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of the Netherlands Research School for Science, Technology and Modern Culture (WTMC)

Knowledge & Technology in Times of Global Shifts

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Abstract Collection

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WEDNESDAY

10:45-12:15 Session 7A: T18: Revisiting the Hydrogen Utopia: Failures, Reorientations, and Emerging Visions

Chairs:

Alison Lesdos and Filip Rozborski

Location: Ravelijn 4231

10:45

Mariana Galvao Lyra

"The only salvation" or a fragmented future? Islands of Prosperity and Abandonment in Finland's Hydrogen Utopia

ABSTRACT. In Finland, green hydrogen has rapidly become embedded in national visions of future sustainability, competitiveness, and energy sovereignty. This paper examines how hydrogen is imagined as an "only salvation" capable of securing multiple societal goals at once, and how these imaginaries acquire spatial form. Emerging hydrogen plans and narratives point to the western regions of Finland as islands of anticipated prosperity, where investment, infrastructure, and institutional attention converge, while eastern regions increasingly appear as islands of abandonment—spaces that are marginal to the dominant hydrogen future yet still implicated in its national framing. Rather than evaluating outcomes, the paper focuses on the performative role of hydrogen imaginaries in shaping expectations, priorities, and regional roles before large-scale deployment has occurred. By attending to absence as much as presence, the paper uses Qualitative Case Analysis to highlight how early-stage energy imaginaries stabilize certain futures while rendering others less visible or less thinkable. The Finnish hydrogen case thus offers insight into how sociotechnical imaginaries operate in formative moments of energy transitions, structuring territorial belonging, hope, and anticipation long before technologies fully materialize.

11:15

Tomas Ariztia

The politics of green hydrogen futures at the end of the world: toward more plural modes of energy anticipation.

ABSTRACT. Drawing on three years of ethnographic research in Magallanes (southern Chile), this presentation examines the normative and political frictions that underpin the anticipation of green hydrogen (GH2) and discusses some alternatives to pluralise green hydrogen futures. We first describe how GH2 futures in Magallanes are enacted through different modalities of anticipation. Three key modalities of anticipation are described: the first involves performances that stage the value and desirability of GH2. We describe how technology fairs, pilot projects, and demonstrations are central to highlight the imminence of GH2. The second concerns the creation of anticipatory narratives around the viability and value of GH2. We explore how these narratives are constructed and used in public documents and discourses to justify GH2 imminence. The third modality involves the spatialisation of the potential economic value of GH2 using maps and representations. We show how these modalities of anticipation reveal a particular politics of GH2 futures, marked by the dominance of planetary-scale technoeconomic interventions and the entanglement of mitigation and economic profit. In doing so, we argue that this type of ecomodernist energy future marginalises alternative pathways for the energy transition and makes it challenging to problematise the various normative and political frictions at play in the deployment of GH2. The presentation closes by reflecting on how STS-oriented research on GH2 futures could help pluralise existing visions of energy futures by producing alternative modes of anticipation. To do so, we explore the potential of manufacturing alternative modes of anticipation, such as (counter) narratives and (counter) mapping that highlight the fragility and

complexities of GH2 and foreground the normative frictions involved in its development. This is illustrated by presenting some preliminary work that explores the production of counter-representations of green hydrogen futures through (counter) participatory mapping of green hydrogen projects with local actors in Magallanes.

Toyah Rodhouse, Karen Moesker, Aad Correljé, Udo Pesch and Eugen Popa

Advancing scenario planning methodology as a technology of humility in hydrogen transitions

ABSTRACT. Hydrogen futures play a critical role in modern-day energy transitions. Yet, they are often shaped by reductionist assumptions about society and the stability of its normative demands. They tend to reproduce incumbent normative priorities onto transitions and often leave little room for normative contestation, rendering hydrogen futures vulnerable [1]. Building on prior research that conceptualises humility as a more resilient response to normative uncertainties arising from value conflict, value incommensurability, value change, and moral uncertainty, this paper investigates whether participatory scenario planning can enable humbler engagement with hydrogen futures [2,3].

Participatory scenario planning has been identified as a promising technology of humility in energy transitions [4,5,6], yet it has not yet been applied to hydrogen transitions. Unlike approaches that converge on preferred pathways or aim to validate and reinforce dominant hydrogen imaginaries, participatory scenario planning foregrounds inclusiveness, contingency, and divergence. It enables participation in the construction and interpretation of futures. It allows for generating, contrasting, and scrutinising a wider range of possible futures, rather than focusing solely on those deemed plausible or probable, and as such it resists instrumental reduction of
11:45 uncertainty and explicitly accommodates pluralism. Lastly, it also allows for including both diverse value dynamics and how governance may respond to these.

The main research question is: To what extent can participatory scenario planning facilitate humble engagement with normative uncertainty in hydrogen transitions? Through a series of pilot multi-actor workshops, including non-dominant and non-expert participants, we will co-produce and reflect on a set of normatively diverse and dynamically evolving hydrogen futures, explicitly attending to normative uncertainties, exclusions, and foreclosed alternatives. The study contributes to hydrogen scholarship by advancing a methodological approach for engaging with normative uncertainty in futures-oriented governance.

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10:45-12:15 Session 7B: T11: Rural-Urban Knowledge Infrastructures for Transformation

Chair:

Catherine Koekoek

Location: Ravelijn 4237

Karma Abudagga

An inquiry into seed commons: anticipating, dissenting, and caring practices

ABSTRACT. Seed enclosures, driven by intellectual property regimes, legal frameworks and the monopoly of industrial agriculture, have led to the rise in seed activism and the growing call for seed sovereignty. In working towards seed sovereignty, practitioners have been establishing seed commons. Associated with a critique of the commodification and enclosure of plant genetic
10:45 resources and the governance of knowledge surrounding seeds, seed activists use the language of the commons, but there remains a lack of consensus on how to enact a seed commons, especially regarding ownership, management, and accessibility. How do indigenous and local communities use seeds to resist colonial erasure, past and present? How do seeds hold the power to bring forth unanticipated and negated futures? How do seeds defy commons categories? Through a multi-sited ethnography, I will contribute to the theoretical and practical understanding of a seed commons. This research project explores seeds as sites of epistemic reclamation by local and indigenous communities and as sites of generative dissent (Hernandez Vidal and Moore, 2022).

Jens Lachmund and Alexandra Supper

Cultivating rural experiences in the city farms of London

ABSTRACT. Since the 1970s, a number of so-called 'City Farms' have popped up in London (as well as other cities within and outside the UK). The term refers to community-based projects, which make use of neglected or abandoned spaces within the city and seek to bring urban dwellers into contact with agricultural practices and animals. Unlike commercial farms, they offer farming as a service to the urban 'community', for example, by providing a space for weekend outings, children's play, volunteering, or therapeutic and educational activities. In doing so, these initiatives simultaneously promise to reconfigure urban spaces, urban communities, and practices of food production. Thus, as we want to show here, they function as spaces in which urban-rural
11:15 relations, and indeed the very categories of "the city" and "the countryside" that underpin them, are reworked and negotiated.

We present a historical-sociological study that traces the emergence of London's city farms as a historically situated process of practice formation. Focusing especially on the period of the 1970s to the 1990s, which saw the emergence and consolidation of several city farm projects in London, we draw on archival materials and some oral history interviews with key actors related to specific city farm projects and the broader city farm 'movement' that connects these disparate local practices. Against this backdrop, we seek to understand in our presentation how authentic experiences of a "countryside atmosphere" are cultivated and choreographed in these city farm projects, for the benefit of local urban publics. In doing so, we ask how notions of cities and countrysides, of urban communities and rural experiences, are constructed alongside ideas of a "good childhood" and a "good life" in the city, and how these processes help to reconfigure urban-rural relations.

Anna Kooi

Swamp Imaginaries: Cooking and Foraging as Emergent Knowledge Infrastructures

ABSTRACT. The Netherlands is often celebrated as a global leader in water management and agricultural innovation. But what if we reimagined it as a swamp? Much of the country was once
11:45 wetland — peatland drained, enclosed, and declared productive only once made to serve agriculture. It is through this history that the rural-urban divide was naturalized, and wetlands were reclaimed into an agricultural regime defi ning the rural as productive hinterland to the urban. Historically cast as wasteland, swamps are in fact landscapes dense with food, medicine, and commons-based knowledge. Their drainage was not neutral infrastructure but an act of enclosure whose logics were subsequently exported through Dutch colonial enterprise. This

presentation asks what was lost in that process: not just ecologically, but in terms of food knowledge, commons practices, and ways of living with wet land that drainage displaced. As climate change brings rising waters, accelerating peatland subsidence, and — paradoxically — increasing drought risk as drained peats dry and compress, this history is becoming urgently relevant. But the question of how to live with wet land again is not singular. Drainage happened in layers, at different times, with diff erent meanings across regions and communities — and those who now face rewetting inherit those varied histories. For some, restoration represents ecological recovery; for others, it threatens livelihoods, identities, and ways of farming that are themselves culturally rooted in the transformed landscape. How do we acknowledge our swampy past in ways that hold this complexity — rather than simply inverting the productive/waste binary that enclosure imposed? These questions are at the heart of my ongoing PhD research at the Rurban Futures Collective, University of Twente, developed through food-based artistic research. As a cook and artistic practitioner, I trace rural-urban knowledge infrastructures through practice. Between September and November 2025, I undertook a two-month artistic residency at 't Gagel, a regenerative peatland farm in Gelderland undergoing wetland restoration. The farm takes its name from gale (Myrica gale), a swamp plant once central to local brewing traditions, now returning as the land rewets. For neighboring conventional farmers, the rewilding this signals reads as disorder — the same productive/waste logic through which enclosure historically operated. But gale also opens other possibilities: as a brewing herb, it carries different meanings across communities while creating shared ground. A bitter, herbal beer might do what arguments cannot. What if the kitchen and the swamp are already doing the infrastructural work we keep waiting for institutions to begin? Cooking with farmers, foraging for edible and medicinal plants, and fermenting with organisms from the farm's wet ecology are, I want to suggest, not only research methods but emergent knowledge infrastructures — practices that gather and transmit wetland food knowledge across the rural-urban divide. Rather than conclusions, this presentation off ers a working set of methods, materials, and open questions from a research project still very much in the field.

10:45-12:15 Session 7C: T4: Scopes and Scapes of Science

Chairs:

Alexander Schniedermann and Sven Ulpts

Location: Ravelijn 3231

Sheena F. Bartscherer

“Did you know that Open Science is a legal obligation under Horizon Europe?”: Taking a closer look at the European Commission’s approach to implementing their notions of openness across European research communities.

10:45 ABSTRACT. The European Commission (EC) is one of the largest funders of research in Europe with its dedicated funding programme Horizon Europe, totalling at EUR 93.5 billion (2021–2027). A budget that has recently been doubled for its next chapter (2028–2034). The Directorate-General for Research and Innovation (DG RTD) is the commission’s executing body, responsible for distributing these large funds and help realise the EU’s research and innovation policy. Within this policy, Open Science (OS) has been given a central role, leading to the establishment of the European Open Science Cloud (EOSC), an OS working group, and varying other initiatives. As important political actors, the DG RTD, EOSC as well as this OS working group have since begun, defining Open Science for the European research space and promoting their (specific) notions of openness, emphasising its universal ability to make research more efficient, robust, and productive (to varying degrees of success). Given their political reach, these actors end up directly impacting and influencing local (research) practices of researchers, academic administrations, and scientific

communities across Europe. This is achieved mainly by legally requiring researchers to adhere to their notions of openness when applying for EU funding. In this presentation, I will therefore take a closer look at these notions as promoted by the DG RTD, EOSC and their dedicated OS working group. I will present interview excerpts with involved actors, questioning the universality of their understandings of openness by highlighting their disciplinary backgrounds and contrasting their notions with definitions and practices from other more localised contexts. I will further highlight how the EU's approach of legally mandating openness might create resistances from researchers across Europe.

Sebastian Giessler, Hendrik Erz and Alexandra Dirksen

Responsible Research in Security & Privacy: Negotiating Scientific Practices, Regulations, and Institutional Norms

ABSTRACT. Security & Privacy (S&P) research is essential to advance the development of digital systems for the benefit of users, who may, however, be exposed to risks when, for example, internet measurements are carried out in real networks. Historically, computer science has prioritized engineering and algorithms over social impact; consequently, many researchers lack the training to systematically evaluate how their work affects individuals and social systems. This has created a tension between research practices and the user's demands on security and privacy within the digital space.

Various cases of ethical misconduct, such as the 'Hypocrite Commit' case, led to ethics reviews becoming mandatory at major conferences. As these venues represent prestigious publication
11:15 bottlenecks, they act as gatekeepers for scien- tific norms. However, this top-down centralization frequently neglects localized academic norms of individual researchers and their institutional idiosyncrasies, which can lead to defensive behavior or event motivate the bypassing of these procedures. To analyse these dynamics, we treat "responsible research" as a scientific practice. In addition to our previous work (Dirksen et al. 2024), we incorporate new findings from computational text analysis of research pub- lications where we identify the actors (e.g., researchers, IRBs), actions (e.g., assessing, informing), and targets (e.g., users) involved in S&P research.

This talk sheds light on the tension between domain-specific research practices, external regulations, and the requirements of international publication venues, focusing on the research domain of S&P. Our discussion pursues an interdisciplinary approach, integrating perspectives from the Philosophy of Science, Sociology, and Computer Science. In result we advocate for novel governance paradigms that prioritize institutionalization while addressing the fragmentation of current review procedures.

Stephanie Meirmans

Diagnostic replication: What happens if this epistemic tool is put into action across disciplines?

ABSTRACT. Recently, the Dutch funding organization NWO issued a call for doing 'replication studies'. Researchers in the social sciences, in the medical sciences, and in the humanities could apply to this call. Here, I argue that this call can be seen as an epistemic science policy experiment.
11:45 It operationalized an epistemic framework of diagnostic replication. Several philosophers and STS researchers had warned, however, that this kind of epistemic framework does not provide an epistemic fit across all disciplines, or 'ways of knowing'. It is thus an interesting research question to empirically track what happened when the underlying epistemic idea of this funding call was 'released into the wild' (i.e. into diverse scientific practices). First, I will explore more in-depth what was the local context for issuing this call in the first place. I will then present what happened in the funded projects: what were the motives to apply, the surprises, the expectations, the problems, and the outcomes of the projects? For this, I use ethnographic material that I gathered

between 2021 and 2025. This includes interviews with several of the main people involved in setting up the funding call, with funding officers, with researchers who got the funding and did the replication, and with original authors of the studies being replicated. It also includes observations of experiments, of handling data and texts in practice, and of discussions in workshops and conferences about the replication work. Perhaps unsurprisingly, I found that replicators across different fields started their endeavor with different assumptions, hopes, and goals. Much more surprising was that in the end the replicators, across disciplines, ran into very similar issues and problems with the replication work. Many also experienced added value in doing replication work in a very similar manner — albeit differently than what the funding call had originally assumed.

10:45-12:15 Session 7D: OT: Reflecting Transformations

Chair:

Ewert Aukes

Location: Ravelijn 3237

Raphael Iltisberger and Georgina Neitzel

Towards an integrated model of technology hypes

ABSTRACT. The practices and implications of technological hypes have come under increased scrutiny in recent years, particularly due to their growing influence on innovation agendas and public discourses. This has led to the emergence of the nascent field of hype studies, bringing together scholars of various disciplines with interest in dynamics and implications of hypes.

A core challenge in hype studies is the nuanced description of hype's components, dynamics, relevant actors, and consequences. This leads us to examine the following research question: How do technology hypes arise and take effect through economic, media, social, political, technical and cultural dynamics?

10:45 Drawing upon an extensive literature review on hypes and related concepts from across a wide range of disciplines, including STS, sociology of expectations, and innovation studies, we propose a new qualitative model for analysing technology hypes. To do so, we apply a systems thinking perspective to analyse existing models. Here, we focus on conceptualizations such as purpose, elements, interconnections, feedback loops, and mental models. We further analyse each model's actors, expectations, narratives, and normativity. The resulting model provides a novel approach to extend STS' existing approaches and contributes to its interdisciplinarity.

Considering hype studies are inherently interdisciplinary and its results often fragmented, our model closes a critical research gap by integrating various disciplinary models into one coherent model applicable to the various disciplines concerned with the phenomenon of technology hype. To illustrate our model, we apply it to three technology use cases - AI agents, cryptocurrency, and bidirectional brain-machine interfaces - to test its validity and highlight its usefulness for researchers and policy-makers.

Adithya Santhosh Kumar

Governing Transport Futures: Material Participation and Peripheralisation in EV-Centred Mobility
11:07 Transitions

ABSTRACT. Decarbonising transportation is seen as a crucial factor for mitigating the effects of climate change. Sustainability transitions in the mobility sector are increasingly shaped by collective visions articulated through policy strategies and future-oriented narratives. While such

futures are often framed as inclusive and enabling, this paper argues that they function as sites of political contestation in which participation and alienation are co-produced.

Drawing upon Marres' theory of material participation, the paper conceptualises the electric vehicle (EV) as a conduit through which participation in mobility futures is enacted. Rather than constituting futures in isolation, the EV's role in future-making is mediated through governance instruments that organise how publics engage with the material artefact. Mobility futures embedded in policy may thus empower existing well-resourced, geographically central collectives, while marginalising future imaginaries associated with publics whose mobility needs are differently configured.

By foregrounding policy-making as a key site of future formation, this paper shows how the incremental nature of governance reinforces dominant EV-centred mobility futures. It analyses three distinct modes of material participation enabled by governance instruments – financial incentives, charging infrastructure and regulation. In doing so, the paper demonstrates how these instruments structure performativity between EV users and those excluded from participation, producing emergent forms of peripheralisation.

Dirk Scheer, Danieli Braun Vargas and Stefania Sardo

Long-term transformation through governance friction – the case of waste management

ABSTRACT. Socio-technical change and transformation in modern societies are complex interplays of self-organization and political steering (intentions) – with clear cause-impact relations often hard to identify. However, transformation and change are not purely self-evolving and emergent, but develop under a shadow of strong or weak government hierarchy. As the complexity and interdependence of socio-technical systems deepen, so too does the need for governance approaches capable of anticipating and managing change over extended time horizons. Long-Term Governance as a conceptual framework has been developed to contour long-term socio-technical transformation and change in the field of tensions between self-organisation and target-oriented steering approaches. Long-term governance embraces broad policy orientation that embeds foresight, institutional resilience, and adaptive capacity into decision-making over decades, often under conditions of ambiguous problem framings and shifting normative commitments. Within this presentation, we take a closer look on a specific socio-technical transformation case, namely the case of waste-to-energy. Taking the example of waste incineration as one of the main pillars of waste management in Germany, we trace and analyse transformation developments, pressures and possible future alignments in this sector and policy field. We empirically examine these dynamics through a qualitative case study of waste-to-energy infrastructures, focusing on the European governance framework and its implementation at the national and local levels in Germany. As a basis for analysing waste transformation, we develop and apply the approach of governance regime comparison frictions. Socio-technical transformation and change is interpreted as a consequence of frictions between existing, competing and interacting differing long-term governance regimes. Governance regimes are institutionalized arrangements composed of actors, rules, visions, and policy instruments. These regimes are structured by long-term normative objectives (e.g. sustainability, decarbonization), temporal commitments (e.g. 2030 or 2050 targets), and distinctive policy tools. Yet in practice, governance rarely unfolds within neatly bounded regimes. In infrastructure-intensive sectors such as energy, mobility, waste management, multiple long-term governance regimes often converge on the same socio-technical systems. Their interaction produces hybrid governance configurations, spaces where divergent long-term agendas, institutional logics, and policy instruments co-exist and interact. This coexistence can generate institutional friction: patterned tensions, misalignments, and contradictions that arise when overlapping regimes advance incompatible goals, timelines, or instruments. Taking the case of waste-to-energy, the sector has been situated at the intersection of three overlapping long-term governance regimes: waste management,

11:29

circular economy, and climate mitigation and pollution control. The circular economy discourse has reframed waste as a resource, challenging the legitimacy of waste-to-energy by emphasizing material recovery, waste prevention, and closed-loop systems, aiming at minimizing residual waste volumes. At the same time, climate mitigation has intensified scrutiny of incineration-related emissions, questioning the role of waste-to-energy in decarbonization pathways. Waste-to-energy's institutional triangulation makes it an exemplary site for exploring how hybrid governance configurations manifest in practice, how actors manage frictions, and how infrastructures evolve under conflicting long-term demands – in short: how socio-technical transformations evolve.

Hanneke de Boer

From life phase to risk factor: menopause and hormone therapy in the Netherlands, 1950-1990

11:51 ABSTRACT. Between the 1950s and the 1990s, public discourse on menopause went through a marked change. Not because the topic was taboo and became less so, but because the conception of menopause changed during this time. In medical journals, the conception of menopause moved from a natural life phase, characterized by a few (potential) complaints, to a drastic reduction in valuable hormones characterized by risk and the need for prevention of long term health effects. The information and advice doctors' provided in women's magazines and in books aimed at lay audiences largely ran parallel to the discourse in medical journals. In the 1950s and 1960s, advice had focused on behaviour and attitude, while simultaneously emphasizing that most women had no complaints whatsoever during their 'transition'. Uniquely, while other countries such as the United States and Germany focused strongly on hormone replacement therapy, Dutch doctors were hesitant, and reluctant to advise hormone therapy as a treatment option. First in the 1970s, the focus shifted to 'psychosocial' circumstances during menopause, followed in the 1980s with a focus on the potential risk factors associated with menopause such as osteoporosis and cardiovascular diseases. At the same time, patient activist and feminist groups influenced the discourse on menopause as well. This raises the question how these changes relate to the attitude towards hormone therapy as a menopause treatment. How did these attitudes change from the 1950s to the 1990s, and how is that related to the conception of menopause, femininity , and the social and cultural authority of Dutch doctors? Method: historical method, using published historical sources (medical journals, women's magazines).

10:45-12:15 Session 7E: T22: Unpacking Entanglements between Science and New Forms of Geopolitics

Chair:

Esther Baar

Location: Ravelijn 2231

Anna Gall, Jarno Hoekman and Jeroen Oomen

Unpacking Performances of Science Politicisation

10:45 ABSTRACT. What is the 'rightful place of science'? This is continuously renegotiated, currently amid backlashes against sustainability efforts, rising post-democratic politics, and shifts in a geopolitical order deemed stable for three decades. Actors – from "radical" researchers, governmental bodies, the military, to (authoritarian) policymakers – are destabilising scientific practices, funding streams, and institutions. Science, in this context, is both object and instrument of political struggle: repeatedly and deeply politicised yet often framed as apolitical or neutral by those enacting its politicisation. While a rich literature engages with science politicisation, how politicisation unfolds in the context of ongoing renegotiations around science's 'rightful place'

remains underexamined. Appreciating politicisation of science as performance enables us to draw attention to what science is or ought to be, how politicisation is staged, by whom, to what end, how non-compliance with broader regimes or internal "norms of science" is policed. We advance a conceptual lens of science politicization as strategic performance based on a critical engagement with STS, political science, political sociology and performance literature. In this view, science and its institutions are inherently political and may at times become politicised, when their political character becomes visible, contested or strategically enacted. Politicisation, we contend, relies on the enactment of strategic performances, that we understand as producing social realities through contextualised interactions. Through these performances actors may polarise, challenge, or reshape science and its institutions, turning them into instruments or sites of politics. Science's politicisation then inevitably serves to reimagine its 'rightful place', foregrounding questions of who gets to reimagine science and how that shapes the worlds we live in.

Gaston Heimeriks and Janpieter Van der Pol

Varieties of Science: SDG knowledge production in different institutional contexts

ABSTRACT. Pressing challenges, from the climate change to biodiversity loss and social inequalities, demand concerted efforts at the global scale. To address these challenges and drive transformative change, new knowledge and skills are needed. However, the scientific knowledge needed to address these challenges is produced and applied within a world shaped by political agendas and geographical realities. This paper explores the ways in which national institutions affect patterns of scientific knowledge production.

The ability of countries to diversify into innovative research activities and to develop new sustainable growth trajectories remains very unevenly distributed. Countries differ in their structural preconditions (including hard and soft institutions) and the capacity to engage in new knowledge domains. Many rules, norms, and values exist within a country, however dominant institutional logics determine which one shape scientific activity. Dominant logics are centered
11:07 around economic competition, and regulatory institutions are designed to foster this.

In order to study the role of national institutions in scientific developments among fields of knowledge production addressing SDGs we focus on the period 2000-2021. Through descriptive analysis and statistical testing, we establish the various relationships between institutional contexts and scientific knowledge production.

There are stark disparities in how knowledge production is distributed geographically,— with a few countries contributing disproportionately to the global output. Overall, the data show diversification and expansion of scientific production, with especially rapid scaling in STEM domains. This shift underscores changing research priorities over the last two decades, shaped by global challenges. Scientific domains show distinct sensitivity to cultural, governance, and economic other institutional conditions. The results highlight how institutional contexts interact with epistemic cultures, where domains closer to societal structures (e.g., business, law, politics) are more strongly shaped by local institutional freedoms and cultural values, while fundamental sciences remain relatively more resilient to such variation.

Asma Mehan

Infrastructures of Crisis: Urban Technoscience, Geopolitics, and the Spatial Politics of Global Justice

11:29

ABSTRACT. Contemporary global crises—armed conflict, climate breakdown, authoritarian governance, and socio-technical restructuring—are increasingly mediated through urban infrastructures. Streets, housing systems, energy networks, digital surveillance technologies, and public spaces have become central sites where geopolitical power, scientific expertise, and

technoscientific governance intersect. This paper argues that urban infrastructure constitutes a critical yet under-examined arena through which new forms of geopolitics are enacted and contested.

Drawing on Science and Technology Studies (STS), political geography, and critical urban theory, the paper conceptualizes infrastructure not as a neutral or background system, but as an active technoscientific apparatus shaping political subjectivities, territorial control, and uneven distributions of vulnerability and care. In conflict-affected and crisis-prone cities, infrastructural systems function simultaneously as tools of securitization, exclusion, and governance, while also enabling forms of everyday resistance, repair, and alternative knowledge production.

Empirically, the paper mobilizes comparative insights from urban contexts across the Global North and South, including post-industrial and conflict-adjacent cities, to demonstrate how infrastructural decision-making—zoning regimes, housing technologies, digital monitoring, and public-space regulation—materializes geopolitical priorities at the scale of everyday life. These cases reveal how technoscientific expertise and planning knowledge are mobilized to legitimize exclusionary governance, often under the language of resilience, security, or modernization.

At the same time, the paper highlights counter-practices emerging from community-led spatial interventions, informal infrastructures, and civic repair initiatives that challenge dominant technopolitical regimes. These practices expose alternative epistemologies of infrastructure grounded in care, commons-based governance, and situated knowledge, complicating dominant narratives of innovation and progress.

Theoretically, the paper contributes to STS debates on geopolitics by foregrounding the urban as a key site where science, technology, and global power relations converge. It argues that geopolitical analysis must move beyond state-centric or macro-scale accounts to engage with the material and spatial infrastructures through which geopolitical orders are enacted and experienced. By reframing infrastructure as a technoscientific mediator of global justice, the paper calls for a more spatially attuned and ethically grounded STS approach to crisis governance.

Efi Nakopoulou and Kornelia Konrad

Towards responsible futures: unpacking the role of raw materials geopolitics in the design of emerging energy technologies

ABSTRACT. We are currently amid an energy transition, which requires various technologies (e.g. renewables, hydrogen etc.). It has been recognized that such a transition is mineral intensive, yet the EU does not have adequate access to many of the critical raw materials (CRMs) needed for achieving its energy goals and targets. This has resulted in a series of tensions events and crises (e.g. Si crisis in PV) (1). Despite being first and foremost a political issue, raw materials geopolitics has been gaining traction in research programmes (e.g. EU, NL etc.), receiving significant funds (2). Given this entanglement, we can expect it to play an important role in the transformation of science and emerging technologies in the years to come. We are participating in NWO-funded projects aimed at designing materials and devices for solar PV and green hydrogen, in which we employ the methodological tools of Constructive Technology Assessment, to foster awareness among material scientists developing emerging energy technologies of two interlinked dimensions (i) raw material geopolitics and (ii) their externalities (i.e. health, social, environmental impacts). Including (regularly) such considerations into the research and design of materials and devices while they are in the making, could help to govern emerging energy technologies towards more responsible futures. At the same time, we are trying to remain reflexive, as STS scholars, as these dimensions can also be employed to boost nationalistic agendas and regimes. In our paper we will unpack some of the challenges we have faced, based on empirical findings, and propose possible ways to approach them.

11:51

(1) Hund et al., Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition, 2020. Regarding the EU see the corresponding Critical Raw Material Lists. (2) For example see the EC strategic projects and the new NWO-KIC call for proposals on reducing critical raw materials use in the energy transition.

10:45-12:15 Session 7F: T2: Governance in the Making: Governance, Knowledge and Technoscience

Location: Ravelijn 2237

Florian Helfrich, Jannika Mattes and Ricarda Schmidt-Scheele

Decentralised energy management in local neighbourhoods - Reconfiguration of power relations and actor constellations through socio-technical-scripts

10:45 ABSTRACT. The energy sector is transforming towards increasingly digitalised, automated, decentralised and data-driven energy infrastructures with novel alternative ways of producing, consuming and managing energy, bringing forth new roles and constellations of actors. Therefore, the implementation of digitalised energy technologies, such as local energy management systems, can be understood as challenging and disruptive actions towards innovation (Dütschke & Wesche 2018; Schmidt-Scheele & Mattes 2025). In order to understand such ongoing transition processes, we need to investigate how relationships, dependencies and practices between actors are directly influencing technology development and implementation. For this, our paper provides a conceptual approach which combines an understanding of socio-technical configurations of actors with a comprehensive analysis of the power dynamics which are situated within such configurations. To analyse the inseparable and intertwined character of constellations of actors and the existing and changing power dynamics between them, we employ the concept of scripts (Akrich 1992; Akrich & Latour 1992), investigating processes of in-scription and de-scription in the development of technological artefacts (Schmidt-Scheele & Mattes 2025). By using a horizontal and relational conception of power relations between actors, building upon approaches highlighting the transformative characteristics of power (De Geus, Avelino et. al 2023; Avelino 2017), we provide a framework which is centred around the agency of actors to challenge, change, renew or re-configure infrastructures which surround them. How power relations are then inscribed within technological artefacts creating forms of agency for actors thereby becomes the key factor for realising actions of transformative change. By combining scripts, socio-technical-ecological configurations and power relations, this paper contributes to the body of literature on the multifaceted and dynamic character of actor constellations within sustainability transitions. To illustrate the applicability of our conceptual framework, we provide insights from an ongoing case study on energy management systems and energy household indicators in local neighbourhoods.

Dirk Kerver

Gen Z Protests: Effects of rapid protest organization on democracy

11:07 ABSTRACT. In September 2025 Kathmandu, Nepal, saw violent protests, leaving 79 killed and over a 1,000 injured, as a reaction to a nationwide ban of 26 social media platforms. The government's reason for the ban was that e-service providers did not comply with a newly instated rule that required a digital tax to be paid. Many Nepalese believed that it was an attempt by the government to silence critique on long-lasting corruption, nepotism and lack of transparency in its political sphere. Throughout 2025 a new trend hit Nepal: "Nepo Z". Increasing amounts of social media content from "nepo babies" (Baskar, 2025), children of wealthy government officials, showing of their luxury lifestyles caused. It is not surprising that Gen Z found each other in online spaces (Rauniyar, 2025), which they used as an outlet to express outrage, build solidarity, and speak freely.

Although the platform was banned, through VPN-connections, Discord groups were set up to communicate about opposing the ban (Szadkowski et al., 2025). These groups grew rapidly, involving tens of thousands of people. They were the epicenter of organizing a, peaceful and permitted, demonstration. As stated by Human Rights Watch (2025), on the 8th of September people gathered at Maitighar Mandala, the typical point of assembly for protests in Kathmandu, to march 400 meters up to a police barricade close to the parliament. Once arrived at the barricade police forces realized they had underestimated the volume of the protest. Thousands of people, mostly Gen Z, had shown up on their doorstep. Protesters toppled the police barricade and started running towards the parliament building. This is when the violence started and the protest turned into a political riot.

Demonstrations and protests, both non-violent and violent, do not reflect a single instance of oppression but, rather, structural and long-term societal oppression that stems from corruption, discrimination, and biased bureaucratic (governmental) processes. The question whether protests can be justified when they turn violent is an important one for understanding the boundaries of (deliberative) democracies. This article explores the impact of technological development on the speed of organizing collective democratic protests and its effect on democratic boundaries.

Nikoletta Tsoukala and Stathis Arapostathis

Standards, Certifications and Technoscience in Greek Agrifood Systems

ABSTRACT. The aim of this research is to examine and explore the role of science and new metrics in the assetization of food products. By employing a critical approach to standardization and certification processes, it investigates how technosciences and cognitive materialities contribute to establishing new value chains with local or territorial implications. Specifically, the paper argues that in a period of crisis for the agrifood regime in Greece, an emerging community of scientists, comprised by biologists, chemists, biochemists, toxicologists and agronomists, promotes scientization of food as the remedy for the reconfiguration of Greek products in the global markets. The paper assesses the formation of added value (valorization) and the construction of assets that redefine the significance of food products. It examines the process of assetization as the development of new ontologies of food products, influenced by knowledge, politics, expertise and regional development policies.

11:29

The key research questions of the paper are: 1. How have knowledge and techno-scientific politics influenced valorization processes in food production, and what is their impact on agrifood transitions? 2. How are standards and certifications co-produced with new sociotechnical imaginaries of regional and national development?

In this context the paper explores how omic technologies, specifically within the framework of the FoodOmicsGR national research infrastructure, contribute to these certification processes by producing scientific evidence, enabling traceability and reinforcing claims of authenticity and distinctiveness of food products. We argue that the emergence of omic technologies is co-produced with new visions about the quality and health benefits of agrifood products, and the new entrepreneurial and policy roles of scientific networks within the national agrifood system. The paper is based on the collection of qualitative data through interviews with scientists and experts and the analysis of media content related to the FoodOmicsGR initiative, interpreted through Critical Discourse Analysis and Frame Analysis.

