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CALL FOR ABSTRACTS

ID: 1

Keywords: futures, anticipation, responsibility, responsible research and design

Bridging Anticipation and Responsibility in Research and Innovation

Filip Rozborski[1,2], Christian Dayé[1], Gert Goeminne[3]

[1]Technische Universität Graz, Austria; [2]Maastricht University, Netherlands; [3]Ghent University, Belgium

This session aims to explore the connections between two strands of literature within the research on sociotechnical change. The first strand, Future Studies, focuses on anticipation and argues the significance of future literacy in research and innovation (R&I) projects. It advocates that given the transformative capacity of science and technology on contemporary societies, it is crucial for scientific and technological projects to envision potential futures and assess their implications (Miller 2018). The second strand encompasses literature on responsibility and ethics in R&I, including systematic approaches such as Responsible Research and Innovation (RRI; Owen et al., 2020), Ethics by Design (Friedman & Hendry, 2019), and Ethical, Legal, and Social Aspects (ELSA; Zwart and Nelis Citation, 2009). While these approaches aim to integrate social and ethical considerations into R&I processes, they often reify responsibilities - delineating human scientists as providers of integration tools and technologists as their implementers (Goeminne & Müllhof 2023).

While both literature streams provide valuable frameworks for anticipating outcomes and integrating ethical reflection in R&I, there are open questions about how responsibilities are conceptualized, negotiated, and enacted within the research projects. Also, the interaction between the anticipation and responsibility at the societal and psychological level remains underexplored. Additionally, there is a gap in understanding how these concepts interconnect in practice across different cultural contexts, technological domains, and stages of research and innovation.

This session aims to follow previous tendencies to connect those literature strains (e.g., Fuller et al., 2024; Urueña, 2021) and address the interrelatedness of anticipation and ethics in R&I. The session is open to contributions that, e.g.:

- Study how responsibilities are conceptualized, negotiated, and enacted.
- Examine how future expectations and visions influence responsibility and ethical obligations among researchers, engineers, and stakeholders.
- Explore case studies from various technological domains and stages of the R&I processes to elucidate how responsibility and anticipation are navigated.

We welcome theoretical and empirical work that enrich the discussion at the intersection of both scholarly traditions, offering insights into how anticipation and responsibility co-evolve and can be better integrated into R&I processes. We also offer space for interactive formats and workshops in the domain of anticipation and responsibility.

Literature:

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Zwart, H., & Nelis, A. (2009). What is ELSA genomics?. EMBO reports, 10(6), 540-544.

ID: 2

Keywords: Digital Research Practices, Academic Communication, Shared Research Infrastructures

What's next? Challenges of Digital Research Practices, Academic Communication and Shared Research Infrastructures put into Perspective

Nathalie Schwichtenberg, Judith Hartstein

DZHW, Germany

In the age of Open Science, researchers face new challenges of doing and communicating their work. Not only are they expected to effectively leverage digital tools and platforms to foster transparent, collaborative, and accessible science. At the same time, the availability of informal scholarly products and resources in open-to-everyone digital research infrastructures poses new questions on how scholars should communicate among each other, as well as to and within society. Meanwhile, researchers across disciplines have established diverse practices in reaction to the new expectations which have emerged. An integrated theoretical perspective on these practices is yet to be developed.

With this panel, we want to gather diverse perspectives on the interrelations between Open Science, scientific communication, and the use, design and development of open research infrastructures.

We invite empirical and theoretical contributions on (including, but not limited to) the following aspects:

1. How do open infrastructures change communication within science and between science & society?
2. Do different epistemic cultures handle the challenges and opportunities of Open Science differently?
3. What role do digital infrastructures and platforms play in promoting Open Science? How has this role changed over the course of digital transformation over the last years?
4. How do societal expectations regarding the contribution of science to the solution of societal problems benefit from the digitalization of scholarly communication? How do these processes modify the construction of value in academia and the formation of academic identities?

The panel aims to promote an open discussion on the effects of Open Science in and with open research infrastructures on the relationship between science and society. Thereby, we want to foster theory building while combining and synthesizing research on scholarly communication and on open infrastructures.

ID: 3

Keywords: research ethics, research integrity, stakeholder engagement, ethics review, new and emerging technologies

Navigating the Challenges of Research Ethics in the Age of Emerging Technologies

Claudia Brändle, Dr. Maria Maia

Karlsruhe Institute of Technology, Germany

The examination of the intersection between ethical considerations and the advancement of science and technology is inextricably linked to the study of research ethics and the associated processes. The advent of new technologies, including artificial intelligence (AI), extended reality, genome editing and biobanking, is transforming the landscape of research and innovation. Researchers and ethics experts must navigate a complex set of challenges, striving to maintain the highest ethical standards to preserve public trust in their work while anticipating and effectively mitigating the ethical issues associated with the use of these emerging technologies. In light of the significant impact that research can have on society, particularly in terms of its potential to generate innovative solutions to problems, it is imperative that rigorous ethical standards are upheld to maintain public trust in the scientific endeavor.

The objective of this session is to identify and discuss the ethical challenges posed by new and emerging technologies in research. Furthermore, it will serve to share best practices and experiences from researchers, ethicists and other experts in the field with regard to dealing with these difficulties. A particular focus of this session is the question of how other key stakeholders such as representatives of civil society or industry can be meaningfully engaged in ethics review processes. Fostering a collaborative dialogue between different stakeholders is an important step to address many of the existing challenges. This dialogue should not be limited to researchers and ethicists, but should also encompass the voices of stakeholders from a multitude of sectors.

The following questions are of particular importance in this context:

- What are the principal ethical concerns associated with new and emerging technologies in research?
- How might researchers and ethic experts maintain awareness and up-to-date knowledge considering the rapid pace of technological advancements?
- What roles can civil society and industry play in the ethical review process, and how can their involvement be facilitated?
- What are the best practices for fostering collaboration between ethics review experts and other stakeholders to guarantee comprehensive ethical oversight?

Call for Contributions

We invite submissions from STS practitioners and other researchers with expertise in research ethics, research integrity, and stakeholder engagement. Those engaged in the ethical oversight of research involving new and emerging technologies will find this call of particular interest. We are particularly interested in the following areas:

- Case studies highlighting ethical dilemmas that arise in the context of new technologies.
- Insights into the evolving role of research's and ethics reviews experts in the context of technological advancements.
- Innovative approaches or methodologies for the involvement of civil society and industry in the ethical review process.
- Strategies for effective communication and collaboration between ethics review experts and other stakeholders.

ID: 4

Keywords: action research, systems thinking, transition studies

At the intersection of action research, systems thinking and transition studies – creating spaces for transformative change

Katharina Biely, Erik Laes

VITO, Flemish Institute for Technological Research

Presumably the traditional connection between science and society understands researchers to be neutral and independent. However, at least since the seminal publication from Funtowicz and Ravetz (1993) researchers try to take on new roles. Funtowicz and Ravetz (1993) argued that complex problems, such as those related to sustainability, require researchers to collaborate with stakeholders on a level playing field. This collaboration should allow researchers to gain a more holistic understanding of the complex problem and thus provide better solutions. Different methods and approaches (such as action research, mode 2, participatory research, cocreation) exist to facilitate the collaboration between society and researchers. Making use of collaborative methods is common practice in STS research. To understand societal concerns and bring about change, (STS) researchers need to collaborate with societal stakeholders. Further to capture the complexity of a respective issue systems thinking can be applied. This approach has become increasingly relevant in sustainability transformations research. Hence, (STS) researchers intending to understand and support transformations, might have to combine action research, systems thinking and insights from transition studies. This combination of approaches requires quite some expertise from researchers, as possible tensions between both approaches need to be carefully navigated. The tensions between STS and sustainability transformations research stem from their distinct approaches to sociotechnical change. For example, sustainability transformations research is often normative and interventionist, aiming to guide transitions toward specific sustainability goals through structured frameworks like the multi-level perspective. In contrast STS adopts a more critical, descriptive stance, scrutinizing underlying assumptions and power dynamics. Such differences, rooted in sustainability transformation' goal-oriented approach versus STS's critical, context-sensitive perspective, create both challenges and opportunities for cross-disciplinary collaboration in addressing complex sustainability transitions. Accordingly, when connecting action research, systems thinking and transition studies researchers not only need to be equipped with a basic understanding of the respective sustainability challenge (e.g., energy, mobility, food-systems, etc.), but also of the methods, concepts and theories within action research, systems thinking and transition studies.

In this session we invite contributions from researchers who have combined action research, systems thinking and transition studies to tackle sustainability issues. The focus of this session does not lie on one specific domain (e.g., energy, mobility, etc.) but on the combination of action research, systems thinking and transition studies. We want to explore which methods, concepts and theories researchers combined and how. For example, one can use the leverage points or systemic iceberg concept to jointly with stakeholders develop a more holistic understanding of a specific problem with the intention to tackle root causes of the problem and thus bring about a deep transformation. Or one could use the x-curve in a co-creative process to understand dynamics between exnovation and innovation.

We are accepting contributions reporting from empirical work as well as theoretical explorations.

Funtowicz, S. O., & Ravetz, J. R. (1993). The Emergence of Post-Normal Science. In R. Von Schomberg (Ed.), Science, Politics and Morality (pp. 85-123). Springer Netherlands. https://doi.org/10.1007/978-94-015-8143-1_6

ID: 5

Keywords: Values-Based Standardisation, EU Standardisation Strategy, Responsibility

From 'Responsible' to 'Values-Based' - A New Standardisation Paradigm?!

Kai Jakobs[1], Vladislav Fomin[2], Andrea Fried[3], Olia Kanevskaia[4], Paul-Moritz Wiegmann[5]

[1]RWTH Aachen University, Germany; [2]Vilnius University, Lithuania; [3]Linköping University, Sweden; [4]Utrecht University, The Netherlands; [5]TU Eindhoven, The Netherlands

Today, technical expertise and economic interests guide standardisation and thus technicaldevelopment. Societal issues are hardly considered by the technical working groups (WGs), ifat all. The EU's 'Annex-III-Organisations', i.e. those that receive funding from the European Commission to represent societal interests in standards setting, are massively understaffed and (can) only represent their respective constituencies (consumers, workers, the environment, SMEs), as opposed to society at. In many cases, this may be an acceptable situation (the specification of a new version of a new type of Ethernet cable may safely be left in the hands of competent engineers and computer scientists). It is not, however, for technologies with potentially significant e.g. societal or environmental ramifications and even less so in cases of technologies that have the potential to change society – for better or worse. These include, for example, Artificial Intelligence and Smart Systems.

The EU's standardisation strategy calls for "… *standards …* [to] … *also incorporate core EU democratic values and interests, as well as green and social principles*". This is very much in line with the principles underlying 'Responsible Standardisation' (RS), which, in turn, represents the transposition of 'responsibility' from research and innovation (RRI) to the field of standards setting. To enable the development of standards that reflect societal and EU values up-front and are thus in line with the EU's standardisation strategy, the concept of 'Values-Based Standardisation' has been conceived [1]. This concept may, therefore, be considered as an extension of RS, aiming to incorporate from the outset specifically European values into (future) standardisation activities (also at the international level). This session solicits contributions that discuss aspects relating to RS from both a practical and a theoretical perspective. Potential topics include but are by no means limited to: • Values – societal, cultural, individual – and their impact on standardisation. • The roles and representation of societal stakeholders in standardisation. • Potential contributions of societal stakeholders to standards development.

- Ways to enable participation of societal stakeholders in standards setting on an equal footing.
- Legitimacy and influence of the different stakeholders in standards development.
- Potential ethical and legal issues of Values-Based Standardisation.
- Education about/on standardisation.

References

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ID: 6

Keywords: data, ethics, open science, declaration of taipei

Why have medical ethics documents gained more traction than those for data ethics? The Declaration of Taipei as both a lens for and object of study

Jonathan Edward LoTempio Jr[1], Chase Yakaboski[2], Helmut Hönigmayer[3], Shauna Stack[4], Magdalena Wicher[5], Thomas König[6], Eric Vilain[7]

[1]University of Pennsylvania, United States of America; [2]Harvard University, USA; [3]Institute for Advanced Studies Vienna; [4]Independent, Germany; [5]Institute for Advanced Studies Vienna; [6]FORWIT Austria; [7]University of California, Irvine

Background: The World Medical Association (WMA), promulgators of the famous Declaration of Helsinki, have a second, less famous Declaration: of Taipei. That second declaration aims to address concerns around health databanks and biobanks. Specifically, from the Taipei Preamble: *This Declaration is intended to cover the collection, storage and use of identifiable data and biological material beyond the individual care of patients. In concordance with the Declaration of Helsinki, it provides additional ethical principles for their use in Health Databases and Biobanks.*

While it is a reasonable circumscription of goals for enhanced ethics like Helsinki, Taipei has not seen wide uptake. That Taipei, which itself focuses on ethical guidelines for privacy, informed consent, data governance, and access and fair use, is not widely known or used based on its citation reports is in itself interesting.

Is this lack of uptake because the document does not shift the paradigm beyond standard research ethics, or is it merely because it is lesser known than other ethics documents? We think that the Declaration of Taipei serves as a good lens for papers to consider the utility or limitations of Taipei as an ethical guide to where data ethics may need to be advanced or honed.

Given the recent revisions to Helsinki, it is especially worth consideration of the points within Taipei so that a body of literature may evolve in anticipation of future revisions to Taipei. Furthermore, researchers and users might enhance their own thinking and work based on the ethical points raised in Taipei.

Approach: Accordingly, we seek papers analysing the Declaration of Taipei and other ethics documents from individuals interested in data (FAIR and/or Open, closed, and everything in between), the AI space (considering not only large language models but also other applications of AI), the policy space which governs, and the STS/ sociology space which studies the impacts, implications, and possible futures of these aspects of the scientific research enterprise.

We will happily accept further study of ethics documents from different perspectives inside and outside of the medical enterprise (for instance agriculture, engineering, space science, climate, etc) through the lens of Taipei, which may yield helpful insights in translating such principles from theory to practice. We especially invite contributors to reimagine the “backstage” of these documents, such that we can understand alternatives to how they are formulated, finalized and disseminated, with who and how these processes might be improved to increase their translation to practice and thus impact. Given that these documents are for and of society, we hope that scholars inside and outside of Science and Technology Studies will consider the vast palette of approaches pioneered in STS for their projects.

