows).

The distribution of fellows over participating institutions is as follows:

University / research fellows	funded	in-kind	total
Delft University of Technology	7	10	17
Eindhoven University of Technology	6	11	17
University of Twente	7	3	10
Utrecht University	5	2	7
Wageningen University & Research	4	1	5
Total	29	27	56

These numbers reflect only those who dedicate research time to the programme. Another twenty five or so researchers are connected to the programme in other ways, such as co-supervising PhD-candidates (referred to as associate fellows). We especially want to mention prof. Thomas Bäck (Leiden University) and prof. Nick Ramsey (UMC Utrecht), who contribute valuable expertise to the programme.

Governance

The programme is managed by a Management Board, consisting of nine members. This Board is chaired by the programme leader (prof. Philip Brey). Day-to-day management has been delegated to the Daily Board, which consists of the programme leader, and two support staff members, namely a programme manager (dr. Sander de Boer) and a project coordinator (Seeta Autar). The vice programme leader (prof. Sabine Roeser) receives all minutes of the Daily Board and provides input on the more strategic matters.

There have been two changes in the composition of the Management Board of the consortium. Prof. Marcus Düwell left Utrecht University; prof. Joel Anderson joined the Board as his replacement. And prof. Anthonie Meijers retired; prof. Vincent Müller joined the Board as his replacement. Also, as of January 2022, Melanie Braamhaar took over the role of programme manager.

In the first year we started setting up the necessary additional structures and procedures for running the programme (administrative, legal, boards, etc.). By the end of 2020 many of these were still work in progress, but much of the preparations had been completed. By the end of the academic year 2020/2021 everything was in place:

- Mentoring programme (programme to connect junior and senior members of the consortium in an informal way)

- Data Management Plan (according to the standards of the funding agency)

- Diversity Strategy (to ensure a culture that embraces diversity and inclusiveness)

- Reach Fund (research time funding scheme for researchers with care duties)

- Sabbatical Fund (funding scheme to spend a semester at another research institute)

- Consortium Agreement

On June 14, 2021 the Management Board had its first meeting with the Scientific Advisory Board (SAB). Based on this meeting and the documents received, the SAB then authored a note for the MB with recommendations. Its main recommendation was to develop a more extensive long-term strategy for the programme, that would clarify how it would reach its overall goals, and how successive stages of the programme would be used to utilize theories, methods and practices developed in earlier stages. Prompted in part by this note, the MB embarked to develop a more extensive long-term strategy, which it aimed to complete in early 2022.

Organisation of research
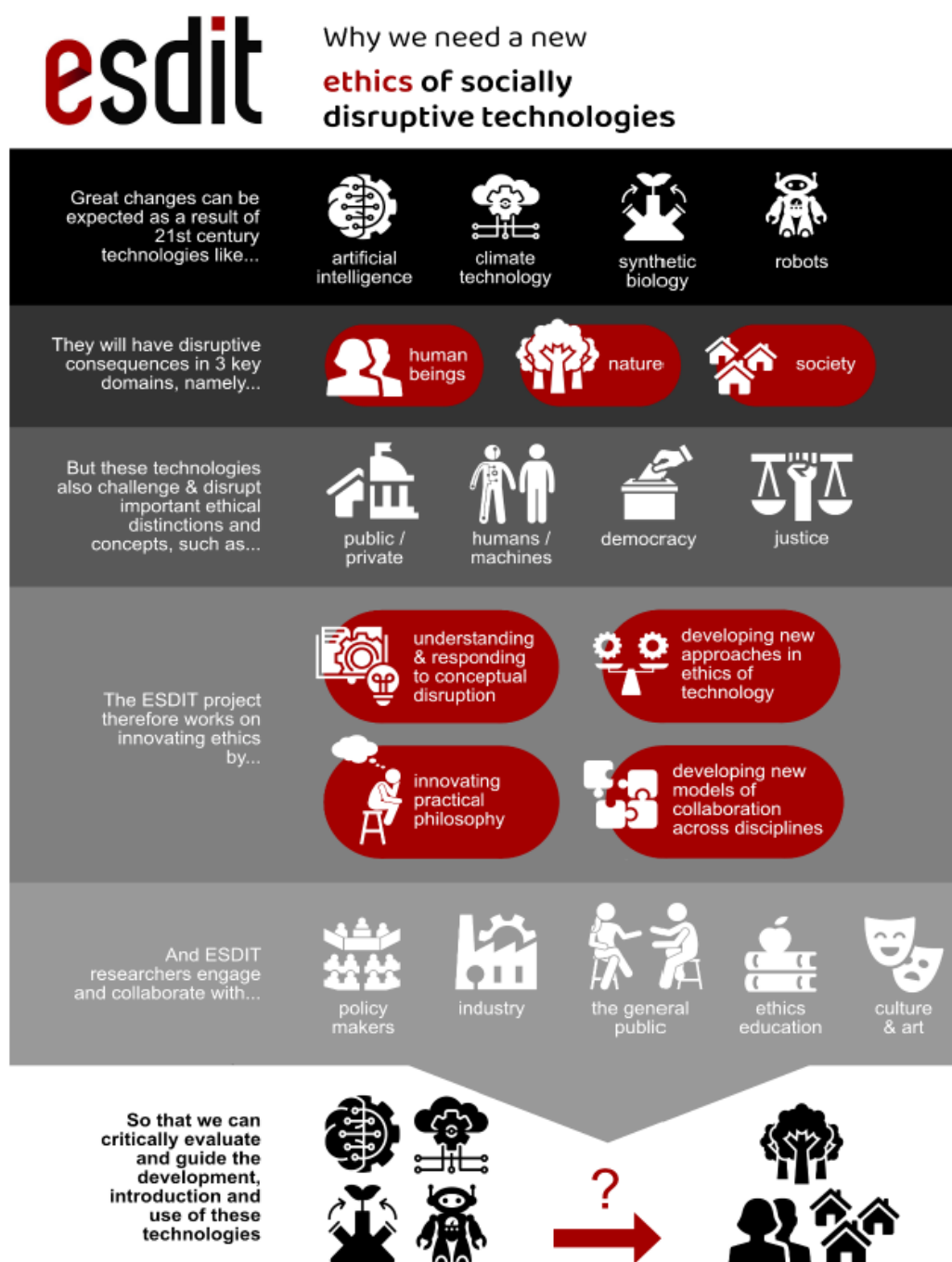
As stated in the programme proposal, we organize our research around four research lines, each of which is centered around a set of research questions:

HUMAN	NATURE	SOCIETY	SYNTHESIS
The Human Condition	Nature, Life and Human Intervention	The Future of a Free and Fair Society	Foundations & Synthesis
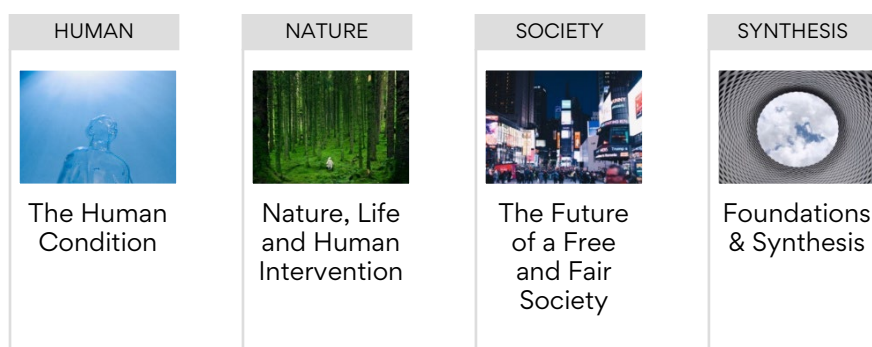
Each of these lines is led by 2 members of the Management Board. They are responsible for the scientific excellence of the research line and its integration into the overall research programme. In each of these lines, a tenure tracker is responsible for the day to day coordination. Each line meets approximately once every 6-7 weeks, and extra meetings may be scheduled for colloquia and reading groups. By the end of 2021, is was clear that the Tenure Trackers were increasingly involved in the research line leadership as well.

In addition to setting up the meetings of the individual research lines, we have also started organizing plenary events that emphasize the programme's overarching themes. We organized four consortium wide events in 2020. Most of these were necessarily conducted online.

- *Research meeting 3 June*: 'Conceptual change'

- *Research meeting 18 June*: 'Presentation of research plans in the four lines'

- *Workshop 16 September:* 'Introduction workshop for new hires'

- *Workshop 26 November:* 'Measuring the socially disruptive impact of technologies & intercultural philosophy of technology'

We have used these meetings mostly for people to get to know each other, to get acquainted with the workings of the programme, and to start developing a common language for talking about two central themes: conceptual change and social disruption.

In 2021 we organized the following consortium wide meetings:

- *Public meeting of the Nature line 18 May 2021:* Lecture by Christopher Preston

- *Away days 10-11 June 2021:* 'What is Conceptual Change?'

- *Workshop 9 September 2021*: 'Analyzing Conceptual Disruptions'

- *ESDiT consortium meeting 16 September 2021:* 'Further strengthening the collaborations between the research lines' (in person event)

- *Annual Research Day 24 November 2021:* Panel on 'conceptual disruption'

- *Public meeting of the Nature line 26 October 2021:* Lecture by Steven Vogel

- *Workshop 9 December 2021:* 'On the ideal and feasibility of control in case of socially disruptive technologies'

Reports

Report from the research lines and Report from the tracks

Report from the research lines

Each research line reported on the progress they had made in the years 2020 and 2021.

Research line

The Human Condition

1) Research activities, events and outreach

(research line coordinator Sven Nyholm - UU)

- Three new PhD candidates were hired: Caroline Bollen (TUD), research area: empathy, Neurodiversity and AAC technologies, Cindy Friedman (UU), research area: the ethics of humanoid robots, Kristy Claassen (UT), research area: the disruptive potential of Artificial Intelligence through Ubuntu.

- One new postdoctoral researcher was hired: Matthew Dennis (TU/e), research area: behavior change technologies for moral improvement.

- Two assistant professors joined the research line (as tenure Trackers): Sven Nyholm (UU), research area: applied ethics (especially the ethics of technology), ethical theory, and the history of ethics and Julia Hermann (UT), research area: the way new and emerging technologies, in particular biomedical technologies, affect fundamental concepts.

- A long-term (2020-2029) research agenda was developed that expands the original proposal.

- Initial developments are underway for a jointly written/collaborative book about socially disruptive technologies and the human condition.

- General meetings of the line were established every six weeks, which feature (a) planning and (b) presentation and discussion of research-in-progress by research line members (and the occasional invited guest).

- Outreach activities include the recording of podcasts highlighting the research by members of this research line, which are published in all main places where podcasts are published (Spotify, Anchor, Apple Podcasts and on the ESDiT website).

2) Contribution to research questions

Our research agenda includes 3 long-term research questions: RQ 1: In what ways and to what extend are socially disruptive technologies disrupting the human condition and our self-understanding as human beings? RQ 2: How do these disruptions challenge existing conceptualizations of 'the human', moral and anthropological theories, and

corresponding legal frameworks? RQ 3: Which ethical theories and normative frameworks are better equipped to provide normative guidance in responding to those challenges?

The following researchers' projects relate to RQ1: Caroline Bollen's PhD on empathy, neurodiversity and AAC technologies (supervised by Janna van Grunsven & Sabine Roeser); Matthew Dennis's post doc project on 'Behavior change technologies for moral improvement (supervised by Lily Frank, Andreas Spahn and Wijnand IJsselsteijn), Dina Babushkina's research about AI, personhood and agency, and Gunter Bombaert's research on the attention economy.

The following researchers' projects relate to RQ2: Anna van Oosterzee's PhD project on mental health labels and technology (supervised by Joel Anderson and Sander Werkhoven), Caroline Bollen's above-mentioned project, Kristy Claassen's PhD project on the disruptive potential of Artificial Intelligence through Ubuntu (supervised by Peter-Paul Verbeek), Janna van Grunsven's research on imagination and divergent bodily lives, Wijnand IJsselsteijn's research on technology and dementia.

The following researchers' projects relate to RQ3: Cindy Friedman's PhD project on the ethics of humanoid robots (supervised by Sven Nyholm, Ingrid Robeyns, Lily Frank & Peter-Paul Verbeek), Wijnand IJsselsteijn's research on virtual embodiment, Sven Nyholm's research on the ethics of human-robot interaction, and Wijnand IJsselsteijn's research on intelligence calibration.

3) Links with other research lines & contributions to conceptual disruption theme

Some members of this research line also participate in the F&S line, including Joel Anderson, Lily Frank and Sven Nyholm.

Sven Nyholm, Wijnand IJsselsteijn and Birna van Riemsdijk are also members of the committee organizing collaboration between the ESDiT gravitation project and the HI gravitation project.

The research outputs that have been published by 2021 focus on the disruption of the following concepts: 'agency', 'meaningfulness in life', 'well-being', and 'personhood'

4) Research line members (per 31-12-2021)

Human Condition line

Name	Category	Position	University
Bollen, Caroline	In-cash research fellow	PhD	Delft University of Technology
Claassen, Kristy	In-cash research fellow	PhD	University of Twente
Dennis, Matthew	In-cash research fellow	Postdoc	Eindhoven University of Technology
Friedman, Cindy	In-cash research fellow	PhD	Utrecht University

Hermann, Julia	In-cash research fellow	Assistant or associate professor	University of Twente
IJsselsteijn, Wijnand	In-cash research fellow	Full professor	Eindhoven University of Technology
Nyholm, Sven	In-cash research fellow	Assistant or associate professor	Utrecht University
Oosterzee van, Anna	In-cash research fellow	PhD	Utrecht University
Verbeek, Peter-Paul	In-cash research fellow	Full professor	University of Twente
Anderson, Joel	In-kind research fellow	Full professor	Utrecht University
Babushkina, Dina	In-kind research fellow	Assistant or associate professor	University of Twente
Bombaerts, Gunter	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
Frank, Lily	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
Grunsven van, Janna	In-kind research fellow	Assistant or associate professor	Delft University of Technology
Jacobs, Naomi	In-kind research fellow	Assistant or associate professor	University of Twente
Ruijten, Peter	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
Santoni de Sio, Filippo	In-kind research fellow	Assistant or associate professor	Delft University of Technology
Snijders, Chris	In-kind research fellow	Full professor	Eindhoven University of Technology
Werkhoven, Sander	In-kind research fellow	Assistant or associate professor	Utrecht University
Broersen, Jan	Associate fellow	Full professor	Utrecht University
Gertz, Nolen	Associate fellow	Assistant or associate professor	University of Twente
Jonker, Catholijn	Associate fellow	Full professor	Delft University of Technology
Kalis, Annemarie	Associate fellow	Assistant or associate professor	Utrecht University
Kamphorst, Bart	Associate fellow	Postdoc	Wageningen University & Research
Lakens, Daniel	Associate fellow	Assistant or associate professor	Eindhoven University of Technology
Ramsey, Nicolas (Nick)	Associate fellow	Full professor	UMC Utrecht
Riemsdijk, van, Birna	Associate fellow	Assistant or associate professor	University of Twente
Scheepers, Floortje	Associate fellow	Full professor	UMC Utrecht
Stramigioli, Stefano	Associate fellow	Full professor	University of Twente

Research line

Nature, Life and Human Intervention

1) **Research activities, events and outreach**

(research line coordinator: Vincent Blok -WUR)

- Four new PhD candidates were hired: Ben Hofbauer (TUD), research area: concepts and ethics in Solar Geoengineering - uncertainty & reversibility; Alessio Gerola (WUR), research area: beyond control-philosophical and ethical implications of biomimetic technologies; Julia Rijssenbeek (WUR), research area: toward an ecological understanding of hybrids - an outline of the ontological and ethical disruption of synthetic biology through metabolism; Karen Moesker (TUD), research area: ownership and responsibility in circular biobased wastewater technologies.

- Two associate professors joined the research line: Vincent Blok (WUR), research area: Philosophy of Technology, and Zoë Robaey (WUR), research area: Environmental Philosophy.

- In the first year, the nature line started with the execution of the original research plan by operationalizing the research plan in discussion with the members involved in the nature line. After year one, we evaluated the original research plan to bring more focus and coherence in the research questions of the nature line. We defined three main research topics: 1) nature of control and our control of nature; 2) the concept, moral status and value of nature; 3) responsibility for and the nature of human, animal and environmental flourishing.

- Nature line meetings were set up every six weeks. They comprise either a workshop on a particular concept ('control' (2021), invited leading authors in the field of the research line (Christopher Preston & Steve Vogel in 2021), or internal meetings to discuss PhD research proposals of the nature line PhD's and/or draft articles. Furthermore a nature line inspired session was organized during the Society for Philosophy and Technology conference in Lille (2021), on crossovers between environmental philosophy and philosophy of technology.