Eva Sievers, Jan Willem Erisman, Marja Spierenburg and Alexander van Oudenhoven

11:51 The power to transform? Mapping transformative power in EU research projects and policy contexts

ABSTRACT. Transformative change is widely recognised as essential to address the underlying causes of biodiversity loss and broader interconnected global crises. It is defined as 'fundamental, system-wide shifts in views, structures, and practices' (O'Brien et al. 2024 p. 5). Yet, translating this ambition into lasting societal change remains highly challenging. A key barrier lies in entrenched structures and power dynamics that constrain not only the implementation of new ideas and innovations, but also the dismantling of old systems and the ability to sustain these changes over time. Despite this, power dynamics remain underexplored in research on transformative change.

This paper examines how transformative power is exercised and where it remains constrained within 14 EU-funded research projects in the Transformative Change cluster. We conducted a reflective power-mapping exercise with project coordinators, using an integrated framework of power dimensions (power to, over, with, and within) and power types (prefigurative, reinforcive, and countervailing). To provide broader context, the study also draws on five semi-structured interviews with EU policymakers and officials.

The analysis shows that the Horizon Europe projects most strongly mobilise prefigurative forms of power, particularly through experimentation with new concepts, practices, narratives (power to), and collaborative arrangements (power with). Power within - shaping understandings, agency, and ownership - is also frequently fostered. In contrast, countervailing and reinforcive forms of power, especially those involving power over (e.g., challenging entrenched structures or institutionalising new governance arrangements), are consistently weaker. These patterns point to deeper, systemic challenges rather than project-level shortcomings.

Moreover, the interviews with EU policy officials highlight complementary tensions at the science-policy interface, including institutional silos, limited transition capacity, unclear mandates, and difficulties sustaining momentum. Together, the findings reveal a systemic mismatch between transformative expectations placed on research and the authority, capacities, and leadership required to enact and sustain transformative change.

10:45-12:15 Session 7G: T5: Deep Learning and Culture

Chair:

Louis Ravn

Location: Carré 3B

Chloe Papadopoulou, Orsola Borrini and Bokar N'Diaye

Absent Voices, Confident Answers: Representation of Long-Tail Biographies and Marginalized Cultures in LLMs Through Log Probabilities and Reasoning Patterns

ABSTRACT. In November 2025, journalist Nicolas Kayser-Bril publishes "Are All LLMs the same ?", an article discussing his repeated querying of commercial Large Language Models to obtain a list of the most "significant" events in world history. Kayser-Bril stresses the high degree of similarity in the generated rankings (both as intra-model repetition and inter-model homogeneity), as well
10:45 as the lack of diversity and the reinforcement of tacit cultural norms that such omissions convey. In the face of increased public reliance on LLMs as repositories of cultural knowledge, this project hopes to replicate this experiment in a way that enriches our understanding of this homogeneity in cultural answers by LLMs, and to ground it in two methodological developments: qualitative insight in the metrics of notability, and computational interpretability of the inner processes of LLMs.

Inspired by Michel-Rolph Trouillot's concept of active historical silences, we invert the experiment's original premise, focusing not on the most "notable" historical objects, but on long-tail / low-notability digital biographies featured on Wikipedia. First, we construct a dataset of

"overlooked" notable individuals through a subselection of long-tail / low-notability digital biographies, on the basis of the platform's own metrics of notability (e.g. minimal cross-linguistic presence). We then test different LLMs using both neutral and contextualised prompts, and record both their outputs and log probabilities to assess the degree of confidence or perceived self-evidence of each completion. These explainability tasks serve as "cultural probes", exposing the different models' familiarity with historical figures, and how they plan and justify their responses.

By investigating the repeating patterns and (dys)functioning of LLMs when queried for marginalized individuals and identities, this work hopes to constitute a study in agnotology, evidencing the ways that generative mechanisms may reify and consolidate omissions and skewing of the global cultural memories grounded in digital archives.

Michael Castelle

'Culture' Meets its Match: The High-Dimensional Semantic Transductions of Multimodal LLMs

ABSTRACT. The gradual arrival on the relevance of the concept of 'culture' on behalf of commercial and academic researchers of 21st century AI (and their social-scientific and humanistic commentators) could be said to be an inevitability and direct consequence of the recent attention to 'language' in the wake of the widespread popularity of dialogically-oriented LLMs such as ChatGPT. Specifically, LLMs have acted as a material "existence proof" of a theory of utterance generation largely at odds with the rule-based and syntax-centric perspectives of Chomsky-influenced theories and other computational models of human language (Piantadosi 2023), and showed that the "bias" already observed in ML-based training methods could be reproduced in practically infinite ways, all within inscrutable high-dimensional, contextual, and indeed multimodal representations of meaning (Farrell et al. 2025). The true complexity of interactional language use, in all of its semiotic modalities, was now a daily reality for AI researchers; and critical disciplines which had already passed through their "linguistic turn" found themselves suddenly lacking in topical relevance (Weatherby 2025). Whatever 'culture(s)' may be, I argue that we must respect the linguistic anthropologists who — in the wake of Boas, Jakobson,
11:15 and others — recognized that any culture's participants "actualize their groupness through interaction, principally, discursive interaction" (Silverstein 2006), and that one cannot speak of culture without (properly semiotically-grounded) language in/as social action.

But in deep learning, with its high-dimensional, multi-layered transductions and representations of meaning, the messy 'culture' concept — notoriously "beset with ambiguity and vagueness" (Lizardo 2016) — has finally met a computational formalization befit to describe it. That is to say, it is only with multilingual LLMs that the polyvalent and only sometimes-overlapping relational uses of the lexical term 'culture' and approximate equivalents across various languages and dialects can be directly explored — albeit via methods which are only presently emerging (Amiesen et al. 2025). Our intuitions, for example, that the semiotically-grounded and interactionally-nuanced concept of 'culture' in American linguistic anthropology is frequently only distantly related to the indexically-naïve and arts-centric concept of 'culture' in British anthropology (and is, e.g. more closely related to interactional and structuralist conceptions of culture in American and French sociology) can, in principle, be increasingly empirically explored via the high-dimensional token representations which unfold through the layers of an LLM encoder. By taking the concept(s) of 'culture' as an exemplary object of study, I will illustrate how the concept's controversiality and differing structural relations across languages and disciplines can be explored with existing open-weight models.

Mariam Khaled

11:45 Beyond Words: The Metaphorical Work of AI Memes

ABSTRACT. This paper examines how AI memes materialise the unstable metaphorical language that underpins public discourse about artificial intelligence. While debates about AI often appear technical, they are driven by shifting figurations - AI as brain, partner, threat, joke, or oracle - that remain largely unexamined. The problem addressed here is how these metaphors structure the contemporary deep-learning hype bubble and how their breakdown becomes visible in everyday cultural production.

Methodologically, the study combines qualitative close reading of 84 AI-related memes with affinity diagramming to identify recurring narrative patterns and metaphor clusters. This approach reveals how memes function as micro-texts through which collective sense-making about AI is performed.

Findings show that AI memes are rarely "about" AI itself; instead, they expose the metaphor work used to make AI intelligible. Memes repeatedly transform AI into bubbles, chaotic interns, monsters, lovers, and scam machines. The humor emerges when these metaphors collapse - when neural networks stop resembling "brains", when the fantasy of AI as creative partner is punctured by hardware, or when superintelligence is reduced to petty gossip.

The paper concludes that AI memes reveal deep cultural frictions within AI discourse, demonstrating that public debates about AI are ultimately debates about the stories used to describe it.

10:45-12:15 Session 7H: OT: Imagination and Design

Location: Carré 3A

Janne Kiencke, Mareike Tippe and Henning Wigger

Co-Designing Sustainability on Board: A Mixed-Method Approach for the Development of Novel Cruise Ship Cabins

10:45 ABSTRACT. The significant environmental footprint of the global shipping industry requires innovative solutions that reduce the sector's environmental impact. This goal is in line with the International Maritime Organisation's (IMO) ambition to reduce carbon emissions to zero by 2050. A single cruise ship employs around 1500 cabins accounting for high environmental impacts through energy demand, components and materials entering the life cycle. In response, the BMWE-funded research project ReCab focuses on introducing circularity/cradle-to-cradle concepts, aiming at minimized resource consumption and waste generation. Appropriate cabin designs and data processing facilitate recycling and enable the reuse in non-shipping contexts. The long-term goal is to create a scalable approach that can account for wider industry adoption. In prerequisite for developing an adequate cabin concept, different aspects have to be considered ranging from environmental, economic and to social dimensions of sustainability. The project focuses on the multidimensional assessment of the cabin's sustainability throughout the entire life cycle including its end-of-life. This analysis combines mixed-method approaches, including Science and Technology Studies (STS) methodologies and stakeholder engagement, to contextualize quantitative results and design decisions. By addressing individuals' usage behavior, potential adoption barriers, technology use, and social actors' understanding of sustainability, a comprehensive insight into sustainable cabin design is provided. The presentation showcases how the project combines a co-design, mixed-method approach, and the integration of the results into Multicriteria Decision Analysis (MCDA) to evaluate and compare alternatives by quantifying and weighting criteria to aid transparent, evidence-based decision-making. The advantages and disadvantages of this approach will be highlighted while real examples from transdisciplinary research practice are shown.

Udipta Boro, Fran Meissner and Karin Pfeffer

Panic Buttons in the Smart Safe City: Public Imaginaries of Urban Safety

ABSTRACT. Cities worldwide are adopting automated urban surveillance systems, reportedly for increased safety. Many such systems come with manually activated buttons, for example, the automated surveillance system for the Bengaluru Safe City Project in India. However, these buttons remain understudied as part of the larger automated systems. Focusing on the discourses around such analogue physical artefacts and their spatial embedding in a city where automated technologies are being hyped can offer rich insights into the city's collective imaginaries (Kasper and Schramm, 2023). Such discourses are often reflected in the news media, including newspapers (Raynor et al., 2017). In light of this, we ask, "How are panic buttons framed in Indian newspapers?" By posing this question, we explore the collective imaginaries involving these buttons and their expected role in urban safety initiatives in the Indian context. We adopt a frame analysis approach and employ an abductive coding strategy. Our analysis reveals three distinct news framings: i) panic buttons need to be where crime has occurred, ii) panic buttons should cause spatially dispersed chain reactions, and iii) panic buttons are useful because they are simple. Conceptually, these findings show how safety-related urban sociotechnical transitions flow from geographies of fear to geographies of hope via urban technocracy.

11:15

Edit Paulo

Ageing on Platforms: Experiences of Older TikTokers

ABSTRACT. Digital platforms have become important sites of cultural production, visibility, and labour, yet later life remains marginal in research on platform participation. This paper examines how older adults engage with social media platforms as content creators, focusing on TikTok as a socio-technical environment shaped by visibility regimes, norms of authenticity, and platform economies.

The paper draws on an ongoing mixed-methods study combining platform data analysis with qualitative interviews with older content creators. Rather than approaching digital engagement in later life primarily through questions of skills or adoption, the analysis situates older creators within broader platform structures that shape opportunities for visibility, recognition, and participation.

11:45

The study explores how older TikTok creators construct public personas, how they interpret audience feedback and platform affordances, and how content creation relates to experiences of work, agency, and social participation in later life. Particular attention is paid to the ways age and gender intersect with platform dynamics, potentially shaping uneven forms of visibility and valuation.

By foregrounding ageing as an analytical category within platform studies, this paper contributes to STS discussions on technology as social infrastructure and on how power is enacted in everyday digital practices. It argues that examining later-life participation can open up new questions about inclusion, cultural labour, and the organisation of digital platforms beyond normative working-age assumptions.

12:15-13:15Lunch Break & Poster Session

13:15-14:45 Session 8A: T18: Revisiting the Hydrogen Utopia: Failures, Reorientations, and Emerging Visions

Chairs:

Alison Lesdos and Filip Rozborski

Location: Ravelijn 4231

Chris E, Vincent Baarslag and Laurens Hessels

Pursuing just hydrogen futures? How directionality is shaped through research practices

ABSTRACT. Governments and industry sectors place a transition towards a renewable hydrogen economy at the centre of their decarbonization strategies, promoting hydrogen futures as an integral part of the transformation different industry sectors. Such futures and the sociotechnical transitions that facilitate them carry normative directions that are in part shaped by research agendas, research programming, and research practices.

Directionality is a central concept in sociotechnical transitions literature and mission-oriented innovation policy. Directionality can be described as normative direction of transformative change processes in sociotechnical systems. However, we have insufficient insights in the practices and
13:15 dynamics through which research-related activities shape directionality.

Focusing on Dutch hydrogen research, we approach directionality as a process, and study the normative dimensions that are currently (not) being considered in this process. We have used just transitions as a normative framework and analysed policy documents as well as 6 four-hour transdisciplinary focus groups to examine the practices and dynamics that shape the normative direction of hydrogen research and consequently, hydrogen futures.

We show how epistemological and institutional arrangements, power and influence structures, problem framing and policy arenas channel attention towards particular solution pathways while marginalising others, coproducing directionality of Dutch hydrogen research. Drawing on these insights, we outline research governance strategies for directing hydrogen research towards more just hydrogen futures.

P.W. Zuidhof

Imagining a Hydrogen Economy: The Technopolitics of the EU Hydrogen Strategy

ABSTRACT. This paper studies the technopolitics of environmental making by examining how the EU Hydrogen Strategy (COM/2020/301) is imagining a European market for hydrogen. With the hydrogen strategy, the EU aimed to develop a market for renewable and low-carbon hydrogen as a way to decarbonize hard-to-abate sectors. The strategy set ambitious targets for hydrogen production and import, outlined measures to stimulate both supply and demand of low-carbon hydrogen, develop infrastructure, provide regulation for a competitive market, and included the introduction price-support mechanisms. With (low-carbon) hydrogen markets still practically non-existent in Europe, the strategy can be considered a striking case of environmental market making: the creation of markets as a means to address environmental concerns (Doganova and
13:45 Laurent 2019). Besides dislocating the relationship between markets and politics, environmental market making schemes like the hydrogen strategy also introduce a host of technopolitical concerns owing to the technological nature of environmental governance. Drawing on Çalışkan and Callon's (2010, see also Callon 2021) ANT-inflected research program on economization, the paper surveys the political contestation that surrounded the various socio-technical interventions introduced by the EU to create a hydrogen market. It reviews the technopolitical issues related to 1) how the EU's mission politics drives the nascent market, 2) how standardization and certification politics determine what counts as low-carbon hydrogen, 3) how EU Joint Undertakings, IPCEI, and the Clean Hydrogen Alliance create 'interested' market actors, 4) how regulatory measures such as the EU Directive on Gas and Hydrogen Networks but also Hydrogen Valleys create market encounters and supply chains, and 5) how the EU Hydrogen Bank stimulates price setting through price support. In doing so the paper provides a comprehensive account of how the EU is imagining and shaping its vision of a hydrogen economy while offering a survey of

the technopolitical issues and concerns that accompany environmental market making more generally.

Gabriella Guinlle, Maurice Wokke and Ans Kolk

Hydrogen hype, decarbonization, and EU industrial policy: An analysis of 'green steel'

ABSTRACT. Hydrogen has increasingly been promoted by policy and corporate actors as a versatile "Swiss-knife" solution capable of decarbonising multiple hard-to-abate sectors. Such framing has shaped expectations, attracted public funding, and guided corporate investment decisions, particularly in capital-intensive industries. However, when technological promises confront sector-specific constraints, hype-driven investment cycles risk producing divergence between announcements and implementation. This phenomenon is particularly noteworthy in the European Union (EU), where hydrogen has been promoted as a key pillar for industrial decarbonization. Steel is a case in point, considering the recent wave of hydrogen-based steel projects announced by firms following the Green Deal and the EU Hydrogen Strategy. Using a
14:15 comparative mapping of hydrogen-based steel projects and their progression toward Final Investment Decision, the analysis reveals a clear cross-country divergence, with many stalled or cancelled. We argue that EU-level policy signalling and subsidies created a strong window of opportunity for project announcements, while actual project realization depends on national structural conditions such as electricity prices, infrastructure, permitting regimes, and firm-level capabilities . Findings show that EU-level incentives and (national) subsidies alone are insufficient to create functioning decarbonization markets, as cross-border differences in national (economic) conditions continue to shape industrial outcomes. Besides identifying conditions under which hydrogen-based steelmaking can scale beyond subsidies and support a more coherent, EU-wide transition, the article contributes to debates on decarbonisation and industrial policy more generally, considering country- and firm-specific advantages . Building on the technology and innovation literatures, it also heeds a warning for hype-driven "solutions ", with steel as case in point.

13:15-14:45 Session 8B: T11: Rural-Urban Knowledge Infrastructures for Transformation (Walkshop 1)

Chair:

Corelia Baibarac-Duignan

Corelia Baibarac-Duignan, Steven McGreevy, Esther Turnhout and Catherine Koekoek

Artistic Fringe: Walkshop 1: Affections almanac – walkshop on campus with artist Merel Zwarts

ABSTRACT. From housing and energy cooperatives to community gardens, artistic practices and action groups, it seems that alternative rural-urban futures are already in the making. Such initiatives make space for and embody alternative values and relations in the here-and-now, while creating imaginaries of what such futures could look like. But what kinds of infrastructures allow
13:15 for embedding local initiatives in processes of wider societal transformation? We propose to use the STS-NL conference itself as a knowledge infrastructure to further explore and bring together alternative spaces, practices and imaginaries at the University of Twente campus and in the cultural ecosystem of Enschede. Through two workshops, inviting artistic and walking methodologies, we ground our academic work in past and present practices, spaces and imaginaries of commoning in the local landscape. This Walkshop will be led by artist Merel Zwarts (part of the artist collective who developed the project "Travelling Farm Museum of Forgotten Skills") and take place on the UT campus, situated in a historical landscape of commoning (marken and meenten). The Travelling Farm Museum of Forgotten Skills is a travelling, participatory museum that listens to the history,

(im)material heritage, and present-day inhabitants – human and non-human. The walkshop engages situated, artistic research methodologies to collectively attune to and (re)imagine human-nature relations on campus. Merel will take us on a walkshop across campus where we will develop an Affections Almanac – focusing on alternative rhythms and forms of knowledge to open up this academic environment for all that lives. The format builds on previous collaborations with the RUrban Futures Collective around the concept of "green intimacies" and aims to contribute to the development of experiential rurban pedagogies. The RUrban Futures Collective is a transdisciplinary collective of researchers at the University of Twente who explore the conditions for just, biodiverse and democratic futures by addressing the interactions between rural-urban spaces, practices and imaginaries. Using collaborative, engaged and arts-based methods, we seek to democratise conversations about biodiversity, climate, and futures.

13:15-14:45 Session 8C: T6: Research Cultures in Transition Roundtable

Chair:

Maarten Derksen

Location: Ravelijn 3231

13:15 Wolfgang Kaltenbrunner and Melpomeni Antonakaki

Fifteen Years of Critical Reflection: STS, Research Culture, and the Looping Effects of (Studying and Enacting) Reform

ABSTRACT. Over the past 15 years, STS scholars have developed a rich body of work examining how researchers, and sometimes also administrators, respond to intensifying regimes of productivity, accountability, integrity, and evaluation. Concepts such as audit cultures, coping or survival strategies, and questionable research practices have been taken on as objects of STS research. Other concepts, such as evaluative inquiries (also known as 'playing the indicator game') and epistemic living spaces have been developed from within STS. Rather than merely describing researchers' responses, these concepts have served as analytical vehicles. They open up more interpretively flexible ways of relating to the dominant script of 'adopt, adapt, disregard (at own peril), or counter' reforms.

This roundtable proposes that STS (NL) takes stock of this literature by asking not only what it has revealed, but also what has been the life of its own concepts beyond the page, whether in forming coalitions with other forces in the science system(s) we inhabit, or by looping onto itself and thus shaping the STS identity. Drawing inspiration from initiatives emerging within activist circles and academic institutions, ranging from the 'academic manifesto' movement of the mid-2010s to national programs like 'Recognition & Rewards', we ask:

1) To what extent and how exactly have STS analyses intersected with concrete efforts to enact change in the ways academic work is governed through uncertainty?

2) How have STS scholars oriented themselves to the various tactics and workarounds which academics use in order to deal with demands regarding the fundability, publishability, and originality of their work?

3) How could STS develop its relations with academic reform movements in the future?

By situating STS scholarship itself as an active participant in science reform, the roundtable invites a historically grounded and analytically sharp conversation about critique, activism, and reflexive scholarship amidst prolonged uncertainty and evaluation fatigue, foregrounding tensions between criticism and co-optation, reflexivity and managerialism, and resistance and normalization.

Participants: Maarten derksen – Chair Wolfgang Kaltenbrunner – Research Culture as a Politics of Uncertainty Susann Hofbauer – Researching Educational Research: Metascience, Governance and (Feminist) Citation Politics in Academic Pedagogy Willem Halfffman – The Many Registers in which We Engage with Science and the Multiplicity of "We" Melina Antonakaki – Science Reparations as much as Corrections: Toward a Collaborative Program of (new) Experimentalisms

13:15-14:45 Session 8D: no session

13:15-14:45 Session 8E: OT: Critical Reflections on Research I

Chair:

Anne Dijkstra

Location: Ravelijn 2231

Jessica Nuske

Bridging Worlds not Blurring Lines: Sustaining Critical Capacity in Transdisciplinary Research

ABSTRACT. Transdisciplinary research has become a prominent response to growing expectations that social sciences engage more directly with societal challenges. While such collaborative formats promise relevance and inclusivity, they also intensify long-standing tensions concerning scientific autonomy, credibility, and critical capacity. Although these tensions are widely acknowledged, existing debates often remain at a programmatic level, offering limited guidance on how critical social science can be practically sustained within co-productive research settings. This paper addresses this gap by first advancing a process-oriented understanding of transdisciplinarity – building on Zuiderent-Jeraks notion of situated interventions. Instead of evaluating research by its capacity to deliver predefined solutions or impacts, this paper advocates for shifting analytical attention toward the qualification of deliberative and co-productive processes. Drawing on
13:15 Latour's notion of critical proximity, intervention is understood as a form of engaged analysis that remains close enough to ongoing practices and controversies to render problem framings, knowledge claims, and normative assumptions empirically visible, without collapsing into advocacy or solutionism. Second, the paper introduces reflexive boundary work as a necessary complement to process orientation. Reflexive boundary work refers to the continuous articulation and scrutiny of the epistemic scope, role, and limits of scientific reasoning within collaborative research constellations. Rather than insulating science from societal engagement, it makes the conditions of scientific autonomy explicit and negotiable, thereby sustaining the critical capacity of social science under conditions of close societal entanglement. By specifying process orientation and reflexive boundary work as concrete practices of transdisciplinary research, the paper contributes to STS debates on participation, intervention, and knowledge co-production. It reframes transdisciplinary collaboration as a site of epistemic inquiry rather than instrumental problem-solving and clarifies how critical social science can remain analytically robust while operating in close proximity to societal processes.

Marta Sienkiewicz

Assessing research(er) quality with disrupted judgement device: the case of narrative-style CV in Dutch research funding

13:45 ABSTRACT. As part of commitment to responsible research assessment, funders around the world introduce new evaluative approaches which aim to unsettle established research quality notions. One example are narrative-style CV formats meant to capture diverse forms of scholarly activities and decrease the overreliance on quantitative quality proxies in funding peer review (Bordignon et al. 2023; Albert et al. 2025). A pertinent empirical question is how the introduction of new CV

formats influences reviewers' practices, with possible implications to what quality notions they (re)produce.

In such an assessment context, research(er) quality resides both in judgement devices such as CVs as well as in flexible agency of the reviewers to read the information through the lens of their values and norms (Kaltenbrunner and de Rijcke 2019). With that in mind, I explore how reviewers interpret new type of information and judge research(er) quality using a new material apparatus designed to disrupt common quality notions. With diversity of information inscribed in the narrative CV comes a choice of how to value it. I discuss how reviewers – powerful gatekeepers, or custodians, of research quality – react to new enactments of research quality brought forward by the applicants and to the expectations regarding their valuations put on them by the funder. I consider how their pre-existing notions of quality and legitimate evaluative evidence interact with the new CV, whether through resisting new enactments or allowing their particular understandings more visibility.

The empirical material comes from a case study of two competitive project funding calls organized by a Dutch research funder. It consists of interviews focused on recreating reviewers' assessments of the CVs submitted in the new format. The interviews were document-assisted, i.e. involving CVs, scores, and written evaluation reports which anchored the conversations about judging research(er) quality and justifying assessments.

Shiwei Chen and Stefan de Jong

The sand in the gears of large-scale interdisciplinary research: Uncovering bottom-up rearrangements of university infrastructure

ABSTRACT. Large-scale interdisciplinary programs aim to tackle today's grand societal challenges. The hope is that by pulling together large amounts of funding and working in massively interdisciplinary teams, solutions to big challenges come within reach. However, our study found that university infrastructure, which typically remains discipline oriented, often causes tensions in interdisciplinary programs. This study contributes to the recent efforts in expanding the field of infrastructure to interdisciplinarity in STS. We took a deep dive into the inner working of
14:15 interdisciplinary programs by analysing them from an infrastructure perspective. Based on fieldwork in three large-scale interdisciplinary programs on inequality, health, diversity and inclusion in the Netherlands and 28 in-depth interviews with research and professional staff, our findings are twofold. Through the empirical study of moments of tension in collaborations, we identify bureaucratic, educational, social, and spatial configurations with the aim to equip members of interdisciplinary research programs with a vocabulary to articulate challenges in everyday work. Second, we uncover mitigation strategies of how members work around and with the existing university infrastructure that serve as practical starting points for professional training, reworking regulation, or even nurturing institutional change. We conclude with outlining how universities can implement infrastructural rearrangements to bring interdisciplinary programs to fruition by learning from everyday research practices.

13:15-14:45 Session 8F: T2: Governance in the Making: Governance, Knowledge and Technoscience

Location: Ravelijn 2237

Gabrielle Lavenir and Marion Coville

13:15 Blood and Data Flows: Private Menstrual Cycle Tracking Technologies and the Production of Academic Knowledge about Women's Health

ABSTRACT. Menstrual cycle tracking apps (MCTAs) have become everyday technologies in the lives of millions of people, positioning private digital technoservices (Clarke, 2000) at the center of contemporary women's health innovation. Promoted by their developers as tools for democratizing gynecological knowledge through self-tracking and data science, MCTA's also exist in a context of post-Roe America and renewed threats to reproductive rights : collection of menstrual health data is thus simultaneously framed as an opportunity, a necessity, and a site of concern (Felsberger, 2025 ; Healy, 2021).

This presentation examines how power is enacted through MCTAs as sociotechnical infrastructures that mediate the production of academic knowledge about women's health. In the context of chronic underfunding of women's health research, European and American private tech companies owning MCTA's have emerged as custodians of large-scale datasets and research infrastructures. These developments reconfigure relations of dependency between academic researchers, platform companies, and users. Our research initially stemmed from a seemingly straightforward question: how do MCTAs contribute to the production of knowledge? Through an ethnography of menstrual data infrastructures focusing on invisible work surrounding data management (Star & Strauss, 1999 ; Star, 1999), this inquiry evolved toward an STS-informed analysis of the co-production of applications and scientific knowledge and enabled us to investigate hidden infrastructures of dependency. This shift foregrounds the heterogeneous assemblage of actors—human and non-human—through which knowledge is produced (Geampana, 2024), including academic researchers, in-house scientists employed by MCTA companies, designers, algorithms, datasets, but also users and their daily practices (Della Bianca, 2022 ; Lupton, 2019).

We combine an analysis of 86 scientific publications based on proprietary MCTA datasets, interviews with 31 researchers and 23 MCTA designers, interface analysis, and surveys with users. This multi-sited approach allows us to conceptualize MCTAs as arenas of complexity rather than mere user-facing interfaces and thus to trace how corporate infrastructures, data access regimes, and platform governance shape research questions, methodological standards, and epistemic categories in women's health research.

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Martijn Logtenberg and Sam Muller

13:45 Beyond Collaboration: Navigating and Anticipating Institutional Logics and Power Dynamics in Hospital Algorithm Development

ABSTRACT. Healthcare algorithms still face persistent implementation challenges. While scholarship emphasizes involving diverse stakeholders to reconcile competing institutional logics (Greenwood et al., 2011; Thornton et al., 2012), such as doctors prioritizing patient care and

administrators emphasizing efficiency, this overlooks a crucial reality: most early-stage projects lack the capacity to meaningfully involve key actors, especially external institutional players like industry, regulators, and insurers. Drawing on previous concepts of anticipation (e.g. Barley, 2015; Flyverbom & Garsten, 2021; Guston, 2014), we develop anticipatory work, activities performed to anticipate logics of actors not directly involved in current decision-making, as a theoretical lens and explore its viability as a proxy for involvement.

Through year-long ethnographic fieldwork of pain identification algorithm development at a Dutch neonatal intensive care unit, we examine how an in-house team navigates institutional logics when involvement proves unfeasible. Our findings reveal three power dynamics. First, despite awareness of involvement's importance, we observed myopic anticipation: short-term, reductive stereotyping of institutional logics rather than substantive engagement. Second, even after probing to encourage anticipation or involvement, two barriers persisted: absence of capacity for strategic innovation management and underdeveloped connections, particularly with temporally distant actors. Third, professional hierarchies within hospitals and competing demands on clinical innovators fundamentally constrained anticipatory work.

These findings challenge widespread recommendations for stakeholder involvement by exposing hidden infrastructures of power that make such involvement practically unfeasible for early-stage projects. Anticipatory work, while pragmatic, cannot fully substitute involvement and risks reproducing power asymmetries through selective attention to dominant institutional logics. Our analysis contributes to STS scholarship on innovation by demonstrating how capacity constraints and institutional hierarchies concentrate authority over algorithmic futures before technologies stabilise (Bailey & Barley, 2020; Mackenzie, 2015). We conclude that successful innovation requires pre-emptive support-building and capacity allocation as foundational prerequisites that redistribute power in technology governance from the outset.

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Conor Douglas

Social pharmaceutical innovation as innovation power in the making

ABSTRACT. The dominant mode of pharmaceutical innovation is coming under significant
14:15 criticism for its lack of production of available treatments for rare and neglected tropical diseases, and the hinderance of access to treatments due to their very high prices. Recent commentators going as so far as suggesting that we may have hit "peak pharma" (Geiger and Bourgeron, 2025).

Considerable STS work has highlighted injustices and vulnerabilities in biomedicine (Clarke, Mamo, Foskett et al., eds. 2010), the power of the pharmaceutical industry (Abraham, 1005;

Lexchin, 2016), and offered some direction in facilitating participation in (Epstein, 1996) and intervening in biomedical practices (Zuiderent-Jerak & Jensen, 2007).

However, there seems to be an absence of mobilizing pharmaceutical innovation itself towards social and activist ends.

This paper reports on a series of recently published case studies (Douglas et al., 2025) of "social pharmaceutical innovation" (SPIN) (Douglas et al., 2022) that respond to innovation challenges in biomedical R&D producing inequities or injustices for patients and health systems.

Social pharmaceutical innovation seeks to understand and support initiatives that are addressing these issues outside of the dominant profit-driven innovation model, and thus offering a form of innovation power in the making.

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13:15-14:45 Session 8G: T5: Deep Learning and Culture

Chair:

Tobias Blanke

Location: Carré 3B

13:15 Delfina S Martinez Pandiani

Cultural Boundaries in Latent Space: Iterative Image Prompting as Method and Meaning-Making

ABSTRACT. Across social media, users engage in iterative prompting trends that push generative models beyond their expected outputs—trends like "make it more" or "create the exact replica 74 times." In these experiments, the same prompt is used to generate a new image from the last, producing long visual chains where meaning slowly drifts. Such sequences often go viral as evidence of "AI glitches"--moments when the model seems to cross boundaries-- such as turning a white woman into a Black man, or muscular biceps into a croissant. They captivate precisely because they appear to reveal a breakdown in the model's logic. This work will argue, however, that these boundary crossings are not breakdowns but interpretative openings that expose the internal coherence of latent space. They make visible the friction between human and machinic epistemologies: while human meaning depends on categorical difference—taxonomical, oppositional, and historically shaped by hierarchies of identity—machine reasoning unfolds through gradients of statistical proximity. When a model drifts from one category to another, it does not violate a boundary but moves along a smooth topology of resemblance. The "boundary" arises only in human interpretation, where categorical expectation collides with gradient reasoning. Iteration lies at the core of understanding these encounters. Using iterative image generation as both phenomenon and method, the work will examine how boundaries and their transgressions emerge only at the interface between human and machinic sense-making. The framework of forensic iteration approaches these moments as acts of epistemic translation, where two modes of reasoning briefly converge. In viral prompting trends, users repeatedly adjust prompts to probe how a model "understands" concepts, performing a lay form of model interrogation. This practice mirrors computational explainability methods such as neuron activation maximization, where researchers iteratively modify inputs to reveal the features that activate particular neurons. Both enact iteration as a tool of boundary crossing: a way to surface what is otherwise latent, to map the contours of meaning as it emerges through gradients rather than categories. By tracing how iteration bridges cultural practice and technical explainability, the paper repositions so-called "AI glitches" as productive sites for theorizing boundary, meaning, and the interpretative space between taxonomy and gradient.