Outcomes: We expect the outcomes of this session to be a summary of findings for organizations like the WMA and advice for funders and policymakers pertinent to their thinking on ethical challenges in relevant data domains.

ID: 7

Keywords: Ethical legal social aspects of science and technology, responsible research and innovation

Addressing the ongoing challenge of responsibility in science and technology after the political demise of "Responsible Research and Innovation" (RRI)

Erich Griessler, Elisabeth Frankus, Robert Braun, Johannes Starkbaum

Institut für Höhere Studien, Austria

The risks, societal, ethical and democratic implications of the production and wider implementation of science and technology have been central to the field of Science and Technology Studies (STS) since its inception and continue to be a significant area of concern, involving a diverse range of technologies. The political concept of "Responsible Research and Innovation" (RRI) was introduced in the early 2010s as an umbrella term at the EU and Member State levels. It aimed to address a range of concerns related to the responsibilities of research, including public engagement, gender equality, open access, science literacy, science education, and ethics. In the context of a number of pressing and reinforcing crises, including climate change, biodiversity loss, the challenges of industrial competitiveness, migration and, last but not least, the crisis of democracy, the concept of RRI has lost much of its political currency and strength as well as political support from European Institutions. This decline of RRI is in stark contrast to the ongoing necessity of critically monitoring the advancement of science and technology at all stages, providing practical tools to address the ethical, legal, and social implications of technology, and offering guidance on the responsibilization of science and technology in various domains. Such guidance would include modalities that move out of the comfort zone of a human centric worldview premised on Western modernist ideals such as nature/culture; body/mind; subject/object binary divides. In this session, we welcome theoretical and empirical papers that address the current challenges of responsibilization of science and technology in different areas of research and technology, as well as practical examples of how to address the ethical, legal, and social challenges of current scientific and technological developments.

ID: 8

Keywords: smart city, smart urbanism, smart governance, algorithms, digital governance

Socio-technical Insights into the Development and Impact of Smart Cities

Anna Domaradzka, Mateusz Trochymiak, Anna Wnuk, Tomasz Oleksy

University of Warsaw, Poland

This session focuses into the socio-technological dimensions of smart cities, especially on how integrating advanced technologies into urban infrastructure affects social life, governance, and urban inequalities. Smart cities leverage IoT (Internet of Things), big data analytics, AI, and other innovations to enhance urban efficiency, sustainability, and livability.

Worldwide, local policymakers implement smart urban solutions and technologies to boost service provision, policy effectiveness, or citizen engagement. These solutions present vision of the future, with technology as the primary solution, claiming to enhance public services through management optimization while addressing policy dilemmas such as safety vs. privacy and efficiency vs. accessibility (Sadowski and Bendor, 2019; Joss et al., 2019). Additionally, smart urbanism emphasizes citizen-centric design and co-production, raising dwellers expectations toward service quality and efficiency (Cardullo & Kitchin, 2019).

However, as city leaders prioritize smart urban solutions, the digitalization of public services is not necessary monitored to make suree it leads to improved service accessibility or quality. Smart city advancements also raise critical questions about social equity, privacy, and the nature of public spaces.

This session will therefore invite authors to explore the multifaceted impact of smart city initiatives on various social groups, emphasizing how technology-driven urban environments can both bridge and widen social divides. Presentations will cover topics such as the digital divide in access to smart city technologies, the implications of surveillance and data collection for security, privacy and civil liberties, and the reshaping of public spaces through digital governance.

We would also like to discuss the governance models of smart cities and their implications for democratic participation. Participants are encouraged to present surveys and case studies from different global contexts to understand how smart city policies are designed and implemented, and how they affect citizen engagement and empowerment. The session will also address the potential of smart city technologies to foster sustainable development and environmental stewardship, juxtaposed with concerns about technological determinism and the marginalization of non-digital urban experiences. By integrating empirical research and theoretical insights, this session aims to provide a comprehensive understanding of the sociological challenges and opportunities presented by smart cities.

ID: 9

Keywords: sustainability, artificial intelligence

Sustainability and AI: Addressing a complex relationship

Daniel Houben[1], Bianca Prietl[2]

[1]University of Applied Sciences Landshut; [2]University of Basel

In line with technosolutionist promises, AI is promoted as offering significant potential for sustainability. Recent policy initiatives, such as the European Union's pursuit of a "twin green & digital transition", reinforce the perception of AI as a catalyst for an ecological sustainable future. Within this discourse, AI is posited as transformative for environmental sustainability, from optimizing renewable energy systems to advancing waste management and environmental monitoring. In terms of social sustainability, AI has been heralded for its potential to increase access to services in healthcare and education, promote inclusivity and improve quality of life. Discussions on economic sustainability frame AI as a driver of efficiency, innovation and growth in sectors such as smart cities and finance.

However, the relationship of AI and sustainability is more complex: AI's resource needs (Crawford 2021; Taffel 2023) challenge its alignment with initiatives such as the Green New Deal. Debates on the ethics of AI have highlighted the paradoxes inherent in the application of AI to sustainability. While advancing environmental, economic and social goals, these technologies simultaneously strain resources, create inequalities and foster power imbalances (Floridi & Mazzi 2023; Sætra 2023).

Against this background, we are interested in exploring these ambivalent relations, in order to contribute to a nuanced understanding of AI's role as both a solution and a challenge to sustainability. Questions we propose to discuss are – amongst others:

- How is sustainability "coproduced" (Ozaki, Shaw & Dodgson 2013) with AI-technologies? What imaginations of sustainability prevail, and what roles do different actors play in these processes?
- How can we conceptualize the relationship between AI and sustainability? How do more than human perspectives (Cielemęcka & Daigle 2019) and power structures factor into this relationship?
- How is sustainability, enabled or complicated by AI, pursued in different sectors (politics, industry, academia)?
- Who or what is "cared for" (Puig de la Bellacasa 2011) in sustainability initiatives and through what mechanisms?
- Who or what is marginalized or ignored in the pursuit of sustainability?

Both, conceptual and empirical contributions are welcome.

ID: 10

Keywords: Digital Social Innovation, Living Labs, Universal Innovation Ecosystem, Indicators, Health and Wellbeing

Beyond Metrics: The Impact of Digital Social Innovation

Fàtima Canseco-López

i2CAT Foundation, Spain

Living Labs are gaining special attention lately. According to the European Network of Living Labs (ENoLL) (2024), *"living labs are open innovation ecosystems in real-life environments based on a systematic user co-creation approach that integrates research and innovation activities in communities and/or multi-stakeholder environments, placing citizens and/or end-users at the centre of the innovation process.*

The European Union (EU) proposes to adopt this approach to develop a competitive knowledge-based society, for example through the Missions (European Commission, 2024). In fact, EU missions involve researchers as well as governments, businesses and citizens. So, they give a new role to research and innovation, along with new forms of governance and collaboration. The challenges proposed by the missions are ambitious, concrete and measurable within a well-defined timeframe to achieve tangible results for all Europeans.

Social innovation (SI) is a solution or improvement to respond to social (and environmental) problems (Lettice and Parekh, 2010). Moreover, digital social innovation (DSI) uses Information and Communication Technologies (ICTs) to solve (or try to solve) these social/environmental needs (Parth et al., 2021). When talking about impact indicators, there is a natural tendency to relate them to numerical or quantitative data, and there are difficulties in reaching a consensus on the criteria for the design of indicators of the social and societal impact (or transformation) of SIs. To what extent can quantitative indicators provide information on the social impact of SI? How can qualitative indicators be designed to provide a broader view of the transformation of the ecosystem and its influence on the territory? What dimensions and/or variables are necessary to have a broad perspective on the impact of SI?

The aim of this presentation session is to explore potential indicators of impact and/or social transformation in the field of DSI in the health and wellbeing sector (although other sectors can be also explored). This session welcomes abstracts of maximum 300 words focusing on:

- Communication processes, dynamics and impact of Living Labs
- Assessment of DSI (or SI) impact beyond the economic (social, societal, and environmental)
- Methodologies used to assess these impact indicators
- Use of KPIs, KVIs, OKRs, or other specific indicators

The session will last around 60 or 90 minutes (depending on the number of participants). The time format will be 15 minutes for each presentation followedby a question-and-answer period. This is a structured way of presenting academic work, ongoing research, projects, and assessments/evaluations. Visual aids such as slides may be used to support the discussion. If the presentation is of an academic paper, the presenter may choose to share their paper with the panel chair for feedback prior the session.

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ID: 11

Keywords: computational methods

Let's get digital! Using computational methods for STS research

Roman Prunč

Graz University of Technology, Austria

Increasing computing power, novel methods, and the (limited) availability of large datasets have given rise to a plethora of studies making use of these factors to produce innovative research. In this regard the question arises, whether and how such approaches can and could add to STS, by opening new perspectives to investigations.

The session seeks to provide a forum for researchers to share their experiences and present their work, making use of computational methods, typically associated with quantitative research. Such methods often consider data not primarily created for research, such as online social networks or large corpora of newspaper articles. Investigating these data allows for the quantification of its contents, the revelation of underlying network structures, or even quasi-semantical analyses such as topic modelling approaches. Besides analyzing datasets gathered another strain of research within this spectrum seeks to create data by means such as agent-based models, helping to understand or simulate phenomena. Ultimately, such techniques allow for the establishment of new mixed methods approaches, thereby broadening the perspective and elevating the analysis.

This session therefore invites contributions based on research applying such or related computational methods for STS research. It is focused on methodological questions, experiences and research examples and shall provide space for a fruitful exchange.

ID: 12

Keywords: digital credentials, education, vocational training

Societal impact of digital credentials in education and vocational training

Alexander Nussbaumer[1], Carlos Alario-Hoyos[2], Miguel Morales-Chan[3], Christian Gütl[1], Rocael Hernandez[3]

[1]Graz University of Technology, Austria; [2]Charles III University of Madrid, Spain; [3]Universidad Galileo, Guatemala

In this session the societal impact of digital credentials on people undergoing education or vocational training are presented and discussed. Digital credentials are representations of achievements, skills and competences that are typically stored and transmitted in digital formats. They are equivalent to paper documents, tangible tokens, or other haptic objects issued by a trusted party. Digital credentials refer to a wide range of qualification sizes and types, such as small courses on a specific topic or a larger learning programme. They can be used in formal, non-formal, or informal settings, such as for certifying university programs or vocational training courses.

Digital credentials constitute an emerging technology with new possibilities and advantages for the involved parties in several use cases. In the vocational sector, recipients of digital credentials can use them to demonstrate further training activities and qualifications in the job or while seeing a new job. In the long run this also serves the lifelong learning initiatives, as qualification activities can be better documented.

Beside these obvious benefits, digital credentials might have a deeper impact on people and society, which needs closer attention especially in terms of its relation to the job market. In a situation where acquiring formal education is difficult for several reasons (e.g. high educational costs or social inequalities), digital credentials may help acquire qualifications by collecting certificates step-by-step. On the other hand, there is also a danger of shifting responsibility of further education from companies to employees.

A focus of this session is on the discussion of initiatives to establish digital credentials in Guatemala including potential societal impacts. This will be done in the context of the Erasmus+ research project EcoCredGT (www.ecocredgt.org) that brings together partners from Guatemala, Spain, and Austria, in order to pilot an infrastructure of digital credentials in Guatemala. The project aims to build capacities in Vocational Education and Training Institutions towards a digital credentials ecosystem that can have a positive impact on promoting employability.

The Session is structured in three parts. First, an overview of the piloting plan is given by representatives of the research project from all participating countries: Carlos Delgado Kloos (Charles III University of Madrid), Héctor Amado-Salvatierra (Universidad Galileo, Guatemala), Eduardo Véliz (Kinal Fondation, Guatemala), and Chiara Rußß-Baumann (TU Graz). These presentations include information about the current situation in Guatemala, how digital credentials are planned to be introduced, and potential societal benefits and issues. Second, in a panel the presented pilot plan is discussed regarding its societal impact and potential risks, as well as societal differences between emerging and developed countries. The panel is moderated by Carlos Delagado Kloos and includes Carlos Alario-Hoyos (Charles III University of Madrid) and Héctor Amado-Salvatierra. Furthermore, two STS experts join the panel, which are Christian Dayé (TU Graz) and one further person. Finally, there will be a general discussion with the conference audience on both the technical implementation and societal aspects.

Remark: This session is not open for abstract submissions.

ID: 13

Keywords: Digital humanism, philosophy of technology, digital ethics, humanism critique

The Future of Digital Humanism: Towards a critical post-post-Humanism?

Erich Prem[1], Katja Mayer[2]

[1]Association of Digital Humanism, Austria; [2]University of Vienna, Austria

The Digital Humanism movement advocates for the integration of human-centred values into technology and digital systems, emphasizing ethical design, transparency, and the protection of human rights in an increasingly automated world. It calls for a balance between innovation and the preservation of human dignity in the digital age (Mayer 2020, Nida-Rümelin 2021, Werthner et al. 2022). Academics, civil society organizations, and policymakers are working together to debate and create ethical frameworks that ensure technology serves humanity, promoting values like equity, privacy, and social responsibility. This movement has gained significant international visibility recently.

Like all humanisms, digital humanism is prone to criticism as expressed by (Adorno & Horkheimer 1997). Critique concerns humanism's perceived Eurocentrism and anthropocentrism, argued to neglect perspectives of non-Western cultures, non-human actors, and the environment. Critics also argue that humanism was overly optimistic about human reason and progress, overlooking historical injustices, inequalities, and the potential harms of technological advancements and that individual autonomy and rationality marginalize collective social values. Digital humanism has responded with a 'critical post-humanism' that fosters a global perspective, emphasizes diversity, and environmental sustainability (Prem 2024) or even a regenerative view that links regeneration with human dignity and AI (Thun-Hohenstein 2024).

The session will analyse which aspects of the critique have been properly assessed and what requires more action and response. It aims to deepen the dialogue around these pressing questions and invite participants from diverse fields to explore what Digital Humanism may offer to their own areas of work. How does Digital Humanism resonate with, or challenge, their own commitments to fostering inclusivity, sustainability, and dignity in the digital realm? What potential connections or divergences do they see in aligning Digital Humanism with their personal or professional ideals? We encourage participants to critically reflect on how their expertise and perspectives might contribute to shaping the future trajectory of Digital Humanism.