  Together with the publications of the nature line, these activities made the nature line of ESDIT increasingly visible in international debates at the crossroads of environmental philosophy and philosophy of technology.

- A PhD reading group was established with meetings every month on basic concepts related to conceptual disruption and nature.

2) Contribution to research questions

Our research agenda includes three long-term research topics: 1) nature of control and our control of nature; 2) the concept, moral status and value of nature; 3) responsibility for and the nature of human, animal and environmental flourishing. Each research topic is as an umbrella concept for more specific research questions. Each member of the nature line has expressed her/his interest to work on one or more research questions in either the short- or long-term.

By the end of 2021, we had a significant number of researchers working on topics 1-2, less researchers focus on topic 3. We had already produced research outputs in the forms of academic publications on topics 1 and 2.

3) Links with other research lines & contributions to conceptual disruption theme

In 2021, the nature line and the synthesis line organized together a workshop on 'conceptual disruption' in nature related technologies.

The research outputs that have been published by 2021 focus on the disruption of the following concepts: 'nature', 'technology', 'control', 'responsibility'.

4) Research line members (per 31-12-2021)

Nature line

Name	Category	Position	University
Blok, Vincent	In-cash research fellow	Assistant or associate professor	Wageningen University & Research
Gerola, Alessio	In-cash research fellow	PhD	Wageningen University & Research
Hofbauer, Benjamin	In-cash research fellow	PhD	Delft University of Technology
Moesker, Karen	In-cash research fellow	PhD	Delft University of Technology
Poel van de, Ibo	In-cash research fellow	Full professor	Delft University of Technology
Rijssenbeek, Julia	In-cash research fellow	PhD	Wageningen University & Research
Robaey, Zoë	In-cash research fellow	Assistant or associate professor	Wageningen University & Research
Doorn, Neelke	In-kind research fellow	Full professor	Delft University of Technology
Pesch, Udo	In-kind research fellow	Assistant or associate professor	Delft University of Technology
Taebi, Behnam	In-kind research fellow	Assistant or associate professor	Delft University of Technology
Verweij, Marcel	In-kind research fellow	Full professor	Wageningen University & Research
Bovenkerk, Bernice	Associate fellow	Assistant or associate professor	Wageningen University & Research

Hajer, Maarten	Associate fellow	Full professor	Utrecht University
Loosdrecht van, Mark	Associate fellow	Full professor	Delft University of Technology
Meijboom, Frank	Associate fellow	Assistant or associate professor	Utrecht University
Oost van der, John	Associate fellow	Full professor	Wageningen University & Research
Verhulst, Eveline	Associate fellow	Assistant or associate professor	Wageningen University & Research
Vuuren van, Detleft	Associate fellow	Full professor	Utrecht University

Research line

The Future of a Free and Fair Society

1) **Research activities, events and outreach**
   (research line coordinator: Elena Ziliotti – TUD)

- Six new PhD candidates were hired: Patricia Reyes Benavides (UT), research area: indigenous philosophy and internet-enabled Climate Activism Networks; Roxanne van der Puil (TU/e), research area: democracy and social media; Arthur Gwagwa (UU), research area: new technologies, democracy, Africa; Joseph Sta. Maria (TUD), research area: confucianism and digital technologies; Elisa Paiusco (UT), research area: intergenerational justice and carbon dioxide removal.

- Three assistant professors joined the research line (as Tenure Trackers): Elena Ziliotti (TUD), research area: democracy and confucianism; Emily Sullivan, research area: the intersection between philosophy and data/computer science and Patrik Hummel (TU/e), research area: data justice.

- A long-term (2020-2029) research agenda was developed that expands the original proposal (including two new research topics) and engages with the main key topics in social and political philosophy, linking them to conceptual and social disruption caused by technology.

- An additional research agenda was developed that includes non-Western philosophical approaches (See research projects of Arthur Gwagwa, Joseph Sta. Maria, Elena Ziliotti, and Patricia Reyes).

- Established general meetings of the line every two months.

- Established general reading groups every month in 2020.

- In 2021, a research group was created that meets every month. The research group is an informal environment where members of the line present their works in progress and receive constructive feedbacks by their peers.

2) Contribution to research questions

Our research agenda includes six long-term research topics:
1. Control and political institutions;
2. Democracy in a Technologically-Driven World;
3. A Sustainable Technological Society;
4. New Perspectives on Social Justice;
5. Rights and Duties in the 21st century;
6. Methodology of Social and Political Philosophy.

Each research topic is as an umbrella concept for more specific research questions (e.g. Topic 3 includes sub-questions on energy transition and climate change). Each member of the society line has expressed her/his interest to work on one or more research questions in either the short- or long-term.

By the end of 2021, we had a significant number of researchers working on topics 1-3 and 6, less researchers focus on topics 4 and 5. We had already produced research outputs in the forms of academic publications on the following topics: technology/autism (topic 3); social inequality and digital transformation (topic), wellbeing and technology (topic 3), deontology and digital behaviour change (topic 3), digital control and autonomy (topic 1), Confucianism and contemporary democracy (topic 2).

3) Links with other research lines & contributions to conceptual disruption theme

In 2021, the Society line and the Nature line have started working on a research collaboration between the two lines. We have identified Climate change as a common topic on which we can centre future joint events.

The research outputs that have been published by 2021 focus on the disruption of the following concepts: 'autistic person', 'well-being', 'social inequalities', 'autonomy', 'digital object', 'digital subject', and 'intersubjectivity'.

4) Research line members (per 31-12-2021)

Society line			
Name	**Category**	**Position**	**University**
Gwagwa, Arthur	In-cash research fellow	PhD	Utrecht University
Hummel, Patrik	In-cash research fellow	Assistant or associate professor	Eindhoven University of Technology
Paiusco, Elisa	In-cash research fellow	PhD	University of Twente

Puil van der, Roxanne	In-cash research fellow	PhD	Eindhoven University of Technology
Reyes Benavides, Patricia	In-cash research fellow	Phd	University of Twente
Robeyns, Ingrid	In-cash research fellow	Full professor	Utrecht University
Roeser, Sabine	In-cash research fellow	Full professor	Delft University of Technology
Sta. Maria, Joseph	In-cash research fellow	PhD	Delft University of Technology
Sullivan, Emily	In-cash research fellow	Assistant or associate professor	Eindhoven University of Technology
Ziliotti, Elena	In-cash research fellow	Assistant or associate professor	Delft University of Technology
Durán, Juan	In-kind research fellow	Assistant or associate professor	Delft University of Technology
Henschke, Adam	In-kind research fellow	Assistant or associate professor	University of Twente
Hoven van den, Jeroen	In-kind research fellow	Full professor	Delft University of Technology
Marin, Lavinia	In-kind research fellow	Assistant or associate professor	Delft University of Technology
Matzat, Uwe	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
Royakkers, Lambèr	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
Spahn, Andreas	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
Bäck, Thomas	Associate fellow	Full professor	Leiden University
Gädeke, Dorothea	Associate fellow	Assistant or associate professor	Utrecht University
Jansen, Sammie	Associate fellow	PhD	Wageningen University & Research
Shäfer, Mirko	Associate fellow	Assistant or associate professor	Utrecht University

Research line

Foundations & Synthesis

1) **Research activities, events and outreach (research line coordinator: Michael Klenk – TUD)**

- Two new postdoctoral researchers were hired: Jeroen Hopster (UT), research area: moral disruption; Guido Löhr (TU/e), research area: conceptual change.

- An assistant professors joined the research line (as in-kind Tenure Tracker): Michael Klenk (TUD), research area: metaethics, epistemology, value theory.

- A long-term (2020-2029) research agenda was developed that expands the original proposal (including two new research topics) and engages with the main key topics in metaethics, epistemology, and practical philosophy, linking them to conceptual and social disruption caused by technology.

- Established two monthly meeting series on the research line level in 2020:
    - JourFixe: Community building, organisational, guest speakers and short presentations.
    - Research Colloquium: in-depth, pre-read discussion, make scholarly progress.

- Established several reading groups, with tangible results:
    - Moral Revolutions reading group (2020-21): workshop with author Robert Baker, two collaborative papers forthcoming in Inquiry and Analysis.
    - Conceptual Change reading group (2020-21): joint work on conceptual change.
    - Techno-moral revolutions reading group (2021).

- Hosted two educational events aimed at members of the other research lines.

2) Contribution to research questions

The F&S research agenda includes three major research themes:
1. the nature of Socially Disruptive Technologies;
2. the nature of Conceptual Change and Disruption;
3. new methods in ethics (not yet started).

For each theme, up to six sub-questions were defined. The members of the research line signed up to one or more themes, and they produced the following results, communicated in published papers:

Regarding theme 1, the nature of socially disruptive technologies was conceptualized, offering both a definition and a critical reflection on the tenability of such a definition, typified the typical impacts of socially disruptive technologies, and distinguished social disruption from disruption in other areas (e.g. business). A further methodological insight is that a purely techno-centric understanding of STDs is problematic and needs to be complemented by a variety of methods (e.g. mediation- and experimentation approaches). Furthermore, the dynamics of techno-moral change and the role of technology in moral revolutions were further scrutinized.

Regarding theme 2, conceptual change was distinguished from conceptual disruption and the latter was linked to the burgeoning conceptual engineering debate.

Furthermore, it was showed how the causes and mechanisms of conceptual change relate to pragmatics.

3) Links with other research lines & contributions to conceptual disruption theme

Starting in 2020, our reading groups and monthly meetings are frequently attended by members from other research lines. This also lead to co-authored papers already.

In 2021, we hosted workshop for PhDs of the other lines presenting our findings for them to use in their projects. The research outputs that have been published by 2021 focus on the general nature of (techno-moral) disruption and conceptual change.

4) Research line members (per 31-12-2021)

F&S line			
Name	**Category**	**Position**	**University of Twente**
Brey, Philip	In-cash research fellow	Full professor	University of Twente
Hopster, Jeroen	In-cash research fellow	Postdoc	University of Twente
Löhr, Guido	In-cash research fellow	Postdoc	Eindhoven University of Technology
Klenk, Michael	In-kind research fellow	Assistant or associate professor	Delft University of Technology
Meijers, Anthonie	In-kind research fellow	Full professor	Eindhoven University of Technology
Müller, Vincent	In-kind research fellow	Full professor	Eindhoven University of Technology
Nickel, Philip	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
O'Neill, Elizabeth	In-kind research fellow	Assistant or associate professor	Eindhoven University of Technology
Veluwenkamp, Herman	In-kind research fellow	Postdoc	Delft University of Technology
Eriksen, Cecile	Associate fellow	Assistant or associate professor	Utrecht University
Sauer, Hanno	Associate fellow	Assistant or associate professor	Utrecht University

Report from the tracks

Cutting across the four research lines we started two research tracks, each of which emphasizes an aspect that we especially value in this consortium.

Track

STEM track

The ESDiT approach is based on close cooperation with the engineering sciences (STEM - Science, Technology, Engineering and Mathematics). First and foremost, STEM is important in determining and understanding current and future challenges posed by Socially Disruptive Technologies (SDTs). Secondly, the ESDiT consortium wishes to interact with STEM areas in order to contribute to improved and more responsible ethical guidance of SDTs.

The STEM track within ESDiT, coordinated by prof. Wijnand IJsselsteijn, is intended to bring together and discuss our joint interests in STEM, and establish and support fruitful and mutually beneficial links between relevant partners involved in STEM innovations and people within ESDiT. To an extent, our project embodies STEM through the STEM representatives present within the consortium, and affiliated to the project. In addition, we are reaching out to other STEM-oriented Gravitation research consortia (e.g., Hybrid Intelligence - with a focus on AI), in order to connect to scholars in the STEM field.

The STEM track has not been officially launched yet during the reporting period. However, initial meetings between its coordinators, Wijnand IJsselsteijn, Neelke Doorn and Matthew Dennis took place.

Over the past year, they have focused on developing philosophical research activities that have a stronger technological or STEM focus. This has resulted in a number of approved (or soon to be approved) PhD or postdoc project proposals, where hiring has started, or will start soon. These projects are embedded within each of the research lines (Human, Nature, Society, or F&S), where they are connected to the main themes of these respective lines.

To help shape our thinking about collaboration and outreach with regards to STEM fields, the coordinators set up an ad hoc working group that has met a few times over the past months. From the discussions in this group, a number of ideas have emerged that can be structured along three main, and partly overlapping, lines of thinking:

1) creating spaces for conversation and learning with regard to STEM;

2) ensuring a fruitful, open, bi-directional exchange;

3) sharing results and insights.

STEM Track members per 31-12-2021

STEM Track

Name	Position	University
Babushkina, Dina	Assistant or associate professor	University of Twente
Bollen, Caroline	PhD	Delft University of Technology
Dennis, Matthew	Postdoc	Eindhoven University of Technology
Doorn, Neelke	Full professor	Delft University of Technology
Hermann, Julia	Assistant or associate professor	University of Twente
IJsselsteijn, Wijnand	Full professor	Eindhoven University of Technology
Jansen, Sammie	PhD	Wageningen University & Research
Kraijeveld, Steven	PhD	Wageningen University & Research
Lakens, Daniel	Assistant or associate professor	Eindhoven University of Technology
Oosterzee van, Anna	PhD	Utrecht University
Poel van de, Ibo	Full professor	Delft University of Technology
Riemsdijk, van Birna	Assistant or associate professor	University of Twente
Snijders, Chris	Full professor	Eindhoven University of Technology
Sullivan, Emily	Assistant or associate professor	Eindhoven University of Technology

Track

Intercultural track

The track on intercultural philosophy is coordinated by prof. Ingrid Robeyns. This track focuses on intercultural ethics. It starts from the insight that truly global challenges need a (cultural) diversity of ethical frameworks to tackle them.

In our first two years, this track has mainly focused on capacity building. Since we had limited expertise and experience in the consortium on this topic, we had to build this first, collaborating with external partners. There has been an expectedly strong interest among our researchers to work on this.

In order to make progress in meeting the goals of this track, we have pursued the following activities in 2020 and 2021:

1. *Reading groups:* We have reading groups for Confucian philosophy (coordinator: Elena Ziliotti), Buddhist philosophy (coordinators: Gunter Bombaerts and Tom Hannes), Indigenous philosophy (coordinator: Patty Reyes), and Ubuntu philosophy (coordinator: Kristy Claassen).

2. *Online seminars:* Some reading groups are organizing online seminars with international experts, e.g. the Buddhism conference has started a series of online seminars, starting with Peter Hershock who will talk about his book *Buddhism and Intelligent Technologies*.

3. *Attend and present at conferences*: several members of the intercultural philosophy tracked presented their work at conferences, e.g. Patty Reyes presented her work on indigenous philosophy and post anthropocentric politics at the Annual Conference for the Society of Intercultural Philosophy (June 4-6 2021); Olya Kudina organized a panel on intercultural philosophy for the biannual 4TU conference in Wageningen (14-15 October 2021); and Matthew Dennis and Elena Ziliotti presented their paper on Confucianism and digital well-being at the Symposium on Intercultural Digital Ethics at the Oxford Internet Institute (November 2021).

4. *Organise our own conference*: Under the leadership of Peter-Paul Verbeek, and with support by Michelle de Boer, we started the organisation of ESDiT's first own conference on Intercultural Ethics and Technology (https://www.esdit.nl/conferences/IET2022/), programmed for January 2022. with keynotes from dr. Beatrice Okyere-Manu (University of KwaZulu-Natal) and prof. Jin Y. Park (American University, Washington DC). Members of het Intercultural philosophy track served on the program committee and helped to shape the conference.

The intercultural philosophy track tries to answer the following overarching question: *how can non-western philosophy help us to provide (different and better) answers, to the research questions of ESDiT?*

Since we are in the capacity-building phase, these questions have not been answered yet. Our activities have however been steered by a number of concrete goals that we have set for the 3-year period 2020-2022:

- Goal 1: Building capacity: most of us are on a steep learning curve, and most of all need to learn about non-western philosophies and intercultural philosophy.

- Goal 2: Building community: within ESDiT and our affiliates, we want to collaborate and co-learn in the area of intercultural philosophy.

- Goal 3: Building/strengthening our international network: we want to gain a better understanding, and get to know, the people working in these fields, in particular those who have also done work on SDTs.

- Goal 4: producing knowledge (and publishing it) that advances the intercultural philosophy perspective within ESDiT.