Sal Hagen

From Ranking to Citing? Interrogating the epistemic culture of RAG-based search

ABSTRACT. This paper studies technologies and epistemic cultures introduced with the growing prominence of Retrieval-Augmented Generation (RAG) in search engines. Features like Google's AI Overviews are slowly reconfiguring not only how search engines operate, but also thought of and used. What are the new epistemic cultures of these systems? What is different compared to earlier algorithmic rankings, which already used deep learning techniques? And how does RAG broadly affect a culture of search? I first document how with RAG, retrieval logics no longer act just on a document level but also on a paragraph and even sentence level. While 'list-making' through authority metrics remains important, generativity is layered on top as a central organizing principle. The result is a move away from interested rankings (Rieder 2021) towards a more fuzzy patchwork of generated texts that partially emerge from a language model and partially from indexed documents. I frame this as RAG's logic of loose citation over pure ranking as diverse snippets from a variety of sources are compiled into one unified result. I then empirically interrogate the 'epistemic culture' (Knorr Cetina 1999) of Google AI overviews using a study on how Dutch party websites are 'cited' in the context of the 2025 national elections in The Netherlands. Most notably, I find that a significant number of cases where the source text contains loosely related or unrelated language compared to the generated text. This source obfuscation–does the text emerge from the model or database?–means that RAG practice of 'citing' can be loose and opaque, closer to 'association' than 'refencing'. Yet successful nudging or 'manipulation' of RAG texts through Generative Engine Optimization comes along with rhetorics of neutrality and balance compared to the more transparent partisan authorship that is visible from a list of domain

13:45

names. I argue that knowledge as such gets 'dislocated' from lists of sources towards multi-sourced generated text, raising uncertainty on information opacity and partisanship.

Marton Gosztonyi, Ildikó Barna, Renáta Németh and Haseeb Raza

Boundary-Work by Artificial Intelligence: How Large-Language Models Govern Sensitive Public Discourse Across User Personas

ABSTRACT. As large language models (LLMs) become integrated into everyday communication, they increasingly participate in the mediation of culturally and morally sensitive public discourse. While these systems are commonly presented as neutral assistants, their responses are shaped by safety architectures, training data, and embedded cultural assumptions. Our research asks: how do LLMs engage with sensitive social issues when confronted with different discursive positions, and what forms of normative governance emerge through these interactions?

We approach LLMs not as passive technologies but as communicative actors that perform boundary-work by adjusting tone, moral framing, and explanatory depth in response to perceived interlocutors. Empirically, we examine antisemitism as a paradigmatic case of moral sensitivity, historical contestation, and cultural tension. Rather than relying on demographic categories, we
14:15 construct synthetic conversational personas that represent distinct discourse styles - hesitant uncertainty, inherited stereotypes, casual conspiratorial talk, and explicit rejectionist narratives. Identical prompts are submitted across personas, alongside a control condition without contextual cues.

Our study employs a comparative prompt-based design combined with mixed-method text analysis. Semantic embedding similarity is used to trace how core themes are reframed across interactions, while sentiment and affective profiling capture shifts in emotional posture and moral urgency. Safety and toxicity classifiers identify moments of refusal, redirection, or disengagement, complemented by qualitative coding of recurring rhetorical strategies such as pedagogical explanation, moral warning, civic framing, and procedural withdrawal.

Our findings show that LLMs respond in patterned yet differentiated ways, enacting forms of normative mediation that vary with perceived user positioning. These responses reveal how deep learning systems actively shape cultural meaning and moral order, translating ethical constraints and institutional expectations into everyday conversational governance.

13:15-14:45 Session 8H: T29: Normative Sense-Making about Artificial Intelligence Technologies

Chair:

Peter Stegmaier

Location: Carré 3A

Dr Peter Stegmaier

Doing normativities at the intersection of AI, energy, and sustainability: an STS perspective

ABSTRACT. This paper proposes to examine how normativities around artificial intelligence,
13:15 energy, and sustainability are done in practice—that is, how they are enacted, stabilized, and contested across socio-technical arrangements rather than merely articulated in policy texts or ethical frameworks. Drawing on science and technology studies (STS), the contribution explores how emerging AI systems in energy-related domains (such as energy management, forecasting, optimization, or sustainability assessment) become sites where epistemological, normative, and policy-related questions are intertwined and negotiated in situ. It empirically explores the three

cases of data centres, digital twins, and decentralised urban energy networks in the Netherlands. From an epistemological perspective, the paper attends to how specific forms of knowledge and certainty are mobilized to make AI-based energy systems actionable. Energy and sustainability are often framed as domains requiring quantification, prediction, and optimization, yet AI introduces new layers of opacity, uncertainty, and delegated decision-making. The paper asks how practitioners, developers, regulators, and users deal with incalculable uncertainties, model assumptions, and data-driven plausibilities in everyday contexts of use. It examines how ignorance and uncertainty are not simply deficits to be resolved but become productive elements in regulatory science, risk assessment, and infrastructural decision-making around AI-driven energy systems. Normatively, the paper focuses on how ideas of "sustainable", "efficient", "responsible", or "green" AI are operationalized through technical architectures, standards, and routines. Rather than treating sustainability norms as external constraints imposed on technology, the analysis foregrounds how norms are embedded into algorithms, data infrastructures, and design choices, producing specific user–technology relations and socio-technical regimes. This includes attention to tensions between formal legal or policy norms (e.g. accountability, transparency, fairness) and technical normativities encoded in AI systems, such as optimization criteria, thresholds, or default settings. The paper asks how these different normative orders converge, clash, or remain misaligned in practice, and what is lost or transformed in translation. From a policy and governance perspective, the paper examines how AI, energy, and sustainability are co-articulated within policy imaginaries and regulatory efforts at different levels. Rather than focusing solely on de jure provisions, it emphasizes law-in-action: how regulatory goals are enacted through procurement practices, pilot projects, standards, and infrastructural arrangements. The analysis explores governance by design, where sustainability and AI regulation are delegated to technical systems and protocols, and considers how responsibility and accountability are distributed across human and non-human actors. Conceptually, the paper draws on STS traditions that understand law and regulation as performative, relational, and materially enacted. It mobilizes insights from studies of regulatory science, co-production, actor-network theory, and posthuman legalities to show how AI in energy contexts reshapes normative boundaries between technology, law, and society. By situating AI within longer histories of energy governance and technological regulation, the paper also reflects on parallels with earlier socio-technical transitions and the challenges of establishing normative frameworks for them. Overall, the paper argues that normativities about AI, energy, and sustainability are not simply emerging but are continuously being tested, revised, and stabilized through everyday socio-technical practices. Attending to these processes is crucial for understanding how sustainability and AI governance are practically accomplished—and contested—across contemporary socio-technical landscapes. The case studies are based on first explorations of policy documents, media reports and analyses of relevant actors using qualitative research including personal conversations with key actors. The explorative approach aims at finding appropriate categories for descriptive explanation according to the standards of the Grounded Theory method. This is part of a new research project at very early stage but with lots of stakeholder contacts already.

Samuela Marchiori

The conceptual pillars of AI governance. The role of conceptual engineering in the legal and ethical governance of AI

13:45 ABSTRACT. This presentation argues that adequate AI governance requires robust conceptual grounding. Specifically, it argues that conceptual engineering–i.e., normative conceptual work aimed at the improvement of concepts (Chalmers, 2020)–is foundational to addressing the governance challenges raised by AI technologies, such as self-driving vehicles, LLMs, and low-code/no-code AI platforms. Indeed, governance outcomes are shaped by conceptual choices. This presentation illustrates how conceptual engineering can illuminate the ways in which different conceptualisations of the same socio-technical artefact can lead to vastly different governance

frameworks, by taking different perspectives to the description of the technology and emphasising different features of the technology. For example, depending on how LLMs are conceptualised– e.g., as author-like entities, editor-like entities, mere spell-checkers, etc–, regulators may reach vastly different conclusions regarding the legal regimes that should apply (Bennett, 2020; Berensmeyer et al, 2012; He, 2019; Lacruz Mantecón, 2023; Lauber-Rönsberg & Hetmankl 2019). Such insights can and should be generalised beyond the specific case of LLMs, which merely exemplify a broader pattern in technology governance: (especially) when new socio-technical artefacts disrupt established conceptual categories, the governance of such technologies cannot safely bypass the deliberate and systematic assessment and refinement of such conceptual categories. Ultimately, this paper argues that conceptual engineering is not an auxiliary concern, but a foundational element of robust AI governance, and should provide the necessary groundwork for technology governance frameworks that are both legally sound and ethically robust.

Salma Haddi

From Sacred Doctrine to Algorithmic Authority: Epistemic Power and AI in Times of Global Sociotechnical Shifts

ABSTRACT. Traditionally, the dominant institution that was invested with epistemic authority began with religious beliefs in pre-modern society and transitioned to scientific rationality in the modern period. However, today, due to the increasing digitalization that is taking place, artificial intelligence is assuming a growing role in the production and production processes of knowledge. These coincided with broader global shifts characterized by technological acceleration, geopolitical uncertainty, and heightened influence wielded by transnational digital platforms.

14:15 This paper raises the question of how algorithmic systems reconfigure epistemic authority and which forms of power do emerge when knowledge production becomes embedded in global AI-driven infrastructures. Based on Foucauldian understandings of power/knowledge and supported by insights from Science and Technology Studies (STS), this paper adopts a critical-theoretical perspective in its examination of AI not as a purely technical tool but as a sociotechnical arrangement within which practices of classification, decision-making, and truth production are constructed. This analysis positions the question of algorithmic power in the context of the contemporary global shift and points to the way in which the notions of objectivity and neutrality associated with AI serve to mask underlying value structures and support the primary stake of the large technological firms in the notion of AI. As opposed to an analysis of the ethical inadequacies and determinate power of AI, the text examines the translation and formulation of ethics in the context of the process of algorithmic systems. In a way that facilitates the consideration of the implications of the new regimes of epistemic power emerging through governance algorithms, the contribution moves forward in terms of new agendas within the area of Science and Technology Studies. It points out the role of knowledge dynamics principles and invisibility principles in governance algorithms.

14:45-15:00Coffee Break

15:00-16:30 Session 9A: T18: Revisiting the Hydrogen Utopia: Failures, Reorientations, and Emerging Visions

Chairs:

Alison Lesdos and Filip Rozborski

Location: Ravelijn 4231

15:00 Alison Lesdos

Captive futures: why solar hydrogen struggles to escape fossil paradigms

ABSTRACT. Low-carbon transitions are marked by temporal tensions: inherited infrastructures, ambitious climate targets, and evolving expectations rarely align. These misalignments often lead to a "captivity" of collective futuring practices, where radical visions become constrained by existing sociotechnical arrangements (Jasanoff & Kim, 2015; Borup et al., 2006). Energy systems provide a striking example, particularly in the case of green hydrogen. Hydrogen produced via electrolysis remains deeply tied to infrastructures (electricity grids, gas pipelines) and economic logics inherited from fossil fuels. In contrast, emerging pathways such as photoelectrochemical (PEC) technologies for solar hydrogen promise autonomy and decentralization. Yet, these promises risk being absorbed into dominant narratives and infrastructural lock-ins, reinforcing centralized logics rather than disrupting them.

This paper asks: What collective representations circulate within the hydrogen community, and how do they constrain the development of PEC technologies?

To address this question, the study combines: - Expert interviews on PEC technologies to capture perceptions of past trajectories, present challenges, and future promises - Stakeholder interviews on electrolysis-based hydrogen projects to identify infrastructural dependencies and representations shaping current strategies - A review of policy frameworks and hydrogen roadmaps to trace assumptions about hydrogen's evolving role in transitions.

Drawing on STS work on futuring, path dependency, and captivity of imaginaries (Beckert, 2016; Brown & Michael, 2003), preliminary findings suggest that PEC technologies are trapped within visions of hydrogen development strongly influenced by fossil fuel-based systems. Rather than enabling radical change, PEC appears confined to niche applications, limiting its transformative potential. Understanding why futures get stuck is vital for anticipatory governance and adaptive strategies. Studying hydrogen, and in particular PEC technologies, reveals how renewable innovations struggle to escape fossil fuel paradigms, inviting critical reflection on futuring's conditions and limitations in energy transitions.

Eric Cezne

Fostering South-South ties 'from below' in hydrogen: Insights from a cross-regional encounter between Africa and Latin America

ABSTRACT. Touted as a key pillar of industrial decarbonization, hydrogen has spurred a growing body of social science research that continues to expand across new disciplinary, empirical, and conceptual terrains. Much of this work has examined the transnational dimensions of hydrogen – ranging from diplomacy and trade to emerging global production networks – while also engaging critically with questions of (green) extractivism and coloniality, particularly in North–South relations. Yet little is known about how distinct lived experiences with hydrogen across the Global
15:22 South relate to, diverge from, or illuminate one another.

This article offers a new perspective by drawing on insights from a South–South grassroots encounter held in March 2026 in Namibia, which brought together hydrogen affected community representatives, indigenous leaders, and civil society organizations from Namibia, South Africa, Brazil, Chile, and Colombia. It explores the prospects, possibilities, and challenges for building bottom up South–South interactions, alliances, and solidarities around hydrogen.

The article contributes to scholarship on the political geographies of hydrogen by advancing a transnational perspective 'from below', and to South–South cooperation studies by showing how such ties are mobilized and made meaningful within a nascent, uncertain, and speculative industry in decarbonized development.

Xueyi Meng

Surviving the Early Hydrogen Economy: Diversification, Hype, and Reorientation in Chinese Hydrogen Start-ups

ABSTRACT. This presentation shares how technological promises in the Chinese hydrogen sector are continually reworked rather than simply realised or abandoned. Drawing on interviews and participant observation with hydrogen start-ups and stakeholders, it explores how hydrogen startups diversify, redirect, and strategically stretch their innovation narratives in the early and uncertain stage of industry formation.

The first set of cases traces how companies move beyond core hydrogen energy applications to construct new fields of imagined value. Fuel-cell developers enter the drone market, promoting hydrogen drones across multiple speculative use-cases; catalyst firms explore biomedical applications alongside hydrogen processing; and start-ups experiment with hydrogen-infused water and healthcare claims as potential revenue streams. Such moves extend the imagined future
15:44 of hydrogen from energy and industrial infrastructure into lifestyle, health, and consumer domains. At the same time, they generate ambivalence: these strategies can secure investment and survival, yet they also risk being read as hype, potentially destabilising trust in hydrogen innovation more broadly.

A second dynamic concerns spatial and organisational expansion. Competition among local governments for hydrogen investment encourages start-ups to establish subsidiaries and factories across multiple cities in China. While this provides policy support and government grants, the resulting infrastructures sometimes exceed firms' technological and market needs, shifting organisational effort from technical development towards relationship-management and institutional alignment.

Rather than treating these processes as deviation or failure, the paper conceptualises them as forms of expectation work through which hydrogen futures are negotiated, protected, and continually rewritten. The study contributes to STS debates on sociotechnical expectations by showing how promise-making becomes a survival strategy within an emergent industrial field shaped by policy competition, investment logics, and shifting imaginaries of hydrogen's value.

Mark Cassidy

Sustaining the Promise: Reframing Narratives Around Fuel Cells and Hydrogen

ABSTRACT. Hydrogen has seen multiple waves of enthusiasm, with various sociotechnical imaginaries being constructed around it. A crucial enabler of these hydrogen futures is fuel cell technology. Indeed, it could be argued that the dynamics of the various hydrogen hype cycles have as much reflected expectations of fuel cells as of hydrogen. While repeatedly rejected on grounds of cost or reliability, fuel cells retain a hold on sociotechnical imaginations, asking the question: how has the fuel cell managed to retain validity despite protracted and troublesome development?

16:06 Many STS accounts of fuel cells centre around the hype cycle of the late 1990s and early 2000s (Bakker and Budde, 2012; Konrad et al., 2012). While histories covering wider temporal periods tend to move between fuel cell families, highlighting different types of fuel cell at different times. (Eisler, 2012; Wallace, 2019). In this work I take a different approach, following the historical pathways of a single fuel cell type, the high temperature solid oxide fuel cell (SOFC), critically engaging with the relationships between materials, technology and the changing political economies of R&D and energy. I find a device repeatedly reframed and reorientated around the potential of new materials and processing, with expectation constructed around these promissory materials and designs. Facilitated by reorganisations of R&D management and energy markets, these offered new applications, which sustained sponsorship.

I also propose that such reframing was further enabled by shifting policy imperatives around energy, from 1970s energy crises, pollution worries in the 1980s and later climate concerns. This contributes to the argument that changing narratives and expectations around fuel cells played a social role, providing plausible keystones for the technological optimism prevalent in policy responses to energy crises, giving the impression that solutions were close at hand, allowing difficult social decisions to be postponed and perpetuating business as usual. I suggest the SOFC inhabited two worlds, one of laboratory results and experiments, the other of ideas and imaginaries. Together these worlds created ambiguities where ideas of hydrogen futures could flourish.

Using autoethnographic reflections, oral histories, study of primary sources, and consideration of material design, I offer an account of how fuel cell communities utilised promissory materials and design to mobilise wider expectation, so sustaining legitimacy of their technology and its roles within future hydrogen imaginaries.

15:00-16:30 Session 9B: T13: Strenghtening the Soil Humanities: Cultivating (Re)generative Power

Chairs:

Marieke Meesters and Dienke Stomph

Location: Ravelijn 4237

Laura Thomas

Rooted in Soil: a relational approach to spatial planning and design with soil

ABSTRACT. Like the social sciences and humanities, the field of spatial planning and design is increasingly turning its attention to soil as a condition for sustainable, climate-adaptive environments. Yet soil is commonly approached instrumentally, framed as a passive substrate, a resource, or a provider of ecosystem services. Within this framing, planning and design projects tend to seek general guidelines, rules of thumb, or design toolboxes that allow soil to be incorporated without sustained engagement. To support this approach, planners and designers often rely on technical consultation with "soil experts," resulting in planning and design decisions based on abstracted knowledge that overlooks the contextual, social, and ecological roles soils play in our environments.

15:00 This research addresses this gap by engaging with soils through hands-on methods in an interdisciplinary collaboration between spatial designers and ethnographers, drawing on soil humanities scholarship. It explores how planners and designers might obtain and operationalise soil knowledge when working in community-led food gardens, where relationships with soil are explicitly enacted.

Over five months, the research team collaborates with two gardening communities in Rotterdam and the Green Heart, participating in gardening activities and observing how people cultivate soil. Insights from these collaborations are translated into "soil characters," a visual library of the living and non-living elements that shape soil formation. These characters are organised into relational diagrams that reveal soil formation as a socially and materially entangled process. By making these relationships explicit, the project enables collective reflection on how they might be reorganised and how our practices might be reoriented in relation to soil.

By foregrounding relational, site-specific, hands-on knowledge, this research demonstrates how spatial planning and design might operationalize soil humanities scholarship. It contributes to

spatial planning and design approaches that treat soils not as technical substrates, but as dynamic ecologies shaped through complex processes and interactions.

Jairo da Costa Junior

More-than-human Actor Mapping: Integrating Actor-Network Theory and Critical Systems Heuristics to Reframe Actor Dynamics in Nature-Based Solutions

ABSTRACT. As sustainability challenges like climate change grow in complexity, the effective design of Nature-based Solutions (NbS), like urban green infrastructure, becomes increasingly urgent. Although NbS can promote climate-resilient and sustainable environments, their success depends on coordinating diverse actors and agencies while considering contextual factors (Mosisa et al., 2025).

This study contends that integrating Critical Systems Heuristics (CSH) and Actor-Network Theory (ANT) provides a comprehensive framework for understanding the dynamic, complex relationships among human and non-human actors in NbS. CSH (Ulrich, 1983) offers a lens to examine the assumptions, values, and power structures shaping sustainability interventions, paying attention to boundary judgments and acknowledging whose interests and knowledge are
15:30 prioritised or excluded (Ulrich & Reynolds, 2020). ANT (Latour, 1987; Law, 1992) emphasises that agency emerges from networks of human and non-human actors, where interactions, rather than individual actors, drive system change (Pels, 1992). ANT complements CSH by grounding critical reflection in empirical network analysis, broadening agency beyond humans. CSH introduces ethical and critical inquiry into network mapping, emphasising justice and inclusion rather than mere description. This holistic, more-than-human approach helps develop actor maps that reveal the often-overlooked complexities, like power relations and system dynamics, crucial in developing effective sustainability interventions.

The research employs a mixed-methods approach, using observation, focus groups, and document analysis, resulting in a More-than-Human Actors Map for a blue-green infrastructure project in the city of Amsterdam. It contributes to STS by providing a theoretical framework and a novel conceptual tool that recognises non-human actors as agents in actor maps that inform NbS design and governance. Challenging hierarchical models, the tool places human and non-human actors equally, emphasising that agency emerges from their interactions. It visualises practices and inscriptions that render non-human actors consequential, highlighting them as mediators that shape other actors' capabilities rather than as passive elements.

Maarten Meijer

The Cosmopolitics of Soil Resourcefulness: The Constitution and Contestation of Terrestrial and Agrarian orders

ABSTRACT. Soils have recently been productively theorised in the humanities in terms of their onto-epistemological plurality and relationality. Soils are plural not just in the classificatory sense of 'soil types', but in the sense of how their very being is understood and is made to matter in the (re)organisation of (a) particular world(s), thus opening up different possible soil futures. Taking
16:00 this relational pluralisation of soils as a starting point, this article interrogates relatively un(der)explored questions pertaining to the history of soil science, political economies of agriculture, and the governance of life and terrestrial space or geobiopolitics. In contrast to how the opening up of soil concerns, epistemologies, and attentiveness are sometimes presented both in practical and theoretical discourse as distinctly contemporary, this article argues that they are rather to be understood through a longer problematisation of soils that reaches as far back as the 19th century. Through the political history of soil sciences, this paper genealogically reconstructs a problematisation of soils and/as the productive orders of the Earth, revolving around debates on the resourcefulness of soils and in need of geobiopolitical governance. To this end, the first part of

the paper is outlines some meta-theoretical reflections regarding the matter at hand, arguing that questions of soils and/as terrestrial orders are to be understood as questions of cosmopolitics structured by the epistemic authority of soil science and the political authority of the (imperial) state. Hereafter, the main body of the text outlines a genealogy of this problematisation of soil, anchored in three historical figurations of concerns with soils' threatened resourcefulness: 19th century concerns over soil exhaustion, 20th century concerns with soil erosion, and the more recent question of soil degradation. These figurations implicate particular configurations of soil sciences, soil governance, and agrarian political economies, which coalesce around particular re-sourcings of soils and involve particular imaginaries of geobiopolitical orders. Finally, by way of a concluding discussion, this paper reflects on the overarching implications of this problematisation of soils for understanding the politics of soils and soil futures.

15:00-16:30 Session 9C: T7: Making Science Better?

Chair:

Bart Penders

Location: Ravelijn 3231

María de Los Ángeles Crespo López, Claudia Pallise Perello, Jeroen de Ridder and Krishma Labib

Open Science as Confused: Contradictory and Conflicting Discourses in Open Science Guidance to Researchers

ABSTRACT. Objective The open science (OS) movement is growing, with increasing policies, guidelines, tools and infrastructures being developed to support researchers' engagement in OS practices. However, there is no widely accepted definition of OS. This study aimed to chart how OS is understood in different parts of the world and how OS and OA discourses relate to knowledge equity, asking: How is OS – including its goals, practices, and scope – understood in researchers' guidelines across the globe? Methods We conducted a scoping review and critical discourse analysis of national and international OS policies and guidelines aimed at researchers. We critically assessed: i) whether guidance documents addressed OS in terms of equity or other goals; ii) Eurocentric priorities and epistemologies promoted in them; iii) socio-political
15:00 assumptions; iv) tone and language; v) colonial logics of superiority and inferiority. Results The analysis included 69 national and international documents, with most originating from North America, Europe, and Latin America. Our results show that OS discourses are exaggerated, framing OS as a solution to address all scientific and societal problems. Furthermore, they often provide contradictory and conflicting ideas about what OS can achieve. Many documents frame OS as a tool to promote economic growth, efficiency, and global competitiveness. Others see OS as necessary to safeguard research quality, integrity and reproducibility through transparency. In contrast, few documents address structural injustices, global power dynamics, knowledge equity and inclusion. These differences suggest that OS is not a unified movement, but a contested one, shaped by diverse institutional priorities, sociopolitical agendas and private industries. Conclusion OS discourses seem to reproduce knowledge equity problems already present in research, rather than tackling them. Therefore, we urge policymakers and researchers to be more precise about the specific approach they take to OS and more humble about the effects it can have – positive and negative.

Wytske Hepkema, Frédérique Bordignon, Willem Halffman, Nathanne Rost, Yj Erden and Raphaël Lévy

15:30 PubPeer Perceptions: how authors view their own papers and those they cite in the light of PubPeer comments

ABSTRACT. Abstract for STS NL track 7 'making science better?' 200-300 words

PubPeer Perceptions: how authors view their own papers and those they cite in the light of PubPeer comments Wytske, Fred, Willem, Nathanne, YJ, Raphaël

Concerns about shortcomings in traditional peer review have led to post-publication peer review (PPPR) platforms such as PubPeer. While existing research focuses on the link between PubPeer comments and retractions, the effect of PubPeer comments on the authors and readers of these articles remains unclear. To address this gap, we surveyed two groups: researchers who received a comment on their work (commented group) and, as a proxy for readers, researchers who cited a commented article (citing group). We found that PubPeer comments do reach authors of commented papers, but not the researchers who cite them. For both groups, the majority claimed the comments on PubPeer did not affect the conclusions of their own paper. Many of the citing group explained their reasons for citing the paper were unrelated to the issue mentioned in the PubPeer comments, or that they also cited other articles that supported the same knowledge claim. Interestingly, 41% of the commented group and 26% of the citing group, would still call the issue mentioned in the PubPeer comments an error, but apparently not an error that affects the conclusions of their own paper. The majority of the commented group took action in response to the PubPeer comment, most often by replying on PubPeer or asking the editor for an erratum. The majority of the citing group did not take action and was not planning to do something in response to the PubPeer comment. For instance because they did not find the comments relevant to their work and/or they did not feel it was their responsibility. These findings suggest that PubPeer currently serves more as a feedback mechanism for authors than as a warning system for the broader scientific community.

Candida F. Sánchez Burmester, Wytske M. Hepkema, Cyrus C. M. Mody and Willem Halffman

Clouded by systemic ignorance: unsettled state of knowledge about spherical nucleic acids

ABSTRACT. Our study is rooted in classic sociology of scientific knowledge, but instead of analyzing the production of knowledge, we focus on the emergence of ignorance, considering traditional communication channels such as conferences and journals as well as sites that developed in the 21st century such as blogs, Wikipedia, and PubPeer. In the current "ignorance explosion" (Verburgt and Burke 2021, 6), surprisingly little attention has been paid to ignorance resulting from systemic structures. Our guiding question is therefore how ignorance has emerged on a systemic level from institutionalized sites where different actors have discussed spherical nucleic acids (SNAs), a nanoparticle that has been claimed to access the cytosol of mammalian cells. SNAs (and their variants) have been commercialized for five years and have been attempted
16:00 to be developed into different clinical applications. The analysis is based on publicly available sources (e.g., journal articles in nanobiology, corporate annual reports, patents, blog posts, press releases), six interviews, and material shared by interviewees (e.g., correspondences). We find that information relevant to the discussion is left unrecorded at conferences, difficult to find across genres, lost in technology transfer, overshadowed by dominant corporate imaginaries, kept secret by companies, rarely published in journals, neglected in citation practices, inaccessible in emails held by universities, undetected due to lacking institutional integrity units in a spinoff, removed due to Wikipedia's structure, or countered with a threat to file a defamation lawsuit. We thus argue that ignorance can inadvertently result from existing structures facilitating scientific knowledge exchange, but in some cases those structures can also be exploited by individuals to create ignorance in the context of a scientific discussion. Individuals and institutions aiming to improve the quality of scientific knowledge production and exchange would ideally take these systemic sources of ignorance into account.

15:00-16:30 Session 9D: T9: Rethinking Classifications: Exploring Approaches to (not) Categorize People in Data-intensive Healthcare and Research

Location: Ravelijn 3237

Marion Coville and Gabrielle Lavenir

From 'you're normal' to 'your normal' : how menstrual tracking technologies and large-scale menstrual datasets challenge, reframe – and reinforce– gynecological categorizations ?

ABSTRACT. Menstrual cycle tracking apps (MCTAs) have become everyday technologies in the lives of millions of people, positioning private digital technoservices (Clarke, 2000) at the center of contemporary women's health innovation. In the context of chronic underfunding of women's health research, European and American private tech companies that own MCTAs have also emerged as custodians of large-scale datasets and research infrastructures. These developments reconfigure relations of dependency between academic researchers, platform companies, and users (Felsberger, 2025 ; Healy, 2021).

The MenstruTech research project draws on feminist STS and examines MCTAs as sociotechnical infrastructures that mediate the production of both academic and experiential knowledge about women's health (Della Bianca, 2022 ; Geampana, 2024 ; Lupton, 2019). In this presentation, we draw on a series of interviews with academic researchers and in-house scientists whose work is based on proprietary MCTA datasets (n = 31), as well as interviews with MCTA designers (n = 23).

Our interviews reveal that both scientists and designers share a common hope that large-scale MCTA datasets could serve as an alternative to established gynecological norms and categorizations, and thus offer a more diverse and inclusive understanding of menstrual health. These expectations rely on two core MCTA technologies. First, the production of large-scale datasets is viewed as an opportunity to challenge the so-called "28-day" model. Second, algorithmic personalization is framed as a way to move beyond the normal/pathological dichotomy by accommodating a broader range of menstrual experiences through a new individualized category: "your normal."

This presentation examines how researchers and designers navigate classificatory systems and how hidden infrastructures shape both research practices and technological design (Star & Strauss, 1999 ; Star, 1999). Despite these ambitions, our findings suggest that researchers and designers struggle to develop models, categories, or infrastructures that do not rely on existing gynecological categorizations. Drawing on interviews combined with an analysis of MCTA interfaces, we show that gynecological norms continue to structure activities such as user onboarding, database construction, and the cleaning and interpretation of user data—processes that themselves rely on classificatory practices. Moreover, we observe that specific menstrual experiences, such as irregular cycles, are framed simultaneously as medical and algorithmic problems, thereby reinforcing their pathologization.

15:00

--- Clarke, A., Fishman, J., Fosket, J., Mamo, L., & Shim, J. (2000). Technosciences et nouvelle biomédicalisation : racines occidentales, rhizomes mondiaux. Sciences Sociales et Santé, 18(2), 11–42. Della Bianca L. (2022) Configuring the body as pedagogical site: towards a conceptual tool to unpack and situate multiple ontologies of the body in self-tracking apps. Learning, Media and Technology 47:1, p. 65-78. Felsberger, S. (2025) The High Stakes of Tracking Menstruation. Minderoo Centre for Technology and Democracy. Geampana, A. (2024). Fertility apps, datafication and knowledge production in reproductive health. Sociology of Health & Illness, 46(6), 1238–1255. Healy R.L. (2021) Zuckerberg, get out of my uterus! An examination of fertility apps, data-sharing and remaking the female body as a digitalized reproductive subject, Journal of Gender Studies, 30:4, 406-416 Lupton, D. (2019) The thing-power of the human-app health assemblage: thinking with vital materialism. Soc Theory Health 17, 125–139. Star, S. L. (1999). The

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Luke Stalley

Temporal Experiments and The Chronopolitics of Life's Endings in a Next-Generation Hospital EPR

ABSTRACT. In medical anthropology and sociology, there is a longstanding concern with how hospitals organise and shape death and dying. In this talk, I revisit these concerns by attending to the 'practical ontologies' (Jensen 2010) embedded and enacted through a contemporary electronic patient record (EPR) and clinical management system - an digital infrastructure that has become central to the politics of living and dying in ageing societies.

Focusing on the work of geriatricians' - specialists in the medical care of older adults - I ask: what kinds of dying are made possible by a digital infrastructure that mediates both administrative imperatives for efficient patient flow and clinicians' efforts to provide good patient-centred care?
15:22 Drawing on ethnographic fieldwork at a large teaching hospital in the English Midlands, I take inspiration from Jensen & Morita's (2015) notion of infrastructure as an 'ontological experiment' and recent scholarship on the politics of time in technology and healthcare. The paper makes three analytical gestures, to trace the temporalities enacted in: (1) the scripts built into the system's default settings, drop down menus and categories; (2) clinicians' techniques for tinkering with time as they work with, around, and against the software; and (3) the kinds of time made manifest in their absence.

While the past decades have seen an institutionalisation of the 'good death' in the modern hospital, attention to the classificatory and infrastructural regimes embedded in the technologies used to manage these institutions shows how other possibilities for living and dying well become foreclosed. My account foregrounds this chronopolitics: one in which slow deterioration, long lives in decline, and uncertain endings are known yet rendered practically unsayable, to ask how things could be otherwise, if only we had the time do categories differently.

Ilse Dijkstra, Tessa van Rijssel, Mira Vegter, Margot Vandenbrouck and Michel Vitale

Rethinking classifications through layers of vulnerability.

ABSTRACT. In (AI or data-driven) health research, categorizing patients by sex, 'race', and socio-economic status are routinely used as proxies for risk prediction. However, STS scholars highlight that these rigid classifications can lead to stigmatization, discrimination, and deeper health inequalities. This raises a critical question: how can we develop alternative ways of dealing with categorization that do not cause harm or reinforce systemic inequality? Florencia Luna's layer model of vulnerability offers an alternative: instead of labelling entire groups as vulnerable, several
15:44 contextual factors can form "layers" of vulnerability for individuals. Would this approach make it possible to deconstruct classifications and reconstruct new, equitable ways of dealing with human differences? We suggest that thinking about a layered approach would allow us to point out how certain contexts create vulnerability and as such would point to more structural solutions. We would like to organize a session (45 min) where we each tackle the concept of vulnerability from within the context of each of our separate projects and draw several lessons to discuss with the audience in an interactive discussion.

1. Ilse Dijkstra, Maastricht University, 'The construction of low socioeconomic status' I examined how professional education, health research, health policy, and health interventions jointly construct low socioeconomic status as a category within the governance of health inequalities. Through their intertwined practices, these domains co-produce a dominant image of low

socioeconomic groups as uniform, unhealthy, unintelligent, and unmotivated. Building on STS scholarship that has previously deconstructed categories of 'race', ethnicity, and gender, I explore how this dominant conception can be critically interrogated and reconfigured.