The session will involve short stimulating lighning talks of invited speakers and panel discussions. It is open to presenters submitting postion papers and other discussants.

ID: 14

Keywords: Privacy, personal data, PETs, GDPR

Digital Privacy: Technical Solutions for Social Problems?

Roman Prunč, Bernhard Wieser, Christian Dayé, Lea Demelius, Andreas Trügler

University of Technology Graz, Austria

In an increasingly digitalized and interconnected world the issue of privacy and protection of personal data is a central concern that attracts more and more attention.

Technological developments, increasing public awareness, and recent legislation such as the GDPR but also the AI Act and the matters they adhere to have put additional focus on questions of data usage, control, and restriction. Consequently, means of apprehending data protection are constantly and rapidly advancing.

Exemplary for such responses are so-called privacy-enhancing technologies (PETs) that offer technical solutions supposedly resolving complex social, legal and ethical problems. In this session we invite colleagues to critically reflect on such a solutionist framing. What is it that needs protection and why? What forms of data use can be achieved by means of PETs that would otherwise not be possible? Promoters of PETs promise applications in a broad array of new possibilities ranging from political decision-making to commercial purposes.

Against this backdrop, this session invites contributions to reflect on the various ways in which new technological solutions reconfigure social relations of trust, acceptance, agency, control and exploitation The panel is open to interdisciplinary perspectives on PETs comprising both theoretical work as well as empirical analysis.

ID: 15

Keywords: AI Governance, EU AI ACT, Ethical AI, Responsible AI, Accountability

Balancing Innovation and Accountability: Wicked Questions of AI Governance in Digital Sphere.

Swati Kumari[1], Raghvendra Singh[2], Madhu Kumari[3]

[1]Radboud University; [2]Indian Institute of Technology Indore; [3]Lulea University of Technology

In the wake of rapid advancements in artificial intelligence (AI) technologies, the imperative for comprehensive regulatory frameworks has become increasingly salient. The recent ratification of the EU AI Regulation Act marks a pivotal juncture in the governance of AI, aspiring to reconcile the dual imperatives of innovation and ethical accountability. However, despite its ambitious aims, the Act has been met with criticism for its perceived shortcomings, particularly concerning the clarity and enforcing accountability towards its provisions. Critics argue that the regulation's definitions of responsibility and accountability are often ambiguous, leaving significant gaps that could hinder effective enforcement. Moreover, there are concerns that the Act may inadvertently stifle innovation by imposing overly stringent requirements without fully considering the nuanced realities of AI development and deployment. Similar is the story of the AI regulation acts in different countries across the globe. This situation has been further complicated by the increase in the democratization of digital innovations. Against this backdrop, this session seeks to critically engage scholars, practitioners, and policymakers in a nuanced exploration of the conceptualization of "responsibility" as delineated within the AI regulation discourses, particularly concerning algorithmic fairness and its broader societal implications.

We invite contributions that investigate the multifaceted dimensions of responsibility inherent in AI regulation, with a particular focus on the following thematic areas:

- Ethical Obligations in AI Development and Deployment: What ethical responsibilities are ascribed to AI developers and implementers? How can established ethical paradigms be employed to foster accountability and transparency in AI systems?

-Liability Frameworks and Enforcement Mechanisms: How do the Acts/regulations propose to delineate liability in instances where AI systems inflict harm? What is the clarity and effectiveness of these proposed mechanisms, and what challenges are anticipated in their operationalization?

-Algorithmic Fairness and Social Justice: Given that AI systems have the propensity to perpetuate biases and exacerbate existing inequalities, how do the regulations engage with the concept of algorithmic fairness? What empirical case studies elucidate the potential ramifications of algorithmic bias, and what regulatory measures could be employed to mitigate such adverse effects?

-Comparative Regulatory Analysis: In what ways does the EU's approach to AI regulation diverge from or converge with regulatory practices in other global jurisdictions? What insights can be gleaned from these comparative analyses to enhance the efficacy of AI governance within Europe?

-Policy Recommendations for Ethical AI Governance: What critical insights can be derived from a comprehensive analysis of the EU AI Act? How can various stakeholders contribute to the evolution of regulatory frameworks that prioritize ethical considerations, fairness, and accountability alongside technological advancement?

We encourage submissions that employ a range of methodological approaches, including empirical investigations, theoretical explorations, legal critiques, and case study analyses. By fostering interdisciplinary dialogue, we aim to cultivate a deeper understanding of the responsibilities underpinning AI governance and promote collaborative avenues for regulatory innovation.

ID: 16

Keywords: Generative AI, AI Literacy, Hybrid Research Methods, Teaching with AI

Thinking With and About Generative AI in STS

Lukas Griessl[1], Christian Dayé[2]

[1]University of Tübingen; [2]Graz University of Technology

Generative Artificial Intelligence (AI), such as ChatGPT, is currently changing many areas of academic life—from learning and teaching to research and publishing. While the full effects of generative AI on knowledge production and education are not yet fully foreseeable, it is increasingly clear that this technology has the potential to challenge and transform many established academic practices and routines. The rise of generative AI provokes scholars across disciplines to position themselves and find ways to engage with and integrate this technology in their everyday practices. In this panel, we use these changes as an opportunity to discuss the possibilities of generative AI as a tool for knowledge acquisition and research, as well as to take it seriously as an object of critical analysis. We also aim to explore whether and why there are disciplinary differences in generative AI adoption.

While some remain cautious when it comes to the integration of generative AI into research and teaching, others happily experiment with generative AI to enhance methodologies and explore new tools. At the heart of these discussions lies the concern that many epistemic practices, routines, and methodologies—traditionally seen as the domain of human researchers—are now being performed in collaboration with a technology whose inner workings remain largely opaque. While generative AI tools are unable to “understand” meaning in the way human actors do, they are nevertheless summarizing texts, serving as personalized tutors or co-authors, and even interpreting content for us, challenging long-held assumptions about human cognitive labor in academic settings.

As researchers try to find the best ways to employ generative AI, it deserves more critical attention within STS and related fields, both as an object of study and as a tool for developing and enhancing research methods and academic practices. This panel engages with this dual dimension, aiming to explore how STS can critically participate in debates about the meaningful and productive use of generative AI as an epistemic tool.

This panel thereby consciously adopts a broad scope, welcoming contributions on, but not limited to, the following topics:

- Generative AI as a Research Tool
- Disciplinary differences in the use and adoption of generative AI
- Ethical and Epistemological Challenges of AI-Assisted Research
- AI and the Transformation of Academic Labor
- Teaching with AI
- Hybrid Research Practices
- AI and the Changing Nature of Peer Review and Academic Publishing
- Critical AI Literacy
- Cultural Implications of AI
- Generative AI in Institutional Knowledge Production
- (Social) Theories of Generative AI

ID: 17

Keywords: Artificial Intelligence, Global South, STS, Democracy

Artificial Intelligence and Society: Perspectives from Global South

Sushant Kumar

Jindal School of Government and Public Policy, O.P.Jindal Global University, Sonipat, India

General objective

Regulation has historically played catch-up with emerging technologies. Awareness is often raised post-facto and in a manner of managing the risks emanating from the application of the technology to society at large (Jasanoff 1997, 2016; Law & McCall 2024). In this process, the promise of technology alleviating developmental problems often ends up exacerbating them, widening the chasms of social, political, and economic inequities, especially for the marginalized, in the name of whom these technological interventions are justified in the first place (Benjamin 2019; Barocas et al., 2017; Moran-Thomas 2020).

The current swathe of AI technologies has proven to be discriminating on grounds of race, class, gender, and even zip codes, owing to systemic biases encoded in the historical data they're trained on (Obermeyer et al., 2019; Akter et al., 2021; Future of Life Institute 2023; Stilgoe 2020). Narratives of technological inevitability and the idea of technocracy, posing regulation as an obstacle to innovation, routinely dominate conversations on AI (Jasanoff 2016).

The deployment of AI in the Global South has been further complicated by the underlying relations of data colonialism and data capitalism which furthers and reinforces historical patterns of colonial and capitalist exploitations of these societies (Zuboff 2019; Couldry and Mejias 2019). Furthermore, the adoption of these technologies by the national policy elites in coutries of the Global South passes through a developmental imaginary which positions them as crucial for the socio-economic development, even as it puts the rights, especially of the already marginalized, at risk (Bhattacharya & Sanasam 2024; George 2017).

We invite contributions from a range of fields and individuals who take this discussion further and speak to one or more of the following research questions and themes of papers:

Research questions

1. How can we understand the peculiar evolution of AI technologies in societies of the Global South?
2. How can historical cases of technological regulation be deployed to inform the development of effective policies for the governance of AI technologies?
3. How are narratives of hype around the technology influencing policymaking?
4. How are Governments and the private sector negotiating authority and legitimacy over regulatory aspects of AI technology?
5. How does global relations of capitalism and colionialism influence adoption of AI in the Global South?
6. How does geopolitics influence the governance of AI in the Global South and other jurisdictions?
7. How can governance frameworks be designed to proactively manage the societal risks and benefits of AI-based technologies while ensuring more equitable outcomes?

Types of papers expected, including but not limited to:

1. Coproduction of AI technologies and society in Global South
2. Sociotechnical Imaginaries inherent in AI projects
3. Implications for caste, class, gender, linguistic, technological and regional divides
4. Narratives, discourse and framing through which polities legitimize or contest AI technologies
5. Geopolitics and AI
6. Technocracy (legitimacy of governance by experts)
7. Forms of colonialism and capitalism in AI in Global South
8. Anticipatory governance of AI technologies
9. Citizen science alternatives and participative approaches to AI governance

ID: 18

Keywords: artificial intelligence, recommender systems, fairness, social justice, interdisciplinarity

Fairness and Artificial Intelligence

Anna Schreuer[1], Bernhard Wieser[1], Peter Müllner[2], Dominik Kowald[2], Simone Kopeinik[3]

[1]STS Unit, TU Graz, Austria; [2]Know Center and ISDS, TU Graz, Austria; [3]Know Center, Austria

The dynamic advancements in artificial intelligence (AI) have given rise to scholarly reflections on wider ethical and social implications of this development. AI-technologies are deployed for various forms of match-making such as recruiting employees, recommending goods and services to consumers, or selecting routes to navigate traffic or plan recreational outings (cycling/hiking).

The proposed session calls for contributions that explore fairness aspects related to AI-technologies from different disciplinary perspectives. Fairness is a concept that has risen to particular prominence in computer science, responding to recognised problems such as under-representation of individuals or social groups, reduced visibility, and even discrimination. Second, fairness refers to the avoidance of various types of bias (e.g., societal bias, cognitive bias, popularity bias, etc.) causing adverse effects in the functionality of AI-technologies. A range of computational methods have been proposed in recent years to identify and mitigate AI-related fairness problems.

From an STS perspective, fairness issues are discussed in terms of discrimination, inequality, exclusion and social justice. From this perspective, fairness raises questions over the (in-)equality of possibilities to participate in economic, social, cultural and political life. How are these opportunities distributed, how and what is the role of AI in opening up or closing down the ways in which different individuals or groups of society may or may not participate? How to different stakeholders in relation to AI-based systems perceive and consider fairness aspects in the design, implementation and evaluation process? How do various actors attempt to shape sociotechnical configurations around AI-based recommender systems?

We invite contributions discussing the various ways in which fairness problems can be addressed by means of computational methods. Furthermore, we invite contributions that address fairness issues beyond the scope of what can be addressed algorithmically, in particular from an STS perspective. Finally, we especially encourage contributions discussing how to bridge the gap between the different disciplinary approaches to fairness problems.

ID: 19

Keywords: social services, digital technologies, ethnomethodology, street-level bureaucracy, administration

Digital technologies and social services in the welfare state

Daniela Boehringer[1], Tanja Klenk[2]

[1]University of Duisburg-Essen; [2]Helmut-Schmidt-Universität, Universität der Bundeswehr Hamburg

How can welfare states ensure and facilitate access to social services in order to contribute to more inclusive and resilient democracies in the era of digitalization? Particularly in conservative/corporatist European welfare states, such as Germany and Austria, where social services like job training, counselling, and support for care work have historically played a negligible role, this question has gained increasing importance in recent years (Busemeyer et al., 2018; Garritzmann et al., 2022). Despite the changing objectives and comprehensive European investing welfare states, the observation of still persistent social problems, despite a social landscape characterised by growing social inequality or a proven low take-up or lack of adequacy of social provision, has put social rights at the top of the agenda from a social and political perspective today (de la Porte 2021; Nelson, Nieuwenhuis et al. 2022).

While the critical role of social services in modern welfare states is widely recognized, delivering these services in an age of digitalization remains highly debated. This discussion is driven by ongoing social, political, and technological developments. Furthermore, persistent social challenges in core European countries evidenced by continuing inequality despite numerous social policy programs and a complex web of social services—have fuelled debates about the effectiveness of welfare state organization and administrative capacities. These issues have placed the question of access to social services and the associated administrative burdens at the forefront of the social policy debate.

The rise of digital technologies in society and the welfare state (Pedersen and Wilkinson, 2018) has further intensified this debate about potential consequences: Digitalization might affect access to social services, the modes of co-producing these services, and, consequently, the realization of social rights. Digital social service provision has evolved into a complex social imagination, one that is simultaneously desired and feared (Henman, 2022). In its optimistic manifestation, the envisioned digital future helps to overcome common obstacles that hinder the realization of social rights. Supporters of digital social service provision maintain that digitalization allows to accomplish “more with less”. Technology is often depicted as the key to ‘rescuing’ the public sector by cutting welfare costs and increasing the efficiency of selective benefits and services as van Gerven (2022) critically observes. In its pessimistic version, the imagination of a digital welfare state entails discrimination, exclusion, and inequality issues that are even more profound than those faced today (Eubanks, 2019; Van Toorn et al., 2024). We are interested in papers that transgress this polarized imagination of the digital welfare state and enhance a deeper understanding of the constant and ongoing interweaving of sociality and technology. Furthermore, we encourage submissions that analyse the social life of digital technologies in concrete social services and, vice versa, analyse how the work of social service provision (e.g. by social workers or bureaucrats) is oriented to a given digital infrastructure.