Track members per 31-12-2021

Intercultural Track

Name	Position	University
Anderson, Joel	Full professor	Utrecht University
Babuskina, Dina	Assistant or associate professor	University of Twente
Bombaerts, Gunter	Assistant or associate professor	Eindhoven University of Technology
Claassen, Kristy	PhD	University of Twente
Dennis, Matthew	Postdoc	Delft University of Technology/Eindhoven University of Technology
Frank, Lily	Assistant or associate professor	Eindhoven University of Technology
Friedman, Cindy	PhD	Utrecht University
Gädeke, Dorothea	Assistant or associate professor	Utrecht University
Gerola, Alessio	PhD	Wageningen University & Research
Gwagwa, Arthur	PhD	Utrecht University
Hannes, Tom	Postdoc	Eindhoven University of Technology
Hermann, Julia	Assistant or associate professor	University of Twente
Hofbauer, Ben	PhD	Delft University of Technology
Kudina, Olya	Assistant or associate professor	Delft University of Technology
Reyes Benavides, Patricia	PhD	University of Twente
Robeyns, Ingrid	Full professor	Utrecht University
Roeser, Sabine	Full professor	Delft University of Technology
Sta. Maria, Joseph	PhD	Delft University of Technology
Verbeek, Peter-Paul	Full professor	University of Twente
Ziliotti, Elena	Assistant or associate professor	Delft University of Technology

Members of this track who are not officially affiliated with ESDiT but given their expertise have been invited to join its intercultural philosophy activities, in particular the reading groups:

Rockwell Clancy (Guest researcher, Delft University) and *Matthias Kramm* (postdoc, Wageningen University).

Output

Outreach & Impact, research projects, publications and other output during 2020-2021

Outreach and impact

Our proposed research has great relevance for society, since new disruptive technologies will have a major role in shaping the 21st century; it is therefore imperative for societal actors to engage in ethical reflection on how to develop and implement these technologies responsibly. Consequently, we are keen to have an extensive dissemination and knowledge transfer strategy, including communication channels and outreach activities.

Impact plan

Early 2021 the outreach ambitions of the funding proposal were elaborated into an overall Impact plan. The aim of this plan is to systematically and effectively reach out to ESDiTs main stakeholders. For each audience, a specific set of activities is foreseen, starting in 2022.

| The Public | Engineers | Policy-makers | Practical Philosophy |

ESDiT communication channels

Right in 2020 a dedicated ESDiT website was designed, providing basic information on the programme and its members. During 2021 the website was further refined, including the design of corporate identity for all communication outlets.

In 2021, ESDiT got its own Twitter account, with a reach of over 400 followers by the end of the year.

During the second half of 2021 ESDiT launched a podcast series, which is indexed on Apple Podcasts, Google podcasts, Spotify, and linked to by the Dutch Research School of Philosophy.

The ESDiT-podcast contains a growing collection of interviews conducted amongst ESDiT-researchers. Each episode discusses a recent paper published by an ESDiT-member, with the aim of reaching out to colleagues in the consortium as well as the broader academic community. The following episodes have been published between October and December 2021: an interview with Jeroen Hopster on "The Nature of Socially Disruptive Technologies", an interview with Julia Hermann on "The Artificial Womb", an interview with Naomi Jacobs on "Capability Sensitive Design", an interview with Cindy Friedman on "Social Robots", an interview with Bernice Bovenkerk on "Ethics of Animal Modification", an interview with Emily Sullivan on "Social Epistemic Networks", and an interview with Patricia Reyes on "Climate Techno-activism".

Organisation of research:
Research collaboration using Obsidian

Within the ESDiT community, there is a widely felt need for better ways of coordinating our research activities and learning cumulatively from each other. In addition, because of the focus of ESDiT on technology's conceptual disruptions, we are also very interested in finding connections between key concepts and relating them to research lines and project groups – including their research questions, activities, and outputs.

New tools have recently emerged for helping with this. Starting in the summer of 2020, Joel Anderson began exploring the idea of using one such tool, Obsidian, for this. The key feature of Obsidian is that it connects plain-text note files together in insightful ways, but without locking users into a proprietary framework.
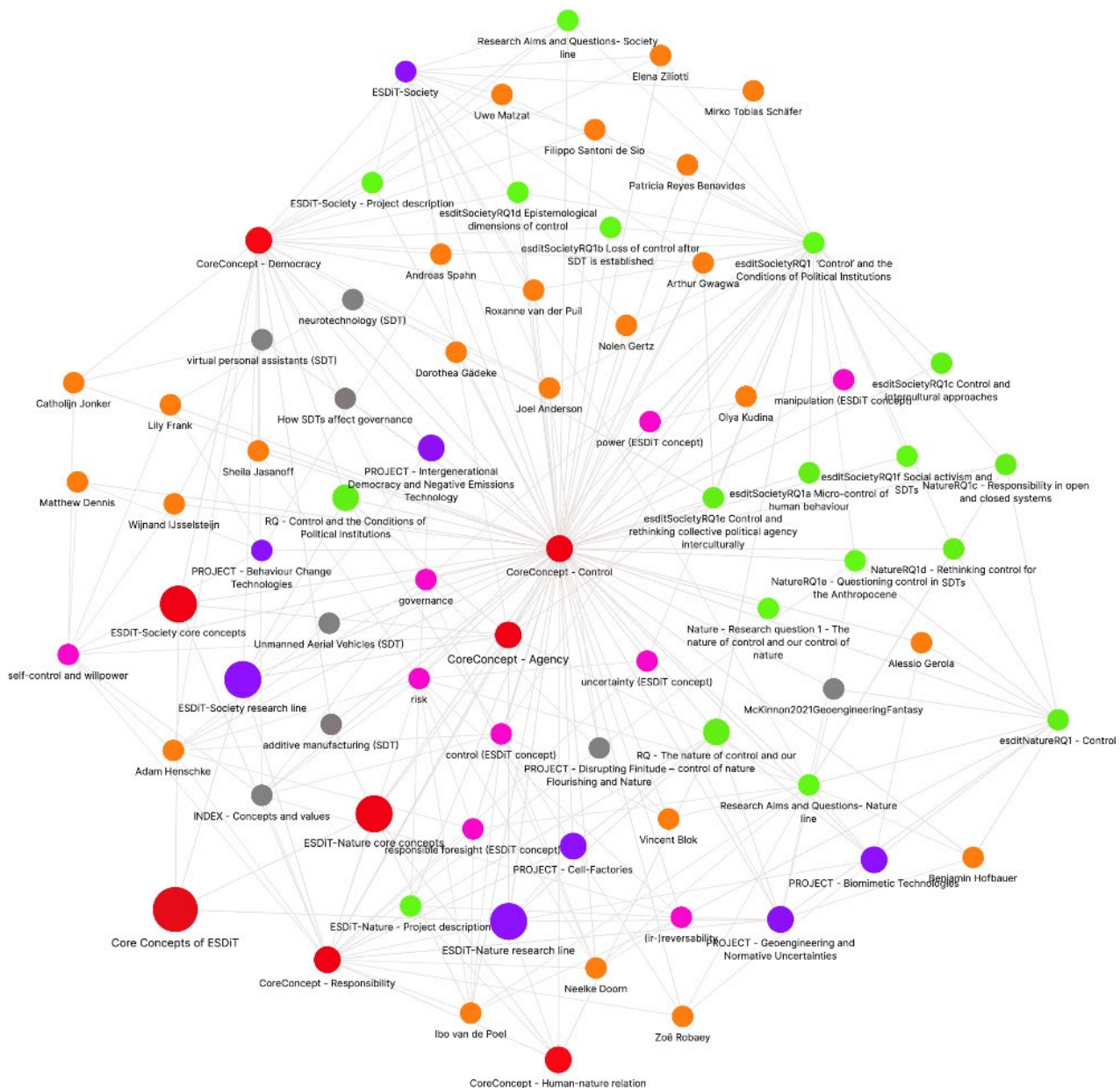
Obsidian Activities in 2020

Concept mapping

- Using an inventory of "socially disruptive technologies" and "impact dimensions" and methods was developed with the consortium by Jeroen Hopster and Julia Hermann, a first Obsidian map of these interconnections was made and presented at the first ESDiT Research Days, in November 2020.

Facilitating interactive collaborations within groups of researchers

- A pilot of the interconnections between research questions was carried out in the "Buddhism and Attention Economy" reading group.

- The same was done with a reading group on Robert Baker's book *Moral Revolutions.*

Practical implementation

- Initial investigation of possibilities for using Obsidian as the digital tool for this project.

Obsidian Activities in 2021

Concept mapping

- The inventory of SDTs and impact dimensions was expanded to include key concepts from the revised research plan, identifying research questions.

- As part of the process of the clarifying the "core concepts" that are guiding for ESDiT, Ibo van de Poel employed Obsidian to help identify how the core concepts are positioned in relation to the wider set of concepts employed within ESDiT. The outcomes were presented at the Research Day in November 2021.

Facilitating interactive collaborations within groups of researchers

- The collaborative research forum – esditCRF in Obsidian was expanded to include information about individual members, project groups, and research lines – all linked to concepts and research questions.

- The esditCRF was made available to members of the consortium for identifying connections between researchers, projects, research lines, and key concepts.

Practical implementation

- A password-protected web-version of the esditCRF was published.

- Plan approved in December for next steps with implementation, and involving key "curators" as well as the wider consortium.

- Several pilots for synchronizing and curating the esditCRF were carried out.

Project: The Disruptive Potential of the Artificial Womb

In the spring of 2021, Sabine Wildevuur, Lisa Mandemaker and Julia Hermann first discussed the idea of collaborating on an interdisciplinary research project about the artificial womb. Shortly thereafter, Lily Frank and Cristina Zaga joined the project team. In a series of online meetings, the team made a concrete plan for how to explore the ways in which the artificial womb could disrupt family relations, gender roles, the practice of abortion, the experiences of expecting and having children, the concepts of pregnancy, gestation, giving birth, parenthood, and so forth.

After their request for funding had been approved by the ESDiT Management Board, they formalized the collaboration with Lisa, who is an independent speculative designer and became designer-in-residence at DesignLab. In the fall, Llona Iness, Naomi Jacobs and Patricia de Vries joined the team, which used the Dutch Design Week as a kickoff event for the project.

With input from the entire team, Lisa made a work-in-progress installation with the title *Dreaming Before the Start of Time*. The installation formed an invitation for visitors to reflect and contribute their own values, stories and concerns about the future of reproduction. Visitors were able to react to three very short techno-moral scenarios. Their reactions served as an inspiration for two longer techno-moral scenarios and for Lisa's prototype.

Julia Hermann gave several interviews about the artificial womb and this particular project:

- Interview for an article written by science journalist Jop de Vrieze for Quest Magazine, January 2021.

- Guest in the science programme *Focus*, NPO Radio 1, 7 May 2021 (Link).

- ESDiT podcast, October 2021.

Team members of the project *The Disruptive Potential of the Artificial Womb*:

Artificial Womb project

Name	Category	University
Frank, Lily	ESDiT research fellow	Eindhoven University of Technology
González Woge, Margoth	Non ESDiT fellow	University of Twente
Hermann, Julia	ESDiT research fellow	University of Twente
Iness, Llona	Non ESDiT fellow	Independent scholar
Jacobs, Naomi	ESDiT research fellow	University of Twente
Mandemaker, Lisa	Non ESDiT fellow	Independent designer, designer-in-residence at DesignLab
Vries de, Patricia	Non ESDiT fellow	Maastricht University
Wildevuur, Sabine	Non ESDiT fellow	University of Twente
Zaga, Cristina	Non ESDiT fellow	University of Twente

PhD and Postdoc research projects

	Project	Line	Type	Supervisor	Candidate	Partner	Starting
1	The converging politics of Internet platforms and climate activism	Society	PhD	Nolen Gertz	Patty Reyes	UT	2020
2	Empathy, Autism and Augmentative and Alternative Communication Technologies	Human	PhD	Janna van Grunsven	Caroline Bollen	TUD	2020
3	Governance of geoengineering in the face of normative uncertainties	Nature	PhD	Behnam Taebi	Ben Hofbauer	TUD	2020
4	Will democracy survive social media?	Society	PhD	Lambèr Royakkers	Roxanne van der Puil	TU/e	2020
5	Synthetic Stewardship – conceptualizing designers' responsibilities towards cell-factories	Nature	PhD	Vincent Blok	Julia van Rijssenbeek	WUR	2020
6	Philosophical analysis of socially disruptive technologies and their role in transforming society with special reference to transformations of fundamental concepts and values	F&S	Post doc		Jeroen Hopster	UT	2020
7	Socially Disruptive Technologies and Conceptual Change	F&S	Post doc		Guido Löhr	TU/e	2020
8	Rethinking ownership and responsibility in wastewater technologies	Nature	PhD	Udo Pesch	Karen Moesker	TUD	2021
9	Confucianism and Ethics of Technology	Society	PhD	Elena Ziliotti	Joseph Sta. Maria	TUD	2021

10	Philosophy of technology or environmental philosophy, doing philosophical and ethical investigations of biomimetic technologies and their applications.	Nature	PhD	Vincent Blok	Alessio Gerola	WUR	2021
11	Intergenerational Democracy and Negative Emissions Technology: Procedural Justice and Legitimacy for Future People in Climate Policy	Society	PhD	Philip Brey	Elisa Paiusco	UT	2021
12	Emerging Technologies and the Moral Character of the Human Being	Human	PhD	Julia Hermann	Kristy Claassen	UT	2021
13	Ethics of Data-Driven Mental Health Diagnostics	Human	PhD	Joel Anderson	Anna van Oosterzee	UU	2021
14	The Ethics of Humanoid Robots	Human	PhD	Sven Nyholm	Cindy Friedman	UU	2021
15	Electoral Technologies and Democracy in Global Perspective	Society	PhD	Dorothea Gädeke	Arthur Gwagwa	UU	2021
16	Behavior Change Technologies for Moral Improvement	Human	Post doc		Matthew Dennis	TU/e	2021

Output

Scientific publications

ESDiT 2020 Academic Publications

- van der Bend, D. L. M., Jansen, L., van der Velde, G., & **Blok, V.** (2020). The influence of a front-of-pack nutrition label on product reformulation: A ten-year evaluation of the Dutch Choices programme. Food Chemistry: X, 6, [100086]. DOI: https://doi.org/10.1016/j.fochx.2020.100086
- Bierbooms, J. J. P. A., van Haaren, M., **IJsselsteijn, W. A.**, de Kort, Y. A. W., Feijt, M. A., & Bongers, I. M. B. (2020). Integration of Online Treatment Into the "New Normal" in Mental Health Care in Post-COVID-19 Times: Exploratory Qualitative Study. JMIR Formative Research, 4(10), e21344. [e21344]. https://doi.org/10.2196/preprints.21344, https://doi.org/10.2196/21344
- Blok, V. (2020). What Is (Business) Management? Laying the Ground for a Philosophy of Management. Philosophy of Management, 19, 173-189. DOI: https://doi.org/10.1007/s40926-019-00126-9
- Blok, V. (2020). Politics versus Economics Philosophical Reflections on the Nature of Corporate Governance. Philosophy of Management, 19, 69-87. https://doi.org/10.1007/s40926-019-00118-9
- Braad, E. P., Degens, N., & **IJsselsteijn, W. A.** (2020). Designing for metacognition in game-based learning: A qualitative review. Translational Issues in Psychological Science, 6(1), 53-69. DOI: https://doi.org/10.1037/tps0000217
- Brand, T., **Blok, V.**, & Verweij, M. (2020). Stakeholder Dialogue as Agonistic Deliberation: Exploring the Role of Conflict and Self-Interest in Business-NGO Interaction. Business Ethics Quarterly, 30(1), 3-30. DOI: https://doi.org/10.1017/beq.2019.21