2. Margot Vandenbroucke, Radboudumc, Katalysatorproject – 'Ethics of lifestyle conversations' Ilse Dijkstra's (and others) work shows how healthcare research has created certain categories (e.g. 'low socio-economic status' and 'low educated') and with that created 'unhealthy' groups who are 'hard to reach' for lifestyle interventions. I will focus on how a well-intended turn in prevention that tried to take the notion of blame away in these interventions, instead labelled these groups as vulnerable, without acknowledging the complexity of health and illness, or inequality in society. A layered conceptualisation of vulnerability in the context of lifestyle care is needed so that we can analyse how to use it in the practical sphere. 3. Tessa van Rijssel, Radboudumc, PATHS consortium, Proposal Horizon 2025 (under review) We examine how Luna's dynamic view of vulnerability can guide responsible data intensive for Hidradenitis suppurativa (HS) research. HS is a chronic, autoinflammatory skin disease that disproportionately affects groups sometimes considered vulnerable, such as women and people with lower socio economic status, and it is associated with factors like smoking and obesity. Current research seeks to address these disparities through patient stratification and risk prediction. We explore questions such as: How can at-risk groups be identified, without harmful causal assumptions or reinforcing stereotypes? And how can groups labelled as vulnerable be involved in this type of research?

4. Michel Vitale, Radboudumc, MERAI lab, 'ethical, legal, and societal implications of AI-enabled low-dose CT lung cancer screening'. Based on a collaborative ethnography study with engineers developing AI for lung cancer screening, my research examines how algorithmic fairness is interpreted, negotiated, and enacted within medical imaging pipelines, revealing gaps and trade-offs between formal fairness frameworks and everyday design and implementation practices. In this setting, fairness emerges through situated practices and is shaped by available resources and 'soft impact' (e.g. norm shifts, responsibility relations, and trust dynamics), rather than residing solely in performance metrics or rigid taxonomies. Building on these insights, we explore how Luna's layered analysis of vulnerability might be operationalized in this sociotechnical context, by identifying interacting vulnerability layers, their stimulus conditions, and cascade risks that render algorithmic disparities ethically meaningful in practice.

Annelies Kleinherenbrink

Technosolutionism, (strategic) essentialism, and (self-)surveillance in women's health

ABSTRACT. In this presentation, I will discuss recent work (conducted together with Ula N. Ratajec, Utrecht University, and currently under review) on the increasingly popular idea that AI is the future of women's health. I will also draw connections between this project and my other work, which focuses on (strategic) sex essentialism, individual responsibilization, and (self-)surveillance of women in mainstream women's health discourse, as well as sexist bias in AI (see references below), to address the questions raised in track 9, "Rethinking classifications".

16:06

When it comes to artificial intelligence (AI), hyped expectations often contrast with lacking results and structural harms. In this study, we conducted a qualitative analysis of recent publications, sourced from medical databases, that discuss the use of AI in relation to the gender/sex health gap specifically. Using a feminist perspective to decode how gender, sex, and AI are conceptualized and related to one another in this corpus, we find that sex essentialism and AI hype are broadly endorsed, naturalized, and mutually reinforced through rhetorical loops that allow spurious claims to flourish. We argue that this is most likely to further impoverish our understanding of gender/sex health disparities, depoliticize women's health, marginalize gender/sex diverse patients, and intensify socially unequal health surveillance practices. We call

on women's health advocates to turn the tide by resisting the hype and fostering more critical understandings of both technology and gender/sex health inequities.

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15:00-16:30 Session 9E: OT: Critical Reflections on Research II

Chair:

Ewert Aukes

Location: Ravelijn 2231

15:00 Lucy Oates

The myth of neutrality: Justice in environmental assessment

ABSTRACT. Calls for more "just" futures are increasingly prominent in environmental policy debates, reflecting growing recognition that unsustainability cannot be addressed through technical solutions alone. Scientific expertise plays a central role in informing and legitimising policy choices – and in this context is expected to inform debates about "just and sustainable" futures while remaining objective and policy-relevant. Yet because justice involves explicit value judgements, it is often framed as a source of normativity that sits uneasily with claims to neutrality. This paper challenges that framing. Drawing on STS, it starts from the premise that policy-oriented knowledge is inherently shaped by normative choices, embedded in research questions, indicators, models, and forms of policy advice. From this perspective, justice does not add normativity to science–policy processes but makes existing value commitments visible. Building on STS debates about the role of scientific expertise in managing or engaging with normative disagreement at the science–policy interface of environmental governance, the paper develops a four-pronged conceptualisation of justice as it appears in science–policy knowledge production. These prongs conceptualise justice as: (1) an outcome, reflected in the distributional implications of policy-relevant analyses; (2) an analytical framework, shaping how problems, responsibilities, and trade-offs are conceptualised; (3) a source of social and political legitimacy, influencing whose knowledge and concerns are recognised; and (4) a reflexive dimension of the research process itself, concerning how values are acknowledged and negotiated. Drawing on experience at the science–policy interface, the paper mobilises this framework as an analytical lens that shows how justice intersects with existing epistemic practices in policy-oriented environmental assessment, sometimes clarifying trade-offs and blind spots, and sometimes exposing tensions between commitments to neutrality and inclusiveness. The paper argues that explicitly engaging with justice strengthens the policy-relevance of science by making value commitments explicit, analysable, and contestable.

15:30 Ting Cong, Dongyi Wang and Rodrigo Costas

Chinese scientific journals on WeChat: Content Framing, Identity Representation, and User Engagement

ABSTRACT. The evolution of science communication has shifted from a unidirectional model of information dissemination toward more interactive and participatory forms of public engagement. Digital platforms have significantly accelerated this transition by enabling scientific actors to reach non-specialist audiences directly. This study examines the WeChat Official Accounts of scientific journals indexed in the Chinese Science Citation Database (CSCD), with particular attention to their content framing strategies and patterns of user engagement. By analyzing the stylistic features of WeChat posts alongside audience interaction metrics, the study investigates how Chinese scientific journals communicate scientific knowledge and construct institutional identities on a domestic social media platform. Combining statistical analysis with textual analysis, the findings reveal that the majority of WeChat posts published by scientific journals are primarily oriented toward scientific experts or semi-expert audiences rather than the general public. Post titles frequently foreground developed countries, high-impact international journals, senior researchers, and elite institutions, reflecting a communication strategy centered on prestige signaling. Furthermore, symbolic representations of authority, institutional credibility, and academic prestige are found to play a more prominent role in stimulating user engagement than technical explanations or informational depth. This pattern partially aligns with dual-processing theory, suggesting that peripheral cues related to status and authority may be particularly influential in shaping audience responses within social media based science communication.

Paolo Volonté and Simone Tosoni

Naïve scientism as vulnerability to scientific misinformation

ABSTRACT. Our paper examines the relationship between science and societal actors through the theoretical lens of scientism (Sorell 1994, Haack 2012). In particular, we describe the understanding of science widespread among adolescents as a form of naïve scientism and interpret naïve scientism as a major vulnerability to scientific misinformation. Dominant research on youth vulnerability to scientific misinformation adopts a behaviorist “effects” paradigm, prioritizing quantitative measures of exposure and belief. We criticize this approach for neglecting the interpretative practices of audiences and propose an alternative, qualitative framework. Drawing on a multi-method study conducted in Northern Italian high schools in 2023-24, we shift analytical focus from deficits in students' scientific literacy to their situated interpretative practices when engaging with media-conveyed scientific information. In this way, our analysis identifies a widespread “naïve scientism”: uncritical deference to scientific authority rooted in a simplistic understanding of the scientific method as a guarantor of uncontested, objective truth. From this perspective, scientific knowledge grounded on data is deemed uncontroversial, not qualified in terms of consensus, confidence and probability, and not susceptible to change over time, and disagreement among scientists is obviously interpreted in terms of a conflict of interest or the incompetence of one of the parties involved. We argue that this unrealistic conceptualization, while fostering surface-level trust, constitutes a profound vulnerability. It renders students ill-equipped to navigate scientific controversies and public debates, increasing the risk of disillusionment when science’s contested, social nature becomes visible. Consequently, today’s core challenge is not merely exposure to scientific “fake news,” but a fundamental misunderstanding of how reliable scientific knowledge is produced that neglects its collective and negotiated nature. Teaching STS approaches in high schools could be a first step to counteracting this attitude. Haack, Susan. 2012. “Six Signs of Scientism.” Logos and Episteme, 3(1): 75-95. Sorell, Tom.1994. Scientism: Philosophy and the infatuation with science. London and New York: Routledge.

16:00

15:00-16:30 Session 9F: T12: Implicit Infrastructures in Healthcare‘s Crisis and Disaster Preparedness

Chairs:

Shiwei Chen and Celine Rooze

Location: Ravelijn 2237

Victoria Meklin

Making School Testing a Problem: Problematization, Preparedness, and Covid-19 Test Regimes in Austria’s Education System

ABSTRACT. This paper examines how Covid-19 testing in Austrian schools became a political, moral, and administrative problem during the pandemic. Drawing on the concept of problematization (Jasanoff & Metzler), the study does not treat testing as a technical intervention but as an object whose meaning, necessity, and legitimacy had to be continuously constructed. To do so the study is looking at how Covid-19 testing in schools was defined regarding what testing was used for, how it was organized and why it was needed. This analysis shows how meaning and importance of Covid-19 testing changed over time and why. This study is based on two types of data. First a detailed timeline on Covid-19 testing in Austrian Schools, based on newspaper reports
15:00 and official announcements and secondly interviews with important and highly responsible politicians from the educational sector. These two sources together show how different ideas about Covid-19 testing in school shaped decisions. Three main kinds of problem definitions appear. Ontological problems show how actors describe what a Covid-19 test in different situations and at different times during the Covid-19 pandemic was. The moral dimension covers different responsibilities regarding testing and how these shifted. And on the administrative side the study shows how testing was carried out, which infrastructure had to be created for that and by whom. Moreover, it shows that the idea of preparedness is behind the implementation of testing in schools, since tests have represented a safety measure that demonstrates how schools have prepared for the pandemic, enabling them to monitor risks and react quickly and effectively. The study argues that crisis governance shapes, and is shaped by, public and political debate. It makes a valuable contribution to the Science and Technology Studies (STS) discussion on preparedness, demonstrating how problematization can be employed to analyse such processes.

Celine Rooze, Bert de Graaff and Roland Bal

Whose knowledge counts in a crisis? Expertise, Governance, and Healthcare Decision Making after COVID 19

ABSTRACT. The COVID-19 pandemic has firmly placed the resilience and preparedness of healthcare systems on national and international policy agendas. Across countries, healthcare systems responded in markedly different ways, revealing substantial variation in crisis governance. A critical factor underlying these differences was the type of knowledge and expertise that
15:30 informed decision making processes. During the pandemic, virological and biomedical expertise received substantial attention in advisory and governance structures, while behavioural, social, and organizational sciences were less prominently represented in the Netherlands. As a result, policy responses predominantly focused on biomedical aspects in acute and hospital based care, even though other healthcare sectors such as long term care, mental health services, and preventive care also experienced profound and lasting impacts. This imbalance can be partly explained by the composition of national decision making bodies, which were often dominated by biomedical perspectives. In the Netherlands, the pandemic highlighted the absence of a sufficiently developed integral decision making framework that allows for the systematic weighing of for example epidemiological, societal, ethical, economic and legal considerations in times of

crisis. In response, the UNITY project aims to contribute to the development of such an integral assessment framework. This study investigates how different forms of knowledge shape crisis decision making processes and outcomes.

Using a qualitative research design, the project combines semi structured interviews, participant observations, and document analysis to examine decision making at the national level. Particular attention is paid to the interaction between different types of academic knowledge such as epidemiology, virology, health economics, and the social sciences and non academic knowledge. By analyzing how these knowledge forms are mobilized, prioritized, or marginalized during crises, the study seeks to inform more inclusive and balanced decision making structures and to strengthen healthcare system resilience in future public health emergencies.

Charlotte Waltz

Implicit advisory infrastructures in pandemic preparedness: temporality, expertise, and epistemic hierarchies

ABSTRACT. Pandemic preparedness relies not only on formal plans and protocols but also on implicit advisory infrastructures that organise how knowledge, uncertainty, and urgency are handled before and during crises. This paper examines how ongoing research on pandemic preparedness in the Netherlands mobilises such infrastructures, shaping whose knowledge becomes 'actionable' at different moments of an unfolding emergency. Drawing on thematic analysis of interdisciplinary simulation exercises of a fictional virus outbreak to develop integrated science advice, I analyse how epistemic hierarchies are (re)produced and reconfigured across different phases of crisis anticipation.

16:00 My analysis shows a temporal pattern in how advisory infrastructures organise knowledge integration. In the early "alert" phase, high uncertainty structurally privileges biomedical expertise as an epistemic infrastructure, positioning insights from social sciences and humanities as contextual or secondary considerations. As the fictional scenario moves into a full "pandemic" phase, crisis temporality and perceived urgency compress deliberation, further narrowing epistemic diversity and foregrounding logics of 'containment' of the virus, while concerns about feasibility, equity, and lived realities are sidelined. Only in a later "transition" phase, when uncertainty and urgency ease, does space reopen for infrastructures of reflexive, value-based reasoning and more symmetrical exchanges across different scientific disciplines.

These dynamics are effects of advisory infrastructures embedded in preparedness practices and institutional procedures for science advice. Seen through feminist theories of situated knowledges, the analysis highlights how these infrastructures risk reproducing epistemic injustices precisely at the moments when knowledge infrastructures are crucially mobilised for pandemic policies. The paper concludes by discussing how rethinking the temporal and infrastructural design of science advice for pandemics could enable more epistemically just forms of crisis governance.

15:00-16:30 Session 9G: T14: Evaluating Existential Threats, from Climate Change to AI and Gene Editing: STS Perspectives

Chair:

Elli Danae Vartziotis

Location: Carré 3B

Elli Danae Vartziotis and Aristotle Tympas

15:00 Mapping the "End of the World": An Institutional Landscape of Existential Risk Research

ABSTRACT. In the last twenty years, a specialized group of research institutes, including the Centre for the Study of Existential Risk (CSER), the Future of Life Institute (FLI), and the Global Catastrophic Risk Institute (GCRI), has emerged to study and mitigate existential risks, understood as threats that could lead to human extinction. In this work, we propose a systematic mapping of these key institutes to analyze how they construct the boundaries of what counts as an existential threat. By utilizing a qualitative content analysis of the institutional websites, annual reports, and conference proceedings, we identify the primary risks prioritized by these institutes, such as artificial intelligence, climate change, and biotechnology, and deconstruct the definitions they employ. A central focus of this study is also the "interconnection" of risks, specifically how these institutions frame the relationship between those threats. Do they treat them as isolated threats or as interconnected systemic vulnerabilities? This mapping will show how contemporary ideas about global security are shaped and reveal tensions between speculative engineering approaches and social science perspectives in addressing planetary crises.

Alyssa Delarosa

Evaluating Biodiversity Loss as an Existential Threat Between the Sciences and Humanities: Techno-solutions and underlying issues

ABSTRACT. The rapid loss of biodiversity has been described as the sixth mass extinction event (Wollmuth et al., 2022; Lewis & Maslin, 2015). The World Wildlife Fund submitted to the ICJ a claim for recognition that biodiversity is both under threat and a solution to climate change (WWF, 2024). The ICJ advisory opinion upheld the request from the WWF and the submissions of other governing biodiversity bodies that States must develop mitigation strategies to prevent biodiversity loss (ICJ, 2025). Because measuring biodiversity loss is fraught with inaccurate data and data bias (García-Roselló et al., 2023), there are currently technologies to collect biodiversity data, such as aerial drones and on-the-ground camera traps (Broad, 2025). However,
15:30 interdisciplinary work in the social sciences and humanities has shown that these issues are also due to a lack of minority representation in biodiversity data collection (Pritchard, 2022). Both of these disciplines also focus on which values are upheld, such as relational value between Indigenous people and biodiversity (Armstrong, 2025; Whyte, 2018). Thus, while both the sciences and humanities are concerned with biodiversity loss, there is a gap between how the natural sciences evaluates the threat of biodiversity loss with technologies, and how the social sciences and humanities evaluate biodiversity loss on values and minorities. How can this evaluation gap with biodiversity loss between the sciences and humanities be bridged? In order to bridge this gap, there needs to be more collaboration between the sciences and humanities in how they evaluate technologies addressing biodiversity loss with underlying issues. I will draw from actor network theory to show the relationship between these technologies, underlying issues, and biodiversity measurement. The result from this analysis will be that these underlying issues can be better addressed if there is a shift within the representation of actors.

Clemens Alexander Ackerl

AI Beyond Human Controllability? Unpacking the Tacit Assumptions and Rhetorical Foundations of AI Existential Risk (X-risk) Narratives & Their Assessment Across Different Scientific Disciplines

16:00 ABSTRACT. As artificial intelligence (AI) capabilities advance, debates about AI beyond human controllability and causing catastrophic harm have moved from niche circles into public and policy discourse. Scenarios of AI takeovers, societal collapse, or even human extinction – once confined to speculative fiction – now shape regulatory agendas and funding priorities. AI existential risks (X-risks) are particularly powerful framings, as they invoke irreversible harm, extreme opportunity costs, and closing windows for action.

In the first part of this contribution, I present key findings from an integrative narrative review of core academic X-risk literature (Bareis, Ackerl & Heil, 2025; in press). The review examines the tacit assumptions and rhetorical strategies shaping debates at the intersection of academia, technology sectors, NGOs, politics, and media – despite ongoing contestation over the plausibility of such scenarios. Our analysis reveals a fragmented discourse characterized by bold but frequently weakly substantiated claims, including accelerationist growth assumptions and speculative calculations of catastrophic tipping points. Dominant framings rely on functionalist, anthropomorphic, and metaphysical conceptions of AI, while perspectives foregrounding infrastructure, social agency, political economy, and Big Tech oligopolies remain marginal. As a result, academic debates often reproduce the hype dynamics of public X-risk discourse, blurring the line between speculative projections and empirically grounded concerns.

In the second part, I discuss ongoing research on how X-risks are assessed and addressed across scientific disciplines. Drawing on a DELPHI expert survey and reflection workshop with computer scientists, as well as interdicsiplinary reflection interviews with scholars from the social sciences and humanities (philosophy, media sociology, technology ethics, social ethics and STS/AI ethics), preliminary findings highlight negotiated framings, (disciplinary-rooted) problematizations in relation to discursive blind spots, and divergent understandings of how different AI risks interact and potentially cascade into existential threats.

15:00-16:30 Session 9H: T29: Normative Sense-Making about Artificial Intelligence Technologies

Chair:

Gabrielle Canalli

Location: Carré 3A

Maaike Harbers

A typology of AI narratives and their normative implications on AI literacy

ABSTRACT. The recent introduction of AI technologies in many areas of life has created a need for increased AI literacy. Yet, there is no consensus on what AI is, what it should be used for, and how it should be governed. Although disagreements about AI often revolve around specific technical choices or regulatory measures, they are rooted in more fundamental and frequently implicit understandings of AI's nature, societal impact and expected futures. These different socio-technical imaginaries of AI, here called AI narratives, have distinct normative implications for what it means to be 'AI literate' and how AI literacy programs should be designed. AI literacy programs, in turn, are norm-setting practices that shape how people understand, use and govern AI technologies.

15:00

To analyze the normative implications of AI narratives for AI literacy, this contribution introduces an analytical typology, mapping four dominant AI narratives that shape AI development and governance. The typology is structured along two dimensions. The first concerns expectations regarding the development of Artificial General Intelligence (AGI), ranging from imaginaries in which AGI is anticipated in the near future to imaginaries in which AGI is expected only in the distant future or not at all. The second dimension concerns the evaluative orientation toward AI, differentiating between imaginaries foregrounding anticipated benefits and those emphasizing risks, harms, and unintended consequences. Combining these dimensions yields four AI narratives, typically associated with AI boomers (AGI, positive), AI doomers (AGI, negative), AI enthusiasts (no AGI, positive), and AI critics (no AGI, negative).

This contribution examines the normative assumptions embedded in these narratives and how they shape the design of AI literacy materials, including which knowledge, skills and forms of engagement with AI are presented as relevant. The proposed typology thus highlights AI literacy as a site where socio-technical imaginaries are translated into everyday normative expectations.

Gabrielle Canalli

Disputing Definitions of Artificial Intelligence: Discursive Dynamics in Brazilian Public Hearings on AI Regulation

ABSTRACT. The use of Artificial Intelligence (AI) is reshaping the way society interacts. This change, linked to era of surveillance capitalism, requires decision-makers to seek solutions to regulate this type of technology. In Brazil, the government has been debating the regulation and use of AI. One of the initiatives to regulate AI in Brazil is the Bill nº. 2.338/2023 – Brazilian AI Bill - , which has been considered a participatory process, including several public hearings in which different actors shared their understanding of the topic. These expressions of technical knowledge, intertwined with political interests, are currently being listened by parliamentarians
15:30 of the National Congress in the formulation of an AI regulatory framework. This paper proposes to investigate how the definitions of AI are constructed and transferred in the discourses of the public hearings in the legislative process of Brazilian AI Bill, and to what extent are they disputed in the process of formulating Brazilian public policy on AI. For this, the general objective is to analyze how definitions of AI are constructed, transferred, and disputed in the discourses of the actors in the public hearings of Brazilian AI Bill, examining their effects on the process of formulating Brazilian public policy on AI. The methodology used will be discourse analysis based on the documents and recordings of the public hearings on Brazilian AI Bill that took place between 2023 and 2025 in Brazil. The study aims to outline the different definitions of AI existing in the speeches of the actors and understand how the dispute between these concepts are considered by parliamentarians in the formulation of Brazilian public policy on AI. This research aims to understand how conceptual disputes can shape public policy on AI in Brazil.

Imad Ibrahim

From Old Regimes to AI: Digital Technologies and the End of Business-as-Usual in International Law

ABSTRACT. Digital technologies are reshaping societies at an unprecedented pace, and international law is being compelled to adapt. Legal frameworks that once evolved gradually must now respond to innovations rapidly transforming economies and governance over a short span of time. The cross-border nature of digital systems has led to the emergence of new treaties to
16:00 regulate areas such as data governance and Artificial Intelligence (AI). Older agreements are being reinterpreted and supplemented to address technological realities that did not exist when they were first concluded. These developments raise important questions about how digital transformation is influencing the structure and function of international law. This article explores that shift by comparing recent digital era instruments with earlier conventions. It examines the General Agreement on Trade in Services, the Digital Economy Partnership Agreement, and the Council of Europe's Framework Convention on AI. An analysis of eight key features highlights how newer agreements respond more directly to technological change. Unlike traditional treaties, they reflect a growing awareness that technology is reshaping regulatory priorities, state responsibilities, and the balance of authority in global governance.

THURSDAY

09:00-10:30 Session 11A: T24: Making Futures Tangible? Sociomaterial Practices of Prediction

Chair:

Wenzel Mehnert

Location: Ravelijn 4231

09:00

Rick Robben, Lieke Melsen, Jeroen Vos, Janien van der Greft and Ulrike Proske

Model realities: a case study on model use and governance in Dutch water management

ABSTRACT. Dutch river management is characterized by its top-down and flood-risk-centered culture, and relies heavily on computer models as to facilitate anticipatory governance. Model-informed flood-risk management has effectively gone uncontested in the Netherlands, despite the substantial impacts of decisions derived from it; while actual river widening or dike heightening implementations have been challenged, the broader narrative remains largely untouched. Other political stakes and aims are only allowed to claim space when their goals manage to exist within the logic and metrics of the flood-risk-paradigm. The computer models underpinning flood-risk management reinforce this dynamic: they have a legal and authoritative status and are perceived as objective, yet, given their design and implementation, they cannot capture alternative knowledges or perspectives. As such, they co-shape the socio-ecological systems that they are argued to neutrally represent, thereby perpetuating the dominant knowledge politics of the flood-risk paradigm.

In order to research the epistemological role of flood-risk models in water management, I equip Actor-Network-Theory methodology and ask: How do these anticipatory hydrological models come to be seen as legitimate, and what role do they play in shaping riverine landscapes? Empirically, I use ethnographic methods to study the dike strengthening project between Olst and Zwolle, conducted by Ijsselwerken. In this way, I will elucidate naturalized assumptions, contestations, and the reinforcing role of computer models in understanding flood risk.

09:30

Wenzel Mehnert

The Making of Neuro-Futures – BCI-figurations in Science-Fiction film

ABSTRACT. For half a century, research on brain-computer interfaces (BCIs) has inspired Science-Fiction filmmakers to explore questions of human nature, embodiment, and technological possibility. SF Film renders these speculative artefacts as tangible expectations and establishes a horizon of social and technological plausibility that guides our imagination of the future. What remains overlooked is that these images themselves are constructed, following techniques such as montage and continuity to create affective credibility and the illusion of experientiality.

Drawing on the concept of diegetic prototypes and building on a hermeneutic approach to technology assessment, the paper analyses the socio-technical imaginaries surrounding BCIs in SF cinema through which contemporary hopes, anxieties, and debates on emerging technologies take narrative and aesthetic form. Across a corpus of films from different eras, the analysis identifies three recurring tropes: the BCI as media apparatus, enabling cognitive immersion and sensory replay; the BCI as transhuman interconnection, merging the human mind with the machine; and the neurointerface as a path to immortality, where mind-uploading promises life beyond biological limits. These tropes operate as media-technical configurations of prediction

that reorganise bodies, data, and agency while foregrounding larger ethical issues of ownership, commodification, control, and human–machine integration.

By combining an STS perspective with a media theoretical approach, the paper highlights how predictive artefacts and cinematic infrastructures shape and stabilise imaginaries of futures and technological development.

Dipanjan Saha

Knitting Work of Prediction: The Praxeological Grounds of Forecasting

10:00 ABSTRACT. Drawing on fieldwork at an AI company, this paper explores the mundane, situated, and methodical work of computation involved in the "production of prediction" (Mackenzie, 2015). My method presents an extension of the established ways of doing workplace ethnography: rather than simply shadowing practitioners, I worked alongside data scientists as a colleague to examine the technical activities constituting their everyday work. I focus on how these practitioners use computer simulation to forecast inventory demand for their e-commerce customer, creating a "digital twin" of their supply chain to test hypothetical strategies before applying them in the real world. I examine the team meetings between the AI company and its customer as “perspicuous settings” (Garfinkel, 2002) where predictive futures are made tangible. Here, data scientists present forecasts as unassailable numbers, yet the validity of the model is routinely contested. In the resulting "oscillation" (Coopmans, 2018) between trusting the forecast and questioning its reliability, I show how the validity of prediction rests on a display of statistical mastery: recovering evidence from data tables to justify findings while obscuring the "trade secrets" of the shop floor. I characterise these practices as "knitting work" (Saha, 2025): the continuous, practical activity of weaving together disparate elements—mathematics, models, code, and worldly data—into a coherent, functional, and accountable whole. I demonstrate how this knitting work places commonsense understandings of business logistics in active dialogue with the technical work of making uncertain futures computationally operational. Finally, I argue that the "intelligence" of the AI system is not located in the algorithm alone but is a product of the extensive division of labour that sustains the sociotechnical infrastructure. It is this invisible work, spanning across engineering, management, and data science, that sustains the intelligent appearance of the system, transforming messy, ad-hoc realities into actionable outcomes.

09:00-10:30 Session 11B: T13: Strengthening the Soil Humanities: Cultivating (Re)generative Power: Soil Lightning Talks

Chairs:

Marieke Meesters and Dienke Stomph

Location: Ravelijn 4237

Dienke Stomph and Marieke Meesters

Soil Lightning Talks

09:00 ABSTRACT. In the 5-minute lightning talks we showcase the breadth of the soil humanities and build community. We invite both seasoned and budding soil scholars. This format may be particularly useful for people who are exploring new aspects or approaches to the soil humanities and may not have a full paper to present. This is the second session of the soil humanities track, which aims to connect scholars working on restoring and restorying soils as well as to strengthen our abilities for enabling change in soil worlds, including though ecological restoration and decolonisation, policy reform, and epistemic shifts.

Participants are requested to sign up through our online form, and to prepare 1-3 powerpoint slides to present during the lightning talks (5 minute per person). Sign up for the lightning talks through this form and submit your slides beforehand, or drop in on the day!

https://forms.cloud.microsoft/e/TqeaZeEUVi

09:00-10:30 Session 11C: T10: Resisting Rent-Seeking: Nonprofit Platforms and the Politics of Open Science in Scholarly Communication and Evaluation

Chair:

Alex Rushforth

Location: Ravelijn 3231

09:00

Wolfgang Kaltenbrunner, Andrea Chiarelli, Andrea Reyes Elizondo, Stephen Pinfield, Ludo Waltman and André Brasil

Why is change in scholarly communication so hard to imagine? Findings from a stakeholder consultation for the cOAlition S proposal 'Towards Responsible Publishing'

ABSTRACT. We analyse focus group discussions and free-text survey responses from a multi-stakeholder consultation conducted following the October 2023 publication of the proposal Towards Responsible Publishing by cOAlition S. The proposal advocates for a systemic reform of scholarly communication, aiming to reduce barriers to knowledge dissemination, encourage the early sharing of research outputs through preprints, and shift peer review toward an open, post-publication model. Our analysis focuses on how different stakeholder groups—including researchers, scholarly infrastructure providers, academic institutions, funders, and publishers—perceive the obstacles to the large-scale, coordinated transformation envisioned in the proposal. We interpret these accounts as articulations of collective action problems that arise from the deep entrenchment of actors within existing academic reward structures and established commercial revenue models. These conditions make transitions toward a more open and economically sustainable system of scholarly communication difficult, even in contexts where there is broad recognition of the need for change. By comparing perspectives across stakeholder groups, our approach highlights areas of alignment as well as points of tension and conflict. It also underscores the performative nature of discourse surrounding collective action problems in scholarly communication: in articulating barriers to reform, participants simultaneously construct, reinforce, or contest their own roles, responsibilities, and capacities within the system. These discursive dynamics, in turn, shape the possibilities for coordinated action and meaningful systemic change.

09:30

Tanya Lee

Advancing Open Research Information: Challenges and Opportunities in the Era of Platform Capitalism

ABSTRACT. Platform capitalism is an evolved form of capitalism where the concept of wealth shifts—from the production of goods to the control and management of goods. Due to the increasing interactions with the internet, the process of platformization—the expanding reach of platform-based infrastructures, business models, and policies across multiple facets of society—continues to accelerate. In the context of research, platform capitalism can be explored through the domain of research information (RI). RI itself is generally used to gain insights into the current research landscape, such as research impact and the current research trends. These insights inform decision-making in science and guide the future direction of science. Nevertheless, RI has mostly been locked inside pay-to-access databases, such as Scopus and Web

of Science (WoS). These proprietary databases operate with low transparency, making research evaluation based on proprietary RI non-reproducible and limiting the ability to identify and address errors, biases, and gaps. Despite the availability of ORI infrastructures, such as OpenAlex and OpenAIRE, and the emergence of ORI movement, such as through the Barcelona Declaration on ORI, as well as the high prices of proprietary platforms, the global research community continues to rely heavily on services provided by proprietary platforms and prioritizing publication within them. This ultimately supplies more RI to these proprietary platforms that can be extracted and turned into proprietary indicators. To explore this phenomenon, an ongoing interview study is being conducted with university staff across universities in the Netherlands, such as with librarians and research information specialists. The aim of the study is to gain insights into the current perspectives on and practices surrounding (open) research information, as well as to explore how potential financial, technical, institutional, and cultural challenges associated with adopting ORI within a university setting can be understood through the lens of platform capitalism.

Thomas Berker

Reviving enlightenment values in post-big-tech knowledge infrastructures?

ABSTRACT. The new digital information and communication infrastructures that became known as the Internet in the 1990s were originally the home of academics (which they of course had to share with the military). Influenced by academic norms that embody enlightenment ideas, these infrastructures were explicitly designed to enable the universal sharing of knowledge on a global scale. Today, 35 years later, we know that anti-enlightenment ideas, misinformation, conspiracy theories and anti-science sentiments are at least as easily spread through these infrastructures as their scientific counterparts.

The shift away from an academic Internet was accompanied by the massive growth of proprietary services that were provided by what would become some of the most powerful corporations of our time. Instead of pursuing enlightenment values of universalism, reason, equality, and cosmopolitanism, these new owners valued profit, engagement, and attention above all.

Academics did not go away during this shift but readily adopted the new, proprietary services engaging with and producing "content" for Google Scholar, Twitter, and other social media platforms. They bought into specialised proprietary tools like Endnote, SPSS, to mention only a few. And they accepted that their text production, communication, and publication happened on the platforms owned and controlled by Microsoft, Google, and major academic publishers. These proprietary tools and platforms have become infrastructural in the strong sense of not being optional any longer but effectively controlling the standards that enable academic collaboration and exchange.

In this contribution, I examine whether a growing skepticism towards Internet-services that are provided by so-called "big-tech" corporations can be harnessed to support the development of knowledge infrastructures that re-engage positively with classic enlightenment values. This question is addressed through a literature study in which the relation between enlightenment ideals and various formations of socio-technical knowledge infrastructures is scrutinised. This work is rooted in STS-approaches to infrastructures, what they "do", and their use, spearheaded by Star and Bowker (e.g., 1999), but also newer contributions more specifically discussing knowledge infrastructures (e.g., Hirsch and Ribes 2021). In addition, perspectives from media studies are introduced, above all Kittler's "systems of inscription" (Aufschreibesysteme). In parallel, results of this study are experimented with in an action research project, which is conducted together with representatives from NTNU's university library and the university's central IT services. Here we experiment with different notions of universalism, reason, openness, and freedom in relation to knowledge infrastructures, and organise local workshops with our

10:00

colleagues in which alternative ways of community-led knowledge infrastructuring are presented, discussed, and experimented with.

References:

Bowker, Geoffrey C., and Susan Leigh Star. 1999. Sorting Things out: Classification and Its Consequences. Cambridge, Mass: MIT Press. Hirsch, Shana, and David Ribes. 2021. “Innovation and Legacy in Energy Knowledge Infrastructures.” Energy Research & Social Science 80: 102218. doi:10.1016/j.erss.2021.102218.