ID: 20

Keywords: ageing, futures, anticipation, sociotechnical imaginaries

Ageing Technofutures-in-the-Making

Helen Manchester[2], Juliane Jarke[1], Daniel López Gómez[3], Andreas Bischof[4], Dagmar Lorenz-Meyer[5]

[1]University of Graz, Austria; [2]University of Bristol, UK; [3]Open University of Catalania, Spain; [4]Technical University of Chemnitz, Germany; [5]Charles University Prague, Czech Republic

Futures have always been debated, planned and materialised. The turn towards the future in times of (social) crisis has a long history and traditionally focussed on developing scenario planning, forecasting and on producing predictions of the future. Anticipation Studies challenges this sense of certainty and stability in relation to futures by starting from the premise of the need to develop "an active and critically reflective interaction with futures that are unknowable" (Amsler & Facer 2017). It starts from a belief that, not only can we not know the future, but that futures are multiple, complex and uncertain (Miller 2018) and therefore could be "otherwise". So, whilst the future does not really exist in the present, anticipation certainly does.

In this session, we are interested in exploring how anticipations in relation to ageing technofutures play out in the present and impact on the ways in which different social actors engage in futures-making. As we age we are continually asked to anticipate and plan for our well (ill)-being, financial and social situation (Adams et al. 2009; Shimoni 2018). "Gerontechnologies" (Gallistl et al. 2023) are often imagined as solutions to the economic and social "problems" of population ageing (Cozza et al. 2019; Joyce 2021). They are promised to promote healthy lifestyles, "independent living" and "ageing in place", to support caregivers and ensure safety, whilst preventing social isolation, all key policy goals internationally. However, who is and can become an active agent in shaping the development of these technologies has long been reserved to an elite of experts.

Regimes of anticipation related to ageing technofutures determine and "prestructure which developments are considered relevant and urgent, possible or inevitable" (Konrad & Böhle 2019) through expressing a particular way of "thinking and living toward the future" in the present (Adams et al. 2009). They emerge around particular collectively shared ways of thinking, reasoning and imagining futures that are made to seem inevitable. They are articulated and materialised through anticipatory practices that affect the design of policies (e.g. legislation such as the EU AI Act or WHO-guidelines of age friendly cities), infrastructures, the allocation of resources, or transform practices of professional societies as well as individuals. They lead to what Annette Markham (2021) has described as "discursive closure". That is, that certain practices or technological designs are made to seem like processes that just exist or are inevitable. Neutralised in this way, ageing technofutures are imagined as "value-free routines or routine ways of thinking" (p.392). This risks removing a sense of agency, recognition of where sociotechnical anticipations originated and what values and norms they represent. It reinforces both a sense of the inevitability of certain uses of technologies and a sense of powerlessness.

We invite contributions that engage with questions around:

- Regimes of anticipation at the intersection of ageing & technologies
    - ☐ What claims are being articulated?
    - ☐ Who has a stake in stabilising these anticipations?
    - ☐ Who enacts and responds to these anticipations (how/why) in the present?
- (Alternative) methods and approaches to futures-making
- (Re)-configurations of sociotechnical imaginaries of ageing

ID: 21

Keywords: healthcare, responsible research and innovation, ethics, foresight, artificial intelligence

Responsible Innovation and the Future(s) of Healthcare

Lukasz Nazarko[1], Karine Sargsyan[2], Zisis Kozlakidis[3], Rafael Popper[4]

[1]Bialystok University of Technology, Poland; [2]Medical University of Graz, Austria;
[3]International Agency for Research on Cancer/World Health Organization, France;
[4]University of Turku, Finland

Issues of ethics and responsibility have always been intimately connected with medical professions. However, nowadays, with the exponential increase in the complexity of socio-technical systems and the unpredictability of their interactions, efforts to create frameworks that guide responsible health innovation are needed more than ever.

Drug discovery, regenerative medicine, disease diagnostics, medical imaging, real-time monitoring systems, genomics, personalised treatment – these are the examples of domains that are fundamentally transformed by advances in artificial intelligence/machine learning, material sciences, data science, molecular biology, robotics and other fields. This session aims to explore the critical intersection of innovation and responsibility, addressing how we can harness cutting-edge technologies ethically and equitably to shape the future of healthcare.

We invite contributions that embrace questions such as (or related):

- What principles should guide responsible innovation in healthcare, and how can these responsibility/ethical frameworks be implemented in practice?
- What are the ethical challenges posed by artificial intelligence, genomics, telemedicine, nanotechnology and other healthcare technologies, and how to address them effectively?
- How can health innovation processes be designed to prioritize patient needs, values, and experiences?
- How can sustainability be integrated into the development and deployment of new healthcare technologies?
- What methodologies can be employed to anticipate and shape the development trajectories of medical technologies?
- How to ensure meaningful public/patient engagement in the health innovation process?

Considering the interdisciplinary nature of the session theme, we welcome submissions by authors representing diverse fields in medical, technical, social sciences, and humanities. Submissions may explore above questions through empirical research, case studies, theoretical analyses, or policy evaluations. The goal is to foster a comprehensive discussion on how to innovate responsibly to create a sustainable, equitable, and effective future for healthcare.

ID: 22

Keywords: Participatory design, Health Tech, STS inspired participatory methos

Advancing Theory – Methods packages for Participatory Design in Health Technology Development

Ayush Shukla[1], Bianca Jansky[2], Renate Baumgartner[1]

[1]Vrije Universiteit Amsterdam, Netherlands; [2]University of Augsburg, Germany

Participatory design approaches are increasingly celebrated—and in some cases, demanded—as integral to health technology development processes. Methods such as co-creation and public patient involvement panels underscore the importance of user-centric development, emphasizing the significance of experiential knowledge and the assumption that users might use technology differently than intended.

While scholars from Science and Technology Studies (STS), anthropology, and human-computer interaction have long been interested in empirically studying participatory approaches to technology development, there remains a significant gap in integrating STS theories and methods with participatory design practices. Although participatory design often adopts pragmatically suitable methodologies, the theoretical connections between these methodologies remain underdeveloped. This panel seeks to explore and theorize how participatory design can be meaningfully connected to theory-method packages within STS and how these approaches can enrich each other in the context of technological development. We are particularly interested in examining these intersections within domain of health and medical technology development.

We aim to discuss the following and further connected questions:

- How can STS theories inform participatory design practices?
- What combinations of STS methods and participatory design approaches are most productive, especially in health technology development?
- How do STS theories and methods vary in applicability across different stages of the design process?
- In what ways do these new methodological combinations shape the development of original theories, methods, or outcomes?
- What new topics or perspectives—such as the politics of participation or inclusive technology development—emerge from these intersections?
- How do stakeholder dynamics in technological development influence the choice and application of theories and methods in participatory design?

Submission Formats:

We welcome a variety of submission types, including:

- Traditional paper presentations
- Methods-focused presentations
- Creative submissions, such as workshop-style method try-outs or experimental formats

ID: 23

Keywords: neurotechnology, ethics, governance, sociotechnical imaginaries

Neurotechnologies for all?! Rethinking neurotechnologies between neuroenchantment and neuroenhancement

Eugen Dolezal, Thomas Gremsl, Juliane Jarke, Guilherme Maia De Oliveira Wood, Sara Skardelly, Petra Zandonella

University of Graz, Austria

The premises surrounding neurotechnologies (NT) have changed over the last years. While originally used in the clinical domain, the general public gained access to direct-to-consumer NT devices for the purposes of neuroenhancement and cognitive augmentation. NT encompas technologies that record, analyze or stimulate brain activity. While being clinically indispensable tools, the ability of NT to allow insights into brain states, as well as the possibility to modulate neural activity also raise challenges of neuropsychological, ethical, legal and societal nature.

One of those challenges lies in the inherent persuasiveness of NT, which is often referred to as neuroenchantment (Ali et al., 2014) or the SANE effect (Bennett et al., 2024), the seductive allure of neuroscience explanations. The experienced privilege of gaining access to the brain's activity is fueled with popular misconceptions, also known as neuromyths. However, research lacks behind the already available practical applications for everyone accessible on the market, especially when it comes to long-term applications. It gets especially problematic when NT are used for example with the prospect of identifying criminals in court with neural polygraphy tests or increasing cognition while not knowing any potentially detrimental side effects. The regulatory framework for NT products used for medical purposes within the European Union is quite robust, but challenges arise for enhancement products or dual-use products in the area of NT. The societal outcomes are diverse, raising concerns about technoableism, changes of expectations around work efficiency or performances at school. Ethically, NT should bridge the gaps between humans instead of enlarging them (Wood et al., 2024).

With this panel, we want to discuss matters of concern that emerge through the advances of neurotechnologies across different social domains. This includes but is not limited to bias and discrimination, privacy and autonomy, transparency and accountability. We invite contributions that consider the complex and ambivalent use contexts, policy and public discourses, regulatory frameworks, ethical aspects and use practices surrounding different types of neurotechnologies.

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ID: 24

Keywords: "Algorithmic Governance", "Artificial Intelligence in Environmental Management", "Predictive Environmental Tools", "Power Dynamics in Algorithmic Systems", "Knowledge Pluralism in Environmental Policy"

Environmental Governance in the age of algorithms

Elphin Joe[1], Anita Pinheiro[2]

[1]Penn State University, United States of America; [2]Independent Researcher

This session call for papers is dedicated to understanding the emerging dynamics of the use of algorithms to help environmental decision making. The aim is to provide insights from Science, Technology, and Society (STS) studies, critical digital studies, sociology of technology, and environmental justice frameworks to understand the way algorithms influence and possibly reconfigure existing ecological and sociopolitical landscapes. In today's digitally interwoven world, data and algorithms along with their supporting platforms increasingly serve as the foundation for environmental management and climate strategy, guiding crucial decisions on resources, conservation, and risk mitigation. The use of algorithmic tools presents a double-edged sword:

while they offer efficiency and predictive capabilities that drive widespread adoption, they also risk reinforcing systemic biases embedded in existing structures and promoting techno-environmental determinism. The rapid advancements in the field of artificial intelligence and their deployment could constrain our responses to environmental crises by embedding socially constructed assumptions and values into the stochastically driven frameworks of these emerging models. This might not only limit the co-production of knowledge by reducing contributions from diverse epistemologies but also reinforce particular worldviews, potentially marginalizing alternative perspectives critical to addressing complex environmental challenges.

This session welcomes contributions that interrogate how algorithmic systems may reinforce or challenge power dynamics, scrutinizing these tools as both facilitators of decision-making and as hegemonic actors in defining and controlling climate and environmental responses. Further, we seek papers that employ an environmental justice lens to critique algorithmic governance's role in environmental data management, reflecting on the social and ecological costs of algorithmic solutions in addressing climate change. This perspective challenges the "objectivity" and "universality" attributed to algorithmic reasoning, questioning whether these tools, often developed within a narrow set of assumptions and values, can represent the diverse realities of environmental impact across different communities. Building on recent critiques, we encourage submissions that examine how algorithmic processes can marginalize alternative modes of environmental knowledge and policymaking, creating a hegemonic knowledge system that prioritizes technical optimization over pluralistic and context-sensitive approaches. Contributions should consider both theoretical perspectives and/or empirical examples, drawing attention to the environmental, social, and political implications of algorithmic decision-making. This session will generate critical dialogues on how algorithmic systems shape the future of environmental governance, aiming to foster a more inclusive, equitable, and responsive framework for addressing the pressing environmental challenges of our time.

Some indicative questions for submission include (but are not limited to):

- How does algorithmic reasoning claim objectivity in environmental governance?
- What are the implications of deploying artificial intelligence tools in environmental management?
- How do predictive environmental tools influence decision-making processes in resource management?
- In what ways do algorithmic systems challenge or reinforce existing power dynamics in environmental governance?

Can algorithmic approaches support knowledge pluralism in environmental policy, or do they inherently marginalize alternative epistemologies?

ID: 25

Keywords: experiment; environmental change; governance; technology; knowledge

Political and economic values of experimentation in the governance of environmental change

Juliane Miriam Schumacher[1], Giovanni Bettini[2]

[1]Humboldt-Universität zu Berlin, Germany; [2]Lancaster University, United Kingdom

Studies on experimental forms of knowledge production and different forms of experimentation have a long history in STS. While early research focused on experiments in a laboratory setting as a site and tool of knowledge creation, more recent theorisations suggest that the experimental has left the laboratory and spread to different areas of society and economy, as in the case of clinical trials (Petryna 2009), humanitarian aid (Jacobsen 2015; Duffield 2016) or urban planning (Evans et al. 2016). However, they are most prominent in the field of socio-ecological transformations and the governance of changing human-non-human relations, such as adaptation to climate change, working towards „resilient" cities (Wakefield and Braun 2014), or attempts at „planetary improvement" (Goldstein 2018). These experiments take different forms and have different purposes, from testing existing knowledge or hypotheses to creating entirely new knowledge. They are linked to specific forms of knowledge generation, practices and (often digital) technologies (Allan et al. 2018), and they challenge existing notions of success and failure.

While some see such „emerging collective experiments" (Latour 2011) as testing grounds for alternative human-non-human assemblages in the Anthropocene, and call for „cosmopolitical experiments" (Braun 2015) to replace modern, linear temporalities of dealing with the unknown, others see these new forms of experimental governance or „experimentality" (Petryna 2009; Nguyen 2009) as leading to increased precarity, exploitation and control (Murphy 2017; Engels et al. 2019).

In this session we invite participants to explore this changing role of the experimental in the governance of environmental change, with a particular interest in the relationship between experimentation, new (digital) technologies and forms of governance of environmental change. We invite papers on theoretical explorations as well as empirical studies. Questions may include, but are not limited to

- What can be considered as an experiment or an experimental form of knowledge production, what (changing) criteria exist, what different forms can be distinguished?
- How do contemporary approaches to experimentation differ from earlier experiments, e.g. in the natural sciences?
- Does the shift in technologies of experimentation give rise to a qualitatively new form of experimentation? How is the concept and use of experimentation changing with the increasing use of digital devices and AI? How does experimentation relate to the generation of data, to processes of valuation, financialisation or commodification?
- How do experiments relate to (changing) forms of governance of humans or non-humans? How do experimental forms of governance relate to other (disciplinary, etc.) governmentalities?
- What is the role of experimentation in creating legitimacy for socio-ecological transformations or adaptation to environmental change, and how does this relate to the reproduction or contestation of existing power relations?