- Braun, R., **Blok, V.,** Loeber, A., & Wunderle, U. (2020). COVID-19 and the onlineification of research: kick-starting a dialogue on Responsible online Research and Innovation (RoRI). Journal of Responsible Innovation, 7(3), 680-688. https://doi.org/10.1080/23299460.2020.1789387
- Brey, P. (2020). Recent Developments in Dutch and European Philosophy and Ethics of Technology. *Techné: Research in Philosophy and Technology*, *24*(4), 36-42. DOI: https://doi.org/10.5840/techne2020244129
- Dennis, M. J. (2020). Cultivating Digital Well-Being and the Rise of Self-Care Apps. In C. Burr, & L. Floridi (Eds.), *The Ethics of Digital Well-Being. Philosophical Studies Series*, 140 (pp. 119-139). Cham: Springer. DOI: https://doi.org/10.1007/978-3-030-50585-1_6
- Dennis, M. J. (2020). *Cultivating Our Passionate Attachments*. New York: Routledge
- Dennis, M. J., & Harrison, T. (2020). Unique Ethical Challenges for the 21st Century. Online Technology and Virtue Education. *Journal of Moral Education*, *50*(3), 251-66. DOI: https://doi.org/10.1080/03057240.2020.1781071
- Durán, J. M. (2020). Calculating Surprises. A Review for the Philosophy of Computer Simulations. *Metascience*, *29*, 337-340. DOI: https://doi.org/10.1007/s11016-020-00527-x
- Durán, J. M. (2020). What is a Simulation Model? *Minds and Machines*, *30*(3), 301-323. DOI: https://doi.org/10.1007/s11023-020-09520-z
- Durán, J. M., & Pirtle, Z. (2020). Epistemic Standards for Participatory Technology Assessment. Suggestions Based upon Well-Ordered Science. *Science and Engineering Ethics*, *26*, 1709-1741. DOI: https://doi.org/10.1007/s11948-020-00211-7
- Feijt, M. A., de Kort, Y. A. W., Bongers, I. M. B., Bierbooms, J. J. P. A., Westerink, J. H. D. M., & **IJsselsteijn, W. A.** (2020). Mental Health Care Goes Online: Practitioners' Experiences of Providing Mental Health Care During the COVID-19 Pandemic. Cyberpsychology, Behavior, and Social Networking, 23(12), 860-864. https://doi.org/10.1089/cyber.2020.0370
- Feijt, M. A., de Kort, Y. A. W., Westerink, J. H. D. M., Okel, S., & **IJsselsteijn, W. A.** (2020). The effect of simulated feedback about psychophysiological synchronization on perceived empathy and connectedness. Annual Review of Cybertherapy and Telemedicine, 18, 117-121. https://www.arctt.info/volume-18-summer-2020
- Hanci, E., Lacroix, J. P. W., Ruijten, P. A. M., Haans, A., & **IJsselsteijn, W. A.** (2020). Measuring commitment to self-tracking: development of the C2ST scale. Personal and Ubiquitous Computing, 24(6), 735-746. https://doi.org/10.1007/s00779-020-01453-9
- Hobma, F., & **Roeser, S.** (2020). Ethiek in Architectuur en Bouw. In M. Hoekstra, L. Lousberg, R. Rooij, W. Wilms Floet, & S. Zijlstra (Eds.), *Inzicht. Academische Vaardigheden voor Bouwkundigen 2020-2021 Q1* (pp. 277-284). Delft University of Technology.
- **Hopster, J. K. G.**, & **Klenk, M. B. O. T.** (2020). Why Metaethics Needs Empirical Moral Psychology. *Crítica: Revista Hispanoamericana de Filosofía*, *52*(155), 27-54. DOI: https://doi.org/10.22201/iifs.18704905e.2020.1193
- **van den Hoven, J.** (Editor-in-Chief), **Dennis, M. J.** (Guest Editor), Ishmaev, G. (Guest Editor). (2020). *Technology & Ethics of the COVID-19 Crisis.* Ethics & Information Technology, Special Issue. Springer.
- Ipakchian Askari, S., Harjunen, V., Haans, A., Ravaja, N., & **Ijsselsteijn, W.** (2020). Does mediated social touch succesfully approximate natural social touch? Annual Review of Cybertherapy and Telemedicine, 18, 99-103. https://www.arctt.info/volume-18-summer-2020
- Klenk, M. (2020). Digital Well-Being and Manipulation Online. Ethics of Digital Well-Being. A Multidisciplinary Approach. In C. Burr, & L. Floridi (Eds.), *The Ethics of Digital Well-Being. Philosophical Studies Series*, 140. (pp. 81-100). Cham: Springer. DOI: https://doi.org/10.1007/978-3-030-50585-1_4
- Long, T. B., **Blok, V.,** Dorrestijn, S., & Macnaghten, P. (2020). The design and testing of a tool for developing responsible innovation in start-up enterprises. Journal of Responsible Innovation, 7(1), 45-75. https://doi.org/10.1080/23299460.2019.1608785
- Long, T. B., Iñigo, E., & **Blok, V.** (2020). Responsible management of innovation in business. In O. Laasch, R. Suddaby, R. E. Freeman, & D. Jamali (Eds.), Research Handbook of Responsible Management (pp. 606-623). Edward Elgar Publishing Limited. https://doi.org/10.4337/9781788971966.00051

- Li, S., van Wynsberghe, A., & **Roeser, S.** (2020). The Complexity of Autonomy. A Consideration of the Impacts of Care Robots on the Autonomy of Elderly Care Receivers. In M. Norskov, J. Seibt, & O. S. Quick (Eds.), *Culturally Sustainable Social Robotics. Proceedings of Robophilosophy 2020* (pp. 316-325). Frontiers in Artificial Intelligence and Applications, 335. IOS Press. DOI: https://doi.org/10.3233/FAIA200928
- Löhr, G. (2020). Concepts and Categorization. Do Philosophers and Psychologists Theorize about Different Things? *Synthese*, *197*, 2171-2191. DOI: https://doi.org/10.1007/s11229-018-1798-4
- Marin, L., & **Roeser, S.** (2020). Emotions and Digital Well-Being. The Rationalistic Bias of Social Media Design in Online Deliberations. In C. Burr, & L. Floridi (Eds.), *Ethics of Digital Well-Being* (pp. 139-150). Cham: Springer.
- Matzat, U., & van Ingen, E. (2020). Social Inequality and the Digital Transformation of Western Society. What Can Stratification Research and Digital Divide Studies Learn from Each Other? *Soziale Welt, 23*(SI 23), 381-397. DOI: https://doi.org/https://doi.org/10.5771/9783845295008-379
- Nickel, P. J. (2020). Disruptive Innovation and Moral Uncertainty. *Nanoethics*, *14*, 259-269. DOI: https://doi.org/10.1007/s11569-020-00375-3
- **Nickel, P. J.**, & **Frank, L. E.** (2020). Trust in Medicine. In J. Simon (Ed.), *Routledge Handbook of Trust and Philosophy* (pp. 367-377). Taylor and Francis Ltd.
- Novitzky, P., Bernstein, M. J., **Blok, V.,** Braun, R., Chan, T. T., Lamers, W., Loeber, A., Meijer, I., Lindner, R., & Griessler, E. (2020). Improve alignment of research policy and societal values. Science, 369(6499), 39-41. https://doi.org/10.1126/science.abb3415
- Nyholm, S. (2020). David Edmonds (Ed.), Ethics and the Contemporary World. *Journal of Moral Philosophy*, *17*(6), 699-702. DOI: https://doi.org/10.1163/17455243-17060005
- Nyholm, S. (2020). *Humans and Robots: Ethics, Agency, and Anthropomorphism*. Philosophy, Technology and Society Series. London: Rowman & Littlefield International.
- Nyholm, S. (2020). In Evaluating Technological Risks, When and Why Should We Consult Our Emotions? *Science and Engineering Ethics*, *26*(4), 1903-1912. DOI: https://doi.org/10.1007/s11948-020-00194-5
- Nyholm, S., & Smids, J. (2020). Automated Cars Meet Human Drivers. Responsible Human-Robot Coordination and the Ethics of Mixed Traffic. *Ethics and Information Technology*, *22*(4), 335-344. DOI: https://doi.org/10.1007/s10676-018-9445-9
- van de Poel, I. (2020). Three Philosophical Perspectives on the Relation between Technology and Society, and How they Affect the Current Debate about Artificial Intelligence. *Human Affairs*, *30*(4), 499. DOI: https://doi.org/10.1515/humaff-2020-0042
- Popa, E. O., **Blok, V.,** & Wesselink, R. (2020). Discussion structures as tools for public deliberation. Public Understanding of Science, 29(1), 76-93. https://doi.org/10.1177/0963662519880675
- Radha, M., den Boer, N., Willemsen, M. C., Paardekooper, T., **IJsselsteijn, W. A.**, & Sartor, F. (2020). Assisting Home-Based Resistance Training for Normotensive and Prehypertensive Individuals Using Ambient Lighting and Sonification Feedback: Sensor-Based System Evaluation. JMIR Cardio, 4(1), [e16354]. https://doi.org/10.2196/16354
- de Reuver, M., van Wynsberghe, A., Janssen, M., & **van de Poel, I.** (2020). Digital Platforms and Responsible Innovation. Expanding Value Sensitive Design to Overcome Ontological Uncertainty. *Ethics and Information Technology*, *22*, 257-267. DOI: https://doi.org/10.1007/s10676-020-09537-z
- Robeyns, I. A. M. (2020). Wellbeing, Place and Technology. Wellbeing, Space and *Society*, *1*, 100013. DOI: https://doi.org/10.1016/j.wss.2020.100013
- Roeser, S. (2020). Risk, Technology, and Moral Emotions. Reply to Critics. *Science and Engineering Ethics*, *26*, 1921-1934. DOI: https://doi.org/10.1007/s11948-020-00196-3
- Royakkers, L., & van Est, R. (2020). The New Digital Wave of Rationalization. *International Journal of Technoethics*, *11*(1), 59-74. DOI: https://doi.org/10.4018/IJT.2020010105
- Sanusi, Y.A., **Spahn, A**. (2020). Exploring Marginalization and Exclusion in Renewable Energy Development in Africa: A Perspective from Western Individualism and African Ubuntu Philosophy. In: Bombaerts, G., Jenkins, K., Sanusi, Y., Guoyu, W. (eds) Energy Justice Across Borders, 273. Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-24021-9_14

- Schembera, B., & **Durán, J. M.** (2020). Dark Data as the New Challenge for Big Data Science and the Introduction of the Scientific Data Officer. *Philosophy & Technology*, *33*, 93-115. DOI: https://doi.org/10.1007/s13347-019-00346-x
- Spahn, A. (2020). Digital Objects, Digital Subjects and Digital Societies. Deontology in the Age of Digitalization. *Information*, *11*(4), 228. DOI: https://doi.org/10.3390/info11040228
- Spelt, H., Zhang, C., Westerink, J. H. D. M., Ham, J. R. C., & **IJsselsteijn, W. A.** (2020). Persuasion-Induced Physiology Partly Predicts Persuasion Effectiveness. IEEE Transactions on Affective Computing, XX(XX). https://doi.org/10.1109/TAFFC.2020.3022109
- Stam, L., **Verbeek, P.-P.**, & Heylighen, A. (2020). Between Specificity and Openness. How Architects Deal with Design-Use Complexities. *Design Studies*, *66*, 54-81. DOI: https://doi.org/10.1016/j.destud.2019.11.010
- Steinert, S., & **Roeser, S.** (2020). Emotions, Values and Technology. Illuminating the Blind Spots. *Journal of Responsible Innovation*, *7*(3), 298-319. DOI: https://doi.org/10.1080/23299460.2020.1738024
- Taebi, B., Kwakkel, J. H., & Kermisch, C. (2020). Governing Climate Risks in the Face of Normative Uncertainties. *Wiley Interdisciplinary Reviews: Climate Change*, *11*(5), e666. DOI: https://doi.org/10.1002/wcc.666
- **Taebi, B.**, **Roeser, S.**, & **van de Poel, I.** (2020). Responsible Innovation of Nuclear Energy Technologies. Social Experiments, Intergenerational Justice, and Emotions. In R. J. Ortt, D. van Putten, D. M. Kamp, & Ibo van de Poel (Eds.), *Responsible Innovation in Large Technological Systems* (pp. 64-79). Oxon: Routledge.
- Tempels, T., **Blok, V.,** & **Verweij, M**. (2020). Food Vendor Beware! On Ordinary Morality and Unhealthy Marketing. Food Ethics, 5(1-2), [3]. https://doi.org/10.1007/s41055-019-00064-2
- Tempels, T., **Blok, V.,** & **Verweij, M**. (2020). Injustice in Food-Related Public Health Problems: A Matter of Corporate Responsibility. Business Ethics Quarterly, 30(3), 388-413. https://doi.org/10.1017/beq.2019.41
- Tromp, N., Hekkert, P. P. M., & **Verbeek, P.-P.** (2020). Design für Sozial Verantwortliches Verhalten. Eine Klassifizierung seines Einflusses Anhand der Angestrebten Gebrauchserfahrung. In M. Fineder, & J. Lang (Eds.), *Zwischenmenschliches Design: Sozialität und Soziabilität durch Dinge* (pp. 127-154). Springer. DOI: https://doi.org/10.1007/978-3-658-30269-6 (In German).
- Tummers - Heemels, A. I. M., Hillen, M. F., de Kort, Y. A. W., & **IJsselsteijn, W. A.** (2020). Use of robotic animal companions in dementia care: a qualitative study of the immediate and long-term effects to enhance quality of life and feelings of wellbeing for individuals living with dementia. Annual Review of Cybertherapy and Telemedicine, 18, 45-49. https://app.koofr.net/content/links/d4eee765-04c8-4a3b-90c7-05e7c71d76bc/files/get/ARCTT_2020.pdf?path=%2F
- Verbeek, P-P. (2020). Politicizing Postphenomenology. In G. Miller, & A. Shew (Eds.), *Reimagining Philosophy and Technology, Reinventing Ihde* (pp. 141-155). Philosophy of Engineering and Technology, 33. Springer. DOI: https://doi.org/10.1007/978-3-030-35967-6_9
- Verweij, M., van de Vathorst, S., Schermer, M., Willems, D., & de Vries, M. (2020). Ethical Advice for an Intensive Care Triage Protocol in the COVID-19 Pandemic. Lessons Learned from the Netherlands. *Public Health Ethics*, *13*(2), 157-165. DOI: https://doi.org/10.1093/phe/phaa027
- Vrščaj, D., **Nyholm, S.**, & Verbong, G. P. J. (2020). Is Tomorrow's Car Appealing Today? Ethical Issues and User Attitudes Beyond Automation. *AI and Society*, *35*(4), 1033-1046. DOI: https://doi.org/10.1007/s00146-020-00941-z
- Zhang, C., Soliman-Hamad, M., Robijns, R., Verberkmoes, N., Verstappen, F., & **IJsselsteijn, W. A.** (2020). Promoting physical activity with self-tracking and mobile-based coaching for cardiac surgery patients during the discharge⇓rehabilitation gap: protocol for a randomized controlled trial. JMIR Research Protocols, 9(8), [e16737]. https://doi.org/10.2196/16737
- Ziliotti, E. (2020). An Epistemic Case for Confucian Democracy. *Critical International Review of Social and Political Philosophy*. Ahead of Print, 1-23. DOI: https://doi.org/10.1080/13698230.2020.1838736

ESDiT 2021 Academic Publications

- Alfano, M., & **Sullivan, E.** (2021). Online trust and distrust. In M. Hannon, & J. de Ridder (Eds.), The Routledge Handbook of Political Epistemology (pp. 480-491). Routledge Taylor & Francis Group. DOI: https://doi.org/10.4324/9780429326769-56
- Anderson, Joel (2021). "Recognition Versus Negative Liberty." In Handbuch Anerkennung, edited by Ludwig Siep, Heikki Ikäheimo, and Michael Quante, 71–78. Wiesbaden: Springer.
- Astola, M., Bombaerts, G., **Spahn, A**. et al. Can Creativity Be a Collective Virtue? Insights for the Ethics of Innovation. J Bus Ethics (2021). DOI: https://doi.org/10.1007/s10551-021-04833-0
- **Babushkina**, D., & Votsis, A. (2021). Disruption, Technology and the Question of (Artificial) Identity. *AI and Ethics*. DOI: https://doi.org/10.1007/s43681-021-00110-y
- Bierbooms, J. J. P. A., Sluis-Thiescheffer, R. J. W., Feijt, M. A., **IJsselsteijn, W. A.**, & Bongers, I. M. B. (2021). The design of a game-based training environment to enhance health care professionals' skills in using eMental health: study protocol for the user requirements analysis. JMIR Research Protocols, 10(2), [e18815]. https://doi.org/10.2196/preprints.18815
- Blok, V. (2021). Correction to: Ecological Management: a Research Agenda. Philosophy of Management. https://doi.org/10.1007/s40926-021-00177-x
- Blok, V. (2021). Ecological Management: a Research Agenda: Guest Editorial. Philosophy of Management, 20(1), 1-4. https://doi.org/10.1007/s40926-021-00167-z
- Blok, V. (2021). Philosophical Reflections on the Concept of Innovation. In B. Godin, G. Gaglio, and D. Vinck (Eds.), *Handbook on Alternative Theories of Innovation* (pp. 354-367). Northampton: Edward Elgar.
- Blok, V. (2021). The Morendo of the Anthropocene. *Foundations of Science.* DOI: doi.org/10.1007/s10699-020-09763-0
- Blok, V. (2021). What is Innovation? Laying the Ground for a Philosophy of Innovation. *Techne: Research in Philosophy and Technology*, *25*(1), 72-96. DOI: https://doi.org/10.5840/techne2020109129
- Danaher, J., & **Nyholm, S**. (2021). Automation, Work and the Achievement Gap. *AI and Ethics*, *1*(3), 227-237. DOI: https://doi.org/10.1007/s43681-020-00028-x
- Danaher, J., & **Nyholm, S**. (2021). Should We Use Technology to Merge Minds? *Cambridge Quarterly of Healthcare Ethics*, *30*(4), 585-603. DOI: https://doi.org/10.1017/s0963180121000062
- Dennis, M. J. (2021). Digital Well-Being Under Pandemic Conditions. Catalysing a Theory of Online Flourishing. *Ethics & Information Technology*, *23*, 435-445. DOI: https://doi.org/10.1007/s10676-021-09584-0
- Dennis, M. J. (2021). Ecological Loss and Our Passionate Attachments. *Journal of Environmental Science & Engineering*, B10, 65-75. DOI: https://doi.org/10.17265/2162-5263/2021.02.003
- Dennis, M. J. (2021). Social Robots and Digital Well-Being. How to Design Future Artificial Agents. *Mind and Society*. DOI: https://doi.org/10.1007/s11299-021-00281-5
- Dennis, M. J. (2021). Towards a Theory of Digital Well-Being. Reimagining Online Life Under Lockdown. *Science & Engineering Ethics*, *27*(3), 32. DOI: https://doi.org/10.1007/s11948-021-00307-8
- Dennis, M. J., & Aizenberg, E. (Guest Editors). (2021) *Prospects for Ethical Artificial Intelligence in Human Resources.* Topical Collection of Ethics & Information Technology. Springer.
- Doorn, N. (2021). Artificial Intelligence in the Water Domain. Opportunities for Responsible Use. *Science of the Total Environment*, *755*(1), 142561. DOI: https://doi.org/10.1016/j.scitotenv.2020.142561
- Durán, J. M. (2021). Dissecting Scientific Explanation in AI (sXAI). A Case for Medicine and Healthcare. *Artificial Intelligence*, *297*, 103498. DOI: https://doi.org/10.1016/j.artint.2021.103498
- Durán, J. M. (2021). Simulación. In D. Parente, A. Berti, and C. Célis Bueno (Eds.), *Glosario de Filosofía de la Técnica*. Adrogué: Ediciones La Cebra (In Spanish).
- Durán, J. M., & Jongsma, K. (2021). Who is Afraid of Black-Box Algorithms? On the Epistemological and Ethical Basis of Trust in Medical AI. *Journal of Medical Ethics*, *47*(5), 329-335. DOI: https://doi.org/10.1136/medethics-2020-106820
- Eiben, A. E., Ellers, J., Meynen, G., & **Nyholm, S**. (2021). Robot Evolution. Ethical Concerns. *Frontiers in Robotics and AI*, *8*, 1-9. DOI: https://doi.org/10.3389/frobt.2021.744590