09:00-10:30 Session 11D: T26: What If we talk Politics a Little - More?

Chair:

Abe Hendriks

Location: Ravelijn 3237

09:00

Abe Hendriks

Democratic futuring: an inquiry in Nederland Verbeeld(t)

ABSTRACT. As the Netherlands confronts climate adaptation, housing insecurity, and rural transformation, democratic challenges increasingly emerge around how futures are imagined and governed. This paper addresses what we conceptualize as an imagination gap: a growing distance between policymakers and citizens concerning whose visions of the future matter. Building on STS scholarship on sociotechnical imaginaries and recent work on “captured futures” (Hajer & Oomen, 2025), the paper argues that dominant dramaturgies of governance tend to stabilize particular futures while foreclosing others, turning futuring into a technocratic rather than a political and democratic practice.

Here, we develop the concept of democratic futuring to understand how futures can be organized as objects of collective inquiry rather than pre-scripted through arrangements that determine whose imagination matters in advance. Democratic futuring foregrounds the provisional character of institutions and sustains spaces where multiple, competing imaginaries can circulate, confront one another, and remain contestable. Through agonistic engagement, it cultivates the productive tensions that arise when futures are treated as political matters, keeping open whose imagination shapes collective horizons.

Empirically, the inquiry takes place in Nederland Verbeeld(t), a three-phase intervention (2025–2027) that creates exhibitions, workshops, regional encounters, and ends up in a public manifestation around societal and spatial futures. These situations are conceptualised as soft spaces outside formal policy arenas that function as "democratic situations" (Birkbak & Papazu, 2022): experimental environments in which futures are materially and narratively made investigable together through collective engagement. Through form-giving practices as spatial/social design, narrative formats and dramaturgical choices, these soft spaces co-produce what counts as valid knowledge about the future, expanding epistemic authority to include affective and embodied experience. By tracing how imaginaries circulate between experimental and institutional settings, the paper shows how democratic futuring emerges through sustained material experimentation that keeps futures politically open by reconfiguring whose imagination counts.

09:22

Timo Maas and Lucy Oates

Still time for a dress rehearsal? Geopolitical ecologies in a changing world order

ABSTRACT. The world is experiencing a rapidly fragmenting world order, lulling Europe from a geopolitical slumber (WRR 2025). No longer can Europe pretend that its values, prosperity and security are easily and comfortably aligned. While the urgency of this message is widely felt in both public and policy debates, the question of 'what's next' is not answered as easily. Moreover, there is a risk in this return of the term 'geopolitics' by naturalizing particular power dynamics and by hiding salient ecological relations. These issues call for seeds of 'good' geopolitical ecologies to be sown (cf. Lawhon et al. 2021; Graddy-Lovelace & Ranganathan 2024). In this paper-in-development, we present work from an ongoing project at PBL, the Dutch national institute for environmental policy research, that seeks to do just this. The project itself is primarily oriented at policymakers at Dutch ministries. As a starting point, it takes that even though modes of global environmental governance are in flux, policy actors have agency in shaping what's next. The project's aim is to develop forms of rehearsing such agency, so as to empower policy actors both in terms of the expertise they hold around such modes of governance – after all, they are their daily practice – as well as in terms of their ability to make normative arguments about what modes are more desirable than others. In our paper, we aim to take such rehearsals to also be rehearsals of forms of democracy-in-practice, acknowledging that bureaucracies are part of how democracy is enacted. We are particularly interested in whether and how such rehearsals are facilitated by expertise that politicizes modes of environmental governance, while simultaneously tries to comes to terms with ecological change as a political actor in its own right (cf. Maas et al. forthcoming).

Eric Deibel, Talya Deibel and Jack Lehane

The global digipolis and a return to self-preservation: on Simmel, the home and the city

ABSTRACT. The "global digipolis" refers to digital culture and information technologies as integral to the modern city. It draws on the late 19th century sociologist George Simmel's view of "metropolitan individuality"

Discussions of "smart cities" and "smart housing" often include appeal to create policies that are more responsive to the lives of their inhabitants. This is often approached critically, fo example, in the literature on "platform urbanization" that looks at the transformation of urban space from the standpoint of capital accumulation (following Marx) and surveillance (following Foucault). There is a more positive spin in a closely related STS literature that affirms the need for new approaches, and related epistemological strategies. Again priority goes to the direct involvement of citizens, as users of new technologies, experimental local practicioners, and as active (co-)creators of
09:44 participatory spaces.

Simmel, however, pointed to a "blasé attitude", which frames the indifference and apathy as a necessity, as a matter of survival. It not simply something to overcome, and he drew on political and legal theory, framing it as resistance to "the social-technological mechanism", and contrasts the attitude to the individualism of the 19th century. In other words, he appeals to legal and political theory.

The paper draws on Simmel while considering real-world examples associated with the project of "Emphatic housing" (Radboud/Maastricht) and a research collaboration that involves Dublin City Council's Smart City Unit and ADAPT Research Ireland. These examples foreground the need to reconsider (legal) concepts like privacy, autonomy, and fundamental rights are under pressure. With the Simmel's help, the focus can be placed on their "minimal morality", maintained as a function of the intensely negotiated boundaries of inner and outer, of personhood and property, and the self that is seeking its survival in a global digipolis.

10:06 Job Zomerplaag

The Machinery of Participation: How the Neighbourhood Approach formats local heat transitions in the Netherlands

ABSTRACT. In the Netherlands, decarbonisation has moved from abstract national targets to the "neighbourhood approach" (Wijkgerichte aanpak). Municipalities must now make the 2050 gas-free housing target "land" neighbourhood by neighbourhood, behind individual front doors. This implementation strategy moves the "front line" of the heat transition into local communities, making the neighbourhood the primary site for a democratic question: how do abstract system transitions become politically articulable — matters that citizens can understand, contest, and act upon?

Drawing on extensive participatory action research into situated interaction processes between citizens, experts, and policymakers in pilot transition neighbourhoods Maastricht and Heerlen, I argue that participation is a constitutive political process. The question is not whether participation is "good" or "desirable", but what participation does in making the energy transition land. More specifically, I am working towards a heuristic to understand this machinery through three dimensions: 1) Delegation: The structuring of responsibility and agency, determining who is invited to think along and who is merely expected to follow; 2) Legitimation: The process of framing problems and solutions where technical expertise often overrides experiential knowledge, defining what "counts" as a valid concern; 3) Synchronisation: The temporal politics of aligning abstract policy targets with local infrastructural works, daily routines, and household investment cycles.

Through these dimensions, I show how the heat transition is produced through fragile, contested processes of gradual concretisation. The neighbourhood approach "formats" the opportunity for political engagement, structuring who can participate, what forms of knowledge matter, and who bears the costs when transitions hit home. Understanding this machinery is essential for imagining sustainability transitions that do not treat households as passive implementation sites, but as political actors with legitimate grounds for contestation and concern.

09:00-10:30 Session 11E: T15: Health and Care Shifts in Times of AI

Chairs:

Renate Baumgartner and Mignon Hagemeijer

Location: Ravelijn 2231

09:00 Martijn Logtenberg

Awkward Alliances: How Algorithm Developers Navigate Contradictions in Healthcare

ABSTRACT. My research examines how developers of vocal biomarker technology for mental health navigate fundamental contradictions between their technological aspirations and institutional healthcare realities. Drawing on interviews with business leaders, researchers, and healthcare professionals, alongside conference observations and corporate discourse analysis, I reveal a striking tension: while developers publicly champion "objective, quantifiable measurements" and dimensional approaches to diagnosis aligning with biomedical perspectives, their technologies overwhelmingly rely on traditional categorical diagnostic frameworks like the DSM.

Through the lens of expectation work (Konrad et al., 2017) and discourse coalitions (Hajer, 1993), I demonstrate that this contradiction is deeply political. Developers are embedded in coalitions with insurers, regulators, and evidence-based medicine frameworks demanding categorical diagnoses for reimbursement and validation, despite their own incentives toward dimensional,

symptom-based approaches that would expand market potential and better suit technological capabilities.

Whereas literature treats developers as autonomous shapers of technological futures (e.g. Brown & Michael, 2003; Katzenbach & Mager, 2021), I show they perform nuanced, multi-sided expectation work: discursively reconstructing "objectivity" as "practically objective," temporally postponing system change, pivoting to symptom severity measurement, integrating vocal biomarkers into other technologies, or exiting clinical markets for wellness applications. This reveals developers as simultaneously enactors and selectors of expectations (cf. Bakker et al., 2011), caught between technological possibilities and coalitional constraints while attempting to redirect coalitional values.

My analysis contributes to STS scholarship on health and AI by: (1) addressing underrepresented research on industrial actors in healthcare innovation, showing how algorithmic expectations interact with psychiatric classification debates; (2) demonstrating discourse coalitions can accommodate contradictory expectations when politically expedient; (3) exposing political choices made in early-stage development design and discourse. This research illuminates how AI developers balance innovation promises with institutional inertia, raising critical questions about whose expectations shape mental healthcare's future and who expectation makers actually consider.

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Lorenzo Olivieri, Claudia Montanaro and Annalisa Pelizza

Hypothetical enrollment - An anticipatory situated method to assess the implementation of AI diagnostics in clinical settings

ABSTRACT. Despite the supposed potentialities of AI tools for medical diagnosis, their adoption is a slow and troubled process. Recent empirical studies (Carboni et al. 2023; Kusta et al. 2024; Lebovitz et al. 2022) illustrate the misalignment between the narratives and expectations about these tools and how they are integrated in clinical settings. Yet, there is a substantial lack of methods for studying the transition of AI diagnostic tools from research settings to real-world
09:22 settings (Williams et al. 2024). Drawing on this emerging body of scholarship, in this paper we ask: what methods can be used to research the implementation of AI diagnostics in clinical settings. We hence propose “hypothetical enrolment” as a methodological framework to assess the organizational and epistemic challenges of adopting AI tools. We conceive of “hypothetical enrolment” as a situated, anticipatory and performative approach. It is anticipatory as it aims to provide an opportunity to appreciate the potential uses of AI diagnostic tools not yet implemented by prodding actors’ expectations and the potential interactions, alliances and transformations that could emerge. It is situated because expectations and potential alliances are mapped and analyzed against the specific disease network in which the technology is to be adopted. It is performative since it prompts actors to reflect on the possible implications of the innovation for their daily diagnostic tasks and to trigger reflection about new modalities of

knowledge production. We tested the validity of our method against an empirical case, the company Autism Scope (AS). AS applies machine learning models for the early detection of autism-spectrum-disorder on children below two years of age. We conducted interviews with AS developers and with three neuropsychiatrists, exploring the “hypothetical enrolment” of AS in clinical settings. Notwithstanding a generally positive attitude, several organizational, professional and epistemic challenges emerged thanks to our method.

Maxime Le Calvé

Aporetic Intelligence: Puzzlement as Care in AI-Augmented Neurosurgery

ABSTRACT. AI in medicine risks inaugurating an era in which we "produce more and understand less" (Messeri & Crockett 2024). Yet beyond familiar critiques of algorithmic bias and black-box opacity lies a less examined transformation: how AI reshapes the experiential core of clinical practice—the hesitations, doubts, and productive uncertainties that constitute skilled judgment. This paper develops Aporetic Intelligence as a framework for understanding what practitioners stand to lose when AI tools promise to eliminate the "cognitive friction" of complex decision-making. Drawing on ongoing ethnographic fieldwork at a Berlin neurosurgery department, I examine how surgeons navigate AI-assisted brain mapping for tumor operations. Tractography—computational modeling of white matter pathways—exemplifies the tension between automation
09:44 and embodied expertise. While startups like Omniscient.ai offer fully externalized planning designed to offload "cognitive weight," leading practitioners warn that surgeons who rely on such tools forgo the apprenticeship necessary for intraoperative adaptation: the capacity to respond when the patient's brain behaves differently than the preoperative model predicted. The research combines long-term ethnographic immersion with two experimental approaches. Graphic ethnography—live sketching during surgical observations and planning sessions—captures the gestural, spatial, and improvisational dimensions of neurosurgical thinking that text-based fieldnotes struggle to render. Design experiments, developed collaboratively with creative coders and artists, produce speculative interfaces that deliberately disclose the uncertainty in the outputs, testing whether tools might amplify rather than foreclose clinical imagination. I argue that puzzlement is not an obstacle to care but partly constitutive of it. Aporetic Intelligence names both the situated practices through which clinicians sustain productive uncertainty and a broader challenge to the frictionless ideal embedded in contemporary AI design.

Lars Assen, Kornelia Konrad and Simone Borsci

Sensing Sepsis: responsibly developing and embedding an AI-assisted diagnostic device

ABSTRACT. Sepsis is a major cause of death and adverse health outcomes worldwide. The NWO-funded SepsPIC project aims to develop a diagnostic device based on blood biomarker testing and machine learning to enable faster and more accurate diagnosis of sepsis, and specifically its various subphenotypes. This could improve survival rates and mitigate adverse health outcomes.

If successful, the device will affect clinical decision-making practices in sepsis care, thereby
10:06 reconfiguring clinical work, relationships, responsibilities, and required knowledge and skills. This raises questions about how such an AI-assisted device could be responsibly embedded within these existing practices.

In this project we are interested in how the responsible development and embedding of this device can be realized. To this end, we apply Constructive Technology Assessment (CTA), by including different stakeholders in workshops, interviews and surveys during the development of the device to explore, among other things, needs, attitudes and expectations. In this presentation, the results from this research will be discussed to highlight challenges related to 1) how the AI-assisted device can be embedded in clinical decision-making practices when users do not fully understand how blood biomarker data are interpreted, 2) how responsibilities are reconfigured

and what medical professionals require to be able to take responsibility and 3) how needs and expectations of medical professionals can be anticipated in the development of the device and the training of the AI component.

09:00-10:30 Session 11F: T21: Orbiting and Hovering – Critical Remote Sensing and Volumetric Regimes

Chair:

Michael Nagenborg

Location: Ravelijn 2237

09:00

Andreas Braun

More Accurate, Less Meaningful? Reflexive Remote Sensing

ABSTRACT. Over the past decades, remote sensing has undergone a remarkable technological acceleration. Advances in sensor resolution, data availability, cloud computing, and algorithmic sophistication—most recently through machine learning and artificial intelligence—have substantially increased the technical accuracy of spatial data products. At the same time, however, critical questions arise as to whether this growing precision is accompanied by a commensurate increase in geographical meaning, explanatory power, or societal relevance. This paper revisits and synthesizes a series of critical interventions that interrogate the epistemological foundations of contemporary remote sensing under the guiding question: does more accuracy necessarily result in more meaningful knowledge? I argue that dominant evaluation practices in remote sensing—centered on accuracy metrics, validation scores, and model performance benchmarks—risk narrowing the epistemic horizon of the field. In many applications, complex socio-ecological processes are reduced to technically tractable proxies, while assumptions about scale, categorization, causality, and normativity remain implicit and largely unscrutinized. As a result, methodological refinement may coincide with conceptual simplification, distancing remote sensing products from the socio-environmental contexts they claim to represent.

09:30

Siran Liang, Aida Taghavi-Bayat, Petra Steffen, Bettina Wahrig and Antje Schwalb

Between remote sensing and yak herding: grassland changes on the Tibetan plateau

ABSTRACT. The ongoing vegetational change on the Tibetan Plateau, where pastoralism has been the predominant way of life, is of regional and global importance. Although recent influential research suggests that the vegetation on the Tibetan Plateau has been greening, or improving, local yak herders in Nagchu (Tibetan Autonomous Region, China) report that their grassland has deteriorated. To understand this discrepancy, we critically analysed and contrasted remote sensing observations and ethnographic accounts within the framework of valuation studies. We argue that these seemingly contradictory observations are not mutually exclusive because the remote sensing data mainly focuses on the spatial vegetation coverage, whereas herders care about vegetation height and its nutritional quality as yak fodder. Taking into account that these two sets of data evade a direct comparison, valuation studies help to understand in what respect the underlying perspectives and observations— i.e. remote sensing and local experiences—can be understood as social activities in which assessments are made based on different criteria. Our study argues that a pluralistic way of understanding the grassland dynamics helps to understand the complexity of the changing environment.

10:00 Ricardo Gellert Paris

Exploring the Limits of Remote Sensing: Transdisciplinarity in Land Conflict Research in Mozambique

ABSTRACT. This research critically examines the methodological limits of remote sensing and explores how transdisciplinary approaches can extend its analytical reach, enrich its interpretations, and challenge epistemic assumptions. The implementation of the Nacala Development Corridor in northern Mozambique provides a compelling site for this question, where biophysical transformations are consequences and/or drivers of complex socio-political dynamics. Here, the expansion of the agricultural and extractive frontier walks hand in hand with socio-political conflicts, leading to new arrangements among local social actors. Revealing the entanglement of environmental change and political conflict.

To address these complexities, the study explores transdisciplinarity to navigate spatial explicit and non-explicit methods. Drawing on ethnographic traditions of participant observation with special emphasis on transect walks, the research foregrounds embodied experiences, local perceptions of resource use, and situated knowledge of production practices. Remote sensing analyses employ multiscale datasets (planet imagery for community-level insights and Landsat data for regional patterns), alongside multiple indices to capture land cover dynamics.

Two empirical cases illustrate the phenomenon of socio-spatial transformations. The first, at the regional scale, cross-references land-related conflicts involving local communities and large-scale agribusiness with satellite data on land cover change. This comparison reveals the spatial and temporal patterns of politically driven conflicts and land-cover changes, a biophysical expression of human activities. The second case, located at the community level in Ribaue district, examines interactions among peasants, rural workers, middle-scale farmers, and non-human agents of spatial change, including technologies, market networks, and infrastructure. Long-term qualitative fieldwork is combined with remote sensing to validate or contest participants' narratives, surface hidden processes, and critically reflect on the researcher's own bias towards presumed findings. Together, these cases demonstrate how transdisciplinary practices can complicate, ground, and ultimately expand the interpretive power of remote sensing in contexts of land conflict.

09:00-10:30 Session 11G: T32: Histories in Times of Global Shifts

Chair:

Evelien de Hoop

Location: Carré 3B

Anique Hommels

Preparing for urban crises: Public shelters as 'infrastructures of preparedness' in times of turmoil

09:00 ABSTRACT. Current geopolitical tensions, the threat of (hybrid) warfare in Europe and climate-related disasters, have spawned discussion about the need to get better prepared for compound crises. In these discussions, the revitalization of public bunkers and shelters as critical infrastructures for the protection of citizens has emerged as a potential strategy. Focusing on both the Cold War period and the 2020s, this paper studies how in Dutch cities, the uses and meanings of shelters have changed over time (as objects for civil protection, cultural heritage, obsolete objects, (military) strategic objects, repurposed objects etc) and which crisis imaginaries they embody. Conceptually, the paper takes an infrastructural lens focusing on the debate about the 'de-infrastructuring' and 're-infrastructuring' of shelters and the role of obduracy in this process of transformation. Based on an analysis of archival documents on Dutch shelter design and use in the Cold War era, public safety reports and campaigns, newspaper articles as well as Dutch and

EU policy reports on civil preparedness, it addresses questions such as: What are the underlying discourses and assumptions regarding the nature, scope and potential impacts of the crises for which public bunkers and shelters were considered as (potential) solutions? How do past governmental decisions regarding bunker and shelter maintenance, investment, technological design, or austerity policies shape the current debate on their role in crisis preparedness in cities? By addressing these questions, this paper hopes to explore how 'the past' can be made usable for today's societal challenges.

Dario Amenophi Perfigli

Foreground and background relationality: addressing chemical design through technoscience and value regimes

ABSTRACT. We are all chemically polluted. This is a serious and urgent matter. Chemical pollution is not new; concerns have been present since at least the early 1960s. Yet despite decades of environmental debate, the situation has worsened. This paper reframes pollution not as a failure of molecules but as a crisis of historical and material imagination. Chemicals gain meaning and power through technoscientific apparatuses, value regimes, and infrastructures that connect past industrial formations with present interventions. We demonstrate that dominant responses, such as bans, restrictions, and redesign strategies, locate agency at the molecular level, moralise the chemist, and leave decision-making, mechanism exchange, and value creation intact.

09:22 Adopting a relational and historical STS perspective, we ask how chemicals become socially relevant across geographies and temporalities. Three moments anchor our analysis. First, the rise of the corporate research laboratory connected chemistry to stable regimes of value through patenting, managerial hierarchies, and industrial rationality. Second, the emergence of synthetic polymers, exemplified by Bakelite, showed that material success hinged on strategic connectivity to modernity's industry rather than intrinsic properties. Third, the consolidation of oil as the hegemonic feedstock established a technological zone that aligned pipelines, refineries, standards, capital, and governance, directing chemical design toward value extraction and cementing petrochemical power.

We conclude by contrasting polypropylene with bio-polypropylene: the latter's marginality stems less from technical limits than from weak social and infrastructural connectivity to prevailing regimes. For transformative change, "better" molecules are insufficient; what is required is contesting and reconfiguring the systems through which chemicals come into context, understanding the wider political-economic reality under which molecules gain value, circulate, and shape worlds.

Simone Schleper

Governing Crisis in Private: Environmental Imaginaries, Sustainable Development, and Alternative Sites of Global Governance since the 1970s

ABSTRACT. This paper reframes established histories of sustainable development by shifting attention from formal institutions and policy frameworks to the private and alternative settings in
09:44 which environmental and energy imaginaries were shaped during the global crises of the 1970s. It examines how postwar environmental and energy crises, shaped by decolonization, oil shocks, and growing concern over ecological limits, produced imaginaries that sought to reconcile environmental protection with continued economic growth. Rather than treating energy as a purely technical or geopolitical issue, the paper approaches it as a moral and epistemic site in which questions of development, planetary limits, and global responsibility were negotiated. Focusing on the private networks of Maurice Strong and Hanne Marstrand, the paper moves beyond official arenas such as UN conferences and international organizations to examine

informal gatherings in private homes and experimental settings in Geneva, Nairobi, the Canadian Rockies, and Crestone, Colorado. Drawing on archival correspondence, personal papers, and institutional records, it shows how these alternative sites that have been largely neglected in the historiography and literature on crisis governance functioned as spaces of experimentation where industrial philanthropy, cybernetics, New Age spiritualism, and development thinking intersected. Using the Strongs' model village of Crestone as a microhistorical lens, the paper reconstructs how histories of development and future energy possibilities were mobilized together to articulate flexible visions of planetary governance. While the ecological crisis was acknowledged, environmental limits were reframed as adaptable through technology, corporate participation, and moral reform. By foregrounding private governance networks and informal knowledge-making practices, the paper challenges linear, institution-centered narratives of sustainable development and highlights how crisis imaginaries forged outside formal policy arenas shaped the evolution of environmental and environmental imaginaries, extending to oil-backed techno-utopian or post-humanist environmental visions that resemble those of present-day elites.

Marije Miedema

Relational preservation: conceptualising our digital legacy amidst an ecological crisis

ABSTRACT. Big Tech's discourse taps into both the fear of forgetting and the promise of control over our personal digital past. Resulting in save-by-default strategies that are pushing planetary limits. Academic literature echoes these sentiments, frequently assuming that there is a common desire to preserve every memory. This talk aims to complicate this perspective by exploring the tension between the long-term valuation of our personal digital heritage and its long-term ecological effects. What are the consequences of these present valuation practices for future archivists, historians, and storytellers more broadly?

10:06 Personal digital heritage consists of personal, born-digital, and digitised material that is both consciously and unconsciously preserved. This presentation is informed by one of the result chapters of my dissertation and draws on long-term assemblage ethnography in the Netherlands. It involves two distinct contexts: (1) community centre visitors experiencing (temporary) socioeconomic difficulties, and (2) industry and public service professionals with whom I explored digital legacy, death, and heritage across different scales, sites, and practices.

With this talk, I hope to show how lived experiences with personal digital heritage practices in the present could impact historical analysis in the future. My observations point to different, more relational ways of preservation that challenge capitalist accumulation narratives. I witnessed the refusal of ratio, effect, and efficiency, and instead felt space for emotion, affect, and sufficiency. This paper aims to offer a different starting point for a heritage conceptualisation – one that reflects on how colonial and patriarchal views on technology permeate conversations about both the ecological impact of these technologies and the proposed solutions to them.

10:30-10:45Coffee Break

10:45-12:15 Session 12A: T31: Navigating the Digital–Science Nexus: Science and Technology Studies, Emerging Digital Technologies, and the Future of Knowledge

Chairs:

Shamira Ahmed and Laurens Hessels

Location: Ravelijn 4231

10:45 Meia van der Zee, Marthe Stevens, Anne-Floor Scholvinck and Laurens Hessels

The future of genAI in science: a backcasting exercise

ABSTRACT. The increasing use of generative AI (genAI) in scientific research has transformative effects on the science system, creating epistemological shifts, challenging existing modes of quality control, changing collaborative dynamics and shifting research funding priorities. GenAI brings potential benefits in terms of efficiency, research quality and democratization, but also poses serious risks for scientific integrity, reliability, equity, social and epistemic diversity, ownership, and autonomy. While policy makers and science studies scholars pay significant attention to the potential opportunities and risks of GenAI in the present, we signal the need for a long-term perspective, taking into account the disruptive and transformative effects genAI may have on the scientific system in the coming 10-15 years. The research question of this project is: how can co-created future visions about the development and use of genAI in science provide guidance to strategic decision-making by policy makers and managers in the (Dutch) science system? To address this question we use a backcasting methodology (Quist and Vergragt, 2006). Our first step was to formulate desirable future visions. Based on expert interviews, literature study, observations at relevant meetings and an interactive stakeholder workshop we have developed three visions for the role of genAI in science 2040: 'Accelerating Science' (driven by the values innovation and efficiency), 'Shared Science' (openness and inclusion), and 'Cautious Science' (scrupulousness and independence). Next steps in our project, to be conducted before the STS NL conference are (1) analyzing the current use of genAI in science, bottlenecks and policy interventions; (2) identifying creative solutions to bridge the gap between the present and desirable futures; and (3) prioritizing policy interventions in co-creation with stakeholders. In our presentation we will cover the results of the backcasting exercise, and evaluate its potential to facilitate future-proof science policy, in relation to the use of genAI.

Lea Stöter

The AI-Question in Academia: Exploring the Practices and Perceptions of Researchers using AI-driven Software

ABSTRACT. The use of artificial intelligence in knowledge production processes and in academia has been illuminated from different disciplinary perspectives, focusing e.g on authorship or academic integrity (e.g. Barros et al. 2023; Watermeyer et al. 2023). With the introduction of OpenAI's ChatGPT, and the associated API-access, the integration of LLMs in software tools for literature reviews or paper writing was simplified, impacting the ways knowledge is produced. Drawing on new materialism (Barad 2008) and situated knowledges (Haraway 1988) to investigate this knowledge produced by human researchers and their AI-driven tools, in this early-stage paper, I aim to present insights from an interview study with researchers from differing fields and career stages. In this study, I explore the use practices, justifications for and against AI-usage, as well as
11:15 the underlying conceptions about the integration of artificial intelligence tools into knowledge production processes using card-sorting techniques. Conceptualising the intra-actions between researchers and their tools as part of a decision space within knowledge production processes, I aim to make sense of the differences and similarities when employing other computational technologies within the research process compared to the usage of genAI. In this study, I explore the perceived implications for research methods, ethical and transparent research, and the understanding of what constitutes scientific knowledge. Following Vu's (2018) approach of 'thinking with' as analysing knowledge and practice as co-produced by multiplicities of human/material, I aim to attune to the multiple knowledges within these assemblages of researchers, digital technologies, and knowledge sources to understand what might be necessary for accountable research practices with AI-driven software.

(To note: As of submitting this abstract, interviews for this study are still being conducted and planned.)

Shamira Ahmed and Kutoma Wakunuma

Navigating Quantum Infrastructures: An Ecosystem-Level Approach to Responsible Research and Innovation in the Netherlands

ABSTRACT. As quantum information and communication technologies (QICT) become deeply integrated into complex information and communication technology (ICT) systems and critical information infrastructures (CII), they are reshaping the digital-science nexus, redefining the co-evolution of scientific knowledge production, digital transformation, and governance. This integration foregrounds the socio-technical nature of quantum innovation, in which technical capabilities, institutional arrangements, and normative assumptions are mutually constituted. In the Netherlands, national initiatives such as Quantum Delta NL position quantum computing, communication, and networking as strategic enablers of cloud infrastructures, hybrid quantum-classical data centres, cybersecurity architectures, and algorithmically enabled systems that underpin essential public services and economic functions. These developments embed quantum technologies within heterogeneous innovation ecosystems involving research institutions,
11:45 industry actors, government agencies, and infrastructure operators, thereby extending their societal relevance. Against this backdrop, this paper addresses the following research question: How can emerging use cases of QICT within Dutch critical information infrastructures be designed and governed in alignment with ecosystem-level responsible research and innovation (RRI) principles, given the evolving dynamics of the digital-science nexus? By focusing on CII as a site of socio-technical integration, the paper will build on Stahl's 2021 ecosystem approach to responsibility by extending core RRI dimensions on anticipatory governance, responsibility distribution and inclusion as well as reflexive innovation and responsiveness in quantum technology development from project-focused interventions to distributed governance arrangements across actors, infrastructures, and institutions. The aim is to explore how ecosystem-level RRI can guide the responsible embedding of QICT in national critical infrastructures and overall digital transformation, in the Netherlands. Methodologically, the research question will be explored through a document analysis of Dutch quantum strategies, policy programmes, and infrastructure initiatives, complemented by a focused case analysis of selected QICT use cases in critical infrastructures such as secure quantum communication networks and quantum-ready cloud services.

10:45-12:15 Session 12B: T13: Strengthening the Soil Humanities: Workshop

Chairs:

Marieke Meesters and Dienke Stomph

Location: Ravelijn 4237

Dienke Stomph, Marieke Meesters and Janell Matthews

Soil Futures Workshop

ABSTRACT. In this Soil Futures workshop, we aim to strengthen our collective presence as soil humanities and soil STS scholars vis-à-vis other domains. In the workshop, Janell Matthews will
10:45 first guide participants in exploring their personal relations with soils through making collages, which we then build upon to explore and create possibilities for (re)generation. The workshop will produce a zine that articulates our collective vision and strategies for engaging beyond the humanities. We welcome those who are just starting to explore soil as a research topic, as well as those who can draw on a wealth of experience in soil research.

This is the final session of the soil humanities track, which aims to connect scholars working on restoring and restorying soils as well as to strengthen our abilities for enabling change in soil

worlds, including though ecological restoration and decolonisation, policy reform, and epistemic shifts. Sign up for the workshop through this form to receive preparatory prompts, or drop in on the day!

https://forms.cloud.microsoft/e/TqeaZeEUVi

10:45-12:15 Session 12C: T7: Making Science Better?

Chair:

Yj Erden

Location: Ravelijn 3231

Amna Pottarath, Willem Halffman and Serge Horbach

Who Assesses What? Framing Expertise and Decision-Making in Peer Review

ABSTRACT. Peer review is a ubiquitous feature of science evaluation known for quality control and legitimacy, however, its processes and procedures remain complex and understudied (Reinhart & Schendzielorz, 2024), particularly in relation to how appropriate experts are selected and what gets assessed by them. This study examines how editors and reviewers frame, stretch, and delimit their expertise in relation to specific manuscripts, and how these practices shape what ultimately gets assessed in peer review. We conducted about 35 semi-structured qualitative interviews with editors, reviewers and authors of PLOS journals using a manuscript-centered approach, i.e., using a manuscript they handled recently as a focal point of the interview questions. To triangulate the interview data, the corresponding review reports for these manuscripts were also coded and analyzed.

Expertise is essentially knowledge delivered at the request of someone else who wants it and who configures the provider as knowledgeable (Grundmann, 2017). In case of peer review, this depends on how the editor frames the manuscript and their selection of reviewers often embeds assumptions about what kinds of expertise are valid/required to assess the paper. The analysis
10:45 shows that manuscripts are divided to assessable components such as topics or methods. Rather than any single actor claiming comprehensive expertise over the manuscript, assessment emerges through a division of tasks and responsibilities. Although this allows diverse forms of expertise/perspectives to contribute to peer review, it can also produce gaps in assessment, leaving certain aspects of manuscripts underexamined. It also creates the need for integration of the diverse forms of expertise, which tends to be a particularly challenging aspect of the editorial process. For instance, reviewers contribute to those aspects they feel competent to assess while assuming someone else will look into other areas. By foregrounding how expertise is situationally enacted and framed, the study contributes to a more nuanced understanding of peer review as a collaborative yet fragmented process of knowledge evaluation in contemporary scholarly publishing.

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11:15 Bart Penders and David Shaw

Imagining the Bureaucratic Modularity of Good Science

ABSTRACT. The pursuit of "good science" has long been a central ethos in the scientific community. Struggles over how to do science and how to do it well, are commonplace. However, what constitutes "good science," and how it is institutionalised in practice, differs remarkably across time and place. Institutions and organisations have established a range of mechanisms and structures to guide, support and evaluate the qualities of research, often under labels such as research integrity, research ethics or research quality.

While all these mechanisms and structures seek to create an environment in which science aspires to be “good”, technically, methodologically, morally and epistemically, their co-existence and the sometimes unclear boundaries between their mandates can also create vagueness and confusion among practising scientists.

Scientists hold diverse views on what these structures mean for their work. For some, they represent invaluable safeguards against error and misconduct, bolstering public trust in science. For others, they may appear as bureaucratic hurdles that stifle creativity or delay progress. This paper explores these tensions and examines how various support structures and perspectives intersect to highlight different "good sciences” and different moral economies that produce them. Preliminary findings suggest that scientists recognise different roles for institutional infrastructures in terms of temporality and targets, yet reject the institutional suggestions of complementarity or modularity and instead articulate incommensurable imaginaries of good, or better science.

Through investigating the perspectives of scientists and the frameworks within which they operate, we display the diversity and plurality of operationalisations of “good science” in practice and can connect existing infrastructures with evolving valuation regimes.