ID: 26

Keywords: Just energy transition, Global South, sustainability

Inclusive Paths of Transformation: Unpacking Just Transition Challenges and Opportunities in the Global South

Dwarkeshwar Dutt[1], Jyoti Prabha[2], Stephani Ruiz[3]

[1]Indian Institute of Technology Delhi, India; [2]Directorate of Education, Delhi; [3]University of Campinas

In the face of the global energy transition, the Global South finds itself at a crucial juncture where it has to align its environmental, developmental, and social goals. In essence it has to redefine its development to integrate social equity and environmental sustainability. For instance, the impending coal phase-out is likely to adversely affect the employment prospects of some of the most vulnerable populations in the developing nations. Also, rapid deployment of large renewable infrastructures (solar and wind) as well as promoting circular bioeconomy approaches have also created justice issues pertaining to land-use and displacement of the local communities. Further, it is a well-established fact that as compared to the Global North, the Global South countries are debilitated by weak institutional capacity to adopt and enforce just governance frameworks and approaches. The unique socio-political context of the Global South necessitates critical engagement with the ways a just energy transition can be ensured in the Global South.

This panel will explore the complex interplay between socio-technical transitions, justice, and sustainable energy transition highlighting the multifaceted, context-specific challenges and opportunities involved in achieving a just energy transition in the Global South. The session would focus on the various aspects pertaining to just transitions in the Global South, including but not limited to the following objectives:

1. Highlighting the uniqueness of the socio-political, economic, and cultural context of the Global South and exploring the conceptual and methodological tools needed to understand this uniqueness.

2. Critically examining the influence of institutional histories, political legacies, governance structures, and policy frameworks in facilitating or hindering just transitions.

3. Analysing the dominant socio-technical imaginaries of just transitions in the Global South and their influence (or lack of it) on governance and policy.

4. Exploring the role of civil society, community-led practices, and indigenous knowledge systems in shaping just transition discourse and policy.

5. Critically examining the socio-economic implications of moving away from traditional industries (e.g., coal mining) and exploring the ways to ensure meaningful and sustainable economic diversification of effected people and regions.

6. Exploring the opportunities for South-South learning and co-operation in advancing localized, equitable solutions

This session is designed for researchers, policymakers, activists, and other practitioners interested in the Global South low-carbon transitions. By bringing together diverse stakeholders, we aim to foster meaningful discussions, share best practices, and inspire innovative solutions for a sustainable future. The session would promote a comprehensive understanding of critical facets of the Global South low-carbon transitions and also promote inclusivity in transitions research by engaging with alternative frames and perspectives to encourage decolonization of transitions research.

ID: 27

Keywords: Sustainable Energy Systems, Technological Integration, Social Acceptance, Policy and Regulatory Barriers

Advancing Urban and Rural Energy Systems for Inclusive, Scalable, and Technologically Integrated Energy Solutions

Vanja Djinlev[1], Michael Brenner-Fliesser[2], Malgorzata {Gosia} Matowska[3]

[1]ETH Zurich, Switzerland; [2]Joanneum Research, Graz, Austria; [3]Airborne Wind Europe, Brussels, Belgium

The transition to sustainable energy systems is a cornerstone of the global energy transition, requiring solutions that address diverse urban and rural needs while integrating advanced technologies with existing social and institutional landscapes. This shift presents opportunities for more inclusive and resilient energy systems, particularly when socio-cultural and institutional dimensions are actively considered in their design and implementation. This session focuses on discussing the socio-cultural, environmental, and institutional challenges of embedding scalable energy solutions across urban and rural settings. By focusing on inclusivity and adaptability, the session will highlight innovative approaches to community engagement, policy adjustments, and institutional reforms that align with long-term decarbonization goals and social equity. Contributions emphasizing the integration of socio-cultural and socio-institutional factors in energy modeling and decision-making are also encouraged.

Session Objectives

The session will:

- Explore barriers to embedding new energy systems, focusing on geographic, demographic, and cultural factors.
- Discuss strategies to foster social acceptance, inclusivity, and engagement for new energy technologies.
- Identify solutions for integrating advanced energy systems with legacy infrastructure, balancing socio-cultural, environmental, and regulatory needs.
- Discuss methodologies to integrate socio-institutional dimensions into energy modeling for effective policy and planning.

Key Topics

1. **Social Acceptance and Community Engagement**

Submissions can include methods for fostering acceptance in areas resistant to change. Submissions can discuss inclusive approaches that benefit underrepresented or isolated communities, enhancing public engagement.

2. **Environmental Impacts and Resilience**

Submissions can be related with environmental benefits, such as reducing urban heat islands and protecting rural ecosystems, alongside resilience strategies that support long-term sustainability.

3. **Policy and Regulatory Adjustments**

Submissions can relate to policy shifts needed to support decentralized systems and encourage adoption, aligning with clean energy and resilience goals.

4. **Financial and Market Barriers**

Submissions can address the financial obstacles and explores how partnerships and cross-sector collaboration can drive investment in energy solutions.

5. **Socio-Institutional Integration in Energy Modeling**

Submissions can introduce innovative modeling approaches that incorporate sociocultural and socio-institutional factors for planning inclusive energy systems.

ID: 28

Keywords: energy poverty, expertise, collective knowledge

Energy Poverty Expertise — Knowledge, Tools and Practices

Adèle Sébert[1], Ute Dubois[2]

[1]University of Reims Champagne-Ardenne, CRIEG, REGARDS, France; [2]ISG International Business School, France

We invite proposals for a session focused on the evolving landscape of energy poverty (EP) expertise, both from a research and from a practice perspective. The questions we propose to consider are as follows: Who are the people we call 'expert' when it comes to EP? What are they 'expert' on? What is the knowledge on which private and/or public 'expertise' is based?

For over 15 years, EP has been an issue on national and European policy agendas, while research has delved into its determinants, multi-dimensionality, and approaches to tackle it. This session will reflect on the collective learning and the construction of expertise in that field, emerging from two main evolutions.

On the one hand, there has been a considerable development of

(a) academic research, including articles in journals, the emergence of research teams, and of national and international research projects,

(b) institutions, such as observatories, data sets to assess EP, standards and laws, and

(c) professional publications and various communication tools.

On the other hand, our relationship with energy knowledge and use have changed. More and more technological devices are available (smart meters, self-consumption devices, 'energy boxes' containing sets of energy saving devices). These are complemented by labels, certificates and nudges. Finally, in a context of increasing prices, more emphasis has been put on energy savings and incentives to save energy.

This session aims at exploring the dynamic interrelations between the instruments and approaches that have been developed in recent years, and their interplay with researchers, policymakers and those experiencing EP.

Presentations in this session will explore two lines of enquiry:

1. The research perspective
   - What (in)disciplines and methodologies are being applied to study EP?
   - How do interdisciplinary methodologies and scientific or technical tools enhance our understanding of the complexity of EP?
   - What knowledge has emerged from research, and how does it address the multi-faceted nature of EP?
2. The perspective of the lived experience of EP
   - What knowledge do those experiencing EP contribute through surveys or during interventions?
   - How to gather objective knowledge on, and how to value their understanding of their situation?
   - What can we learn from the practices of those living with or addressing EP situations, whether temporary or permanent?
   - What is an energy poverty situation, whether temporary or permanent?

We particularly encourage proposals that explore the intersections of these two perspectives, but submissions focusing solely on one area are also welcome.

Proposals may address, but are not limited to:

- Innovative research methodologies for studying EP
- Institutional, academic, or professional tools for tackling EP
- Technological interventions (*e.g.*, smart meters, 'energy boxes') and their social impacts
- Collective learning processes and analyses on how knowledge evolves over time
- Case studies or field reports on EP, including historical analyses
- Theoretical reflections on multi-disciplinarity and diachronic approaches to EP research
- Perspectives on community engagement and participatory practices in EP initiatives.

We welcome theoretical, methodological, empirical and reflective contributions from diverse disciplines and perspectives.

ID: 29

Keywords: onshoring, critical minerals, just transitions, inequality, climate policy, technology policy

Implications of technology onshoring in the Global North for Just Transitions in the Global South

Mel George[1], Anjali Sharma[2]

[1]University of Maryland College Park, United States of America; [2]Indian Institute of Technology (IIT) Bombay, Mumbai, India

Recent geopolitical conflicts and the Covid-19 supply chain crises, the rise of nativism, protectionism and consequent trade wars have posed significant risks to global energy and material security. In response, countries are taking steps towards strategic autonomy or "onshoring" to safeguard their interests. These competitive aspects play out in the backdrop of a climate crisis and rapid energy transitions and global cooperation required to meet the stated climate goals of the Paris Agreement. Harnessing carbon-free energy requires globe-trotting processes of economic production. These minerals are now the terrain of geoeconomics. Countries are using subsidies, domestic policies, and trade measures to gain a competitive advantage in clean energy technologies.
The emerging terrain of mineral extraction & processing moving from the South may pose multilevel tensions and challenges for global justice. While enticing extraction to the Global North would alleviate some harms in the South, in reality economic nationalism around clean technology may complicate the attainment of globally just energy transitions.

What are the impacts of protectionist measures for ambitious climate policy and Just Transitions? Are there reasons to be concerned about onshoring mining and technology supply chains to the North?This session seeks to provoke & promote discussion on the changes in energy strategies due to geopolitical issues and the competition in clean energy technologies. Discussions will also explore how energy import taxes, technology cooperation, friend-shoring, revenue recycling or other policies can provide better outcomes for the most vulnerable and impact sustainable development goals. The session will seek to explore how the Global South is affected by new scenarios of global distrust and the green technology race. Would populations in the North benefit from unequal exchanges with the South, or equally pay the environmental costs of onshoring and higher climate mitgation costs? Would global North onshoring repair or exacerbate the harms to vulnerable populations in the South? What forms of redistribution, including technology transfer and climate finance, would mitigate such harms and what factors inhibit them?

We invite papers on how Just and Rapid energy transitions can be effectively pursued for the Global South in a fragmented world.

Through this panel, we aim to contribute to a more informed and strategic decision-making process in a complex global context characterized by geopolitical fragmentation on the one hand and the necessity of cooperation to achieve climate goals.

ID: 30

Keywords: Hydrogen futures, energy transition

Exploring Hydrogen Futures: Sociotechnical Pathways and their Implications.

Paula De Pablos Sanz[1], Filip Rozborski[1], Michael Kriechbaum[2], Soma Rahmani[1], Peter Obersteiner[2]

[1]Technical University Graz, Austria; [2]University of Graz

Expectations around the key role hydrogen might have within the context of a decarbonized world keep rising to unprecedented levels [1]. Since 2018, more than sixty countries have published hydrogen strategies, and the IEA expects the market value of low-emission hydrogen sector to rise from USD 1.4 billion today to USD 12 billion by 2030 [2]. At the same time, the production of 'low carbon hydrogen' is still marginal (i.e., less than 1Mt) accounting for merely one percent of global hydrogen generation [3]. Thus, current global ambitions and efforts are centered around attracting investments, and stimulating global supply of low-emission hydrogen, while facilitating deployment of hydrogen end-use technologies [3].

Despite current global expectations and efforts to scale up low-emission hydrogen, several questions regarding the use, production pathways, and broader socio-environmental implications remain open. Along these lines, different interests, values, and expectations are associated with the idea of the 'hydrogen economy' [4], which translates into a diversity of potential future pathways, each of which is related to different risks and challenges [5]. For instance, issues of fossil fuel path dependencies are being discussed in this context [6]. Furthermore, increasing attention is paid to broader social, environmental, cultural, and justice concerns around the development of a future hydrogen economy; bringing questions about the desirability and implications of scaling up low emissions hydrogen technologies [7,8].

While it is still uncertain what form (if any) would the hydrogen economy might take, any materialization of current hydrogen efforts and expectations will be associated with different techno-economic, political, social, environmental, cultural, and justice configurations and implications. In this session, we invite contributions that aim to extend the knowledge on hydrogen futures and their implications. Contributions can focus on following areas of research:

- Stakeholders' influence on hydrogen futures and relations to global power dynamics
- Dynamics of expectations and influence to broader ideas on hydrogen futures
- Challenges in hydrogen adoption
- Hydrogen futures and justice considerations

We welcome empirical contributions focusing on various levels of analysis, including countries, regions, organizations, stakeholders, sectors encouraging comparative analysis.

[1] Budde, B.; Konrad, K. (2019): Tentative governing of fuel cell innovation in a dynamic network of expectations. Research Policy 48 (5): 1098-1112.

[2] IEA – International energy agency (2023): Global Hydrogen Review 2023. IEA, Paris.

[3] IEA – International energy agency (2024): Global Hydrogen Review 2024. IEA, Paris.

[4] Sovacool, B. K.; Brossmann, B. (2010): Symbolic convergence and the hydrogen economy. Energy Policy 38 (4): 1999-2012.

[5] Ohlendorf, N.; Löhr, M.; Markard, J. (2023): Actors in multi-sector transitions - discourse analysis on hydrogen in Germany. Environmental Innovation and Societal Transitions 47: 100692.

[6] Szabo, J. (2021): Fossil Capitalism's Lock-ins: The Natural Gas-Hydroge Nexus. Capitalism Nature Socialism, 32:4, 91-110.

[7] Carlson, J. T.; Trencher, G. (2024): A framework for considering decarbonisation risks emerging from low-carbon hydrogen supply chains. Energy Research and Social Science 116.

[8] Müller, F., Tunn, J., Kalt, T. (2022): Hydrogen justice. Environ. Res. Lett. 17.