- Erler, A., & **Müller, V. C.** (2021). AI as IA. Human Enhancement through Artificial Intelligence (AI) for Intelligence Augmentation (IA)? In M. Ienca, & F. Jotterand (Eds.), *The Routledge Handbook of the Ethics of Human Enhancement*. London: Routledge. DOI: https://doi.org/10.13140/RG.2.2.12547.43046
- Erler, A., & **Müller, V. C.** (2021). The Ethics of Biomedical Military Research. Therapy, Prevention, Enhancement, and Risk. In D. Messelken, & D. Winkler (Eds.), *Health Care in Contexts of Risk, Uncertainty, and Hybridity* (pp. 235-252). Berlin: Springer. DOI: https://doi.org/10.1007/978-3-030-80443-5_15
- Feijt, M. A., Westerink, J. H. D. M., de Kort, Y. A. W., & **IJsselsteijn, W. A.** (2021). Sharing Biosignals: An Analysis of the Experiential and Communication Properties of Interpersonal Psychophysiology. Human-Computer Interaction, XX(XX). https://doi.org/10.1080/07370024.2021.1913164
- Feijt, M. A., de Kort, Y. A. W., Westerink, J. H. D. M., & **IJsselsteijn, W. A.** (2021). Assessing professionals' adoption readiness for emental health: Development and validation of the emental health adoption readiness scale. Journal of Medical Internet Research, 23(9), [e28518]. https://doi.org/10.2196/28518
- Garst, J., **Blok, V.,** Branzei, O., Jansen, L., & Omta, O. S. W. F. (2021). Toward a Value-Sensitive Absorptive Capacity Framework: Navigating Intervalue and Intravalue Conflicts to Answer the Societal Call for Health. Business and Society, 60(6), 1349-1386. https://doi.org/10.1177/0007650319876108
- van Gelder, P., Klaassen, P., **Taebi, B.**, Walhout, B., van Ommen, R., **van de Poel, I.**, & **Robaey, Z.** (2021). Safe-by-Design in Engineering. An Overview and Comparative Analysis of Engineering Disciplines. *International Journal of Environmental Research and Public Health*, *18*(12), 6329. DOI: https://doi.org/10.3390/ijerph18126329
- Geukes, H., **Pesch, U.**, Correljé, A., & Taebi, B. (2021). A Healthy Metaphor? The North Sea Consultation and the Power of Words. *Sustainability*, *13*(22), 12905. DOI: https://doi.org/10.3390/su132212905
- Gordon, J.-S., & **Nyholm, S.** (2021). Ethics of Artificial Intelligence. *Internet Encyclopedia of Philosophy*. Available at https://iep.utm.edu/ethic-ai
- Gordon, J. S. & **Nyholm, S.** (2021). Kantianism and the Problem of Child Sex Robots. *Journal of Applied Philosophy*, *39*(1), 132-147. DOI: https://doi.org/10.1111/japp.12543
- van Grunsven, J. (2021). Enactivism and the Paradox of Moral Perception. *Topoi. An International Review of Philosophy*. DOI: https://doi.org/10.1007/s11245-021-09767-w
- **van Grunsven, J. B**, Marin, L., Stone, T. W., **Roeser, S.**, & **Doorn, N.** (2021). How to Teach Engineering Ethics? A Retrospective and Prospective Sketch of the TU Delft Approach. *Advances in Engineering Education*, *9*(4), 1-10.
- **van Grunsven, J.**, & **Roeser, S.** (2021). AAC Technology, Autism, and the Empathic Turn. *Social Epistemology*, 95-110. DOI: https://doi.org/10.1080/02691728.2021.1897189
- **Gwagwa, A.**, Kazim, E., Kachidza, P., Hilliard, A., Siminyu, K., Smith, M., & Shawe-Taylor, J. (2021). Road Map for Research on Responsible Artificial Intelligence for Development (AI4D) in African Countries. The Case Study of Agriculture. *Patterns*, *2*(12), 100381. DOI: https://doi.org/10.1016/j.patter.2021.100381
- **Hermann, J**., Bauer, K., and Baatz, C. (2021), "Coronavirus and Climate Change: What can the Former Teach us about the Latter?", in Fay Niker and Aveek Bhattacharya (eds.), *Political Philosophy in a Pandemic: Routes to a More Just Future*, Bloomsbury Academic. (Preview of the book: https://bloomsburycp3.codemantra.com/viewer/60e32c6452faff0001578d89)
    Holy-Luczaj, M., & **Blok, V.** (2021). Hybrids and the Boundaries of Moral Considerability or Revisiting the Idea of Non-Instrumental Value. *Philosophy and Technology*, *34*(2), 223-242. DOI: https://doi.org/10.1007/s13347-019-00380-9
- Hopster, J. K. G. (2021). Climate Uncertainty, Real Possibilities, and the Precautionary Principle. *Erkenntnis*, 1-17. DOI: https://doi.org/10.1007/s10670-021-00461-2
- Hopster, J. K. G. (2021). Mutual Affordances. The Dynamics between Social Media and Populism. *Media, Culture & Society*, *43*(3), 551-560. DOI: https://doi.org/10.1177/0163443720957889
- Hopster, J. K. G. (2021). The Ethics of Disruptive Technologies: Towards a General Framework. In J. F. de Paz Santana and D. H. de la Iglesia (Eds.), *New Trends in Disruptive Technologies, Tech Ethics and Artificial Intelligence* (pp. 133-144). Cham: Springer. DOI: https://doi.org/10.1007/978-3-030-87687-6_14

- Hopster, J. K. G. (2021). What are Socially Disruptive Technologies? *Technology in Society*, *67*, 101750. DOI: https://doi.org/10.1016/j.techsoc.2021.101750
- Ipakchian Askari, S., Harjunen, V. J., Spapé, M., Haans, A., Ravaja, N., & **IJsselsteijn, W. A.** (2021). Receiving a mediated touch from your partner vs. a male stranger: How visual feedback of touch and its sender influence touch experience. IEEE Transactions on Affective Computing, XX(XX). https://doi.org/10.1109/TAFFC.2021.3085185
- **Jacobs, N**., & **IJsselsteijn, W. A.** (2021). Bridging the 'Theory-Practice Gap': Design-Experts on Capability Sensitive Design. International Journal of Technoethics, 12(2), [1]. https://doi.org/10.4018/IJT.2021070101
- Jafino, B. A., Kwakkel, J. H., & **Taebi, B.** (2021). Enabling Assessment of Distributive Justice through Models for Climate Change Planning. A Review of Recent Advances and a Research Agenda. *Wiley Interdisciplinary Reviews: Climate Change*, *12*(4), e721. DOI: https://doi.org/10.1002/wcc.721
- Klenk, M. (2021). Moral Realism, Disagreement, and Conceptual Ethics. *Inquiry*, 1-18. DOI: https://doi.org/10.1080/0020174X.2021.1995483
- Klenk, M. (2021). (Online) Manipulation. Sometimes Hidden, Always Careless. *Review of Social Economy*, 1-21. DOI: https://doi.org/10.1080/00346764.2021.1894350
- Klenk, M. (2021). The Influence of Situational Factors in Sacrificial Dilemmas on Utilitarian Moral Judgments. *Review of Philosophy and Psychology*. DOI: https://doi.org/10.1007/s13164-021-00547-4
- **Klenk, M**., & Sauer, H. (2021). Moral Judgement and Moral Progress. The Problem of Cognitive Control. *Philosophical Psychology*, *34*(7), 938-961. DOI: https://doi.org/10.1080/09515089.2021.1931670
- **Klenk, M.**, & **van de Poel, I.** (2021). COVID-19, Uncertainty, and Moral Experiments. *History and Philosophy of the Life Sciences*, *43*(1), 8. DOI: https://doi.org/10.1007/s40656-020-00360-9
- **Korenhof, P**., **Blok, V.**, & Kloppenburg, S. (2021). Steering Representations. Toward a Critical Understanding of Digital Twins. *Philosophy and Technology*, *34*(4), 1751-1773. DOI: https://doi.org/10.1007/s13347-021-00484-1
- Lee, M., **Ruijten, P.**, **Frank, L.**, de Kort, Y., & **IJsselsteijn, W.** (2021). People May Punish, But Not Blame Robots. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. Making Waves, Combining Strengths.* ACM. DOI: https://doi.org/10.1145/3411764.3445284
- Lee, M., Frank, L. E., & **IJsselsteijn, W. A.** (2021). Brokerbot: A Cryptocurrency Chatbot in the Social-technical Gap of Trust. Computer Supported Cooperative Work, 30(1), 79-117. [30]. https://doi.org/10.1007/s10606-021-09392-6
- Lee, M., Kolkmeier, J., Heylen, D., & **IJsselsteijn, W.** (2021). Who Makes Your Heart Beat? What Makes You Sweat? Social Conflict in Virtual Reality for Educators. Frontiers in Psychology, 12, [628246]. https://doi.org/10.3389/fpsyg.2021.628246
- Levine, S., Rottman, J., Davis, T., **O'Neill, E.**, Stich, S., & Machery, E. (2021). Religious Affiliation and Conceptions of the Moral Domain. *Social Cognition*, *39*(1), 139-165. DOI: https://doi.org/10.1521/soco.2021.39.1.139
- Löhr, G. (2021). Commitment Engineering. Conceptual Engineering without Representations. *Synthese*, *199*, 13035-13052. DOI: https://doi.org/10.1007/s11229-021-03365-4
- Löhr, G. (2021). Does Polysemy Support Radical Contextualism? On the Relation Between Minimalism, Contextualism and Polysemy. *Inquiry*. DOI: https://doi.org/10.1080/0020174X.2020.1868329
- Löhr, G. (2021). Social Constructionism, Concept Acquisition and the Mismatch Problem. *Synthese*, *198*, 2659-2673. DOI: https://doi.org/10.1007/s11229-019-02237-2
- Löhr, G. (2021). What are Abstract Concepts? On Lexical Ambiguity and Concreteness Ratings. *Review of Philosophy and Psychology*. DOI: https://doi.org/10.1007/s13164-021-00542-9
- Long, T. B., & **Blok, V.** (2021). Niche level investment challenges for European Green Deal financing in Europe: lessons from and for the agri-food climate transition. Humanities and Social Sciences Communications, 8, [269]. https://doi.org/10.1057/s41599-021-00945-0
- Michelfelder, D. M., & **Doorn, N.** (Eds.). (2021). *Handbook of Philosophy of Engineering*. Oxon/New York: Routledge.

- Müller, V. C. (2021). History of Digital Ethics. In Carissa Véliz (Ed.), *Oxford Handbook of Digital Ethics*. Oxford: Oxford University Press.
- Müller, V. C. (2021). Is it Time for Robot Rights? Moral Status in Artificial Entities. *Ethics & Information Technology*, *23*, 579-587. DOI: https://doi.org/10.1007/s10676-021-09596-w
- Nyholm, S. (2021). De Ethiek van Zelfrijdende Auto's. *Filosofie Tijdschrift*, *31*(2), 25-29.
- Nyholm, S. (2021). Meaning and Anti-Meaning in Life and What Happens After We Die. *Royal Institute of Philosophy Supplements*, *90*, 11-31. DOI: https://doi.org/10.1017/S1358246121000217
- Nyholm, S. (2021). Should a Medical Digital Twin be Viewed as an Extension of the Patient's Body? *Journal of Medical Ethics*, *47*(6), 401-402. DOI: https://doi.org/10.1136/medethics-2021-107448
- Nyholm, S. (2021). The World's Most Dangerous Idea? Transhumanism in the Age of Artificial Intelligence, Climate Change, and Existential Risk. Some Comments on Stefan Lorenz Sorgner's On Transhumanism. *Deliberatio, Studies in Contemporary Philosophical Challenges*, *1*(1), 77-86.
- O'Neill, E. (2021). Digital Wormholes. *AI & Society*, 1-3. DOI: https://doi.org/10.1007/s00146-021-01300-2
- Pesch, U. (2021). Imaginaries of Innovation. Turning Technology Development into a Public Issue. *Science and Public Policy*, *48*(2), 257-264. DOI: https://doi.org/10.1093/scipol/scab017
- Pesch, U. (2021). Institutions of Justice and Intuitions of Fairness. Contesting Goods, Rules and Inequalities. *Critical Review of International Social and Political Philosophy*, 1-14. DOI: https://doi.org/10.1080/13698230.2021.1913887
- Pesch, U. (2021). The Ethical Challenges of Innovation. *Science and Engineering Ethics*, *27*(3), 31. DOI: https://doi.org/10.1007/s11948-021-00308-7
- Popa, E. O., **Blok, V.,** & Wesselink, R. (2021). An Agonistic Approach to Technological Conflict. Philosophy and Technology, 34(4), 717-737. https://doi.org/10.1007/s13347-020-00430-7
- Roeser, S. (2021). Emotionen und Ethische Beurteilung Technologischer Risiken. In A. Grunwald, & R. Hillerbrand (Eds.), *Handbuch Technikethik, 2nd Edition* (pp. 186-190). Springer.
- Rutenberg, I., **Gwagwa, A.,** & Omino, M. (2021). Use and Impact of Artificial Intelligence on Climate Change Adaptation in Africa. In N. Oguge, D. Ayal, L. Adeleke, & I. da Silva (Eds.), *African Handbook of Climate Change Adaptation* (pp. 1107-1126). Cham: Springer. DOI: https://doi.org/10.1007/978-3-030-45106-6_80
- Sand, M., **Durán, J. M.,** & Jongsma, K. (2021). Responsibility Beyond Design. Physicians' Requirements for Ethical Medical AI. *Bioethics*, *36*(2), 162-169. DOI: https://doi.org/10.1111/bioe.12887
- Sand, M., & **Klenk, M.** (2021). Moral Luck and Unfair Blame. *The Journal of Value Inquiry.* DOI: https://doi.org/10.1007/s10790-021-09856-4
- Sandin P., & **Robaey Z.** (2021). Modern Biotechnology, Agriculture, and Ethics. In: D. C. Poff, & A.C. Michalos (Eds.), *Encyclopedia of Business and Professional Ethics*. Cham: Springer. DOI: https://doi.org/10.1007/978-3-319-23514-1_1256-1
- von Schomberg, L., & **Blok, V.** (2021). Technology in the Age of innovation. Responsible Innovation as a New Subdomain within the Philosophy of Technology. *Philosophy and Technology*, *34*(2), 309-323. DOI: https://doi.org/10.1007/s13347-019-00386-3
- von Schomberg, L., & **Blok, V.** (2021). The turbulent age of innovation. Synthese, 198(S19), 4667-4683. https://doi.org/10.1007/s11229-018-01950-8
- Stahl, B. C., Akintoye, S., Bitsch, L., Bringedal, B., Eke, D., Farisco, M., Grasenick, K., Guerrero, M., Knight, W., Leach, T., **Nyholm, S.**, [...] & Ulnicane, I. (2021). From Responsible Research and Innovation to Responsibility by Design. *Journal of Responsible Innovation*, *8*(2), 175-198. DOI: https://doi.org/10.1080/23299460.2021.1955613
- Stahl, B. C., Andreou, A., **Brey, P.,** Hatzakis, T., Kirichenko, A., Macnish, K., Patel, A., Ryan, M., and Wright, D. (2021). Artificial Intelligence for Human Flourishing. Beyond Principles for Machine Learning. *Journal of Business Research* (124), 374-388. DOI: https://doi.org/10.1016/j.jbusres.2020.11.030
- Steen, M., Sand, M., & **van de Poel, I.** (2021). Virtue Ethics for Responsible Innovation. *Business and Professional Ethics Journal*, *40*(2), 243-268. DOI: https://doi.org/10.5840/bpej2021319108