Joonha Jeon

Research Integrity at Scale: Paper Mills, Screening Tools, and the Reconfiguration of Publishability

ABSTRACT. Paper mills—black market entities selling fraudulent authorship and/or manuscript content for publications in academic journals—are attracting growing attention as a major threat to research integrity. Building on earlier issues like ghostwriting and predatory journals, paper mills exploit vulnerabilities in academic publishing at scale, shifting the focus of scientific misconduct from individual misbehavior to systematic manipulation. This crisis has prompted coordinated responses from multiple stakeholder groups including publishers, research institutions, and funders, with interventions that are actively reshaping the field.

This research specifically examines how research integrity tools designed and developed to combat
11:45 paper mills are reconfiguring the concept of "publishability", as it is situated and performed within industrial scholarly communication infrastructures by automating and augmenting integrity checks within submission and editorial workflows. The study draws on a scoping review of empirical studies on paper mills focusing on their operational patterns and proposed countermeasures complemented by a document analysis of grey literature and industry materials that catalog their positioning and promotion of solutions.

Preliminary findings show that paper mill detection and screening tools are increasingly relying on AI-based automation, framed by vendors as scalable solutions that are also efficient, saving time and scarce resources for editorial and peer review efforts. As paper mills are also widely alleged to utilize generative AI, this dynamic fosters an AI arms race that generates a new commercial market in research integrity, where both paper mills and vendors of research integrity tools pursue business opportunities through technological innovations and hence co-constitute an emerging research integrity economy. This market-making process with the adoption of these tools within

integrity and quality assurance systems in academic publishing not only how publishability is operationalized, but also broader conceptions of research integrity and quality.

10:45-12:15 Session 12D: T6: Changing Research Culture: Impact and Infrastructure

Chair:

Wolfgang Kaltenbrunner

Location: Ravelijn 3237

Sophie van der Does, Lotte Krabbenborg and Noelle Aarts

The impact agenda. Investigating practices and politics of producing science with impact

ABSTRACT. ABSTRACT TRACK 6 STS NL Sophie van der Does, Lotte Krabbenborg, Noelle Aarts

Since the 1970s, most governments in the Western world have increasingly emphasized the benefits to society of their financial investment in academic science (Mowery and Sampat 2005). One, and perhaps the most visible instance of this development has been the top down implementation of a so called 'impact agenda'. The impact agenda refers to a set of policy measures that seeks to bureaucratically assess the social, cultural and economic impact of scientific research in society (Kidd and Chubb, 2021). However, the implementation of this impact agenda does not come without consequences, as incentivizing societal impact places a double expectation on academic research cultures, now charged with both producing scientific and societal impact. Empirical studies point out that this double expectation produces tensions; research aimed at societal impact and 'traditional' academic research are seen as two different categories of practice with different values assigned to them (Bandola- Gill, 2019; D'Este, Ramos-Vielba et al. 2018). For example, incentive structures for most academics lead to publishing in high impact journals, often with an eye on achieving academic reputation in a given knowledge domain (D'Este et al, 2018).

This PhD research examines how tensions between producing science with impact, which is seen as problem-driven and assumes interactions between stakeholders and scientists, and 'traditional'
10:45 science, i.e. science as intellectually driven and 'inward oriented' are dealt with in practice. Empirically, we look at processes of producing science with impact in different settings in which actors attempt to make societal impact. We do so from a social practice perspective (Shove, Pantzar et al. 2012). In other words, this research looks at the ways in which societal impact that is expected and stimulated, materializes in practices. We do so by studying to the ways researchers, managers, stakeholders and other actors translate and realize a fuzzy policy concept like 'societal impact' in their daily work. In doing so, we explore how changes in governance of science through the introduction of the impact agenda affect academic research cultures downstream and how emerging tensions are dealt with in practice.

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Kidd, I. J., Chubb, J., & Forstenzer, J. (2021). Epistemic corruption and the research impact agenda. Theory and Research in Education, 19(2), 148-167. https://doi.org/10.1177/14778785211029516

Mowery and Sampat, 2005. Universities in national innovation systems. J. Fagerberg, D.C. Mowery, R.R. Nelson (Eds.), The Oxford Handbook of Innovation, Oxford University Press, Oxford.

Sapolsky, R. M. (2017). Behave: The biology of humans at our best and worst. Penguin Books.

Shove, E., Pantzar, M., & Watson, M. (2012). The Dynamics of Social Practice: Everyday Life and How it Changes. SAGE Publications Ltd. https://doi.org/10.4135/9781446250655

Timo Leimbach and Vedran Zerjav

Assetisation mechanisms in hybrid professions - Evidence from Project Management

ABSTRACT. Across many contemporary organizational fields, authority, coordination, and value creation are no longer primarily anchored in state licensing or legally enforced professional monopolies. Instead, they are increasingly produced through sociotechnical arrangements that render practice-based knowledge portable, examinable, and continuously updatable. Standards, certifications, metrics, and software platforms have become central organizing devices, yet existing theories struggle to explain how such arrangements stabilize authority and endure over time in the absence of legal jurisdiction.

This paper develops assetisation as a mid-range theory to address this puzzle. We conceptualize assetisation as the sociotechnical process through which heterogeneous and often tacit know-how is transformed into durable, value-bearing artifacts—standards, credentials, calculative devices, and platforms—whose authority depends on their portability, calculability, exclusivity, and updatability. Crucially, assetisation shifts analytical attention from the production of knowledge to its maintenance, highlighting the institutional work required to sustain knowledge as an asset over time.

11:15

The paper further argues that assetisation is coordinated by a triadic institutional engine composed of academic journals, professional bodies, and vendors or consultancies. Through their institutional coupling, this engine governs the durability of knowledge assets and substitutes functionally for legal jurisdiction. Rather than being unintended side effects, characteristic field-level dynamics emerge as structural outcomes of this coupling, including credential substitution for licensing, non-monotonic effects of standardization on interoperability, and performativity-induced blind spots that privilege calculable forms of value.

We develop these arguments through a theory-building analysis of project management, a field characterized by mature standards, extensive credential markets, strong platformization, and the absence of state licensing. The analysis demonstrates how authority is stabilized through asset governance rather than law and how sociotechnical infrastructures shape what counts as competence and value in practice.

The paper contributes to organization studies and science and technology studies by reframing professional authority as a problem of asset governance and by offering a transferable framework for analyzing how contemporary organizational fields are governed through standardized and platformized knowledge assets.

Andrea Scharnhorst and Hella Hollander

Archives and AI - opportunities and challenges for research data curation in a changing landscape of academic research

ABSTRACT. This paper looks into technology induced changes of research culture, in particular
11:45 data cultures, and their impact on research data archives. Research data archives as part of research infrastructures have increasingly become an object of study. [1,2,3] The current wave of technological innovation - generative AI - which so profoundly shakes the landscape of scholarly communication and the inner working of knowledge production in academia, not surprisingly also affects the processes of digital preservation and the services as provided by archives. This paper combines a reflection about the impact of new technology on the function of digital research

archives with a practice lens and a focus on ongoing policy making. We depart demonstrating about how archives in the cultural heritage domain embrace those new technologies, and at the same time try to confine and guide such technological impact by means of shaping new policies [4]. Very concretely we look into the DANS Data Station of Archaeology. This archive is the central access point for all archaeological data in the Netherlands. It contains over 165.000 datasets with a varied provenance, from academic research to certified archaeological commercial organizations to citizen scientists. The archive itself has innovated its services by participating in international and projects and networks such as ARIADNE [5], PARTHENOS [6], and SEADDA [7], and is well embedded in new trends in digital preservation. [8] The core of the paper concerns the question how trust is to be protected in the changing landscape of making research data. Trustworthiness is the very essence in the relationship between an archive and the (scientific) communities it serves. We ask: How can and should new technologies such as AI supported metadata enrichment become implemented? What policy should an archive apply if it comes to the preservation of data which might be created by humans and machines? What are the implications for the professional portfolio of data curators themselves?

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10:45-12:15 Session 12E: T15: Health and Care Shifts in Times of AI

Chairs:

Flora Lysen and Mareike Smolka

Location: Ravelijn 2231

Renate Baumgartner

10:45 Is participatory design enough? Methodologies for co-designing inclusive AI-based health technologies for and with people with COPD

ABSTRACT. Participatory design (PD) is often leveraged as the gold standard for co-developing inclusive AI-based health technologies, particularly when it comes to patients as users. PD involves multiple stakeholders, including patients, across iterative phases of observation, ideation, and prototyping. However, even participatory processes face challenges: marginalized groups often remain underrepresented because their needs are harder to accommodate than those of tech-savvy participants. As in any participatory process, micro decisions about whom to involve in the development can have a huge impact on the outcome. How can we move in the participatory design framework and leverage other methods that ideally might lead to a more thorough analysis of the field, to an (even) more reflexive development process and more inclusive technologies? This presentation draws on the development process of an AI-based mobile application for and with people with chronic obstructive pulmonary disease (COPD) within a Dutch project funded by NWO called DACIL. The project particularly centers people living in low socio-economic position in its co-development process. COPD patients living in a low socio-economic position often are low digital and health literate and are thus, particularly vulnerable to poor health outcomes. DACIL aims to co-create a wearable that monitors disease progression and provides personalized lifestyle advice. The project brings together an interdisciplinary team from medicine, computer science, health sciences, behavioral sciences, and science and technology studies, alongside technology partners and patient representatives. Beyond design thinking, the process incorporates reflexive monitoring in action, ensuring continuous reflection on goals, expectations, and patient perspectives throughout the development. By analysing this case, I explore how participatory and reflexive practices can address socio-technical challenges in designing AI-driven health technologies for marginalized populations.

Catharina van Leersum

Explainable AI visions by older adults and how they co-create AI in care and daily practices

ABSTRACT. Artificial Intelligence (AI) can improve personalized care and ageing in place. However, responsible embedding might be difficult without knowledge about users and their practices. Designers and researchers do not often actively involve the older adults, which results in designs that are probably less suitable to the lives and practices of older adults. Several studies have shown how design could be formed by ageism, especially in current AI developments. Design and development processes could benefit from involving the older adults to overcome ageism and possible biases incorporated into AI systems. In my previous work I explore the necessities and notions regarding explainable AI (XAI). What is explainability in the context of care and according
11:07 to older adults? This research showed that it is not such a simple topic. The needed level of explainability is diverse for individuals and in different contexts, it varies from knowing the algorithm towards practical knowledge. Although care stakeholders argue that older adults probably do not need explainability, the older adults show interest in XAI. Therefore, I currently aim to actively involve older adults to overcome ageism in the design and implementation of AI systems. By using co-creation methods it is possible to provide an environment for open collaboration and enhances generation of new perspectives from actual end-users. Therefore, I applied that approach to explore possible AI use in the lives of older adults. My current research assists older adults in investigating the question: “Where do you visualize and position AI in your life while ageing in a more and more digital society?” This question is leading during a creative session in which the older adults got an introduction about AI, after which they created personal scenarios and got into discussions about AI in their future lives, including care and daily practices.

Mira Vegter and Tessa van Rijssel

11:29 Reflecting on diabetes care through AI: Lessons from Leefmaatje

ABSTRACT. Chatbots in healthcare have been critiqued in terms of techno-solutionism as they reframe complex problems as easily solvable by AI (Sharon & Stiffels, 2024; Sharon 2025). For

example, claims on “empathic” chatbots are criticized for hollowing out the meaning of empathy, while also creating an orphan problem: they distract from the underlying issue that current healthcare lacks insufficient time and attention for genuine empathy to exist (Sharon 2025). In this presentation we want to discuss our findings as embedded ethicist in the development of a chatbot for patients with Diabetes mellitus type I. For over 30 days, a group of patients was given the opportunity to interact with a chatbot called Leefmaatje. Leefmaatje was designed to answer questions about managing ones disease in daily life. Observations within this project shed light on current diabetes care practices, and may actually reveal another orphan problem than the absence of empathy. First, current clinical encounters are to a great extent scripted by numbers resulting from glucose monitoring, rather than discussing real-life experiences. These consultations are not able to address questions as they occur throughout patients’ daily life, and often assume certain skills and knowledge. Moreover, experiences with Leefmaatje stir away from the assumption that patients want an empathetic chatbot or doctor: the chatbot was greatly appreciated for its neutral, non-judgmental responses to everyday questions. The so-called orphan problem in diabetes care might therefore actually be the suboptimal organization of current diabetes care. This is for instance reflected in the lack of agenda-setting in current clinical consultations, causing a disproportional focus on numbers and very little attention to navigating daily life and the questions that arise for patients within that context. We conclude that engaging and experimenting with this chatbot ultimately raises broader questions about how diabetes care can be most effectively organized.

Jill van der Kamp and Lotte Krabbenborg

In between use and non-use: evaluating implementation of digital home-based health screening in the lives of everyday publics

ABSTRACT. Background In recent years, we have seen an increase in the development of health technologies (Pols, 2012). Developers often have assumptions about prospective users and non-users which become materialized in technologies (van Lente, 2012). Yet, research has shown how people have creative ways of using technologies, that do not always match developers’ expectations (Oudshoorn, 2019). Scholars e.g. Wyatt (2003) and Weiner and Will (2018), showed that use/non-use are dynamic practices. Much remains unknown about people’s considerations whether or not to use technologies.

We studied why and how people do (not) use digital home-based screening technologies. Our case is embedded in the Check@Home case, which is developing a digital home-based screening for the early detection of chronic diseases. People have to perform digital self-tests, interpret results
11:51 and seek-out care.

Methods Interviews with people who have 1) not used the screening, 2) used the digital home-based tests but did not seek-out care, and 3) used the complete screening programme.

Results While Check@Home aims for detection of disease in individuals and promotes lifestyle changes, respondents used screening to assure themselves of their health and to contribute to scientific development. Respondents saw performing health tasks as a ‘civic duty’ to reduce work-load for health professionals and reduce costs for society. Check@Home strives towards an accessible technology for often-called “care avoiders”. Yet, people who did not use the screening, stopped participation at different phases of the screening process due to feelings of frustration, e.g. because they had trouble executing self-tests, anxiety, e.g. for the outcome of the tests, or distrusts, e.g. regarding reliability of self-testing.

Conclusion Our results confirm research on how use/non-use is shaped by personal values, e.g. good health. We add that for citizens that are not (yet) diagnosed, use/non-use is also shaped by societal expectations and values, e.g. responsibility to be good citizens.

10:45-12:15 Session 12F: T21: Orbiting and Hovering – Critical Remote Sensing and Volumetric Regimes

Chair:

Fran Meissner

Location: Ravelijn 2237

10:45

Anna Jacyszyn, Tobias Kerzenmacher, Sabine Barthlott, Genet Asefa Gesese, Sven Hertling, Sibylle Haßler, Felix Bach, Kerstin Soltau and Christian Bonatto Minella

Towards a FAIR-compliant Harmonised AI-based Automatic Metadata for Climate Research

ABSTRACT. In the petabyte era, climate research deals with large and extremely large datasets on a daily basis. Filling in metadata accompanying climate datasets is challenging in many cases. It can be time consuming, often leads to incomplete results and is very error prone. Arguably, most researchers fill only the minimal set of metadata required to publish their data (i.e. software, publication), mostly out of time constraints. The metadata fields are also not filled consistently. For the institution for example sometimes an abbreviation, while the other times the full name is used. There are multiple lower/upper case issues. Moreover, users do not always choose the same names for the same variables they are describing. In multiple cases there are FAIR compliance gaps (findable, accessible, interoperable, reusable).

In this talk, we present the idea of an automatic AI-based FAIR-compliant metadata for climate research in order to deal with the aforementioned challenges. Based on an interdisciplinary collaboration within the Leibniz Science Campus "Digital Transformation of Research" (DiTraRe), we created a work plan connecting researchers from the climate domain as well as computer science experts and infrastructure providers (RADAR). Within this framework, we aim to develop a scalable infrastructure that leverages natural language processing (NLP), knowledge graphs, and large language models (LLMs) to support the harmonisation and semantic alignment of metadata in climate research repositories. Our output will be a curated, machine-actionable metadata set that can support both the integration of scientific data and downstream AI research. We aim to deliver not only technical tools but also sustainable resources for the community, including an openly accessible metadata set and methods for its continuous extension and reuse.

11:15

Annika Reinke

Seeing like a Satellite? The Role of Space-based Valuations in Monitoring GHG Emissions

ABSTRACT. Earth Observation technologies comprise a central part of information-based infrastructures owned by public and – in the context of the emerging 'New Space Economy' – private entities. Promising to care for a distant future, they find multiple climate-related applications, including the anticipation of climate hazards and the sensing GHG emissions. The contribution seeks to answer how space-based visualising technologies for monitoring and modelling greenhouse gases enact "scopic valuations" (Dobeson 2016). Specifically, the contribution asks how satellite-derived sensing data for climate mitigation assemble a shared reality, thereby allow for a global form of coordination and create novel possibilities for accountability.

Hyperspectral imaging sensors are capable of measuring atmospheric GHG concentrations and tracking anthropogenic contributions to climate change. Thereby, they hold the promise to measure global GHG emissions more accurately than previous measurement methods. Space-based valuations are increasingly integrated into voluntary or mandatory GHG reporting practices, e.g., national emissions estimations under the 'Global Stocktake' or cap and trade markets. Hence, space-based climate monitoring tools can be conceptualised as "monitoring procedures and

sensors" (Callon 1998, 257) that create evidence for tangible processes – negative climate change-inducing externalities – within economic practices (ibid. 244, 257).

Drawing on conference ethnography, the contribution traces negotiations on how satellites' measurements refabricate the governance of GHG emissions as economic objects in the context of reporting practices. The insights of my conference ethnography also shed light on the implementation of space-based GHG monitoring infrastructure as a site of political struggle for space assets. Within this ongoing assetisation process, the reconfiguration of the public sector – enrolling the state as an investor or entrepreneur – becomes decisive (Birch/ Muniesa 2020, 19). Business models of private companies are salient in high-resolution monitoring practices, such as facility level methane leakages. Other companies nest their business model into open satellite-derived climate data that stems from public scientific-oriented satellite missions, such as low-resolution area flux mappers.

Susan Groenia, Giorgia Giardina, Joanne Vinke-de Kruijf, Leentje Volker and Andreas Hartmann

How the adoption of remote sensing technologies challenges asset management in municipal organisations: a case study of urban bridges and quay walls

ABSTRACT. Many infrastructure assets in the Netherlands are beyond their technical lifespan and are at risk of failure. This also applies to urban bridges and quay walls (UBQs) in historic cities. These UBQs exhibit signs of deterioration, and they require regular monitoring, inspection, and assessment. To reduce costs and nuisance while ensuring safety, municipalities are moving from traditional, labour-intensive inspections towards data-driven approaches. As part of this transition, municipalities are interested in using space-borne Interferometric Synthetic Aperture Radar (InSAR) technology. InSAR is a remote sensing technology that enables cost-effective monitoring of many assets at once and tracking long-term deformations at city-scale.

11:45 Despite these benefits, adopting InSAR into municipal UBQ asset management appears challenging. This study aims to identify and discuss the challenges that limit the adoption of remote sensing technologies in municipal organisations. To this end, we employed literature on innovation adoption in public organisations, and conducted a qualitative case study that examines how two large Dutch municipalities are adopting InSAR into their UBQ asset management. While both municipalities have an innovation program on UBQs, they differ in terms of organisation size and resources for asset management. We conducted semi-structured interviews with asset management practitioners and analysed municipal documents to identify technological and organisational challenges that limit the adoption of remote sensing.

Our findings show that both municipalities mostly face organisational challenges, such as (re)formalising monitoring methods and UBQ assessment standards. Furthermore, municipalities are challenged by continuously changing technological limitations and advancements, which affect the uncertainties in their UBQ safety assessments. This research provides insights into the innovation adoption challenges faced by municipal organisations when implementing InSAR into their UBQ asset management, and aims to motivate further research on the adoption of remote sensing technologies by public organisations.

10:45-12:15 Session 12G: T32: Histories in Times of Global Shifts: Roundtable

Location: Carré 3B

Evelien de Hoop, Andreas Weber, Sjamme van de Voort and Efi Nakopoulou

10:45 T32: Roundtable

ABSTRACT. Speakers: Roundtable speakers: Vivek Oak, Jeroen Oomen, Efthymia Nakopoulou, Andreas Weber and Sjamme van de Voort

A roundtable conversation with researchers active in the fields of history, memory studies, transdisciplinary STS, and related disciplines. Our goal is to generate a debate between forms of past-oriented and future-oriented intervention-based research. Questions that the roundtable will cover are: • What do we mean when we study 'crisis', and why do we (not) study crisis? • What is the role of 'pasts' in your study of crisis, or conversely, what has been the role of crisis in your field of study? • How does your study of pasts and/or of crisis (not) shape present and future possibilities? And what is the role of (digital) methods through which pasts (and time more broadly) are known in your work play therein? • Who counts as a knowledge-maker, and with what kind of responsibility, in such practices, within and beyond academia?

12:15-13:15 Session 13: Lunch Break & Poster Session

Location: Atrium Ravelijn

Sophia van Swaay, Funda Yildirim and Simone Borsci

Physiological Responses To Feedback In VR: Understanding Sustainable Consumer Behaviour

ABSTRACT. This research investigates the potential of immersive virtual reality (VR) to influence sustainable consumer decision-making in the context of climate change and routine consumption. By employing cumulative environmental feedback in a VR online grocery shopping simulation, participants (N=23) were expected to visualise the long-term consequences of their everyday choices through visual dynamic changes in weather conditions. The aim was to assess whether immersive environmental feedback impacts sustainable purchasing behaviour and how such feedback is reflected in physiological arousal. A controlled experimental design was adopted, in which participants were asked to repeatedly choose between eco-labelled and conventional food items while receiving either improving or deteriorating weather feedback. Furthermore, behavioural outcomes were analysed at the trial level using a mixed-effects logistic regression. Physiological responses were measured using electrocardiography (ECG) and galvanic skin response (GSR) sensors to assess heart rate (HR) and skin conductance (SC) as indicators of affective engagement. The study found that immersive feedback framing did not significantly shift participants' eco-friendly product selection in a short, low-stakes shopping task. Nonetheless, negative feedback elicited stronger SC responses, which indicates emotional or moral engagement despite the absence of behavioural change. These findings contribute to Science and Technology studies by highlighting the struggle to transform affective engagement into behavioural change. Ultimately, questioning the potential of immersive technologies to translate experiential knowledge of environmental consequences into sustained changes in everyday consumption practices.

Andrea Bertazzoli

Why "Neutral" Reporting Cannot Secure the Trustworthiness of a Commodified Science

ABSTRACT. While public distrust of science is a cause for concern, there are also legitimate reasons to question the trustworthiness of much scientific testimony. Among the most troubling is the pervasiveness of hype in scientific communication. In an increasingly competitive, commodified science system, scientists, institutions, and journals are driven to make their results more attractive and marketable. This, however, erodes credibility, dispelling the old myth of science as a disinterested endeavor. The dominant approach to countering hype aims to reverse this: treating hype as the corruption of otherwise objective reporting, much metascientific discourse prescribes standardized, cautious, "neutral" reporting as the antidote. In this philosophical piece, I argue that this solution is ill-suited to improving science's actual trustworthiness. The strategy of "just reporting the facts" risks reviving the Victorian myth of a value-free science as well as a purely negative conception of scientific

responsibility, centered on detachment and restraint. This, however, would represent a significant step backward from our advancements in understanding science as value-laden. Moreover, the "just the facts" approach does not shield scientific reporting from perverse incentives; it can actually align well with them. In a commodified science system, even ostensibly neutral language can serve reputational aims over responsible communication. The same structures that reward bold claims can indeed reward the performance of rigor and caution without ensuring trustworthiness. "Neutral" and "hyped" language in science communication should therefore not be seen as opposites, as much metascience assumes; both can be more focused on making findings attractive than responsible.

Sage Cammers-Goodwin

Drowning Technology in Ethics: Why EU Grant Structure is Increasingly Prone to Ethics Washing and What to Do About It

ABSTRACT. Despite benefiting from injustice overseas, the lofty ideals of ethics and justice the European Union (EU) promised to its own citizens has, nevertheless, helped set the global standard for human rights, especially in the tech sector. This can be demonstrated by regulations such as the General Data Protection Act (GDPR) and the AI Act forcing tech companies to scramble to put human right protections in place in order to access the European market. Unfortunately, it appears that this European barricade is wearing thin and protections for people are instead being viewed as blockades to (a capitalist, techno-deterministic notion of) human progress. The EU is facing increasing internal turmoil as perceived threats loom from all directions, including questionable allies like the ever erratic and overly armored United States, territory hungry Russia, synchronized and self-reliant China, and fortifying former colonies unlikely to feel pity for nations that pilfered, dissected and terrorized them. In order to maintain a sense of moral superiority while maintaining relevance and security from the aforementioned threats, the EU appears to be rolling full throttle towards high tech solutions with an asterisks of creating them on a morally higher ground. Money flows into new and perhaps questionable innovations with the promise that what will be explored must be made ethical. This puts STS scholars and philosophers in a precarious position where research budgets may only be primarily available for unjustifiable technologies such as AI military drones, where reporting structures offer no leeway besides the grant "succeeding," further developing an "ethical" instance of the technology even if no such instance exists. This paper further problematizes the concern of EU funded ethics washing and provides possible solutions in light of the current global context.

Yelyzaveta Terentieva

Critical Dataset Studies: Culture, Labour, and the Making of Deep Learning Systems

ABSTRACT. Deep learning systems are often discussed as technologies that process and transform culture. This paper argues that cultural effects of deep learning are already shaped earlier in the pipeline, at the level of dataset formation. Using genealogical field mapping, the paper examines how exploitative labour, bias, and representational problems are conceptualised within critical dataset studies, and traces how this field emerged from earlier critiques of big data and critical data studies. The analysis shows that while many scholars address ethics, labour, and fairness in dataset production, dataset work itself remains under-theorised as a cultural and socio-technical practice. In particular, data labour is persistently undervalued, accountability for dataset decisions is diffuse, and representational biases are often treated as downstream problems rather than as conditions of dataset construction. These dynamics shape what deep learning systems can recognise, classify, and reproduce, embedding cultural assumptions and power relations into AI systems before model training begins. By foregrounding datasets as cultural infrastructures of deep learning, this paper contributes to ongoing debates on deep learning and culture by shifting attention from model outputs to the socio-technical conditions of data production. It argues that ethical and cultural critiques of deep learning remain limited if they overlook dataset formation practices. The paper concludes by suggesting the integration of the Socio-Technical Integration Research (STIR) framework and data feminist approaches as ways to

enable earlier reflection, clearer accountability, and more inclusive forms of cultural representation in dataset work.

Xu Xu and Qiao Yan

When Language Produces: Post-Structuralist Risk Analysis of ChatGPT as a World-Making Infrastructure

ABSTRACT. Large language models (LLMs) such as ChatGPT do not merely use language; they operationalize language as a sociotechnical infrastructure that shapes salience, credibility, and action under uncertainty (MacKenzie and Wajcman 1985; Pinch and Bijker 1987). From a post-structuralist and onto-epistemological standpoint, language is not a neutral medium but a condition of subject formation and meaning-making; consequently, LLM-generated discourse can participate in "world-making" by reorganizing interpretive authority and perceived agency (Barad 2003). The central risk, therefore, is not exhausted by factual error, but concerns how natural-language generation modulates affective uptake (e.g., confidence, anxiety, resignation) and thereby relocates decision thresholds in everyday judgment and public communication (Polanyi 1958; Whorf 1956).

This paper develops an STS diagnosis in three steps. First, it analyzes how LLM interaction compresses the boundary between calculation and conversation, producing persuasive "as-if" semantics that may invite epistemic deference beyond warrant (Turing 1950; Floridi and Chiriatti 2020). Second, it reconstructs a semiotic–affective coupling mechanism: credibility is co-produced by textual form, platform affordances, and users' affective orientations, rather than by propositional accuracy alone (Barad 2003). Third, it examines responsibility drift in deployment contexts, where agency and accountability are redistributed across users, model providers, and institutions in ways that can obscure traceability (Winner 1977).

The paper concludes by proposing governance-oriented criteria for "linguistic risk" that complement accuracy metrics: maintaining inspectable evidence trails, auditing interface-induced affective modulation, and specifying responsibility allocations for high-stakes use settings (MacKenzie and Wajcman 1985; Pinch and Bijker 1987).

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Teresa Bertogna, Andrea Stoevenbelt, Ole Gmelin and Maarten Derksen

Researcher identity and its definitions

ABSTRACT. Research is one of the main tasks of junior and senior academics alike. How one conducts research depends on their field and their training, but also on their researcher identity, i.e. how/whether someone perceives themselves as a researcher. Researcher identity can influence the researcher's choice

of methods and topics, as well as how they interact with their academic environment. Thus, researcher identity is an important factor when it comes to how and what kind of research is being conducted. Despite its importance, researcher identity is a very ill-defined term, with varying conceptualisations within the literature. Additionally, some authors use different terms to talk about researcher identity (e.g., they use the terms "researcher identity" and "academic identity" interchangeably). However, there is disagreement as to whether this is appropriate, as other authors explicitly distinguish between researcher and other identities. This unclarity in regards to definitions and confusion about what each term is used for makes it difficult to find relevant literature and to integrate results into a larger body of knowledge. Thus, this literature review aimed to: 1) find and analyse the definitions of researcher identity present in the literature on researcher identity; and 2) provide an overview of what other terms are used to talk about researcher identity within the literature on researcher identity. This literature review examined 28 definitions of researcher identity using qualitative methods of analysis, and resulted in an overview of what kinds of definitions are used in the literature, and what are their characteristics.

Su Yun Woo

AI-Mediated Citizen Participation in China: Where sociotechnical mediation shapes governance logics

ABSTRACT. As a front runner in AI technologies, China increasingly rely on artificial intelligence (AI) to process, filter, and translate citizen inputs into administrative action. While these systems are often framed as tools for efficiency, responsiveness, and innovation, their implications for citizen voice, participation, and governance remain insufficiently understood. This poster presents an emerging research agenda that examines AI not merely as a technical instrument, but as a sociotechnical mediator that actively shapes participation practices and governance outcomes. The central research question guiding this project is: How is AI used to mediate and shape citizen participation in China, and what governance logics underpin these sociotechnical arrangements? Conceptually, the project first distinguishes between AI's mediating functions (e.g. classification, routing, filtering, sentiment analysis) and its shaping effects, such as structuring participation formats, prioritising certain forms of input, followed by examining how these functions impact how citizen feedback is translated into policy or administrative responses. Particular attention is paid to tensions between inclusion and control, efficiency and deliberation, and participation and surveillance. Methodologically, the project seeks to initially conduct a systematic mapping study of the existing literature on AI-enabled citizen participation in China, drawing on STS-informed approaches to technology and governance. This first phase of research undertakes a structured literature screening and qualitative coding to identify dominant AI functions, participation formats, and underlying governance rationalities. The mapping study serves as a foundation for subsequent qualitative comparative case studies of concrete participation platforms, or even potential fieldwork in China to interview important stakeholders (dependent on field access and funding). By situating AI-mediated participation within broader debates on sociotechnical governance, this research contributes to STS discussions on how emerging technologies reconfigure political voice, state–citizen relations, and the meaning of participation under authoritarian conditions. Additionally, this research focusing on a dominant and dynamic authoritarian country and its utility of advance technology in political participation further contributes to the current crucial debates and reflection about democratic recession. The poster format is intended to invite methodological and conceptual feedback at an early stage of project development.

Ilias Makrodimitris and Efstathios Arapostathis

Governing Open Science in Greece: Politics of Representations, Visions, and Future Aspirations

ABSTRACT. This paper examines the emergence of Open Science in Greece within an analytical framework of knowledge politics and politics of visions and expectations. In this study, Open Science is not treated as a neutral technical/technocratic reform, but as a dynamic field of sociopolitical governance of knowledge. Particular emphasis is placed on the representations, practices, and policies shaping the adoption of Open Science within the Greek research ecosystem, as well as on the tensions

that emerge between European strategies and national specificities. The study highlights the inequalities and asymmetries produced through the uneven implementation of European policies, the significance of bottom-up initiatives, and the role of infrastructures as sociotechnical networks. The paper argues that that Open Science in Greece constitutes a field of deliberation for different stakeholders and different epistemic communities as well as an arena of negotiation between democratic values, technocratic rationales, and economic strategies. The process of its emergence underscores the need for a coherent, socially sensitive, and institutionally anchored model of knowledge governance. Methodologically, the research is based on qualitative analysis, drawing on semi-structured interviews with researchers and professionals actively involved in national and European Open Science initiatives, combined with an analysis of institutional and policy documents from Greece and the European Union. The research findings indicate that Open Science in Greece is primarily perceived as a combination of the democratization of scientific knowledge and the removal of access barriers, alongside technocratic and market-oriented logics. At the same time, it is accompanied by significant obstacles, such as the lack of stable infrastructures, sustainable funding, and a binding institutional framework for implementation.

Wisse Van Engelen

Porous Fences and Elephant Agencies: Rethinking Infrastructure in the Okavango Delta

ABSTRACT. Despite a recent surge of literature on infrastructure and space, infrastructure breakdown in many domains continues to be presented as the result of technical failure, neglect of maintenance, or human sabotage. Infrastructure breakdown is thus mostly cast as abnormal and as caused by deficient materials or disobedient humans, reproducing normative ideas that successful infrastructure should be stable in its environment and work according to its initial designs. In this paper, we challenge this anthropo- and Eurocentric understanding of infrastructure. Drawing on more-than-human and postcolonial geographies, we present a case study of a 240-kilometer long fence that was erected in the Okavango Delta in northern Botswana and that is seasonally being broken by elephants. As elephants construct their pathways across the fence, we show that the fence breakdown is part of an interspecies negotiation over how to order the landscape. We understand this as elephant counter-infrastructuring and examine varied, partial, and ambivalent responses to elephant activities. When we foreground perspectives from Botswana in this way, we no longer see a stable and fixed infrastructure that fails in ordering space, but an open-ended infrastructure that succeeds in accommodating multiple, conflicting demands and interests. Counterintuitively, we thus argue for the virtues of a porous fence: It may actually be the best infrastructural compromise possible in politically fraught negotiations over this landscape.