ID: 31

Keywords: Transition Management; Sustainable Mobility; Behavioural change

Transitioning to Sustainable Urban Mobility – Practical Applications and Behavioral Change

Filipa Corais[1], Caue Rios[2]

[1]University of Minho, Portugal; [2]University of Porto

Urban mobility is a key domain in pursuing sustainable transitions, yet it faces persistent challenges rooted in deeply ingrained unsustainable behaviours, both among the general population and within institutional structures. A dual focus on societal behaviour change and institutional transformations is essential to achieve a paradigm shift towards sustainable urban mobility. This session invites contributions exploring practical approaches to fostering these shifts, focusing on empirical applications and critical reflections on sustainability transition theories, frameworks, and methodologies.
We are particularly interested in case studies or applied research that investigates how transition theories or other frameworks within the socio-technical transitions field have been employed to address behavioural change in urban mobility. Submissions may examine one or more of the following themes:

Behavioural Change in Civil Society:
Strategies to promote sustainable mobility practices among citizens.
Impacts of social innovation, advocacy, and grassroots movements on urban mobility transitions.
Insights into the challenges and opportunities of engaging diverse societal groups in co-creating sustainable mobility solutions.

Institutional Change and Planning Practices:
Applications of sustainability transition frameworks to transform institutional structures and urban planning practices.
Empirical accounts of how planners, policymakers, and other institutional actors integrate transition tools into their work.
Critical reflections on the role of governance, power dynamics, and institutional resistance in shaping the trajectory of sustainable mobility transitions.

Bridging Theory and Practice:
Case studies demonstrating the application of transition methodologies in real-world mobility projects.
Methodological innovations or adaptations that enhance the practical utility of transition theories.
Evaluation of the outcomes and limitations of applied transition tools in urban mobility contexts.

We welcome a range of methodological approaches, from qualitative and quantitative research to participatory action research and mixed methods. The session aims to foster a rich dialogue between researchers and practitioners, creating a platform to share insights, challenges, and lessons learned from practical applications of transition theories in urban mobility.
Innovative formats, such as roundtables or interactive discussions, may be included to enhance engagement and facilitate knowledge exchange. Contributions that provide comparative insights or engage with underexplored geographies, particularly those in the Global South, are especially encouraged.
Through this session, we seek to advance our understanding of how sustainability transition frameworks can bridge the gap between theory and practice in urban mobility, fostering meaningful change across societal and institutional levels.

ID: 32

Keywords: Mobility, Circularity, Sustainability, Socio Technical Transformation, Circular Economy

The Role of Circularity in Current and Future Mobility

Kay Cepera, Marlon Philipp, Antonio Isopp

TU Dortmund, Germany

Mobility plays a crucial role in everyday life and is referred to as basic need (Hoerler et al., 2020). The mobility sector is one of the largest contributors of global greenhouse gas emissions (Umweltbundesamt 2023). Thus, significant reductions are needed to meet international sustainability goals set by the Paris Agreement and corresponding Sustainable Development Goals.

While there has been a global development towards electric drivetrains as a desirable goal in terms of reducing traffic-related emissions in recent years, a substantial shift in the modal split towards more sustainable mobility options (i.e., cycling and public transportation) has not happened. Yet, there are some examples of successful sustainable mobility transformations (e.g. the bicycle transformation of Paris, Buehler & Pucher 2022) which raise the question how sustainable mobility behaviour can be promoted elsewhere too .

As the car remains dominant in the current modal split (Corselli-Nordblad et al. 2023) and the electrification of individual transport will shift a large part of the emissions from the mobility sector to the production of BEVs, both the production phase und the use phase emissions should be considered (Eickhoff and Jeppe 2024). A possible solution proposed by international policy makers through various policies such as the European Green Deal lies in the adoption of circular economy (CE) strategies.

Circularity (or Circular Economy) aims to extend the life cycle of products, through reusing, repairing and recycling products, and thus minimizing the consumption of finite resources and the generation of waste (cf. Kirchherr et at., 2023). Thus, CE is not only enabling a reduction of emissions but also preventing further resource extraction and supporting the resilience of the supply chain (Suárez-Eiroa et al., 2019). Resilience is becoming even more important with the shift towards electric mobility, as traction batteries are becoming a critical resource factor containing vast amounts of precious metals and rare earths, which are valuable raw materials for production (Rudolph 2017). Nevertheless, the concept of CE is still in its infancy (Bocken 2024) and transformational circular efforts in the automotive industry remain sparse.

Given the duality of a missing change in mobility behaviours as well as an unclear future of circular production, this session focuses on strategies and concepts of successful sustainable transformation of mobility and its current and future relationships with the circular economy. We also welcome submissions that address the intersection of these topics from other relevant perspectives. These could be approaches from the shared economy, for example, or research on social innovation in the mobility sector.

This session will consist of brief 10-minute presentations, which will each be accompanied by a discussant who will provide a 90-second input to stimulate discussion. Contributors to this session are encouraged to submit their presentation in advance of the conference and to discuss another contributor’s presentation as a discussant. There will also be time at the end for a general discussion that will contextualize the presentations and summarize the lessons learned.

ID: 33

Keywords: Future Thinking; Transition Management ; Sustainable Urban Mobility

Boosting Future Visions for Sustainable Mobility

Filipa Corais

University of Minho, Portugal

In 30 years' time, it is estimated that 70% of the world's population will live or work in cities, and the transportation needs generated by human activity in cities will have a major impact on the problem of climate change. It is therefore necessary to change habits and behavior in this area. In support of the principle of democracy and fairness, good governance must understand society's most pressing needs (filtering out individual demands) and use decision support tools that allow it to act in favor of collective causes.

The application of future thinking methodologies has proved to be very promising for promoting capacity building and changing mindsets and more sustainable mobility behaviors. The use of workshops that allow participants to project the current problem into the long-term future (e.g. 2050) makes them aware of the negative scenarios that the current situation could generate if nothing is done to change it. This encourages participants to reflect on their current behaviors and raises awareness of the need to change habits, attitudes and behaviors. This Future Thinking approach makes it possible to achieve change in a more effective and impactful way than using traditional awareness-raising methodologies to promote sustainable mobility. After this phase, and continuing with the use of future thinking techniques, participants will be prepared to enter into a process of co-creation and co-design for the collective construction of a vision of the future (e.g. Vision 2050), through the creation of aspirational scenarios, to make the transition to a scenario in which cities become more sustainable, resilient and liveable. Transporting the problems and solutions to the distant future allows participants to detach themselves from their current (unsustainable) personal needs and focus on solutions for building a more sustainable future by considering this scenario as an alternative reality in the near future. This is sometimes supported by the use of new technologies (e.g. augmented reality, virtual reality) to support the communication of different scenarios.

Future Thinking and the creation of future scenarios, associated with participation and empowerment processes for the promotion of sustainable mobility, also have the potential to influence the decision support of politicians and government officials, contributing to the construction of more sustainable agendas and the mitigation of climate change. And this happens by changing the trend towards a top-down approach and introducing new, more bottom-up or side-by-side practices, as the process of co-creation emerges from the combination of ideas and skills of the group involved, which includes society, researchers, politicians and technicians.

In this way, the possibility of achieving an Extreme Vision for sustainable mobility through cocreation has the potential to shape more sustainable policies, practices and cultures and formalizes a new approach to governance.

Believing that the Aspirational futures method is truly transformative, we invite you to submit calls that address future thinking methodologies associated with the promotion of sustainable mobility. You can present empirical studies, conceptual approaches or co-creation workshops applying innovative methodologies that contribute to the transition to a more sustainable future.

ID: 34

Keywords: Gender, Intersectionality, Early Career Researchers, Methodology, Training

The Potential of Gender and Intersectional Approaches in the Content of Research: Training of Young Researchers for a More Inclusive Research

Anne-Sophie Godfroy[1], Clemens Striebing[2], Anita Thaler[3]

[1]Ecole Normale Supérieure - PSL, France; [2]Fraunhofer IAO; [3]IFZ

How do we know what we know? The importance of the social foundations of scientific knowledge has been highlighted by feminist work. Far from being 'neutral', knowledge production can be biased. Developing gendered and inclusive perspectives is a way of moving towards 'strong objectivity' (Harding, 1991).

In "Gendered innovations in science and engineering" (2008), Schiebinger has identified case studies to demonstrate how sex and gender perspectives can be implemented in research content. This programme has since been developed by Stanford University and the European Commission (https://genderedinnovations.stanford.edu). The same approach is also productive in the humanities and social sciences, see for example Sawer & Baker, 2018 in political science or Lisa Shapiro developing the 'New Narratives' project in philosophy.

Despite the interest in opening up new and relevant research questions and the fact that it is a mandatory requirement in EU-funded research, the integration of research as a gender dimension remains an area where the least progress has been made in promoting gender equality in the research sector (ERAC 2020).

The aim of the panel is to share reflections on tools, methodologies, case studies, conceptual reflections and training programmes to better integrate sex, gender and inclusive perspectives in the content of research.

The panel welcomes

- Conceptual papers on the social basis of knowledge production and the importance of sex, gender and intersectional approaches to produce more objective knowledge.
- Case studies where gender has been successfully integrated into research, in order to disseminate best practice on tools and methods for integrating gender at all stages of the research process.
- Examples of training programmes (for face-to-face and online contexts) aimed at early career researchers.

The expected format for abstracts is that of an academic presentation. However, the panel is open to other formats, including, but not limited to, World Café sessions, roundtable discussions, co-creative workshops, and serious games. If the proposers have a specific format in mind, they are encouraged to propose it.

ID: 35

Keywords: queer, feminist STS, intersectionality, sexualities, solidarities

The past, the present and the future of queer STS

Anita Thaler, Magdalena Wicher

IFZ, Austria

In 2008, feminist STS researchers in Graz began to discuss queer-feminist literature in a 'reading circle'. This initial reading group gradually developed into a working group whose critique of heteronormative and binary gender concepts (i.e. a queer perspective in the original sense) was just as important as questioning the power mechanisms of scientific organizations. Against the backdrop of the economization of science, questions of social justice and intersectionality became relevant both as research content, but also from the perspective of those affected from discrimination. In 2011, the working group officially named itself 'AG Queer STS' (AG as in "Arbeitsgruppe", German for working group) and has been working together loosely but continuously ever since. Since 2016, the working group publishes the "Queer-Feminist Science and Technology Studies Forum" on their website https://queersts.com, a freely accessible, transdisciplinary, multimedia online journal. The journal is dedicated to one topic each year and used by the queer feminist community in- and outside academia. Topics ranged from "Queering the Class in Academia", "Interfaces of Queer Technologies and Sexualities" to "Academic Kindness" and the latest issue on "Queer-Feminist Solidarities in Times of Social and Political Turbulences".

In this session, we want to celebrate the 10th year anniversary of the Queer STS Forum by inviting queer-feminist contributions to discuss past, current and emerging topics of interest for the feminist STS community and academic discourse. We welcome contributions of all kinds, classical academic, artistic, activist, interactive and visionary.

ID: 36

Keywords: feminism, energy, masculinities, gender, justice

Feminist Perspectives on Energy Systems: Bridging Justice and Sustainability

Sabine Loos, Clemens Striebing

Center for Responsible Research and Innovation, Fraunhofer IAO, Germany

This panel brings together feminist perspectives on energy systems, focusing on four interconnected themes. First, feminist scholars emphasize the disproportionate burden of energy injustices on women and marginalized groups, illustrating how intersecting identities — such as gender, race, and class — shape unequal access to energy resources and decision-making (Moniruzzaman and Day 2020, Ngarava et.al. 2022). Second, based on Feminist Political Ecology and Ecofeminism, the panel explores the imperative for ecological sustainability, arguing that challenging entrenched growth-oriented paradigms and embracing sufficiency strategies are essential to building truly just energy systems (Bell et al. 2020, Creutzig et al. 2022, Gaard 2015, Harcourt et al 2023). Third, care ethics — often neglected in energy discussions — will be examined as a vital framework for fostering equitable energy transitions (Bauhardt and Harcourt 2019). Lastly, insights from masculinity studies will critically assess how notions of masculinity influence energy consumption and power dynamics within energy systems (Connell 2001, Daggett 2018, Pulé and Hultman 2021). By weaving together these perspectives, the panel aims to illuminate pathways toward dismantling entrenched power imbalances and fostering a more just, sustainable, and inclusive energy future.

ID: 37

Keywords: Participatory research and innovation, policy making, power dynamics, transformation

Cultivating Participation: Pathways to Shared Innovation

Elisabeth Frankus, Erich Griessler

Institute for Advanced Studies, Austria

Participation has become a central yet complex feature of research and innovation, challenging STS practitioners to rethink their roles, methodologies, and ethical commitments. As we engage with participatory processes, we are not merely observers of these dynamics but active contributors, navigating their potentials and pitfalls. This session aims to critically reflect on how we engage with and shape participation in research, policymaking, urban planning, and teaching. Rather than examining participation as an abstract phenomenon, this session centers on the practice of participation itself. How do we balance the transformative aspirations of participation with the realities of institutional resistance and the power imbalances inherent in these processes? What responsibilities do we carry in fostering genuine inclusion, and how do our own methods and assumptions come under scrutiny in participatory contexts?

Key questions include:

- How do STS practitioners negotiate the ethical, methodological, and practical challenges of participatory processes?
- What insights can we gain from our failures and successes in fostering meaningful participation?
- How do our approaches to participation affect power dynamics, and what kinds of reflexivity are required to critically assess our own practices?
- What does it mean to co-produce knowledge and innovation in ways that are not only participatory but also critically informed by STS perspectives?

This session invites contributions that engage with the practice of participation. We seek inputs that reflect on your own experiences in participatory processes, addressing issues such as navigating tensions between participatory ideals and hierarchical systems, reconfiguring traditional roles, and embracing uncertainty as part of innovation.

Through a combination of brief impulse presentations and an interactive World Café format, this session provides a space for shared reflection and dialogue. Speakers (5 à 5-7 minutes) will share their experiences and insights, followed by discussions at thematic tables focusing on challenges, lessons from failures, transformative potentials, and shifts in attitudes and approaches. Participants will rotate between tables (4 rounds á 20 minutes), with key insights summarized in a plenary session. This collaborative format invites us to collectively grapple with the question: What does it mean to “do” participation, and how can we critically enhance these practices?