- Sullivan, E., & Alfano, M. (2021). A Normative Framework for Sharing Information Online. In C. Véliz (Ed.), The Oxford Handbook of Digital Ethics Oxford University Press. DOI: https://doi.org/10.1093/oxfordhb/9780198857815.013.5
- Timmermans, J., & **Blok, V.** (2021). A critical hermeneutic reflection on the paradigm-level assumptions underlying responsible innovation. Synthese, 198(S19), 4635-4666. https://doi.org/10.1007/s11229-018-1839-z
- Veluwenkamp, H. (2021). Inferentialist Truth Pluralism. *Ethical Theory and Moral Practice*, *24*, 107-121. DOI: https://doi.org/10.1007/s10677-020-10145-5
- Veraart, R., & **Blok, V.** (2021). Efficiency versus Enjoyment. Incorporating the Human Condition in the Transition to the Bio-based Economy. *Journal of Agricultural and Environmental Ethics*, *34*, 32. DOI: https://doi.org/10.1007/s10806-021-09872-1
- Veraart, R., & **Blok, V.** (2021). Towards a Philosophy of a Bio-based Economy. A Levinassian Perspective on the Relations Between Economic and Ecology Systems. *Environmental Values*, *30*(2), 169-192. DOI: https://doi.org/10.3197/096327120X15916910310626
- Vrščaj, D., **Nyholm, S.,** & Verbong, G. (2021). Smart Mobility Innovation Policy as Boundary Work. Identifying the Challenges of User Involvement. *Transport Reviews*, *41*(2), 210-229. DOI: https://doi.org/10.1080/01441647.2020.1829743
- Wakunuma, K., de Castro, F., Jiya, T., Inigo, E. A., **Blok, V.,** & Bryce, V. (2021). Reconceptualising responsible research and innovation from a Global South perspective. Journal of Responsible Innovation, 8(2), 267-291. https://doi.org/10.1080/23299460.2021.1944736
- Wiarda, M., van de Kee, G., Yaghmaei, E., & **Doorn, N.** (2021). A Comprehensive Appraisal of Responsible Research and Innovation. From roots to leaves. *Technological Forecasting and Social Change*, *172*, 121053. DOI: https://doi.org/10.1016/j.techfore.2021.121053
- de Wildt, T. E., **van de Poel, I. R.**, & Chappin, E. J. L. (2021). Tracing Long-Term Value Change in (Energy) Technologies. Opportunities of Probabilistic Topic Models Using Large Data Sets. *Science, Technology, & Human Values*, *47*(3), 429-458. Online first. DOI: https://doi.org/10.1177/01622439211054439
- Rutjes, H., Willemsen, M. C., Feijt, M. A., & **IJsselsteijn, W. A.** (2021). The Influence of Personal Health Data on the Health Coaching Process. Manuscript submitted for publication.
- Rutjes, H., Willemsen, M. C., Smyth, B., & **IJsselsteijn, W. A.** (2021). Running Coaches' Interactions with a Marathon Prediction Tool. Manuscript submitted for publication.
- Zhang, C., Van Gorp, P., Derksen, M. A., Nuijten, R. C. Y., **IJsselsteijn, W. A.**, Zanutto , A., Melilo, F., & Pratola, R. (2021). Promoting Occupational Health through Gamification and E-Coaching: A 5-Month User Engagement Study. International Journal of Environmental Research and Public Health, 18(6), [2823]. https://doi.org/10.3390/ijerph18062823
- Zhang, C., Lakens, D., & **IJsselsteijn, W. A.** (2021). Theory integration for lifestyle behavior change in the digital age: An adaptive decision-making framework. Journal of Medical Internet Research, 23(4), [e17127]. https://doi.org/10.2196/17127
- Zhang, C., Vanschoren, J., van Wissen, A., Lakens, D., Ruyter, B. D., & **IJsselsteijn, W. A.** (2021). Theory-based Habit Modeling for Enhancing Behavior Prediction. arXiv, 2021, [2101.01637]. https://arxiv.org/abs/2101.01637
- Zuidhof, N., Ben Allouch, S., Peters, O., & **Verbeek, P.-P.** (2021). Defining Smart Glasses. A Rapid Review of State-of-the-Art Perspectives and Future Challenges From a Social Sciences' Perspective. *Augmented Human Research*, *6*, 15. DOI: https://doi.org/10.1007/s41133-021-00053-3
- Ziliotti, E. (2021). Review of Daniel A. Bell and Wang Pei's 'Just Hierarchy. Why Social Hierarchies matter for China and the rest of the World'. *Res Publica*, 27, 515-520. DOI: https://doi.org/10.1007/s11158-020-09493-x

Professional publications

ESDiT 2020 Professional Publications

- Barendregt, W., Becker, C., Cheon, E., Clement, A., Reynolds-Cuéllar, P., Schuler, D., & Suchman, L. (2021). Defund Big Tech, Refund Community. Tech Otherwise. https://doi.org/10.21428/93b2c832.e0100a3f
- Hopster, J. (2020). Gefilterde liefde. Wijsgerig perspectief op maatschappij en wetenschap, 2020(2). https://www.filosofie.nl/gefilterde-liefde/
- Hopster, J. (2020). Soorten bestaan niet. Algemeen Nederlands Tijdschrift voor Wijsbegeerte, 112(4), 499-502. https://doi.org/10.5117/antw2020.4.027.Hops
- IJsselsteijn, W. A. (2019). The digital transformation, behavioural influencing, and the government. The slippery slope from nudging to überveillance. In Appropriate use of data in public space From dialogue groups to new policy proposals. Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. https://www.nldigitalgovernment.nl/wp-content/uploads/sites/11/2019/11/appropriate-use-of-data-in-public-space.pdf
- IJsselsteijn, W. A., Tummers - Heemels, A. I. M., & Brankaert, R. G. A. (2020). Warme Technologie: Ontwerpen voor en met mensen met dementie. Tijdschrift Positieve Psychologie, 2020(4), 10-17.
- Poel, I. v. d., Taebi, B., & Wildt, T. d. (2020). Accounting for Values in the Development and Design of New Nuclear Reactors. The Bridge, Fall, 59–65. https://lwrs.inl.gov/Technical%20Integration%20Office/Nuclear_Energy_Revisited.pdf#page=61
- Poel, I. v. d., Taebi, B., & Wildt, T. d. (2020). Engineering and social responsibility accounting for values in the development and design of new nuclear reactors. Bridge, 50(3), 59--65.
- Roeser, S. (2020). Corona, risico's en morele emoties. Podium voor Bio-ethiek, 27(3), 7-9. https://nvbioethiek.files.wordpress.com/2020/07/podium-20-3-naar-een-morele-agenda-na-de-coronacrisis.pdf
- Verbeek, P. P. (2020). Data in de zorg en zorg voor de data. In M. V. Houdenhoven & J. H. Zwaveling (Eds.), Datadilemma's in de zorg (pp. 96-103). Bohn Stafleu van Loghum. https://doi.org/https://doi.org/10.1007/978-90-368-2428-6_10
- Verbeek, P. P. (2020). Technologisch burgerschap en het ethisch begeleiden van digitalisering. In J. Rabaey, R. v. Est, P. P. Verbeek, & J. Vandewalle (Eds.), Maatschappelijke waarden bij digitale innovatie: wie, wat en hoe? KVAB – Denkersprogramma 2019 (pp. 38-54). https://www.kvab.be/sites/default/rest/blobs/2806/tw_waardevoldigitaliseren.pdf
- Verbeek, P. P., Brey, P., Est, R. v., Gemert, L. v., Heldeweg, M., & Moerel, L. (2020). Ethische analyse van de COVID-19 notificatie-app ter aanvulling op bron en contactonderzoek GGD. . https://www.rijksoverheid.nl/documenten/rapporten/2020/07/14/ethische-analyse-van-de-covid-19-notificatie-app-ter-aanvulling-op-bron-en-contactonderzoek-ggd
- Verbeek, P. P., & Tijink, D. (2020). Guidance Ethics Approach. ECP.

ESDiT 2021 Professional Publications

- Hopster, J. (2021). De 21ste eeuwse Darwin. Wijsgerig perspectief op maatschappij en wetenschap, (3). https://www.filosofie.nl/ten-geleide-de-21ste-eeuwse-darwin/
- Hopster, J. (2021). Zijn nationale klimaatrechtszaken zinvol? Filosofie magazine, (9). https://www.filosofie.nl/zijn-nationale-klimaatrechtszaken-zinvol/
- Hopster, J. (2021). Zijn generaties elkaar iets verschuldigd? Filosofie magazine, (2). https://www.filosofie.nl/zijn-generaties-elkaar-iets-verschuldigd/
- Hopster, J. (2021). Moeten we uitgestorven soorten tot leven wekken? Filosofie magazine, (4). https://www.filosofie.nl/moeten-we-uitgestorven-soorten-tot-leven-wekken/
- Hopster, J. (2021). Is een kinderwens nog van deze tijd? Filosofie magazine, (5). https://www.filosofie.nl/is-een-kinderwens-nog-van-deze-tijd/
- Hopster, J. (2021). Is zwangerschap buiten het lichaam een goed idee? Filosofie magazine, (7). https://www.filosofie.nl/is-zwangerschap-buiten-het-lichaam-een-goed-idee/

- Hopster, J. (2021). _Zijn nationale klimaatrechtszaken zinvol?_ Filosofie magazine, (9). https://www.filosofie.nl/zijn-nationale-klimaatrechtszaken-zinvol/
- Hopster, J. (2021). _Moeten grote bedrijven activistisch zijn?_ Filosofie magazine, (12). _Moeten grote bedrijven activistisch zijn? — University of Twente Research Information (utwente.nl)_
- Hopster, J. (2021). Zijn generaties elkaar iets verschuldigd? Filosofie magazine, (2). https://www.filosofie.nl/zijn-generaties-elkaar-iets-verschuldigd/
- Rijssenbeek, J. (2021). Deep Transitions in our food system. European Society for Agricultural and Food Ethics (EURSAFE) https://www.eursafe.org/images/EURSAFE_NEWSLETTER_MAY_2021.pdf

Conferences

2020

Name	Role	Title	Venue	Date
Hermann, J.	invited speaker	When the Ground Starts to Shake: Wittgenstein's View of Certainty in the Light of Rapid Technological Progress	UEA Wittgenstein Workshop	14 October, 2020
IJsselsteijn, W.	keynote	When AI meets VR: Ethical challenges and societal implications	Artificial Intelligence & Virtual Reality (AIVR 2020). 2nd Ethics in AI and XR Workshop.	14-18 December, 2020
Klenk, M.	invited speaker	Manipulation	Practical Philosophy Research Seminar, LMU Munich	1 November 2020
Klenk, M.	invited speaker	Questions for a Political Philosophy of Technology	HfP Global Governance Research Colloquium, Munich, Germany	October, 2020
Nickel, P.; O. Kudina; I. van de Poel		Moral Uncertainty in Techno-moral Change: Bridging the Explanatory Gap	PHTR Conference 2020, Philosophy of Human-Technology Relations	4-7 November 2020
Nyholm, S.	keynote	Human Minds meet Artificial Intelligence	Conference on AI and Human Enhancement, Kaunas University, Lithuania	February 2020
Poel, I. van de	keynote	Worlds apart? What philosophy and engineering can learn from each other	fPET 2020, On-line Forum on Philosophy, Engineering and Technology	17-19 November 2020
Poel, I. van de	invited speaker	Embedding Values in AI systems	AGORA AITech	28 October 2020
Poel, I. van de	invited speaker	Responsible Innovation [presentation & panel]	INNovember event of the Dutch National Government	9 November 2020

Roeser, S.	keynote	Convergence ethics of medical technologies, risk and moral emotion	Workshop of convergence ethics project, TU Delft/Erasmus	12 November 2020
Roeser, S.	invited speaker	Ethics of medical-technological innovations	Conference of Anchoring Innovations project, Leiden University & Radboud University	11 December 2020
Roeser, S.	invited speaker	Risk, Moral Emotions and the Corona-crisis	Mancept workshop, track on risk ethics, Manchester University	9 September 2020
Roeser, S.	invited speaker	Ethical aspects of the Corona-crisis	Online colloquium, Philosophy Department Tilburg University	16 May 2020
Roeser, S.	invited speaker	Ethical aspects of the Corona-crisis	Webinar on Covid-19, DSYS, TU Delft	8 April 2020
Verbeek, P. P.	keynote	Responsible Innovation for a Digital Society	27th Innovation and Product Development Management Conference, Antwerp	8 June 2020
Verbeek, P. P.	keynote	Working towards Society 5.0: AI and the Future of the Human Min	Conference 'Reshaping Work', Amsterdam	6 March 2020
Verbeek, P. P.	keynote	Robotisering in de zorg: uitdagingen, verwachtingen, dilemma's	Symposium on Robotization and Pharmacy, Princess Maxima Center, Utrecht	6 February 2020
Verbeek, P. P.	invited speaker	Technology and Morality: How Bioethics meets Philosophy of Technology	Yale University, Summer Institute in Bioethics	14 July 2020
Verbeek, P. P.	invited speaker	The Moral Status of Technological Artifacts	Filosofia da Ciência, Tecnologia, Arte e Sociedade, Lisbon	2 July 2020
Verbeek, P. P.	invited speaker	How will Autonomous Robots and Systems Influence Society? Debate from technological, philosophical, ethical, legal, and social implications perspective	ICRA 2020 (International Conference on Robotics and Automation), Paris	4 June 2020
Verweij, M.	invited speaker	Ethics and Covid19 vaccination	Annual Conference of the Swedish National Council on Medical Ethics	18 December 2020

2021

Name	Role	Title	Venue	Date
Doorn, N.	invited speaker	Klimaatadaptatie: waarom veerkracht alleen niet voldoende is	Van Leeuwenhoek Lecture TU Delft	7 March 2021
Gwagwa, A.	keynote	African Values, Ethics, and Technology by Palgrave	Book launch, University of Kwazulu-Natal	26 August 2021
Gwagwa, A.	invited speaker	Biometric data repurposing for political reasons in Africa	Brocher Institute and University of Augsburg	27 October 2021
Hermann, J.	invited speaker	Moral Progress through Disruption?	Moral Progress and Disagreement: Evolutionary Perspectives, Rome	2 December 2021
Müller, V.	keynote	AIAI: As-if AI and intelligence without goals	Southern African Conference for Artificial Intelligence Research (SACAIR), Dolphin Coast, KwaZulu-Natal	8 December 2021
Nyholm, S.	keynote	How Should We Interact with Artificially Intelligent Robots?	Theology and AI conference, Münster University	October 2021
Nyholm, S.	keynote	An Asymmetry in the Possibility of Vice and Virtue in Relation to Humanoid Robots?	Ethics, Anthropomorphism, and Robots conference, University of Porto	June 2021
Nyholm, S.	invited speaker	Meaning and Anti-Meaning in Life and What Happens After We Die	2021 Royal Institute of Philosophy Conference, Liverpool	July 2021
Nyholm, S.	invited speaker	The Ethics of Human-Robot Interaction	University of Sri Jayewardenepura, Sri Lanka	June 2021
Pesch, U.	invited speaker	Autonomously driving away from meanings	SPT Conference, Lille	28 June 2021
Reyes Benavides, P.	keynote	Walk the Talk! A lecture on Action Research and Intersectionality	Sustainability Transformation Symposium, University of Twente	7 October 2021
Roeser, S.	keynote	Ethical intuitions and uncertainty'	Lorentz Workshop,	1 August 2021
Roeser, S.	invited speaker	Emotional Deliberation on Varieties of Risk	Workshop Varieties of Risk project, Philosophy Departments of Edinburgh University and University of Stirling	8 March 2021
Sullivan, E.E.	Invited Speaker	Inductive Risk, Understanding, and Opaque Machine Learning Models	Philosophy of Science Meets ML; Tübingen University	Nov. 2021