13:15-14:45 Session 14: Keynote plenary Harro van Lente & Annapurna Mamidipudi

Keynote Plenary: Between local and global - is STS stuck?

Location: Horst C101

14:45-15:15Coffee Break

15:15-16:45 Session 15A: OT: Approaches to Knowing I

Chair:

Tom Coenen

Location: Ravelijn 4231

15:15 Vedran Zerjav

Enacting Futures Through Valuation: Sociomaterial Practices of Prediction in Public Investment

ABSTRACT. How do predictive artefacts and evaluation regimes make certain futures tangible while rendering others impossible to articulate? We discuss a conceptual framework for understanding prediction as a sociomaterial practice in the governance of major public investments. These projects—transport, energy, digital infrastructure—are justified through formal evaluation devices such as cost–benefit analyses, risk registers and performance indicators. While presented as neutral tools, these devices enact specific worlds: they stabilise some value configurations and foreclose others, shaping what counts as legitimate knowledge and acceptable futures.

Building on Science and Technology Studies and valuation research, the research integrates four strands. First, modes of existence and non-existence conceptualise technical, legal, political and moral regimes as distinct ways of establishing validity, and show how futures become practically 'non-existent' through procedural moves and omissions (Latour, 2013; Valkenburg, 2020). Second, a typology of value modes—technical, economic, organisational, political, legal, environmental, moral and representational—captures the plurality of logics mobilised in project governance (Zerjav, 2021). Third, valuation studies frame evaluation as sequences of tests and demonstrations with emergent causal powers: once stabilised, they lock in trajectories and exclude alternatives (Muniesa, 2011; Muniesa, 2017; Elder-Vass, 2022). Finally, recent work on futures and inference highlights the inferential labour behind scenarios and counterfactuals, suggesting that making futures tangible requires explicit chains of reasoning from documentary traces to plausible pathways (Navarrete et al., 2020).

We argue that predictive knowledge in public investment is not a passive forecast but an active sociomaterial arrangement. Evaluation devices and procedures do not merely compare options; they enact futures by configuring value modes, legitimising some imaginaries and silencing others. This conceptual synthesis advances STS debates on prediction and valuation by showing how epistemic agency is distributed across artefacts, practices and institutional logics, and by proposing a vocabulary for researching futures as enacted rather than anticipated.

Mirella Schrijvers and Amber Geurts

Identifying future control points in the economy: The startup complexity index

ABSTRACT. In this time of geopolitical and economic uncertainty, a number of challenges and crises - including the COVID-19 pandemic, the unravelling energy transition, the Russian war in Ukraine, instability in the Middle East, and US-China trade tensions – have exposed economic vulnerabilities and global dependencies between countries and continents that are becoming more of a liability (Damen, 2022). In the EU and various other countries there are fears of losing ground in key technological areas such as battery production, artificial intelligence, cybersecurity, clean energy technologies, and medicines (Edler et al., 2024; Kroll,2024). As a result, countries are trying to preserve their own and their firms' ability to act strategically and autonomously, and produce
15:45 and use technological knowledge in a time of intensifying geopolitical and geo-economic competition. Identifying current positions of control (TNO, 2024) is quickly becoming a necessity in these times of geopolitical and geo-economic concerns. This study goes one step further and aims to identify potential future control points in the economy that assure future competitiveness (Draghi, 2024). To find future control points we use company data from Dealroom. This database includes innovative startups and scale-ups which are developing products using new technologies. As these startups are already commercializing their innovations this is more closely related to future economic activity than, for instance, publication or patent data. We analyze this data building on economic complexity methods as proposed by Hidalgo and Hausman (2009) and refined by Tachella et al. (2012). These indicators show whether outputs are relatively simple or complex to produce by analyzing how many countries are able to produce these outputs (ubiquity) and which other outputs these countries produce (diversification). The findings show the countries with the most complex startup economies as evidenced by the highest score on the startup

complexity index. Analyzing the countries that are strong in the most complex startup sectors points us towards potential future control points. These control points are likely to emerge in clusters of complex startups with unique and hard to replicate activities.

Bruna Karl, Isabel Martins and Lucy Avraamidou

CDA as a theoretical lens for studying contemporary STS related issues: discursive disputes around sustainability

ABSTRACT. This paper discusses potential contributions of Critical Discourse Analysis (CDA) for expanding STS research agenda by exploring ideological effects and power disputes which constitute contemporary discourses on sustainability as found in two exemplars of widely used Brazilian and Dutch secondary school Physics textbooks. Sustainability can be understood as one of the urgent and cross-cutting issues of contemporary society, encompassing social, environmental, economic, and cultural dimensions that call for effective and collaborative solutions in times of environmental crisis, particularly with regard to the maintenance of social justice, democracy, and the contributions of environmental education. STS perspectives have emphasised that science and technology are not neutral social practices, but historically situated and permeated by diverse interests and values, whether cultural, environmental, economic, or political. In educational contexts, this perspective aims at fostering students' abilities to understand, question, and propose sociopolitical actions concerning sustainability, which involve responsible participation and a commitment to social justice. CDA understands discourse as both
16:15 constitutive of and constituted by social practices, while also contributing to the maintenance or transformation of power structures. By articulating conjunctural and textual analyses, it allows to investigate ways through which meanings of sustainability are produced, naturalised, or legitimised in discourse, CDA can shed light on how specific conceptions on human-environment relationships may become hegemonic or marginalised in different sociopolitical contexts. Discursive disputes around sustainability – in society as well as in specific genres such as textbooks – involve tensions between competing notions of preservation and natural resource exploration, Education for Sustainable Development interpretations, developmentalist growth-centred discourses, concepts such as de-growth and negotiations between local and global framings. A preliminary analysis shows that, in the Netherlands, sustainability is addressed cross-disciplinarily, grounded on urban daily-life contexts, and focusing energy efficiency and emission reduction. In Brazil, debates emphasise environmental and economic dimensions, referencing the Amazon region, electric vehicles, and entrepreneurship. While Brazilian textbooks make more explicit intertextual connections, with both historical and media texts, Dutch textbooks tend to articulate conceptual approaches related to different natural science disciplines. In both contexts, growth-oriented development models are naturalized; considerations about historical and Indigenous perspectives are incipient; and sustainability is framed in terms of society's consumption demands and conceptual discussions of energy-related physics topics with limited democratic engagement.

15:15-16:45 Session 15B: T11: Rural-Urban Knowledge Infrastructures for Transformation

Chair:

Steven McGreevy

Location: Ravelijn 4237

Catherine Koekoek

15:15 On amplifying, facilitating and building alliances: democratic infrastructures for transformation

ABSTRACT. The knowledge embedded in everyday experiences and bottom-up practices is often overlooked, or seems to operate at too small a scale to address the all-encompassing challenges

posed by interlocking eco-social crises. Democratic theories of prefiguration and commoning respond to this lacuna and are well-equipped to study how alternative practices, including artistic, community-based and protest practices, embody "the kind of radical change that they aspire to bring about on a much grander scale in the future" (Sande 2019, 227). However, how such alternative world-building 'aligns' (Von Redecker 2021) to realise durable political change within existing democratic systems often remains unclear. I propose that the concept of 'democratic infrastructures' offers a useful tool to understand how seemingly small-scale practices of 'everyday living' connect with larger institutional, political or cultural transformation. Firstly, democratic infrastructures make visible how different temporalities of political action are connected: for instance, how moments of radical protest or refusal, can later lead to the building of durable alternative spaces, practices and institutions. Secondly, democratic infrastructures connect different sites of political action: progressive institutional policy might for instance be driven by bottom-up (counter-institutional) initiatives, which are in turn further enabled by a change in policy. Based on this spatial and relational understanding of democracy, I wish to contribute to an understanding of transformative change that solidly recognises the connections between informal and self-organised initiatives, and institutional change. To further concretise this conceptual account, I focus on two figures: the amplifier, and the facilitator. These are people (e.g. community development workers, speakers for the living or government advisors) who make connections between different worlds, norms, or systems. They both – in different ways – build alliances for transformation between different sites and temporalities of change. Finally I ask: what would it mean for academics to act as amplifier or facilitator of transformative change?

Tamalone van den Eijnden and Natasha Hulst

'Commons-literacies' for activating rurban futures: Lessons learned on cultivating a new (knowledge) practice for commoning at the rural edges of Amsterdam

ABSTRACT. The current situation of land politics for urban farming in Amsterdam upholds a regime that stimulates competition and which is highly vulnerable to the financialization and value-extraction of the land. Alternative rurban futures require modes of governing space and ownership in ways that break away from dominant capitalist practices. Commoning is one such alternative mode that is capable of displacing financial interests so that other social-ecological values have a chance of flourishing. However, for this purpose 'prospective commoners' who have been socialized within a mainly capitalist paradigm, need to foster and learn new vocabularies and
15:45 practices that articulate the alternative ecologies, economies and ontologies that constitute the commons. We refer to these alternative vocabularies and practices as a 'commons literacy'. Within this paper presentation, we examine: what is a commons-literacy and how can we further develop this? For this we draw on the experience of Voedselpark Amsterdam in making land available for ecological urban agriculture and building communities capable of governing the land as a commons. We examine how we can cultivate a commons-literacy through conversations, workshops, research and collectively setting up governance structures. We will critically reflect on where the lack of a shared 'commons-literacy' leads to frictions and how Voedselpark Amsterdam has developed new creative vocabularies that allow to articulate alternative modes of valuing the land and organizing finance. This, we show, is an embodied and experiential process. However, while it is necessarily rooted in local communities and circumstances, as a set of (knowledge) practices, there is a continuous exchange with other communities and circumstances.

Liam Ó Riada, Esther Turnhout and Unai Pascual

Beyond niche innovations and scaling: Transformative change as struggle
16:15

ABSTRACT. Despite widespread acknowledgement that contemporary social-ecological crises demand profound change, dominant sustainability frameworks continue to rely on the same modernist logics – growth, progress, and innovation – that have contributed to these crises. While

recent scholarship and policy debates increasingly invoke 'transformative change', much of the sustainability transitions literature remains shaped by modernist assumptions, particularly through its emphasis on niches, innovation, disruption, and scaling. Although these concepts have generated valuable insights, they risk depoliticising transformation by obscuring structural constraints and struggles over imaginaries. This paper addresses the question of how transformative change can move beyond modernist framings. We address this question by drawing on social movement scholarship and presenting materials from two case studies: schoolyard greening initiatives in the Basque city of Vitoria-Gasteiz and an initiative to create a food park in Amsterdam. Our findings show that when these initiatives are framed as niche innovations that need to be scaled, they become constrained by modernist logics, leading to lock-in. Conversely, when they are understood as part of broader struggles – for transformative sustainability education and for commoning, respectively – they reveal leverage points to contribute to transformative change. Based on our analysis, we propose to conceptualize Transformative Change as struggle, foregrounding conflict and contestation over worldviews.

15:15-16:45 Session 15C: T7: Making Science Better?

Chair:

Serge Horbach

Location: Ravelijn 3231

Miles MacLeod and Y J Erden

Exploring Scientific Bubbles: Lessons from other domains

ABSTRACT. Science is sometimes described as having "bubble-like" tendencies, whereby researchers and others create and perpetuate "hype-like" trends which can result in vast amounts of research into specific approaches untethered from concrete results. This costs resources. But why does this happen in science, a supposedly rational enterprise? In this paper we examine the relevance of the notion of a "scientific bubble", a concept related to "hype", to identify and explain such patterns. To do so we build on some initial applications of the economic bubble concept to science (e.g. Pedersen and Hendricks, 2014) by taking a systematic approach, first exploring an analogy between the structure and behaviour of economic bubbles and certain patterns in science, and then examining causes or indicators that might transfer (or have analogues) between the contexts.

15:15 Economic bubbles are commonly considered cases in which asset prices greatly exceed intrinsic valuations (Long 1990). As an 'asset' – the principal variable in economic bubble theory – we consider any scientific good which can generate new knowledge, e.g. scientific methods, approaches, hypotheses, new technologies. 'Prices' represent expectations scientific researchers have on the payoffs these goods might bring, e.g. new discoveries (epistemic value), increased status / rewards. These prices can then be speculated on and in turn overvalued.

With an analogy in place we then consider how causes of economic bubbles might translate to science: e.g. manipulation (misconduct), too much money chasing too few resources, normative conformity, herding (rational, irrational), hype, overpromising, emotional contagion, and others. We map the traits we identify to key cases (historical, current, potential) to assess the extent to which the analogy holds up, and to thereby draw inferences for the identification of causes, failures, and features for early identification of scientific bubbles and to explore differences between the concept of a bubble, and that of a hype cycle.

300 words

Indicative references and sources

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Ching-Han Kuo, Willem Halffman and Serge Horbach

Editorial Structure and Peer Reviewer Selection: A Comparative Study of PLOS Biology and PLOS ONE

ABSTRACT. In scholarly communication, peer reviewers are expected to filter out poor-quality research and improve papers through advice. Therefore, the selection of reviewers is crucial, as it fundamentally affects this quality assurance mechanism. Editors are primarily responsible for selecting reviewers. Existing literature has discussed editors' perspectives on reviewers' roles and editors' practices in reviewer selection. However, much current research approaches this topic from a self-reported perspective, and, drawing on the concept of attitude–behaviour inconsistency, what editors claim about their reviewer selection may not reflect their actual practice. To fill this gap, this study seeks to examine existing journal metadata quantitatively, using a quantitative
15:45 approach to understand who editors select as reviewers.

However, there is variation in the category of editors. Some journals rely heavily on in-house editors (i.e. staff editors), while others rely more heavily on external editors (usually called "academic editors"). How do differences in editorial categories affect the composition of peer reviewers? Using metadata from more than 30,000 articles published in PLOS Biology and PLOS ONE—as PLOS Biology has a strong internal editorial team, whereas PLOS ONE relies more on external editors—we will compare reviewer-panel characteristics across these journals. In addition, using social network analysis and scientometrics, collaboration and epistemic networks among reviewers, authors and editors will be constructed to assess how prior relational proximity differs between the two editorial models. The findings from this research will be compared with academic ideals regarding peer reviewer selection, thereby highlighting any inconsistencies and potential flaws that could be improved.

Andrea Reyes-Elizondo and Wolfgang Kaltenbrunner

Navigating the science system: research integrity and academic survival strategies

ABSTRACT. Institutional approaches to research integrity often frame it as an issue of information deficit that can be solved through documentation. This solution-oriented approach allows to
16:15 identify and deal with specific cases of misconduct but it does not consider the rationale behind them. Whereas significant research on scientific misconduct has focused on the motivations and its systemic incentives, in our approach we sought to explore the relation between misconduct and various forms of uncertainty. We propose to conceptualize QRPs as attempts by researchers to reconcile epistemic and social forms of uncertainty inherent to a knowledge production system embedded in a particular economic and social system. Our analysis is based on empirical material from 30 focus group interviews with 147 researchers of different levels of seniority and stakeholders

from the four main areas of research (humanities, social science, natural science incl. technical science, and medical science incl. biomedicine) carried out in 8 European countries between 2019-2020 (organized in the context of the Standard Operation Procedures for Research Integrity EU Horizon project). The coding process made use of an explorative approach, where the themes of QRPs and social uncertainty in academic careers emerged through an inductive coding procedure. In the researchers' accounts, misconduct was often described as part of a spectrum of shared practices that span various degrees of acceptability within a community. We have grouped these practices into various overarching "families": cutting corners, grey data practices, RI as box ticking, avoiding trouble, and writing practices. We argue that conceptualizing QRPs as efforts to reconcile epistemic and social forms of uncertainty allows to reconsider actions for discouraging them that go beyond normative and policing approaches. Further, recommendations for collective change in the endeavors of knowledge production are provided which stem from the researchers' own accounts during the interviews and existing literature.

15:15-16:45 Session 15D: T20: Ctrl+Shift+Lab: Living Labs as Value-Based Research Infrastructures for Goal-oriented Change in Times of Global Crises

Chair:

Marta Martorell Camps

Location: Ravelijn 3237

Marc Dijk and Nikolaj Kristensen

A Transdisciplinary Transformative Cycle (TTC) as a practices-based intervention framework for sustainability transformations

ABSTRACT. Climate change and other sustainability pressures are challenging urban areas and require fundamental and multiple adjustments to urban practices, infrastructures, competences, business models and policy incentives. While urban transformations can occur – and have occurred – spontaneously, inducing and steering urban transformations is a significant challenge.

Studies on sustainability transitions have called for experiments as a source of learning, because learning processes have the potential to influence, accelerate or reorient transitions. However, research on learning in sustainability transitions is still poor in conceptual clarity and empirical evidence. This leads to questions about the actual impact of experiments in practice, both concerning their transformative effect and their level of inclusivity.

15:15 This paper develops a transdisciplinary and cyclical approach for transformative interventions based on four elements: - A System of practices: a social-practices-based way of scoping and analyzing the challenge and current policy mix - Defining a portfolio of Living Lab experiments - A Reflection, Learning & Adaptation Cycle

Accordingly, it combines policy mix analysis with (urban) experimental approaches, addressing intervention through SPT elements like meanings, competences, and materialities. As an illustrative case study, we elaborate urban mobility transformations in Maastricht (The Netherlands, 2010 - 2030), including its entanglements with other relevant domains and practices like housing, shopping and urban planning. Our case study combines a retrospective analysis of car constraining policies with promoting car alternatives, with a prospective discussion on how to make policies more transitional.

The merit of this approach is that it goes beyond the mainstream transition (governance) concept of a simple regime shift from A to B through 'upscaling niches'. Instead, it is a more context-sensitive concept of 'distributed upscaling' of multiple adapted elements within reconfiguring

practices. This can help to develop more locally-tailored interventions to accelerate sustainability transitions for specific locations.

Marios Kalemis, Paul Upham and Sophie Nyborg

Narrating and Enacting the Campus Living Lab: A Comparative Analysis of Sustainability Imaginary Embeddedness.

ABSTRACT. Topic

This study examines University Campus Living Labs (UCLLs) as emerging mechanisms through which universities experiment with and demonstrate sustainability transitions. The research focuses on how the UCLL concept functions as both a collective vision and institutional practice, addressing the ambiguity and heterogeneity observed in campus living lab initiatives globally.

Research Question

The main research question investigates how campuses narrate and institutionalize the UCLL imaginary, from visions and narratives to governance structures and project pipelines. The study
15:37 aims to understand how universities actively construct and stabilize the "campus as a living lab" imaginary through socio-technical embedding, addressing the gap in systematic analysis of how sustainability agendas become anchored in the socio-material and procedural fabric of universities.

Methods

The study adopts a comparative literature-study based design analyzing 12 detailed case studies of Campus Living Labs and Smart Campus initiatives. Cases were purposefully selected to capture variation across geography, governance models, and degrees of institutionalization using maximum-variation sampling logic. The analysis applies reflexive thematic analysis within cases followed by cross-case synthesis to identify convergences, divergences, and meta-themes. The conceptual framework combines science and technology studies concepts of sociotechnical imaginaries and boundary objects to understand how UCLLs coordinate diverse actors while maintaining interpretive flexibility.

Julia Backhaus and Gudrun Rohde

Reflexive innovation in Living Labs: Novel knowledge infrastructures in times of global shifts

ABSTRACT. In times of intertwined socio-environmental, geopolitical, and technological crises, universities, particularly technical universities, are increasingly called upon to reconfigure how knowledge and technology are produced. Living Labs have emerged as prominent infrastructures within this shift, intended to institutionalise open and participatory experimentation that brings together researchers, citizens, policymakers, and industry actors. As such, Living Labs are often presented as key instruments for societal transformation, promising to connect scientific
15:59 knowledge production with democratic participation, social inclusion, and sustainability goals. At the same time, their expanding role raises important questions about responsibility, legitimacy, and the governance of innovation under conditions of uncertainty. Drawing on STS scholarship and literature on Responsible Research and Innovation (RRI), this contribution examines Living Labs as reflexive innovation settings. While they open up research processes to new actors and forms of expertise, they also introduce new constraints and expectations for academic work. Empirically, the paper is based on a case study of several Living Lab initiatives at a large technical university in Germany. We analyse how transdisciplinary, real-world experimentation reshapes relations between science and society in everyday research practice. The analysis highlights recurring tensions: between academic autonomy and societal relevance; between disciplinary standards and transdisciplinary collaboration; between fast-paced innovation and ethically

reflexive research; and between broad participation and control over experimental design and validity. Methodologically, we adopt a multi-level approach that connects local research practices to organisational structures, (inter)national policy frameworks, and global agendas such as the Sustainable Development Goals. Rather than proposing fixed normative solutions, we argue for a practice-based and reflexive understanding of Living Labs, in which responsibility is negotiated, relational, and often contested. In short, the presentation contributes to rethinking (and thus shaping) Living Labs as critical infrastructures for knowledge and technology production in times of global shifts.

Marta Martorell, Fatima Canseco-Lopez and Viviana Perez Clausen

Value-Based Methodologies for Knowledge and Technological Justice in Living Labs for Human Rights

ABSTRACT. In the face of accelerating global transitions, the infrastructures through which knowledge and technology are co-produced are subjected to increasing ethical, social, and political scrutiny. This contribution explores how Living Labs, as open, participatory and place-based innovation ecosystems, can serve as human rights infrastructures that advance technological justice, inclusion and democratic participation. Drawing on the recent EU Policy Recommendations for Integrating Living Labs in Framework Programme 10 (FP10) (ENoLL, 2024), the talk positions Living Labs within the broader European agenda, which recognises their role as key Research and Technology Infrastructures. These environments bridge research and societal
16:21 transformation by bringing together citizens, policymakers, researchers, and businesses in shared spaces of experimentation. Acting as trust brokers, Living Labs foster legitimacy and accountability across the Quadruple Helix (4-H), aligning with a user-centric, green, digital, and rights-based vision of innovation. The presentation introduces the Key Value (KV) and Key Value Indicators (KVI) framework, an emerging impact assessment methodology that translates ethical and public values into measurable outcomes. Moving beyond quantitative performance metrics, the KVI approach enables a shift from metrics to meaning by capturing how innovation and technology design contribute to collective well-being, social justice, and sustainability. A central case study, the digital and rural Living Labs in Senegal—developed by the i2CAT Foundation in collaboration with the Fonds de Développement du Service Universel des Télécommunications (FDSUT) and the Catalan Agency for Development Cooperation (CADC)—illustrates how international cooperation can localise Human Rights principles through digital and social innovation and connect the Global South and Europe in the co-creation of equitable futures.

15:15-16:45 Session 15E: T15: Health and Care Shifts in Times of AI

Chairs:

Lotte Krabbenborg and Karin van Leersum

Location: Ravelijn 2231

Hannah Piehl

A Case Study of the Development and Implementation of AI in Healthcare, or the Love of Technology

15:15 ABSTRACT. AI-based decision aids are frequently promoted by developers, tech companies and health care organizations as tools to improve shared decision-making, reduce overtreatment, and enhance patient autonomy. Yet many such tools struggle to become meaningfully embedded in clinical practice. This paper presents a work-in-progress case study of an AI-supported decision aid developed in the Netherlands to support patients with prostate cancer by providing personalized

information on treatment options and predicted side effects. Despite high expectations, the implementation of the tool was ultimately discontinued.

Inspired by Latour's "Aramis, or the Love of Technology" (1992), we examine how entangled social, organizational, and technological factors shape trust in AI-based decision aids, and how these dynamics help explain their implementation trajectories. The study is based on 15 semi-structured interviews with AI developers, clinicians, health scientists, employees of a decision-aid company, student assistants, and patient representatives, who were involved in the project. Through reflexive thematic analysis, the study traces how different actors understood the purpose of the tool, its place within clinical consultations and their roles in its development and use. In doing so, it shifts attention away from technical performance towards the relations, negotiations, and frictions through which trust in the tool was built, contested, and ultimately withdrawn.

Preliminary findings highlight tensions in understandings of medical and technological expertise, diverging expectations about the tool's role in consultations, and shifting doctor-patient relationships. These were compounded by practical and structural factors, including regulatory changes, complex multi-stakeholder arrangements, questions about the tool's clinical usefulness, and economic dependencies with an external company. The paper contributes to debates on trust, knowledge politics, and AI implementation by showing how discontinuation often materializes from frictions across socio-technical arrangements rather than a single point of failure.

Eliana Bergamin

Digital health, AI, and the shifting of (health)care values: Corporate-driven efficiency unquestioned

ABSTRACT. Artificial Intelligence (AI) is increasingly being introduced in the healthcare field through promissory discourses that present it as a potential solution to structural challenges such as rising costs, workforce shortages, and increasingly ageing population. While efficiency has long played a role in healthcare governance, particularly within regimes of regulated competition and technological intervention, this study argues that contemporary AI-driven digitalisation facilitates a shift toward what can be described as corporate-driven efficiency. Rather than just optimising existing practices, the introduction of AI enables corporate actors to enter healthcare and rearticulate efficiency through regimes of data collection, measurability, and standardization. Building on scholarship on sphere transgressions (Sharon, 2021; Sharon & Gellert, 2024; Walzer, 1983) and historical analyses of efficiency and automation (Alexander, 2008, 2009), this research develops an account of how AI acts as a vehicle for value migration across societal domains. Values originating in technical, managerial, and market spheres are increasingly enter healthcare, where they interact with – and often displace – sphere-specific commitments such as relationality and patient-centred care. This research argues that these value shifts represent normatively and politically charged crossings between different spheres. Drawing on empirical cases discussed in the literature on AI-supported homecare (Neves et al., 2024), medical chatbots (Sharon, 2025), and digital mental health technologies (Stein & Prost, 2024), the paper illustrates how corporate-driven efficiency becomes an operationalised value in concrete healthcare practices. These studies show how efficiency-oriented choices at the same time prioritise standardisation and measurability, while also reconfiguring care relations, professional roles, and emotional engagement. By conceptualising these developments as sphere transgressions rather than just the consequences of technical innovations, the paper contributes to STS debates on AI, health, and care by foregrounding how corporate actors reshape values, authority, and what counts as legitimate healthcare practice.

15:45

16:15 Claudia Egher, Susan van Hees and Wouter Boon

Care alignment: Holding together care and scale in the development of AI-based health data infrastructures

ABSTRACT. The promissory discourse surrounding AI-based health data infrastructures rests on scalability, on the expectation that data, tools, and practices can be standardized and implemented across diverse settings. In STS, scalability has often been contrasted with care, understood as situated, experimental practices through which specific relations are sustained (Law, 2014; Mol, 2008; de la Bellacasa, 2017). While scale is associated with abstraction and uniformity, care foregrounds attentiveness to difference, fragility, and contingency.

In this presentation, we start from the premise that AI-based health data infrastructures are shaped by the simultaneous demands of care and scale. Their development requires interoperable and standardized data, while also attending to the specificities of diseases, patients, research communities, etc. To examine how these demands are navigated in practice, we study IDEA4RC, a Horizon Europe–funded project developing a data ecosystem for rare cancers.

Building on work on scale (Tsing, 2012; Seaver, 2021), we argue that scalability does not displace care but is dependent on ongoing efforts to negotiate, translate, and partially align multiple forms of care. Based on a thematic analysis of project documents, 30 semi-structured interviews, three co-creation workshops, and over 200 hours of participant observation, we introduce the concept of care alignment. Care alignment refers to processes whereby heterogeneous ideals, needs, and attachments are negotiated so that multiple objects of care and modes of caring can be successfully orchestrated. The relationship between care and scale in AI-based health data infrastructures is thus marked not only by persistent tensions, but also by practical strategies of bringing and holding together different elements. Scalability is pursued by aligning data accumulation efforts with the management of unwanted data collection excesses, by promoting standard data access approaches while allowing flexible local requirements, and by fostering collaboration while retaining the lures of competitive advantages and reputational gains.

15:15-16:45 Session 15F: T3: Ethics and Technology in Practice

Chair:

Steven Dorrestijn

Location: Ravelijn 2237

15:15 Jodi Sturge, Nikita Sharda and Wouter Eggink

Outsourcing the Ethics of Care: Human-Robot-Healthcare Interaction

ABSTRACT. Healthcare environments face persistent challenges balancing staffing shortages with the provision of high-quality patient care. A promising solution is the use of social robots which have potential to support the transformation of healthcare delivery. They are already being deployed across various care settings, including long-term residential facilities and paediatric wards, to assist with operational tasks, diagnostics, and direct patient interaction. Alongside these promising developments, however, come important challenges related to trust, implementation, and adaptation. For instance, healthcare practitioners need ongoing resources, training, and ethical guidance to effectively integrate, coordinate, and troubleshoot technological systems in everyday care. Moreover, by adding robots to the system of caregiving, not only functional aspects of care are outsourced to the technology, however also the social and ethical aspects of "good care" are affected. In this paper, we introduce three social robots currently used in healthcare. We will then explore the research question how can a combined lens of mediation theory and Joan Tronto's ethics of care be used to frame and analyse the use and roles of such robots. We will examine how these frameworks can help us understand what constitutes "good robot care" and how this

understanding can better position the role of social robots within the care system and how they can reshape the future care experience. Through this ethical reflection, we will discuss how the functions and design of these robots can be envisioned and tailored to specific care tasks and environments, ensuring that technological innovation genuinely supports, rather than undermines, the ethical and relational aspects of care in practice.

Dulaj Perera, Wouter Eggink and Jairo da Costa Junior

Ethical Readiness for AI in Systemic Design Practice: Making Systemic Design Tools Adaptive, Inclusive, and Participatory Infrastructures

ABSTRACT. Systemic design approaches are widely used to address complex global challenges such as climate change. Central to these approaches are methods and tools for participatory mapping, modelling, and collective sense-making. In design-oriented Science and Technology Studies, such tools are understood as non-neutral mediators that shape how participation, knowledge production, and decision-making unfold (Sevaldson, 2011; Latour, 2002; Perera et al., 2025). As artificial intelligence is increasingly explored and debated across design research and practice, its integration into participatory and system-oriented design approaches, such as systemic design, raises questions about whether these practices are ethically ready to incorporate AI into their methodological repertoires.

This contribution draws on a participatory design workshop exploring Living System Maps, an approach that reimagines systemic design tools as adaptive, inclusive, and participatory
15:45 infrastructures, while examining the promise of AI to make such practices more accessible and supportive of collective sense-making (Perera et al., 2025). Participants worked with a pre-framed food systems map and engaged in reflective and speculative activities that explored the role of AI in collective sense-making through multiple imagined roles, framing AI as a supportive actor to enhance participation and inclusiveness.

In this paper, we present a retrospective analysis of the ethical reflections that emerged during the workshop using the Ethical Readiness Check (Dorrestijn & Eggink, 2018). Applied as an analytical lens at the level of practice, it helps articulate ethical concerns related to system framing, boundary-setting, shifting agency and responsibility, and potential unintended effects. These concerns appeared in fragmented, participant-specific ways rather than being embedded as a shared, repeatable practice of ethical reflection.

The study proposes that ethical readiness should be understood as a capacity of systemic design practice rather than a property of AI technologies alone. By linking experiential design work with structured ethical reflection, it can extend the CTA toolbox for AI-supported systemic design and can offer practical insights for embedding ethics amid complexity in uncertain times.

Nynke van Uffelen and Aarthi Sundaram

Making the invisible visible: A reflection method to help model developers and users uncover justice-related design choices in energy models

ABSTRACT. Energy models play a crucial role in shaping energy transitions, yet are often treated as objective and value-neutral tools. Increasingly, scholars and practitioners argue that justice should
16:15 be more explicitly linked to energy modelling, not only because of the intrinsic importance of justice, but also in response to growing contestation of top-down, techno-economic decision-making. So far, most efforts have focused on implementations of energy justice within the model logic, such as equity metrics or by including a variety of stakeholders through participatory modelling. However, such design choices embed assumptions of what justice entails in the given context, such as: who is recognized as a stakeholder, whose knowledge is represented, and whose interests are prioritized. Therefore, it is essential that model developers and users engage

reflexively with normative assumptions embedded within the modelling process. However, few concrete methods exist to support such reflection in practice. In this study, we ask: How and to what does extent does a method for joint reflection between model developers and users help identify assumptions and choices in the modelling process that have potential justice implications? We develop and test a reflection method that combines structured dialogue, creative exercises, and critical questioning, in the form of two workshops with developers and users of two policy-relevant energy models in the Netherlands: Energy Transition Model and Hestia. Our findings reveal six places where (in)justice reveals itself in energy models, namely in (1) model scoping and its consequences, (2) normative assumptions in models, (3) ability of models to steer policy choices, (4) modeller errors and uncertainties, (5) model complexity and barriers to understanding, (6) potential for model misuse. We conclude with implications for integrating reflexivity and justice awareness in energy modelling practice.

15:15-16:45 Session 15G: T8: Comparing Theoretical Lenses for Studying Contemporary Science-Society Interactions

Chair:

Laurens Hessels

Location: Carré 3B

Aisha So, Koen Beumer, Josephine Chambers and Ellen Moors

Braiding repertoires: using repertoire theory to analyze co-production processes between researchers and societal actors

ABSTRACT. Engaging with societal actors in direct co-production processes has been proposed as a desirable way for researchers to interact with society (Norström et al., 2020; Turnhout et al., 2020). Co-production is understood as the collaborative braiding-together of diverse knowledges by researchers and their collaborators (Chambers et al., 2021; Tengö et al., 2017). Although this way of collaborating ideally entails equitable decision-making and transformative outcomes, there are many challenges to co-production processes in practice (Turnhout et al., 2020; Chambers et al., 2022).

In response to these challenges, current co-production literature refers to the need to build trust and engage in continuous mutual learning, amongst other process-oriented factors (Djenontin & Meadow, 2018; Mach et al., 2020; Norström et al., 2020). But this understanding of co-production
15:15 does not address how structural particularities of the involved actor groups influence the collaboration process.