ID: 38

Keywords: Citizen Science, decarbonisation, energy transitions, Public understanding of science, public engagement

Citizen Science and Sustainability

Vandana Maurya[1], Nazia Talat[2], A. Vasudha[3]

[1]lady Irwin College, India; [2]Shyama Prasad Mukherjee College, Delhi, India; [3]Independent Researcher, India

Participation of public in science has always played an important role in shaping policy making (Irwin, 1995) [1]. Discussions around Citizen science (CS) and its role in shaping the society is still very relevant. CS not only democratises the knowledge but also shapes policymaking which help in realising the role of 'layman' in making the required 'change'. It also provides sense of ownership among the public which is reflected in the form of their support for various scientific endeavours and informed decision making (Conrad and Hilchey, 2011)[2]. Last few decades have seen increased interest of public in helping the economies decarbonise and achieve sustainability (Fraisl et al., 2020)[3]. Projects like transitioning towards just and renewable energy, reducing the carbon footprints, conservation of biodiversity and making economies circular are among the emerging areas where public finds themselves responsible and have engaged themselves actively across the world, majorly in global north. CS in global south is still not very active which is also reflected in the policy making. Moreover, public understanding of science and role of public in doing and shaping science in global south is still not well underlined.

The session aims to understand the renewed role of CS in the wake of triple planetary crises. What are various challenges and opportunities faced by CS in global south is changing and shaping the science and how public understanding of science is shaping CS. Further, it aims to identify and underline various methods used for conducting CS in the pursuit of achieving sustainability and helping economies decarbonise. We look forward to empirical and conceptual research work which addresses the issues underlined above. Research done at institutional level, local level, national level with special focus on global south will be of high value.

[1] A. Irwin (1995) Citizen Science: A Study of People, Expertise, and Sustainable Development

Routledge.

[2] C. Conrad, K. Hilchey (2011) A review of citizen science and community-based environmental monitoring: issues and opportunities, Environ. Monit. Assess., 176, pp. 273-291

[3] D. Fraisl, J. Campbell, L. See, U. Wehn, J. Wardlaw, M. Gold, …, S. Fritz (2020) Mapping citizen science contributions to the UN sustainable development goals, Sustain. Sci., 15 , pp. 1735-1751

ID: 39

Keywords: knowledge production, knowledge structures, epistemic infrastructures

Knowledge Structures and Epistemic Infrastructures

Franziska L. S. Sörgel[1], Judith Hartstein[2]

[1]Karlsruhe Institut for Technology, Germany; [2]Deutsches Zentrum für Hochschul- und Wissenschaftsforschung

Our panel invites contributions addressing scientific knowledge on the micro and meso levels. Our goal is to link the concepts of knowledge structures and epistemic infrastructures. Theoretical and empirical contributions are welcome.

Knowledge as a concept is not monolithic but can be divided into various structures, each playing a specific role in science and knowledge production. Within these structures, we focus on three key categories of knowledge that help analyse how knowledge is produced and transferred; We find positive knowledge, non-knowledge/ unknowingness, and negative knowledge that define the spectrum of what is known and unknown, and sometimes (deliberately) excluded. All three types of knowledge are connected to objects, such as historic documents, technology development or biological specimens. These objects may be accessible to interested researchers in collections such as archives, repositories, and libraries – in short, epistemic infrastructures (Hedstrom & King, 2006).

Positive knowledge represents science's achievements: knowledge about how something works, serving as the foundation for innovation and progress. Positive knowledge is the most visible and easily transferable form of knowledge, often codified in theories, models, or technologies. However, it does not exist in isolation, as negative knowledge and non-knowledge provide the foundation for its development and validation.

Non-knowledge, by contrast, represents the absence of knowledge. In science, it is often a key driver of research, as awareness of existing gaps prompts the formulation of new questions and the pursuit of answers. Non-knowledge is not merely a deficit but also a resource, as it marks the boundaries of understanding and paves the way for discoveries. Hence, epistemic infrastructures bridge the individual and the collective, the known and the unknown. They ensure that non-knowledge is not isolated but systematically addressed through organised practices and methodologies.

Negative knowledge, as described by Fritz Oser (2005), refers to knowledge about how something does not work or should not be. This knowledge arises from recognising errors, making mistakes, or deliberately excluding certain elements. In scientific contexts, negative knowledge potentially helps researchers avoid repeating mistakes and frames hypotheses they can rule out. However, we can observe that negative knowledge often remains implicit or is actively excluded from communication, at best rendering it a form of 'tacit knowledge' (Polanyi, 2009). This implicit nature can hinder exchange, even though it simultaneously forms a collective foundation sustained indirectly through epistemic practices.

Epistemic infrastructures function as systematic collections of epistemic objects that are structured and organised through epistemic practices. They connect individual perspectives with collective rationalities, enabling the development and transfer of knowledge. These infrastructures unite researchers by providing mechanisms of trust, heuristic methods, and control systems. They are essential for facilitating transitions between the categories of knowledge – from identifying non-knowledge, incorporating negative knowledge, and generating positive knowledge.

We aim to discuss the relationship between these knowledge structures and epistemic infrastructures, including (but not limited to) the following questions:

- (How) does positive knowledge develop coherently?
- How is non-knowledge addressed?
- How is the potential of negative knowledge harnessed for collective learning?
- How do epistemic infrastructures organise knowledge in science?

ID: 40

Keywords: Democratisation of science, just food system transitions, responsible research and innovation, science-policy interface, sustainability transitions

From global to local: Enabling inclusive and democratic agri-food system transitions

Anita Pinheiro[1], Neha Sehra[2]

[1]Independent Researcher, India; [2]NCWEB, Delhi University, India

The dominant debates around climate change talk about global risks and global solutions, which are expected to be disseminated across different geographies and contexts. However, there is a huge disparity in who contributes to climate change, who suffers the most from climate change effects, and who is expected to contribute to mitigation efforts. Agri-food systems, which collectively contribute to climate change while also being a victim of climate change events in addition to other prevailing socio-economic and ecologic challenges, are an important area for exploring these disparities of global debates and their local implications.

Sustainability transitions in agri-food systems entail fundamental changes in food/non-food items' production, processing, transportation, consumption, and waste management. However, the pertinent question here is: Are all agri-food systems in their present form bad for the planet? If not, whose/what forms of agriculture needs to be transformed? How do we make agri-food system transitions more inclusive, just, responsible, and democratic? These questions are particularly relevant as most global discourses on climate mitigation in agri-food systems are centred on aggregated assessments of greenhouse gas (GHG) emissions (from industrial and non-industrial agri-food systems) and techno-market innovations that predominantly follow a top-down approach. In this context, we invite abstracts that are related to, but not limited to, the following questions of sustainability transitions in agri-food systems:

1. **Global vs. Local challenges:** How do the dynamics of global discourse on climate change mitigation unfold at local-level agri-food system transitions? What are the local implications of implementing globally predominant techno-market innovations in agri-food systems? What are the impacts of such impositions on diverse agri-food system practices that are already sustainable or least impacting the environment and climate change?
2. **Inclusive, equitable, and just transitions:** What are the enablers and barriers for facilitating more inclusive and equitable transitions to socially, economically, and ecologically sustainable agri-food systems? How do we make this transition possible without causing more harm to marginalised sections whose lives and livelihoods are often affected by climate change events? How are justice considerations incorporated into climate mitigation policies and interventions in agri-food systems?
3. **Responsible and democratic approaches:** How are the intricacies of Responsible Innovation (RI), Responsible Research and Innovation (RRI), and democratisation of science addressed in agri-food system transitions? How are plural forms of knowledge, experience, and concerns incorporated/ignored in the national and local level climate mitigation policies and interventions? What are the challenges of integrating dominant (modern science) and non-dominant (other forms of knowledge) in climate mitigation policies?
4. **Climate mitigation Vs Sustainable Development Goals:** How does prioritising the GHG emission reductions from agri-food systems shape broader Sustainable Development Goals across various contexts and geographies? How do financial mechanisms, technology choices, and science-policy interface shape locally relevant sustainability transitions in agri-food systems beyond the narratives of GHG emission reductions?

This session focuses on paper presentations on theoretical, conceptual, or empirical insights that intersect with broader STS concepts from sociology, politics, geography, and transition studies. We aim to bring diverse practices, knowledge, experiences, and voices to the broader discourse on sustainable agri-food system transitions.

ID: 41

Keywords: Livestock; animals; futures; transitions; agricultural technologies

Futures of livestock, meat and dairy: transitions, foresight and visions.

Raphaël James Somerville Stephens, Nicolas Brault, Loïc Sauvée

UniLaSalle, France

This session focuses on contemporary and future transformations of agri-food systems and food processing industries linked to livestock farming. We welcome contributions researching all segments of the food production chain, from agriculture to processing and transformation, distribution and consumption of processed foods derived from animal husbandry - so long as the timeframe is current and/or forward-looking (as opposed to historic). The core aim of this session is to engage a broad range of methods and concepts linked to anticipatory perspectives on animal-related agri-food transformations. We therefore welcome perspectives from (for instance, but not limited to): foresight (e.g., prospective analysis, scenario building, forecasting), sociotechnical transitions, studies of agricultural systems, studies of food systems, research on generational renewal in agriculture, visions of desirable futures, co-creation of agri-food innovations, agri-food tech (e.g., digitalization, precision farming, artificial intelligence), societal perspectives (e.g., food transparency, perceptions of technologies used in livestock farming, animal rights), current transformations in agri-food governance (at all scales, from supranational to regional), and any science and technology studies research which has to do with contemporary or future trends, particularly technological trends, in the sector of livestock and animal-derived products.

While we welcome propositions from any area among those described above, we particularly welcome propositions which relate to three more specific areas. The first area relates to societal views on, and social acceptability of, current/anticipated technologies, innovations and trends in the livestock sector, which may (or not) lead to alternative and contested futures and social movements around animal products consumption, animal rights and human-animal relations. Our second core area of interest concerns evolutions towards combined livestock and crop (sub)-systems, and the ways in which their performances are measured along different criteria: technologies employed, productive and economic efficiency, contributions towards biodiversity and rural/peri-urban/urban landscapes, impacts of technologies on the organization of work, or any other aspect of such combined systems. The third area we are specifically interested in looks at the territorial and geographic reconfigurations and networks at all scales (local to global) that are brought about by present-day reconfigurations of agri-food value chains.

Work presented can be case-based, conceptual or methodological. We welcome contents of various types: articles, unpublished research, doctoral work, project work, etc.

Format: formal presentations.

ID: 42

Keywords: (agro-)biodiversity, co-creative learning, systemic transformative change, social justice, intersectionality

Co-creative approaches (learning spaces) for (agro-)biodiversity-positive and socially just transformative changes

Sandra Karner, David Steinwender, Anita Thaler

IFZ Interdisciplinary Research Center for Technology, Work and Culture

The ongoing loss of biodiversity affects both wild biodiversity (Living Planet Report 2024, IPBES 2019) and agrobiodiversity (Agnoletti & Santoro 2022), threatening ecosystems and human survival due to failures in essential ecosystem services, particularly food provision (Cardinale et al. 2012). This loss is primarily driven by the overexploitation of natural resources and intensive agriculture, supported by inadequate governance that fails to embrace diverse worldviews and societal values, all shaped by interconnected power structures (IPBES 2019). To effectively combat biodiversity loss, systemic transformative change (Meadows 1999) must address structural inequalities and social justice issues, acknowledging the diverse needs and values within the complex relationship between nature and society and the varying abilities of societal subgroups (Van Herzele et al. 2005). This includes recognizing the intersectionality of social characteristics, as factors like gender, class, ethnicity, nationality, health, sexual orientation, and age influence the responsibilities and vulnerabilities of individuals in biodiversity-related processes (Kaijser & Kronsell 2014). Identifying successful transformational pathways thus involves integrating various knowledge systems, beliefs, worldviews, and aspirations. Co-creative learning spaces can significantly support such biodiversity-positive and socially just transformative changes by fostering collaboration, enhancing understanding, and empowering individuals, communities, and institutions. There are various ways in which such learning spaces can be designed:

- Local Knowledge Integration: These spaces can leverage local knowledge and traditional practices that have historically contributed to biodiversity conservation, promoting culturally relevant actions.
- Experiential Learning: By incorporating hands-on experiences such as fieldwork and workshops, participants can engage with nature directly, deepening their understanding of biodiversity and fostering stewardship.
- Networking and Community Building: Co-creative spaces facilitate networking among participants, creating learning communities that enhance collaboration and collective action toward biodiversity goals.
- Empowerment and Agency: Fostering a sense of ownership among participants encourages them to contribute to biodiversity-positive initiatives and advocate for supportive policies.
- Inclusive Collaboration: These spaces promote holistic decision-making regarding biodiversity by bringing together diverse stakeholders—community members, scientists, policymakers, and educators.
- Critical Thinking and Problem-Solving: Encouraging critical discussions helps participants explore complex biodiversity issues and consider the long-term impacts of their decisions, leading to sustainable choices.
- Awareness and Education: Co-creative spaces raise awareness about biodiversity issues through tailored educational programs that resonate with participants' realities and interests.
- Feedback and Adaptation: Incorporating mechanisms for feedback allows participants to evaluate and adapt their actions, leading to more effective decision-making over time.
- Interdisciplinary Approaches: These spaces can integrate knowledge from various fields, developing comprehensive strategies for biodiversity conservation.
- Policy Advocacy: By equipping participants with knowledge and skills, co-created spaces empower them to engage in policy advocacy, influencing local and regional biodiversity conservation efforts.

We invite presentations for this session that showcase co-creative learning spaces aimed at promoting biodiversity-positive transformative changes while also addressing social justice issues. Our goal is to contribute to more sustainable and equitable outcomes. We are particularly interested in work that takes intersectionality into account.

Presentations can include both conceptual and empirical work, and literature reviews as well as studies that explore the topic of ‘co-creative learning spaces’ are encouraged.

ID: 43

Keywords: Empowerment hub, food and nutrition data, data sovereignty, data privacy, citizen engagement

Empowering Citizens: Hubs for Food Data Sovereignty

Maria Schrammel, ilse Marschalek

ZSI GmbH, Austria

In the digital era, food data sovereignty has emerged as a critical yet often abstract concept within Science and Technology Studies (STS). As data increasingly shapes our food systems, it becomes imperative to empower citizens to engage actively with their food data. This session delves into innovative citizen empowerment hubs designed to tackle data sovereignty challenges in food and nutrition, aligning with STS themes of technology, society, and participatory engagement.