Sullivan, E.E.	Keynote	Inductive Risk, Understanding, and Opaque Machine Learning Models	Bias and discrimination in AI decisions; Hannover university	Oct. 2021
Sullivan, E.E.	Invited Speaker	Explainable AI with a Purpose	AiTech Agora Talk – TU Delft	Feb. 2021
Sullivan, E.E.	Invited Panel Speaker	Panel discussion on responsible data science	Digital Society Conference, VSNU	Nov. 2021
Sullivan, E.E.	peer-reviewed accepted speaker	Inductive Risk, Understanding, and Machine Learning Models	Symposium Panel 2020/21 Philosophy of Science Association Meeting; Baltimore, MD	Nov. 2021
Sullivan, E.E.	Invited Speaker	How values encroach on understanding from opaque machine learning models	Lugano Talks on the Foundations and Ethics of AI, IDSIA and Univesity of Milan	June. 2021
Ignacio Ojea Quintana, Colin Klein, Marc Cheong, **Emily Sullivan,** Ritsaart Reimann, Mark Alfano	Invited Speaker	The evolution of vaccine discourse on Twitter during the first six months of COVID	Deliberation and Polarization workshop, VU Amsterdam	April. 2021
Veluwenkamp, H.	invited speaker	On Reproaching Robots	Practical Philosophy and Political Theory Research Seminar, Gothenburg	26 May 2021
Veluwenkamp, H.	invited speaker	Ethics by Design and Conceptual Engineering	FS Philosophy Forum, Frankfurt	17 November 2021
Verbeek, P. P.	keynote	Disruptive Technologies and Responsible Design	Senses&Sensibility21: Designing Next Gernera(c)t!ons', Bari	9 December 2021
Verbeek, P. P.	keynote	Artificial Intelligence and ethical disruption	SACAIR conference, Pretoria	24 February 2021
Verbeek, P. P.	keynote	Techno-topology: Interculturality and the Technological Mediation of Place	PLATIAL'21 conference, ITC, Enschede	16 December 2021
Verbeek, P. P.	keynote	On Intertechnicality: Postphenomenology, New Materialism, and Digital Materiality'	Conference On humans and machines. Human-machine interactions in digital cultures, Fern Universität Hagen	3 March 2021
Verbeek, P. P.	keynote	Disruptive Technologies and the Reconfiguration of Risk	SRA-E Benelux conference 2021, Eindhoven	16 March 2021
Ziliotti, E.	invited speaker	Against Confucian Hierarchy	Conference on Equality and Hierarchy, Center for East Asian and Comparative Philosophy,	March 2021

			City University of Hong Kong	
Ziliotti, E.	invited speaker	Collectivist Approaches to Digital Well-Being: A Confucian Perspective	4TU.Ethics Biannual Conference on Ethics and Technology	October 2021

Knowledge utilization

2020

Name	Item	Title	(Publication) Venue	Link/DOI
Hopster, J.	article	Gefilterde liefde	Wijsgerig perspectief nr 2/2020	Link
IJsselsteijn, W.	article	Knuffelen in de anderhalvemetersamenleving	NTR De kennis van nu	Link
IJsselsteijn, W.	interview	Welkom in de digi-dystopie	HP de Tijd	Link
Nyholm, S.	interview	Humans and Robots: Ethics, Agency, and Anthropomorphism	Radio Orbit, on KOPN 89,5, Missouri, USA	Link
Nyholm, S.	interview	Verliefd op een chatbot: hoe vergroeid kun je raken met technologie?	VPRO Tegenlicht	Link
Nyholm, S.	interview	Can a Robot be a Good Colleague: New Study on Smooth Human-Robot Interaction	Analytics Magazine India	Link
Nyholm, S.	workshop	Can Robots Act for Reasons?	Artificial Intelligence workshop, Chalmers University	
Nyholm, S.	invited talk	An Asymmetry in the Possibility of Vice and Virtue in Relation to Humanoid Robots?	University of Vienna	
Poel, I. van de	blog/podcast	Waarom nu wel een app maar geen vaccin tegen corona?	Bij Nader Inzien	Link
Poel, I. van de	videocast	Maatschappelijk verantwoord ontwerpen en de ingenieuze stad	Koninklijke NLIngenieurs, onderdeel van de Maand van de Ingenieuze Stad	Link
Rijssenbeek, J.	essay	Voorbij stad of platteland	Wijsgerig Perspectief 3/2020	Link
Roeser, S.	blog	Neem emoties mee in toekomstige besluitvorming over corona	Bij Nader Inzien	Link
Royakkers, L.; Verbugge, R.; Harmelen, F. van	article	Verbied preventief het gebruik van 'killer robots'	NRC	Link

Name	Item	Title	(Publication) Venue	Link/DOI
Verbeek, P. P. & Brey, P.	expert advice	Ethische analyse van de COVID-19 notificatie-app	Ministerie van VWS	Link
Verweij, M.	article	Voorkom sociale ongelijkheid door het vaccinatiepaspoort	Trouw	Link
Verweij, M.	article	Vaccinatie hóéft niet. Maar piep dan ook niet over minder vrijheid [met Roland Pierik]	Volkskrant	Link
Verweij, M.	article	Beloon coronavaccinatie met meer vrijheden [met Roland Pierik]	NRC	Link
Verweij, M.	article	Het pijnlijke gesprek over ziekenhuisbedden moet juist nu gevoerd worden [met Roland Pierik]	Bij Nader Inzien	Link
Verweij, M.	article	Geef jong en fit voorrang op de intensive care [met Roland Pierik]	Volkskrant	Link
Ziliotti, E.	interview	Ethics of social media, Confucianism, Meritocracy, in Italian	Mentinfuga	Link

2021

Name	Item	Title	(Publication) Venue	Link/DOI
Brey, P.	expert advice	Ethisch kader	Adviesraad Internationale vraagstukken	Link
Doorn, N.	workshop	Ethische verkenning rioolwaterepidemiologie	RIVM/ Unie van Waterschappen/ Ministerie VWS	
Doorn, N.	workshop	Digitaliseringsberaad: Ethiek en digitalisering watersector	Unie van Waterschappen	
Durán, J.	invited talk	But… is it credible? Computational reliabilism for Machine Learning	Leverhulme Centre for the Future of Intelligence, University of Cambridge	
Durán, J.	invited talk	Matching Ethics and Law in AI: policy and practical implications for "Trustworthy" AI	European Parliament	
Friedman, C.	podcast	Moral Patiency, Westworld, and Privacy	The Dolores Project, Joshua K. Smith	Link
Gerola, A.	workshop	Beyond control: philosophical and ethical implications of biomimicry	Gesellschaft für Interkulturelle Philosophie	Link
Grunsven, J. van	symposium organizer	Disability, technology, and bodily control	4TU Ethics Symposium	
Gwagwa, A.	invited talk	Inclusive and Resilient Digital Transition: a new chapter for the AU-EU relations?	EU Institute for Security Studies, Research ICT Africa and the Global Forum on Cyber Expertise	Link

Gwagwa, A.	podcast	Data and automation	Columbia University and Data & Society	Link
Hermann, J.	interview	Zwanger of een kind uit een kunstbaarmoeder?	Focus, NPO Radio 1	Link
Hermann, J.	invited talk	Philosophical perspectives on Artificial Wombs and Period Trackers	PEP Talk: Feminism & Technology	
Hopster, J.	article	Klimaatwinnaars	De Groene Amsterdammer	Link
IJsselsteijn, W.	lecture	Artificial intelligence and human wisdom	Prof. Dr. D.L. Knook Lecture	Link
IJsselsteijn, W.	podcast	Hoe intiem kan technologie zijn?	Studium Generale Universiteit Utrecht	Link
Jacobs, N.	installation	Dreaming Before the Start of Time	Dutch Design Week 2021	Link
Jacobs, N.	invited talk	Spinozaals 2021-2022	Bekendmaking Spinozalens Laureaten	Link
Müller, V.	invited talk	Orthogonalität und existentielles Risiko durch KI - Geht das wirklich zusammen?	Forschungsinstitut für Wissenschaft, Munich Center for Technology	
Nyholm, S.	interview	Dating-Apps erwecken den Eindruck, man müsse vollkommen sein	Süddeutsche Zeitung Magazine, by Agnes Striegan	Link
Nyholm, S.	interview	Liefde tussen mens en robot	Filosofie Magazine nr. 7/2021	Link
O'Neill, E.	blog	Three Under-recognized Hazards of Digital Recording	Cornell Tech	Link
Pesch, U.	invited talk	Democratie en rechtvaardigheid in transitie	Masterclass Ministerie van Infrastructuur en Waterstaat	
Poel, I. van de	interview	Responsible Innovation: Turn Your Commitment To Do Good into Daily Action	Centre for Responsible Innovation	Link
Poel, I. van de	invited talk	Ethical Issues in Cybersecurity: Beyond Privacy and Security	Cyber justice laboratory	Link
Poel, I. van de	workshop	Can we take responsibility for risks beyond our control?	Institute of Philosophy, University of Graz	
Poel, I. van de	workshop	Equal access to infrastructure services? The importance of value and time	Workshop Space, time and contestations over demand response and infrastructure access, University of Lancaster	Link
Reyes Benavides, P.	installation	Tell the Truth	GOGBOT festival, Enschede	Link

Rijssenbeek, J.	lecture	How the COVID-19 pandemic disrupts our relationship to nature	Studium Generale, WUR	Link
Roeser, S.	interview	De techniek was niet objectief	Trouw	Link
Roeser, S.	interview	Het debat over kernenergie moet ook over emoties gaan	NRC	Link
Roeser, S.	keynote	Moral emotions and risks of nuclear energy	Workshop by Deutsche Strahlenschutzkomission (radiation protection agency advising the German government)	
Roeser, S.	keynote	AI and Moral Emotions	Science Week Karlsruhe Institute of Technology	
Royakkers, L.	invited talk	Zijn we te optimistisch over technologische oplossingen?	Betweterfestival Utrecht	Link
Royakkers, L.	invited talk	Ethical AI in Defence	COID Integriteitsbureau Defensie	
Verbeek, P. P.	course design	Online Course Philosophy of Technology and Design	FutureLearn	Link
Verbeek, P. P.	interview	Doet u mij alstublieft een meisje: is geslachtskeuze een eerste stap naar designerbaby's?	De Volkskrant	Link
Sullivan, E.E.	Invited Panel Speaker	Regulating Algorithmic Recommendation Systems	Digital Futures Summit European Parliament	
Sullivan, E.E.	Expert comment	Far right spies an opportunity in Europe's new wave of COVID pain and protest	NBC News	Link
Sullivan, E.E.	Interview / podcast	What is machine learning and why is it important for philosophy?	Why? Philosophical Discussions about Everyday Life; prairie public radio-- United States	Link
Sullivan, E.E.	Interview / radio / podcast	Corona and Machine Learning	4TU.Ethics COVID Ethics Pod-cast	Link
Sullivan, E.E.	Interview / podcast	Social epistemic networks	Podcast	Link
Sullivan, E.E.	Invited Panel Speaker	Webinar : AI for Good Series – AI & Robotics Event	Deloitte	
Verbeek, P. P.	podcast	Waarom vinden computers witte mannen die Peter heten het leukst?	De Universiteit van Nederland podcast	Link
Verbeek, P. P.	symposium organizer	Intercultural Philosophical Relay Race	UNESCO World Philosophy Day 2021	Link

Verweij, M.	article	Laat gedrag zwaarder wegen bij bloeddonatie	Het Parool	Link
Verweij, M.	article	Burgers zijn vrij om het vaccin te weigeren, maar er zijn wel gerechtvaardigde consequenties. [met Roland Pierik]	NRC	Link
Verweij, M.	article	Zoeken hoe je die pas proportioneel inzet [De kwestie: coronabewijs]	Telegraaf	Link
Verweij, M.	article	Beloon een vaccinatie in achterstandswijk	Trouw	Link
Verweij, M.	article	Liever een echte vaccinatieplicht dan 2G, dat is duidelijker en eerlijker [met Roland Pierik]	Volkskrant	Link
Ziliotti, E.	invited talk	Confucian Democratic Leadership	LUCIP Lecture Series, Centre for Intercultural Philosophy, University of Leiden	Link
Ziliotti, E.	invited talk	What Does the COVID-19 Pandemic Teach us about Democracy?	Confucian Meritocratic Political System in its Domestic and International Forms, Fudan University, China	

ESDiT Podcast

The ESDiT podcast showcases Interviews with, and by, scholars affiliated with the research consortium Ethics of Socially Disruptive Technologies.

ESDiT Podcast 2021 Episodes

- Patricia Reyes on "Climate Technoactivism" Link
- Emily Sullivan on "Social Epistemic Networks" Link
- Bernice Bovenkerk on "Ethics of Animal Modification" Link
- Cindy Friedman on "Social Robots" Link
- Naomi Jacobs on "Capability Sensitive Design" Link
- Julia Hermann on "The Artificial Womb" Link
- Jeroen Hopster on "The Nature of Socially Disruptive Technologies" Link
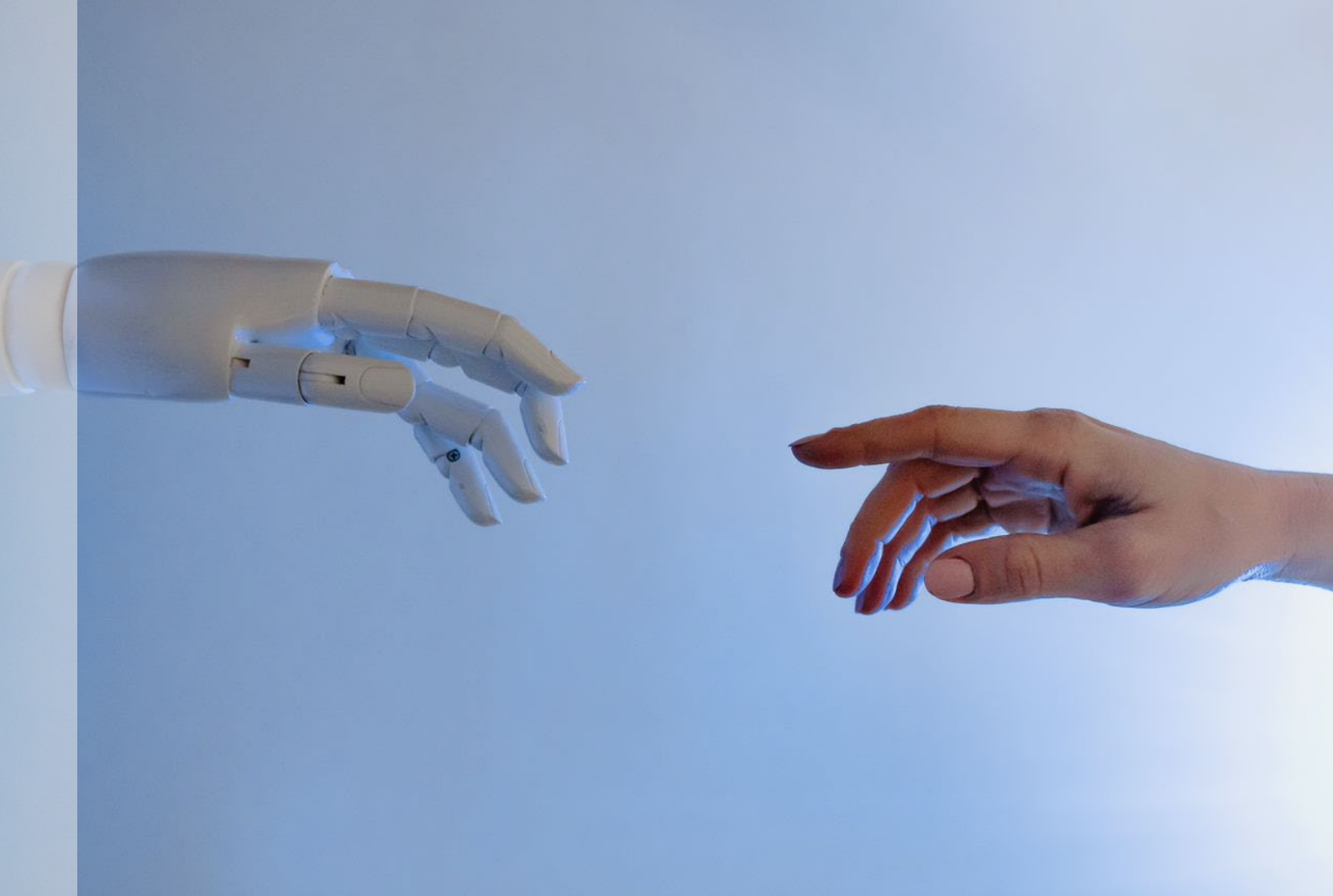
Researchers

Members of the ESDiT Programme

Researchers

In-cash Research Fellows ESDiT programme

Research fellows NWO in-cash 2020-2021

	Last name	First name	University	Position	Research line
1	Blok	Vincent	Wageningen University & Research	Assistant or associate professor	Nature
2	Bollen	Caroline	Delft University of Technology	PhD	Human
3	Brey	Philip	University of Twente	Full professor	Synthesis
4	Claassen	Kristy	University of Twente	PhD	Human
5	Dennis	Matthew	Eindhoven University of Technology	Postdoc	Human
6	Friedman	Cindy	Utrecht University	PhD	Human
7	Gerola	Alessio	Wageningen University & Research	PhD	Nature
8	Gwagwa	Arthur	Utrecht University	PhD	Society
9	Hermann	Julia	University of Twente	Assistant or associate professor	Human
10	Hofbauer	Benjamin	Delft University of Technology	PhD	Nature
11	Hopster	Jeroen	University of Twente	Postdoc	Synthesis
12	Hummel	Patrik	Eindhoven University of Technology	Assistant or associate professor	Society
13	IJsselsteijn	Wijnand	Eindhoven University of Technology	Full professor	Human
14	Löhr	Guido	Eindhoven University of Technology	Postdoc	Synthesis
15	Moesker	Karen	Delft University of Technology	PhD	Nature
16	Nyholm	Sven	Utrecht University	Assistant or associate professor	Human
17	Oosterzee, van	Anna	Utrecht University	PhD	Human
18	Paiusco	Elisa	University of Twente	PhD	Society
19	Poel, van de	Ibo	Delft University of Technology	Full professor	Nature
20	Puil, van der	Roxanne	Eindhoven University of Technology	PhD	Society
21	Reyes Benavides	Patricia	University of Twente	PhD	Society
22	Rijssenbeek	Julia	Wageningen University & Research	PhD	Nature
23	Robaey	Zoë	Wageningen University & Research	Assistant or associate professor	Nature
24	Robeyns	Ingrid	Utrecht University	Full professor	Society
25	Roeser	Sabine	Delft University of Technology	Full professor	Society
26	Sta. Maria	Joseph	Delft University of Technology	PhD	Society

	First name	Last name	University	Position	Research line
27	Sullivan	Emily	Eindhoven University of Technology	Assistant or associate professor	Society
28	Verbeek	Peter-Paul	University of Twente	Full professor	Human
29	Ziliotti	Elena	Delft University of Technology	Assistant or associate professor	Society

In-kind Research Fellows ESDiT programme

Research fellows in-kind 2020-2021

	First name	Last name	University	Position	Research line
1	Anderson	Joel	Utrecht University	Full professor	Human
2	Babushkina	Dina	University of Twente	Assistant or associate professor	Human
3	Bombaerts	Gunter	Eindhoven University of Technology	Assistant or associate professor	Human
4	Doorn	Neelke	Delft University of Technology	Full professor	Nature
5	Durán	Juan	Delft University of Technology	Assistant or associate professor	Society
6	Frank	Lily	Eindhoven University of Technology	Assistant or associate professor	Human
7	Grunsven, van	Janna	Delft University of Technology	Assistant or associate professor	Human
8	Henschke	Adam	University of Twente	Assistant or associate professor	Society
9	Hoven, van den	Jeroen	Delft University of Technology	Full professor	Society
10	Jacobs	Naomi	University of Twente	Assistant or associate professor	Human
11	Klenk	Michael	Delft University of Technology	Assistant or associate professor	Synthesis
12	Kudina	Olya	Delft University of Technology	Postdoc	Human
13	Marin	Lavinia	Delft University of Technology	Postdoc	Society
14	Matzat	Uwe	Eindhoven University of Technology	Assistant or associate professor	Society
15	Meijers	Anthonie	Eindhoven University of Technology	Full professor	Synthesis
16	Müller	Vincent	Eindhoven University of Technology	Full professor	Synthesis
17	Nickel	Philip	Eindhoven University of Technology	Assistant or associate professor	Synthesis
18	O'Neill	Elizabeth	Eindhoven University of Technology	Assistant or associate professor	Synthesis
19	Pesch	Udo	Delft University of Technology	Assistant or associate professor	Nature
20	Royakkers	Lambèr	Eindhoven University of Technology	Assistant or associate professor	Society
21	Ruijten	Peter	Eindhoven University of Technology	Assistant or associate professor	Human

	First name	Last name	University	Position	Research line
22	Santoni de Sio	Filippo	Delft University of Technology	Assistant or associate professor	Human
23	Snijders	Chris	Eindhoven University of Technology	Full professor	Human
24	Spahn	Andreas	Eindhoven University of Technology	Assistant or associate professor	Society
25	Taebi	Behnam	Delft University of Technology	Assistant or associate professor	Nature
26	Veluwenkamp	Herman	Delft University of Technology	Postdoc	Synthesis
27	Verweij	Marcel	Wageningen University & Research	Full professor	Nature
28	Werkhoven	Sander	Utrecht University	Assistant or associate professor	Human

Associate Fellows ESDiT programme

Associate fellows 2020-2021

	First name	Last name	University	Position	Research line
1	Bäck	Thomas	Leiden University	Full professor	Society
2	Bovenkerk	Bernice	Wageningen University & Research	Assistant or associate professor	Nature
3	Broersen	Jan	Utrecht University	Full professor	Human
4	Copeland	Samantha	Delft University of Technology	Assistant or associate professor	Unknown
5	Gädeke	Dorothea	Utrecht University	Assistant or associate professor	Society
6	Gertz	Nolen	University of Twente	Assistant or associate professor	Human
7	Gremmen	Bart	Wageningen University & Research	Full professor	Unknown
8	Hajer	Maarten	Utrecht University	Full professor	Nature
9	Jansen	Sammie	Wageningen University & Research	PhD	Society
10	Jonker	Catholijn	Delft University of Technology	Full professor	Human
11	Kalis	Annemarie	Utrecht University	Assistant or associate professor	Human
12	Kamphorst	Bart	Wageningen University & Research	Postdoc	Human
13	Korenhof	Paulan	Wageningen University & Research	Postdoc	Unknown
14	Lakens	Daniel	Eindhoven University of Technology	Assistant or associate professor	Human
15	Loosdrecht, van	Mark	Delft University of Technology	Full professor	Nature

16	Meijboom	Frank	Utrecht University	Assistant or associate professor	Nature
17	Oost, van der	John	Wageningen University & Research	Full professor	Nature
18	Ramsey	Nicolas (Nick)	UMC Utrecht	Full professor	Human
19	Riemsdijk, van	Birna	University of Twente	Assistant or associate professor	Human
20	Sauer	Hanno	Utrecht University	Assistant or associate professor	Synthesis
21	Scheepers	Floortje	UMC Utrecht	Full professor	Human
22	Shäfer	Mirko Tobias	Utrecht University	Assistant or associate professor	Society
23	Stramigioli	Stefano	University of Twente	Full professor	Human
24	Verhulst	Eveline	Wageningen University & Research	Assistant or associate professor	Nature
25	Vuuren, van	Detlef	Utrecht University	Full professor	Nature
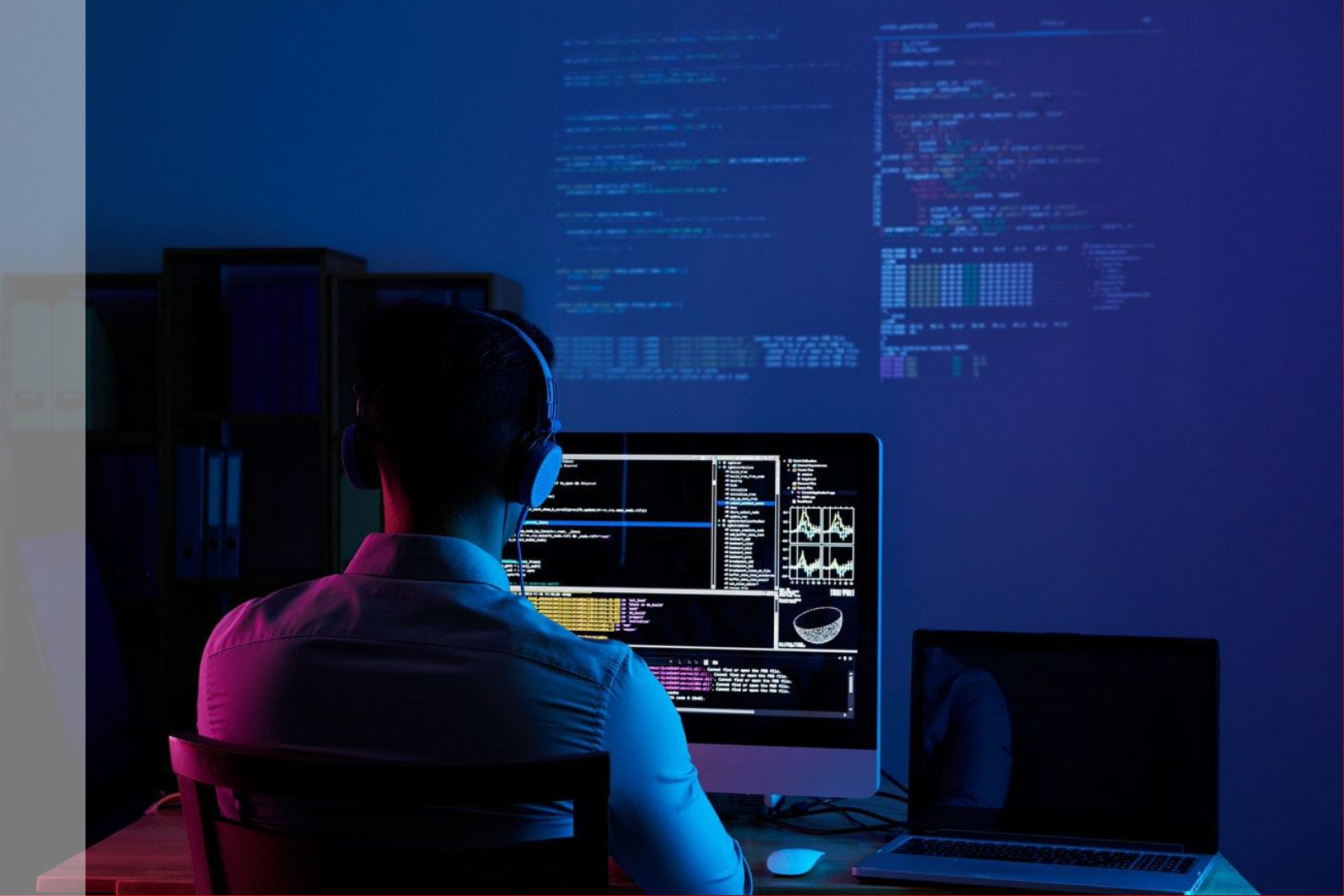
Finances

Overall budget 2020-2021

Budget

Overall budget

ESDiT's overall budget of €28 million is financed by NWO (€19 million) and co-funding via de participating universities (€8 million)

As was to be expected, we have underspent in almost every category in this first two years due to the COVID restrictions.

Financial report 2020-2021

Staff (period 2020-2021) (in k€)   1000

Scientific staff	FTE	B2021	R2021	UT	TUD	UU	TUE	WUR	Total	Total period 2020	Total (period 2020-2021)
PhD students	13,0	570,7	393,0	76,8	123,6	81,7	47,3	63,6	**393,0**	**62,7**	**455,8**
Post Docs	2,6	398,4	184,0	72,8	-	-	111,2	-	**184,0**	**15,8**	**199,9**
Tenure Trackers	3,4	82,0	56,5	13,8	16,4	16,4	6,6	3,3	**56,5**	**15,5**	**72,0**
Replacements (PIs)	0,8	86,8	120,3	17,1	58,4	8,2	36,5	-	**120,3**	**126,8**	**247,1**
Total	**19,9**	**1.137,8**	**753,7**	**180,6**	**198,4**	**106,4**	**201,6**	**66,9**	**753,7**	**221,0**	**974,7**

Non-scientific staff	FTE	B2021	R2021	UT	TUD	UU	TUE	WUR	Total	Total period 2020	Total (period 2020-2021)
Academic level	0,9	111,4	85,2	85,2					**85,2**	**66,1**	**151,3**

Professional level	0,8	46,7	49,8	49,8					49,8	48,7	98,5
Total	**1,8**	**158,2**	**135,0**	**135,0**	**-**	**-**	**-**	**-**	**135,0**	**114,8**	**249,8**
Total 2020-2021	**21,7**	**1.296,0**	**888,8**	**315,6**	**198,4**	**106,4**	**201,6**	**66,9**	**888,8**	**335,7**	**1.224,5**

Other costs (period 2020-2021) (in k€)

Other funding / *Description*	B2021	R2021	UT	TUD	UU	TUE	WUR	**Total**	**Total period 2020**	**Total (period 2020-2021)**
Open science infrastructure	5,0	-	-	-	-	-	-	**-**	**-**	**-**
Travel and conference organisation	96,2	18,9	13,6	1,3	2,5	1,3	0,3	**18,9**	**4,6**	**23,5**
Dissemination and valorization	25,0	9,1	8,2	-	0,6	-	0,3	**9,1**	**-**	**9,1**
PhD Abroad programme	7,5	-	-	-	-	-	-	**-**	**-**	**-**
Strengthening Living Labs	20,0								**-**	**-**
Total 2020-2021	**153,7**	**28,1**	**21,8**	**1,3**	**3,1**	**1,3**	**0,6**	**28,1**	**4,6**	**32,6**

Co-funding (period 2020-2021) (in k€ incl. surcharges for personnel)

Co-funding	By whom	B2021	R2021	UT	TUD	UU	TUE	WUR	**Total**	**Total period 2020**	**Total (period 2020-2021)**

In cash:

		B2021	R2021	UT	TUD	UU	TUE	WUR	Total	Total period 2020	Total (period 2020-2021)
PhD students	consortium	35,3	54,7	11,6	16,9	11,1	6,4	8,7	**54,7**	**8,6**	**63,3**
Post Docs	consortium	-	25,1	9,9	-	-	15,2	-	**25,1**	**2,2**	**27,3**
4 Tenure Trackers	consortium	328,0	199,2	54,4	64,6	64,6	3,1	12,4	**199,2**	**53,0**	**252,2**
Sabbatical funding scheme	consortium	89,3	-	-	-	-	-	-	**-**	**-**	**-**
Additional replacement costs Coordinator	consortium	30,5	-	-					**-**	**-**	**-**
Travel and conference organisation	consortium	-	-						**-**	**-**	**-**
Academic level	coordinator	6,1	26,3	26,3					**26,3**	**24,9**	**51,1**
In kind:										**-**	
Staff	consortium	418,5	418,5						**-**	**-**	**-**
Total 2020-2021		**907,7**	**723,7**	**102,2**	**81,5**	**75,8**	**24,7**	**21,1**	**305,2**	**88,6**	**393,9**

Totals (period 2020-2021)

Totals	B2021	R2021	UT	TUD	UU	TUE	WUR	Total	Total period 2020	Total (period 2020-2021)
Total Staff (2020-2021)	1.296,0	888,8	315,6	198,4	106,4	201,6	66,9	**888,8**	**335,7**	**1.224,5**
Total Other costs (2020-2021)	153,7	28,1	21,8	1,3	3,1	1,3	0,6	**28,1**	**4,6**	**32,6**

Total costs (2020-2021)	1.449,7	916,8	337,4	199,7	109,4	202,8	67,5	**916,8**	340,3	1.257,2
Total In cash (2020-2021)	489,2	305,2	102,2	81,5	75,8	24,7	21,1	**305,2**	88,6	393,9
Total In kind (2020-2021)	418,5	418,5	83,7	83,7	83,7	83,7	83,7	**418,5**	418,5	837,0
Total Co-funding (2020-2021)	907,7	723,7	185,9	165,2	159,5	108,4	104,8	**723,7**	507,1	1.230,9
Total 2020-2021	2.357,4	1.640,6	523,3	364,9	268,9	311,2	172,3	**1.640,6**	847,5	2.488,0

-

Grand Totals (period 2020-2029)

Totals	Total BUDGET	Total REA
Total Staff (2020-2029)	**16.953,3**	**1.224,5**
Total Other costs (2020-2029)	**1.879,3**	**32,6**
Total costs (2020-2029)	**18.832,5**	**1.257,2**
Total Co-funding (2020-2029)	**8.404,1**	**1.230,9**
Grand Total 2020-2029	**27.236,7**	**2.488,0**

In terms of funding, the indexation from the Ministry of Education, Culture and Science has been allocated to the Gravitation programme.

These are awarded to cover the higher expected material costs (travel costs and conference organisation), support for the program and a lower cash contribution to the PhDs.

esdit

ethics of socially
disruptive technologies