The session will focus on five key stages integral to these empowerment hubs, employing a dynamic fishbowl discussion format that reflects the diversity of citizen engagement. This interactive setup allows participants to move fluidly in and out of the conversation, promoting inclusive dialogue. We will begin with "Hub Genesis," emphasizing the cultivation of safe spaces for critical conversations. Here, we discuss the importance of creating environments where citizens feel comfortable engaging with complex data issues and explore approaches to initiating these hubs within diverse communities.

Moving to "Empowering Educators," we focus on equipping local teams with cutting-edge methodologies. This stage examines training methods for local facilitators leading data literacy initiatives and shares tools and resources that enable effective community education. The third stage, "Data Alchemy," involves transforming raw information into citizen action through photovoice workshops. We introduce photovoice as a participatory method for citizens to express and analyze their experiences with food data, discussing outcomes from workshops that have successfully turned data into actionable insights.

In the fourth stage, "Dialogue Dynamics," we center on fostering collaborations across the food data ecosystem. This involves exploring ways to build bridges between citizens, technologists, policymakers, and other stakeholders, discussing collaborative models that support shared governance of food data. Finally, "Ripple Effect" focuses on designing impactful awareness campaigns that resonate beyond hub boundaries. We share strategies for amplifying the impact of local initiatives to broader audiences and discuss metrics for measuring the success of awareness campaigns.

Participants will gain a deeper understanding of food data sovereignty and practical approaches to empower citizens in this domain. By delving into these five key stages, the session aims to share best practices in cultivating community-driven approaches to food data sovereignty. It seeks to foster connections among STS scholars, practitioners, and community members interested in digital rights, data governance, and participatory methodologies. Attendees will leave with actionable insights and potential collaborations to further the discourse on digital citizenship in food and nutrition.

We invite conference participants to join this engaging fishbowl session to explore the intersections of technology, society, and food data sovereignty. Together, we can craft the future of digital citizenship, ensuring that diverse voices are heard and that citizens are empowered to shape their food data futures.

ID: 44

Keywords: testing, biomedicine, governance, ethics

Towards Social Studies of (Biomedical) Testing?

Erik Aarden[1], Mara Köhler[2], Victoria Meklin[3], Ingrid Metzler[4]

[1]Universität Klagenfurt; [2]Karl Landsteiner University of Health Sciences, Austria; [3]Universität Klagenfurt; [4]Karl Landsteiner University of Health Sciences, Austria

This panel seeks to engage scholars in a conversation on the topic of testing within biomedicine. We welcome contributions that explore the development, uses, regulation, and governance of various biomedical tests across clinical, public health, and recreational contexts.

Over the past three decades, scholars in Science and Technology Studies (STS) and related fields, such as Medical Sociology, Medical Anthropology, Health Policy Analysis, and Bioethics, have engaged with the phenomenon of "testing in bio-medicine." Much of this work has focused on specific types of tests or their uses in distinct settings. For instance, beginning in the late 1980s, scholars have studied genetic testing as it was envisioned, developed, and used in clinical, public health, or recreational practices, or compared the moralities of the regulatory frameworks sustaining and limiting its uses. Simultaneously, scholars contributing to a sociology of diagnosis have investigated how testing in clinical practices is involved in "making up people" (Hacking, 2002). More recently, research has addressed the development, use, and regulations of testing in emerging fields such as translational medicine and precision medicine, paying special attention to the political economies of testing and the authorities involved in their governance. Last but not least, emerging bodies of scholarship have explored the role of testing as a governing tool in global health initiatives and pandemic management, particularly in response to COVID-19.

In this panel, we aim to use testing as a boundary object to open up a conversation between these different areas of research. Building on work performed under the label of the "anthropology of medical testing" (Street and Kelly, 2021) and the "sociology of diagnosis and screening"(Petersen and Pienaar, 2021), we propose the label of "social studies of (biomedical) testing" or "biomedical testing studies" to encourage interdisciplinary engagements.

We invite both empirical and theoretical contributions that engage with the envisioning, development, use, evaluation, and regulations of testing across diverse biomedical domains. These may include, but are not limited to: testing practices in clinical, public health or social service settings; DIY-testing; and economic, legal, moral, and political dimensions of testing as well as the absences or non-use of tests.

References:

Hacking I (2002) *Historical Ontology*. Cambridge, Massachusetts and London, England: Harvard University Press.

Petersen A and Pienaar K (2021) Testing for Life? Regimes of Governance in Diagnosis and Screening. *Science, Technology and Society* 26(1). SAGE Publications India: 7–23.

Street A and Kelly AH (2021) Introduction: Diagnostics, Medical Testing, and Value in Medical Anthropology. *Medicine Anthropology Theory* 8(2). 2: 1–16.

ID: 45

Keywords: Safe and Sustainable by Design, (Nano)materials, ethics, social, training

Ethical challenges & role of societal stakeholders for building a pan-European training partnership for (research and) innovation on safe and sustainable nano- and advanced materials

Ineke Malsch[1], Susanne Resch[2], Luis Mauricio Ortiz-Galvez[3], Sabine Hofer[4], Norbert Hofstätter[4], Andreas Falk[2], Sophie M. Briffa[5], Ciro Salcines[6], Thomas Exner[7], Sean Kelly[8], Effie Marcoulaki[9], Martin Himly[4]

[1]Malsch TechnoValuation, Netherlands, The; [2]BioNanoNet Forschungsgesellschaft mbH, Austria; [3]EMPA, Technology & Society Laboratory, Austria; [4]Paris Lodron University Salzburg Dept. Biosciences & Medical Biology, Austria; [5]Faculty of Engineering, University of Malta, Malta; [6]Health and Safety Unity, University of Cantabria, Spain; [7]Seven past Nine, Germany; [8]Nanotechnology Industries Association, Belgium; [9]NCSR Demokritos, Greece

The European Green Deal (2021) binds the EU to become climate neutral by 2050 through green growth and innovation, offering opportunities for all citizens and protecting biodiversity. A key enabler of achieving this Green Deal is the (re)design towards safer and more sustainable materials: Safe and Sustainable by Design (SSbD). This also supports several UN Sustainable Development Goals, including reducing harmful chemical exposure for better health (SDG 3), fostering sustainable industrial practices (SDG 9), promoting environmentally friendly consumption and production (SDG 12), creating eco-friendly alternatives to combat climate change (SDG 13), and encouraging multi-stakeholder partnerships to share knowledge for sustainable development (SDG 17). These endeavors will require well-trained material developers capable of conducting an array of inter-disciplinary assessments and overseeing the aggregation of data from diverse dimensions including functional material performance, impacts on human health, environmental, ethical, social and economic aspects.

We intend to establish the blueprint for an international education, training, re- and upskilling network, as *SSbD Innovation Alliance*, for students, young professionals, and employees of SMEs gaining the expertise on the principles, integration approaches, experimental and computational methodologies and tools for SSbD-guided innovation, focusing on the case of nano- and advanced materials. Considering a global geographical scope, this initiative targets and engages partners conducting vocational training as well as academic education, thus, engaging higher education institutes and research institutions as well as industry including SMEs. All emerging teaching materials will be (machine-) translated into the national languages of the partner organizations. The educational scope includes deep knowledge of SSbD principles and methodologies, computational and experimental tools, life cycle analysis including ecological, social, economic, and ethical aspects, (two-way) science communication, and social sciences & humanities aspects.

During the proposed interactive session at STS-conference Graz 2025, we will engage with experts in Social Sciences and Humanities to identify required ethical and other SSH-skills. **The session will start with a general introduction to the proposed SSbD Innovation Alliance, where participants can share their thoughts, ideas and preferences through live interactions with Mentimeter. This is followed by a world café in two rounds, where participants will further discuss the contents of educational modules in ethics and SSH-skills. Finally, the main conclusions will be shared with all participants.** This session will be moderated under the guidance of the *EU NanoSafety Cluster (NSC) WG Education, Training, and Communication* in line with their current *Roadmap towards Safe and Sustainable Advanced and Innovative Materials*, and internationally connected *via* the NSC-supported initiative INISS-Nano.

ID: 46

Keywords: innovation, biomedicine, social pharmaceutical innovation, RRI

Social Innovation for addressing challenges in biomedicine and pharmaceutical R&D

Conor Douglas

York University, Canada

Social innovation is a longstanding area of activism and scholarship that has worked to address the needs of vulnerable populations, through user-driven collaborative activities carried out with-and for such populations. Rather than just products, innovation here also includes new kinds of “processes or programs that profoundly change the basic routines, resource and authority flows, or beliefs of the social system in which the innovation occurs” (Westley and Antadze, 2010).

While there is some history of social innovation in the provision of healthcare services particularly in the Global South (Gardner, Acharya, & Yach, 2007; Srinivas, Yang, Shrestha, et al. 2020), one area in which there is a noticeable absence in the social innovation literature is in the production of biomedical research and development (R&D). Similarly, in STS there is a considerable track record in highlighting injustices and vulnerabilities in biomedicine (Clarke, Mamo, Foskett et al., eds. 2010), as well as facilitating participation in (Felt & Fochler, 2010) and intervening in biomedical practices (Zuiderent-Jerak & Jensen, 2007). This has taken the forms of ELSI / ELSA scholarship in genomic (Zwart & Nelis, 2009), responsible research and innovation (Demers-Payette, Lehoux, & Daudelin, 2016; Felt, 2017), as well as feminist (Clarke, 2021) and post-colonial STS (Seth, 2009). However, there seems to be an absence of mobilizing social innovation scholarship and activism towards these ends.

One recent example of work that engages directly with both bodies of scholarship is that of “social pharmaceutical innovation”, particularly in the area of rare diseases (Douglas, Aith, Boon et al., 2022). Significant problems within the dominant pharmaceutical innovation model are leading to lack of available treatments, hindered access processes and very high prices for treatment. Social pharmaceutical innovation seeks to understand and support initiatives that are addressing these issues outside of the dominant profit-driven innovation model.

This session invites papers that engage with -or in- forms of social innovation in biomedicine writ large, and in the bio-pharmaceutical sector specifically. Papers may address the following topics and more:

- Innovation challenges in biomedical R&D producing inequities or injustices
- Use of social innovation to address challenges in biomedicine
- Other forms of interventions for the production of safe and fair biomedicines
- Specific challenges in pharmaceutical innovation
- Ways forward in addressing specific challenges in pharmaceutical innovation
- Productive tensions between social innovation and STS

List of references not included due to word count, but available on request.

ID: 47

Keywords: open science, qualitative research, qualitative methods, open research, open scholarship

Advancing Open Qualitative Research through Theory, Research, and Action

Nicki Lisa Cole[1], Agata Bochynska[2], Peter Branney[3], Kirsti Klette[2]

[1]Know Center Research GmbH, Austria; [2]University of Oslo, Norway; [3]University of Bradford, United Kingdom

Barriers and challenges to open qualitative research are well known and established in the literature and within the community. A recently completed review study by some of the session organizers found a consensus within the literature that there are foundational ontological and epistemological barriers to integrating established Open Science practices within qualitative research, and numerous serious ethical barriers to data sharing and reuse. Additional barriers include a poor fit between established Open Science tools, templates, platforms and guidance, and the epistemological and methodological realities of qualitative research. Yet, at the same time, this review also found a substantial discourse around enablers of open qualitative research and included many demonstrations of researchers successfully opening qualitative research processes and outputs, despite the challenges that exist. Further, we note that there is a growing community of practice focused on open qualitative research that includes researchers, administrators, and infrastructure and service providers. However, we also note that this community is scattered across various geographies, not yet fully established as one coherent community, and that tools and resources for open qualitative research are also scattered and can be hard to find.

Therefore, building on last year's successful and well-attended double conference session and workshop focused on challenges and opportunities for open qualitative research, we propose both a conference session and a half-day research hackathon to further integrate and strengthen this community and advance the practice of open qualitative research by formalizing a plan to establish a resource hub for open qualitative research.

For the conference session we invite submissions that provide empirical, methodological and theoretical evidence and/or evidence-based guidance for enabling open qualitative research. Topics may include any aspect of Open Science (also open research and scholarship), may focus on research practice, infrastructure or service provision, tools and guidance, or the use of epistemically inclusive language and expectations, among others.

The half-day research hackathon will be open to all conference attendees and aims to 1) advance and enable open qualitative research by developing a taxonomy and database of tools and resources that support open qualitative research, 2) establish through deliberation how qualitative researchers search for tools and resource and decide the right digital location for an online resource hub for open qualitative research, and 4) formalize a plan of action to create the resource hub.

ID: 48

Keywords: critique, responsible innovation, reflexivity, power

Critique in, for, with, and of responsible innovation: a roundtable discussion

Mareike Smolka[1], Tess Doezema[2], Lucien van Schomberg[3]

[1]Wageningen University & Research, Netherlands, The; [2]University of Vigo, Spain; [3]University of Greenwich, United Kingdom

Critique has been a central theme in Responsible Innovation and Responsible Research and Innovation (R(R)I). R(R)I promises to critique dominant technocratic and economic regimes by conducting critical analysis, promoting critical reflection, and launching critical interventions to democratize science, technology, and innovation. However, the sheer success of R(R)I as a policy concept promoted by influential international organizations, a measure to satisfy consumer demands in tech companies, and a pedagogical program advertised to students, suggests that its critical impetus has been curbed by the institutions it sought to confront. Tasked with enacting critique within the dominant regimes it aims to challenge, R(R)I finds itself in a double bind.

This roundtable discussion probes the role that critique has played and could play in R(R)I. We build on our edited collection “Critique in, for, with, and of responsible innovation” recently published in the *Journal of Responsible Innovation* by organizing a roundtable at the STS conference in Graz and an open panel at the 4S conference in Seattle in 2025. The aim is to include diverse voices of collection contributors and discussants, spanning across continents.

The contributors will shed light on the multiple ways in which critique has been conceptualized, performed, and debated in R(R)I, and they deliberate how critique could be reclaimed and become more generative for the responsible governance of science, technology, and innovation. The discussants will share their perspectives on the collection, speaking from different positions within and at the margins of the R(R)I community.

Taken together, the roundtable discussion will explore how critique operates in different modes and across R(R)I’s scholarly styles – articulation, intervention, interpretation, and assessment. In this way, we aim to cultivate the flexibility of critique to provide generative responses to R(R)I’s double bind.

Remark: This session is not open for abstract submissions.