Building on foundational work that characterizes distinct research communities (Kuhn, 1962; Knorr-Cetina, 1999) we propose repertoire theory (Ankeny & Leonelli, 2016, 2021) as a useful lens to analyze how the structural characteristics of actor groups influence the co-production between them. Repertoires are patterns of conceptual, material, and socio-economic elements that structure the activities of actor groups. In this contribution, we extend the use of repertoire theory from characterizing (change in) research communities to analyzing co-production processes, both between different research communities but also between scientists and societal stakeholders. We draw on participant observation and 30 interviews in two transdisciplinary plant breeding innovation projects in the Netherlands and Tanzania to show how (mis)aligning elements from existing repertoires can constrain or enable co-production processes between actors, leading to particular ways in which these elements are braided into newly emerging repertoires. Repertoire theory illuminates how structural elements influence co-production processes between actors, while these elements are also being altered and created in the process.

Selen Eren

Pursuing better environmental knowledge in practice: Labouring connections and exploring supportive stories and skills

ABSTRACT. There is a substantial body of literature arguing that environmental sciences need to be transformed in order to produce "actionable," or "relevant" knowledge for societal transformations (Pohl et al. 2017; Beier et al. 2017). According to Turnhout et al. (2020), much of this literature neglects the question of why co-production or transdisciplinarity often fail to deliver on their promises. To address this gap, the authors call for a (re-)politicization of co-production processes by enabling contestation over interests, perspectives, and knowledge claims—without reverting to expectations of science as a provider of universally "best" solutions. Continuing her line of work, Turnhout (2024) later suggests that "dominant environmental science has become an obstacle for transformative change", serving the vested interests of capital and reinforcing colonial
15:45 power relations constitute a "core foundation" of science (p. 2). While this account provides a powerful structural critique of certain science–society relations, at times it presents a totalizing view of scientific practice that obscures its fragmentation, internal contradictions, and persistent trade-offs (e.g., transparency vs. security, uncertainty vs. distrust). Such totalizing accounts, in turn, may foreclose opportunities for building transformative alliances and for fostering co-learning.

Building on Green's (2020) distinction between Scientism and scientific research methods, and drawing on my recent experiences of facilitating a participatory modelling workshop, this paper explores what it means to pursue "better" environmental knowledge in practice: labouring connections by taking part in the messiness of (re)politicization. Inspired by Stengers' (2023) work on 'making sense in common', as well as by contributions from Lave and Lane (2025) and Green (2022) that blur methodological boundaries between the biophysical and social sciences, I will further explore the stories and skills needed to support labouring such connections amid the messiness of openendedness, contestation, and uncertainty.

Sevgi Fruytier, Carina Pittens and Ruth Peters

Accounting for in- and exclusions of diverse modes of patient and public involvement in medical research ethics review

ABSTRACT. In line with developments to promote, incentivise, and mandate science-society interactions, questions about patient and public involvement (PPI) in medical-scientific studies have recently been included in the national application form of the Dutch medical research ethics review, nudging scientists to do PPI and gathering input for review. However, how it should be accounted for in ethics review remains rather ambiguous. Therefore, we studied how PPI practices are designed and performed, in relation to their effects, to improve our understanding of what makes PPI meaningful. We analysed the answers to the PPI questions in the ethics review
16:15 application forms of 908 medical-scientific studies. From these 908 studies, a selected group of applicants was invited for an interview about their PPI practices (n=19). We employed Chilvers & Longhurst's (2016) public engagement framework to perform a comparative analysis of the active construction of PPI objects (the issue framings and visions), subjects (the involved patients and publics), and the models (involvement technologies or procedural formats). This framework helps us to not assume their value as pregiven but explore variety in in- and exclusions of actors, issues, and visions, and how these relate to their context in the broader medical-scientific research system. Our preliminary findings indicate that scientists' PPI visions and practices diverged in the level of actors' influence, the depth of decisions, and forms of representation and contributions, shaped by the systemic context and complementing or transforming their studies. Despite this diversity, scientists tend to focus on who and what was included, bounded by their preconceived notions of issues and subjects, rarely acknowledging the resulting exclusions. To meaningfully

account for PPI in ethics review, we argue that, instead of using a uniform standard, the inevitable partiality of all diverse modes of PPI should be recognized to reflect on their meaningfulness in particular circumstances.

15:15-16:45 Session 15H: T21: Orbiting and Hovering – Critical Remote Sensing and Volumetric Regimes - Picknick

16:45-17:00Coffee Break

17:00-18:30 Session 16A: OT: Approaches to Knowing II

Chair:

Anne Dijkstra

Location: Ravelijn 4231

17:00 Muhammad Unggul Karami and Julia Cramer

Engaging Quantum Futures: Expectations as a Bridge Between Science and Society

ABSTRACT. Contemporary science communication practices emphasise not only the dissemination of research result but also engagement with the public. In the context of emerging technologies, communication of impacts, predictions, and expectations, routinely can be found accompanying research result. To clarify this phenomenon, we draw on Science and Technology Studies, particularly the concept of expectation, which is central to how emerging technologies are communicated. Quantum technology is a suitable case because, despite uncertain impacts, growing attention suggests ongoing hype. We conducted a qualitative content analysis of highly cited papers regarding quantum technologies (2007-2023) to examine how expectations are articulated. Our findings suggest two dominant modes: use case and future projection. The use case frames quantum technology as a solution to (societal) problems. This problem-solving narrative provides a shared reference point for the broader public to engage with. While the tendency to use this narrative can be attributed to the medialisation of science, the current science evaluation practice, which places a strong emphasis on 'impact', also plays a role. The future projections articulate versions of the future in which quantum technology is mature and adopted, along with the anticipated pathways. In contrast to the use cases, future projection is more aimed towards fellow scientists. This orientation is reflected in the use of more technical terminology such as 'quantum algorithm', 'quantum memory', and 'quantum repeater'. Theoretically, we argue that expectations illuminate the mechanism of medialisation that permeates our scientific practice. Expectation, in the form of use case and future projection, articulates tangible future states, which then enables engagement both from inside the scientific sphere and eventually from the public through the media. In this sense, expectation serves as a connective element between the scientific sphere and the public sphere. It makes the scientific discoveries relatable to the public.

17:30 Bronte Isabella

Same artwork, different values: how art appraisers navigate uncertainty and information asymmetries in the art market

ABSTRACT. Art market data is a key tool employed by art appraisers to assess the value of art for formal financial moments, such as: auction, insurance, inheritance, or donation. The art market is characterised by information asymmetry: auction sales data is collated and available through databases (such as ArtPrice or Artnet), while dealers' prices remain largely opaque. Art appraisers navigate this uncertainty by using art market data to simulate otherwise inaccessible or unknowable data points. As a result, multipliers have emerged as a norm to determine value for

different purposes: auction value (1.0), inheritance (0.8–1.0), insurance (2.0–3.0), or donation (3.0–4.0). This phenomenon has arisen within professional practice, through a bottom-up adaptation to prevailing market conditions, to navigate a partially opaque market and the institutionalised value flexibility of art.

From an ANT-informed perspective, these multipliers operate as key mediators, translating partial market data into actionable and institutionally recognised assessments. Rather than simply reflecting market transactions, multipliers encode professional judgment, institutional norms, and market conventions, making explicit the socially constructed flexibility of art's value. The emergence of multipliers illustrates that valuation is not a neutral reflection of economic reality but a performative practice that stabilises value under conditions of uncertainty.

This observation emerged from 14 months of field work apprenticing as an art appraiser and over 50 interviews with experts in the field of art appraisal. By centring the multiplier as both a practical and theoretical device, this research reveals how value is enacted through the coordinated work of tools, conventions, and institutional frameworks, highlighting the socially constructed and context-dependent nature of knowledge in valuing high-value unique goods, like art. The systematic use of multipliers is significant as it demonstrates how valuation practices structure market transactions as well as institutional expectations and standards of economic legitimacy.

Anne Dijkstra and Mikihito Tanaka

Quality of science journalism explored in Japan and the Netherlands in times of uncertainty

ABSTRACT. Worldwide, it is clear from research and practice that science and society are intertwined in complex and multiple ways. In this complex context, access to high-quality information can be considered vital since the way citizens encounter scientific information matters (e.g. Dunwoody, 2020). Traditionally, science journalists' role is to deliver scientific information to a wider audience. The past years, however, have seen several changes, or shifts, in the field of science journalism, as has been reported for example by Dijkstra et al (2024). Changes in media ecosystems, the media landscapes and the growing influence from mis- and disinformation pose challenges to reliable news production by science journalists while scientific knowledge itself is increasingly disputed. However, regarding topics on the boundaries between science and society, such as vaccination, climate change and artificial intelligence, it is highly important to better understand the developments and the challenges these bring, as well as the positions of the key actors to enable high-quality science journalism. Understanding these shifts
18:00 which take place around the world is increasingly important.

In our study, we aimed to better understand the position and developments in science journalism comparing the understudied countries Japan and the Netherlands. In a mixed methodology consisting of a Q-sort study followed-up by focused group discussions, we gained in-depth insights in journalists' behaviours and views on quality reporting and the shifts they must deal with. Q-sort study methodology combines qualitative and quantitative elements allowing to consider the breath of the topic at hand (Brown, 1980; Watts & Stenner, 2012). Ranking of statements according to participants' personal views allowed for identifying similar views, as well as outlining views and variety (Watts & Stenner, 2012). Our findings will be presented along the major identified changes for science journalism, the changing media landscape and the process of medialization of science.

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17:00-18:30 Session 16B: OT: Infrastructures of Knowing

Chair:

Andrea Kottmann

Location: Ravelijn 4237

17:00 Claudia Matus

Gender as an Epistemological Lens in Biodiversity Data Production: Rethinking Open-Air Laboratories

ABSTRACT. Recent international efforts to enhance the validity and reproducibility of biodiversity data—such as Nature Portfolio's 2022 guidelines and the SAGER framework—recognize that ignoring sex and gender considerations can weaken scientific findings. However, in biodiversity sciences, gender has mostly been viewed as a sociological or demographic variable rather than an epistemological one. This presentation examines how incorporating gender as an epistemological perspective can change the way biodiversity data is produced, validated, and interpreted in open-air laboratories, with implications for both epistemic justice and environmental governance. Grounded in feminist epistemologies (Haraway, Barad, Schiebinger, Harding) and Science and Technology Studies (STS) of environmental knowledge (Turnhout, Bowker), this paper presents two case studies: the Patagonia UC Research Station and Escudero Antarctic Base. These sites, situated in sub-Antarctic and Antarctic ecosystems, function as "open-air laboratories" environments where the material, institutional, and climatic contingencies of research are inseparable from its epistemic outcomes. Methodologically, the study combines ethnographic observation with scientific fieldwork, as well as reflexive documentation of sampling practices, taxonomic classifications, and metadata recording. Through iterative "knowledge cycles," interdisciplinary teams—including microbiologists, ecologists, philosophers of science, and gender theorists—co-analyze how decisions made in the field (e.g., which specimens are considered representative, how metadata categories are filled out, what constitutes a "complete" dataset) reflect gendered assumptions about neutrality, scale, and value. Preliminary findings show that including gender as an epistemological category reveals subtle but consistent biases in field protocols and data systems. For example, classifications based on binary sexual dimorphism in fauna often conceal intersex or sex-changing species, while team hierarchies and data recording practices reinforce masculine ideas of authority and detachment. Conversely, using reflexive, gender-aware observation criteria enhances data transparency, traceability, and representativeness—dimensions that are increasingly important for global biodiversity databases. Conceptually, this work redefines biodiversity not as a neutral object of measurement but as a relational epistemic practice, co-created by human and non-human actors, technologies, and institutional norms. It aligns with feminist and posthuman approaches that emphasize situated knowledge and the interconnectedness of matter, meaning, and method. Beyond its technical contribution, the project aims to promote epistemic justice by questioning whose categories of life, difference, and value underpin global biodiversity infrastructures. Ultimately, this paper argues that including gender as an epistemological lens is not an optional addition to biodiversity science but a necessary approach for developing more robust, inclusive, and context-aware environmental knowledge. In doing so, it repositions open-air laboratories as sites where the politics of data, gender, and ecology converge—offering both empirical insights and a conceptual pathway toward more equitable biodiversity management.

Eefje de Louw, Krijn Turkenburg and Christine Moser

Uncovering hidden assumptions in Digital Twins

ABSTRACT. Policy makers increasingly use of algorithmic tools for their decision-making processes. It is argued that these tools hold myriad of positive outcomes, such as: enhanced efficiency, cost-effectiveness, improved predictive accuracy, and over all, surpassing human decision-making capabilities. Mainly because of the assumption of algorithms generating objective and value-free outcomes and the promise that "more granular data equals more accurate predictions" keep feeding digitization processes. However, seeing algorithms as tools, holds multiple ontological beliefs: seeing digital twins as "accurate" "one-to-one" "representations" that humans can control, implicates a dependent relationship between that what's being simulated and that what's being acted out in the physical world. In this relationship, for the simulations to be an
17:22 accurate description of the physical, is to assume the physical reality can be reduced to single digits. Rarely these assumptions are verbalized or even researched. This lack of conceptualization is equally dominant in the current narratives in 'smart cities' design and 'digital twins as a service'. What is meant by "smart", "as a service" and what is precisely the problem in current practices that they try to solve? The aim of this ethnographic study is to observe the lifecycle of a mathematical model that is implemented in the Digital Twin of a Dutch municipality. In order to understand the role that modelling algorithms play in connecting the physical to the social domain in policy making. By using a processual lens I try to capture how data transform to actionable insights for policy-making, and how this differs from actual (expert) knowledge. Questions of particular interest: Firstly, what is reality represented as in these modelling algorithms? secondly, what is the role of meaning in this process of reduction? Lastly, in addition to researching the decision-makers' understanding of accuracy, I'm interested in their validating practices as opposed to their evaluating practices.

Lidia Yatluk

From Open Science to Platform Enclosure? Sociotechnical Mechanisms of Closing in Decentralized Science (DeSci)

ABSTRACT. Decentralized science (DeSci) has emerged as a digitally native organizational field that positions itself as an alternative to closed scientific data platforms, commercial publishing, and opaque clinical research infrastructures. Early DeSci initiatives explicitly rejected Big Tech involvement, promoted transparent blockchain-based governance, and mobilized citizen science as a means to resist rent-seeking and enclosure in scholarly communication. Yet by early 2026, many DeSci organizations display a striking transformation: governance has shifted from open, on-chain participation to closed working groups with appointed membership; scientific platforms have been fragmented into multiple startups across jurisdictions; and communities increasingly
17:44 function as sources of visibility and legitimacy rather than decision-making authority. This paper asks why these shifts occur and which sociotechnical mechanisms drive the re-emergence of enclosure and centralized control within a field explicitly committed to openness. Theoretically, the study conceptualizes DeSci as a sociotechnical organizational field by combining strategic action field theory with insights from actor-network theory. This integrated approach allows analysis of how governance tools, infrastructures, and spatial arrangements actively structure power, legitimacy, and value capture, rather than merely supporting organizational coordination. Empirically, the paper draws on a comparative qualitative study of four decentralized autonomous organizations (DAOs), using interviews, participant observation at online and offline events, organizational documents, platform materials, and social media data. The analysis shows how one specific network of funding infrastructures, governance tools, platform architectures, founders, developers and spatial arrangements became dominant in the emerging DeSci field. This dominance emerged through processes of translation that produced technological path dependencies and stabilized authority via infrastructural reliance rather than formal hierarchy. As

a result, practices initially framed as decentralized and open increasingly reproduced centralized control, illustrating how sociotechnical arrangements can stabilize power and limit alternatives even within the movement started from open science.

Carl-Philipp Bodenstein and Karin Pfeffer

Participatory and Spatial Approaches within Urban Infrastructuring

ABSTRACT. Infrastructuring refers to the continuous process of infrastructure development and emphasizes the dynamic relationship between the various aspects that shape infrastructures in specific contexts and over time. While there is considerable work on the theoretical conceptualization of infrastructures and infrastructuring in various fields, we lack a comprehensive overview of the processes and practices of co-developing urban infrastructures through collaborative knowledge production and geospatial approaches. In this presentation, we
18:06 address the question of what trends and directions can be identified in research on the sociotechnical processes and relational system of urban infrastructuring, and how are methods of participation and knowledge building conceptualized and realized in infrastructuring processes? We obtain our evidence from a scoping review, analysed qualitatively and quantitatively. We elicit what kinds of knowledge co-occur with different techniques of infrastructuring. Our analysis identified three points where urban infrastructuring needs more attention. First, there is limited longitudinal research on infrastructuring processes. Secondly, while there is innovative empirical work in the Majority World, there is scope for theory building that takes into account the local context as well interdisciplinary approaches. Thirdly, more work on prototyping can help create links between the conceptual and empirical as well as the processual characteristics of infrastructuring.

17:00-18:30 Session 16C: T7: Making Science Better?

Chair:

Willem Halffman

Location: Ravelijn 3231

Rene Bekkers

Co-creating Research Assessment Reform

ABSTRACT. As research performing organizations across the globe are trying to reform the ways they reward the performance of researchers, what criteria should they use? Starting from the perspective that a strategy for reform of research assessment is more likely to be successful if it is supported by the community of researchers that will be assessed, we describe a community-based co-creation approach to define and measure research quality that respects the epistemic diversity of research. Communities of researchers working with different sources of data uphold different
17:00 standards for what they regard as high quality research: they value different goals of research activities, attach different weights to various aspects of research, describe them in different terms, and set different norms for what counts as good practices. With this variation in mind, we will organize a series of deliberative conversations in seven communities of researchers in the Social Sciences and Humanities, each working with a different source of data: self-reports in surveys, personal interviews of individuals and (focus) groups, observations by researchers of behavior through equipment, participant observation by researchers, official registers, news and social media, and synthetic data. The goal of these meetings is to derive consensus-based lists of transparency indicators that data communities agree should be measured in evaluations of research quality. To broaden the basis of support for the transparency indicators, we include researchers in the conversations who are working with the same source of data in different

disciplines. The conversations are part of the development of Research Transparency Check (Bekkers et al., 2025). Modeled after the development of a tool in biomedicine (Wilkinson et al. (2024), we take five steps: 1) From various surveys of researchers in the Social and Behavioral Sciences (Bekkers, 2025a, 2025b), we construct a long list of aspects of research that researchers may find important to make transparent. 2) We assess the feasibility and likely impact of measuring good practices with rule-based checks (i.e., without the use of Large Language Models); 3) We conduct a Delphi-study to identify which aspects are supported by consensus in the data community; 4) We select checks that will be included in software screening research reports; 5) We evaluate the accuracy of the tool and user experiences with the data communities.

References Bekkers, R. (2025a). Data Practices in the Social and Behavioral Sciences in the Netherlands. https://osf.io/pbkun/ Bekkers, R. (2025b). Transparency Priorities. Survey: https://vuamsterdam.eu.qualtrics.com/jfe/form/SV_cCjVtArMsVIQzwW; Results: https://osf.io/z3tr9/files/gckfh Bekkers, R., Lakens, D., DeBruine, L., Mesquida Caldenty, C. & Littel, M. (2025). Research Transparency Check. TDCC-SSH Challenge grant. Project: https://osf.io/z3tr9 Wilkinson, J., Heal, C., Antoniou, G.A., et al. (2024). Protocol for the development of a tool (INSPECT-SR) to identify problematic randomised controlled trials in systematic reviews of health interventions. BMJ Open, https://doi.org/10.1136/bmjopen-2024-084164

Marianne Noël

What makes a conference high quality?

ABSTRACT. What constitutes “high-quality” research and who decides? This proposal focuses on sites that have been little studied from this perspective: scientific conferences. With the exception of recent studies, particularly those of a historical nature, these venues have been surprisingly under-analyzed in the field of STS. While the emphasis has mainly been on their role in creating and maintaining scientific communities, the economic dimension underlying the organization of large-scale events (up to 20,000 participants in the American Chemical Society's Annual Meetings, for example) has been neglected. My proposal is to consider conferences as socio-technical agencements that constantly organize considerable collective work requiring individuals—who devote time and resources to their organization and participation—but also
17:30 learned societies or companies, publishing infrastructures, etc., to ensure their continuity and development. This approach invites us to enter the worlds of science and, above all, the economics of scientific publishing, based on the organizational work, the everyday practices of professionals within these worlds, the infrastructural and technological components—in short, the processes and engineering through which this publishing machinery operates. Callon and colleagues give a procedural and relational dimension to the manufacture and qualification of goods and invite us to pay particular attention to the forms of coordination that arise between several groups of actors. The empirical contribution is based on participant observations of several conferences in materials sciences and nanosciences that are considered both "legitimate" and "illegitimate". In my talk, I will describe their physical settings, the elements and devices that contribute to the framing of transactions (scripts, business models, etc.) and the agencements that make enable people to engage in global trading of communications or articles, but also to exclude others by exploiting vulnerabilities.

Franziska Mohr, Mollie Chapman, Bianca Vienni Baptista, Lars Schöbitz and Elizabeth Tilley

FAIR Data Practices for Qualitative Research in Transdisciplinarity

18:00

ABSTRACT. In recent years, open research data (ORD) practices have gained traction, as evidenced by funding calls and journals establishing them as a requirement. ORD intends to 'make science better' by increasing transparency and reproducibility, and by making datasets

reusable and citable. However, ORD practises are often based on quantitative data cultures, and are rarely applied to qualitative data. Given their growing importance, it is important to rethink ORD practices for qualitative data, taking into account the practical, epistemological, and ethical challenges of sharing such data. This need comes to the fore when conducting transdisciplinary (Td) research, where new forms of engagement between science and society co-produce problem framings and project outputs. Sharing interview or workshop data from Td projects could allow for improved learning between Td processes and increase engagement between science and society. In the FAIRqual project we adress this issue by asking the questions: What are options to share this data according to FAIR principles? How to navigate the ethical issues of research participant protection and the benefits of sharing qualitative data? Who processes and stores data from Td research, and for whom? During a workshop with Td researchers, we identified key considerations and questions relating to open qualitative data in Td research. In a second step, we explored these in expert interviews with experienced Td researchers and open science experts. Based on our insights, our aim is to provide guidance on opening up qualitative data and encourage reflection on the current data management in Td research. By doing this, we do not view ORD as a measure of 'better science', but rather as a tool to start conversations about data documentation and data governance in Td projects. This has the potential to strengthen both research integrity and the partnership between science and society.

17:00-18:30 Session 16D: no session

17:00-18:30 Session 16E: T15: Health and Care Shifts in Times of AI

Chairs:

Shiwei Chen and Jill van der Kamp

Location: Ravelijn 2231

Svenja Breuer

Tracing imaginaries of healthcare AI and robotics through public policy, engineering research, and nursing practice

ABSTRACT. AI is increasingly promoted as a solution to the challenges in health and care – from workforce shortages to demographic change, and demands for efficiency and personalization. This paper draws on a multi-sited, multi-method study to critically examine how such promises are imagined, negotiated, and contested across different social arenas, and how they contribute to ongoing shifts in health and care in times of AI. It presents a comparative analysis of imaginaries of AI-enabled healthcare robotics in Germany, spanning public policy, engineering research, and healthcare practice. Empirically, the paper draws on qualitative analyses of German policy
17:00 documents, ethnographic research in a healthcare robotics initiative, and interviews and focus groups with nursing professionals. The analysis shows that policy and engineering actors often imagine robots as assistive technologies that promise relief and “good work” for nurses, yet often obscuring wide-ranging changes implied in the use of these technologies and overlooking the situated realities of nursing care work. In contrast, nursing professionals engage with these imaginaries critically. While open to the potential of AI and robotics, they emphasize that such technologies must be embedded in broader structural changes to healthcare systems. They use these AI-related discussions to voice long-standing concerns around workload, professional autonomy, and the relational nature of care. By tracing tensions between promissory AI narratives, design practices, and lived healthcare realities, the paper contributes to STS debates on the politics of expertise and future-making in healthcare. It highlights how imaginaries shape not only innovation and governance but also redistribute burdens and expectations within healthcare work. Methodologically, it demonstrates the value of including marginalized perspectives – like

those of nurses – in studies of AI and robotics, and argues for more context-sensitive, care-oriented approaches to the imagining and governing of healthcare technologies.

Mareike Smolka, Ruud van Stiphout and Phil Macnaghten

Cultivating narrative literacy: how fictional stories structure sense-making of AI for health and care

ABSTRACT. Artificial Intelligence (AI) for personalized dietary and lifestyle advice promises to promote better consumption habits, disease prevention, and autonomy in making healthcare decisions. At the same time, AI for health and care could raise concerns about privacy, unequal access, changes in doctor-patient relationships, and increasing individual responsibility for health and disease.

While a growing body of research on public and stakeholder perceptions of AI in healthcare focuses on individual attitudes, beliefs, and concerns, we seek to understand how stakeholders make sense of emerging technology by drawing on culturally embedded fictional stories. We ask:
17:22 How do stakeholders imagine the future of AI for personalized dietary and lifestyle advice? Which narratives do stakeholders invoke to make sense of this emerging technology?

We supervised a six-week interdisciplinary student project and conducted more than 20 semi-structured interviews to capture the narrative sense-making practices of stakeholders who had an interest in or could become affected by AI for personalized dietary and lifestyle advice with a particular focus on human hydration. Through a narrative analysis we found that fictional stories from a variety of sources, ranging from classic poems to science-fiction movies, structured stakeholders' imagination. Moreover, we noticed that stakeholders creatively adapted these stories to align them with their lived experience.

We discuss the implications of these findings for the responsible development of AI. We emphasize the relevance of narrative literacy – the capacity to understand how narratives are composed, the tacit social knowledge and cultural norms they (re)produce, and the effects they generate in the world – for hermeneutic technology assessment in transdisciplinary projects.

Pascalle Paumen

"Digitaal als het kan": Framing Value and Necessity of Digital Innovations in Dutch Mental Healthcare

ABSTRACT. Mental healthcare systems across Europe struggle with growing demand and limited resources. Digital innovations like eHealth platforms and devices driven by Artificial Intelligence (AI) are being prioritised as effective solutions to aligning capacity with demand. In the Dutch context, scalability of digital innovations for mental healthcare is being promoted as urgent and necessary to achieving accessible and affordable care. However, recent scholarship raises concerns that the present 'scalability zeitgeist' might lead us to sidestep complex systemic challenges and
17:44 questions the premise that scaling is inherently good (Hanna & Park, 2020; Pfotenhauer et al., 2022; Tsing , 2012). Prioritising scale may, for instance, lead companies to design products with only one type of user in mind, with harmful consequences for marginalised groups. There are thus growing efforts to scale innovations in healthcare responsibly, for example by balancing standardization and customization in AI innovation (Lukkien et al., 2025). In a broader pursuit towards responsible scaling, this paper investigates how the added value and necessity of digital innovations has been framed by mental health professionals, technology developers, and policy and regulatory actors in the Dutch mental healthcare context from 2005 to 2025. I analyse three types of sources: a) articles in major Dutch professional mental health journals; b) news and opinion pieces in national newspapers; and c) policy and monitoring reports. Through a framing analysis, I identify implicit and explicit assumptions, promises, and paradigms that underpin

digitalisation and scaling ambitions in relation to digitalisation in mental healthcare, as well as what becomes less visible or omitted when these innovations are framed as solutions to mental healthcare challenges. This analysis contributes to understanding what scaling framings have been prioritised over time, which potential alternative scaling framings may have been less visible, and how underlying paradigms of care and policy priorities encourage or discourage scaling.

References: Hanna, A., & Park, T. M. (2020). Against Scale: Provocations and Resistances to Scale Thinking. arXiv. https://doi.org/10.48550/ARXIV.2010.08850 Lukkien, D. R. M., Nap, H. H., Peine, A., Minkman, M. M. N., Moors, E. H. M., & Boon, W. P. C. (2025). Responsible scaling of artificial intelligence in healthcare: Standardization meets customization. Ethics and Information Technology, 27(3), 34. https://doi.org/10.1007/s10676-025-09842-5 Pfotenhauer, S., Laurent, B., Papageorgiou, K., & Stilgoe, A. J. (2022). The politics of scaling. Social Studies of Science, 52(1), 3–34. https://doi.org/10.1177/03063127211048945 Tsing, A. L. (2012). On Nonscalability. Common Knowledge, 18(3), 505–524. https://doi.org/10.1215/0961754X-1630424

Mignon Hagemeijer and Lotte Krabbenborg

Scripts-in-the-making: the continues rescriptions of AI assisted digital self-monitoring during technology development process.

ABSTRACT. This paper presentation focusses on a research initiative aiming to create a Digital Twin platform where citizens, using AI models, can compare their health data to big data references. The ambition of the technology promotors is to improve early detection and prevention of cardiovascular disease. As various STS scholars already argued, technologies-in-the-making are not just material objects. Instead, they embody various visions, values and promises on for example, in our case, 'good health', 'patient empowerment' and 'individual responsibility' that ultimately also shape decision-making processes regarding e.g. investments and how can or should use the new technologies and why (Rip & Talma, 1998; Aykut et al., 2019).

With the help of participatory observations of consortium meetings and formal and informal conversations with technology developers, we studied, for 2.5 years, the various 'scripts-in-the-making' of the Digital Twin platform. With this, we attempted to increase understanding how
18:06 broader contexts, such as the presence of clinical guidelines, business strategies, reimbursement policies, as well as academic research cultures, encourages certain forms of use of digital twins and discourages or constrains others, with a particular focus on which forms of patient empowerment are (not) stimulated and why.

Preliminary findings reveal emerging "scripts-in-the-making" that position patients not only as users but also as active data collectors and managers, reflecting a drive to improve algorithmic accuracy and create big data research opportunities for scientists. Yet, these ambitions are tempered by concerns over accessibility, privacy compliance, data governance and medical guidelines and certifications. This presentation will dive into how these concerns shape the various scripts-in-the-making, including the imagined end-users.

Rip, A., & Talma, A. (1998). Antagonistic Patterns and New Technologies. In Getting New Technologies Together (pp. 299–323). https://doi.org/10.1515/9783110810721.299

Aykut, S., Demortain, D., & Benboudiz, B. (2019). The Politics of Anticipatory Expertise: Plurality and contestation of Futures Knowledge in Governance — Introduction to the special issue. Science & Technology Studies, 32(4), 2–12. https://doi.org/10.23987/sts.87369

17:00-18:30 Session 16F: T3: Ethics and Technology in Practice

Chair:

Verena Schulze Greiving

Location: Ravelijn 2237

Kiara Scheunpflug

Ethics in and through InSilico Health

ABSTRACT. The rise of InSilico Health (ISH) technologies, particularly Virtual Human Twins (VHT), signals a potential shift in biomedical research and healthcare innovation (Marques et al., 2024). By simulating biological processes, these technologies aim to advance precision medicine and improve clinical trials, although their effectiveness remains uncertain to date (Leo et al., 2022; Pappalardo et al., 2019; Rousseau et al., 2024; Samei, 2025). Alongside these developments, ethical frameworks such as Ethical, Legal, and Social Implications (ELSI), Responsible Research and Innovation (RRI), and Technology Assessment (TA) seek to guide their responsible development and use, yet their integration into daily innovation practices and their influence on decision-
17:00 making and technology development remain uncertain (Elhadj et al., 2024; de Jong, 2025).

This presentation draws on early insights from an ongoing PhD project that uses an empirical ethics approach to investigate how ethics is framed, negotiated, and operationalized in and through interdisciplinary human and non-human actors involved in the R&D of ISH. Rather than treating ethics as an external or merely formal requirement, this study approaches ethics as an active and dynamic component of research practice, one that is negotiated, contextually shaped, and influenced by broader social, institutional and power dynamics, while also shaping decision-making and the development of ISH technologies.

The presentation introduces the project's key research questions and conceptual considerations and invites discussion on the role of ethics, the distribution of ethical responsibilities, and on the practices through which ethical reflection becomes integrated among interdisciplinary actors.

Lukas Claudio Maass

Values in Diagnostic Cancer Technologies: Co-constitution, Multiplicity, and Ethical Reflection in PREDI-Lynch

ABSTRACT. In the development and deployment of diagnostic cancer tests, values assigned to aspects such as quality of life or diagnostic utility are typically treated as predefined and stable entities (Ferrante di Ruffano et al., 2023; Minhinnick et al., 2025). However, insights from valuation studies show that values are not inherent to health innovation technologies (Boenink & Kudina, 2020; Hoven & Manders-Huits, 2020). Rather, they are co-constituted, multiple, and dynamic (Hees et al., 2023). I operationalize this conceptualization to answer the following research question: How are values assigned, negotiated, and contested by stakeholders involved in PREDI-Lynch in the development of diagnostic precision technologies for colorectal, endometrial, and
17:30 urothelial cancers?

Based on a thematic analysis of data collected through in-depth interviews with PREDI-Lynch stakeholders, I discuss preliminary insights into the nature of values in diagnostic cancer technologies. These insights highlight the multiplicity of values and reveal tensions related to the values attributed to different diagnostic tests, cancer indications, and stakeholders. Through this, I show how these tensions and trade-offs remain subtle and gradually surface as stakeholders continue to engage with the technology and with one another.

By demonstrating this, I argue that emphasizing co-constitution and multiplicity of values and technology through application of this approach helps make value tensions visible early on in technological health innovation projects. Furthermore, I argue that linking these insights to subsequent co-creation activities with participating stakeholders may subsequently stimulate practical ethical reflection, which will be the next planned step of this study.

With this presentation, I aim to collectively reflect on the consequences of these practical reflections and the conditions under which their impact on subsequent developments and decision-making within technology-driven innovation projects like PREDI-Lynch becomes noticeable.

Sophie van Wijk, Josephine Chambers, Jarno Hoekman, Ellen Moors and Franck Meijboom

A Practical Dialogue Approach to Emotional-Moral Reflection on Risks and Technologies

ABSTRACT. A global transition is underway from animal testing to animal-free risk assessment strategies. Although public concerns on animal welfare were key in initiating this transition, current debates are dominated by a science-policy focus on technological barriers, while public engagement in these discussions is limited (NCad, 2024), and questioning the need for testing – human use of risky chemicals – is omitted. The public's perceptions of risk are often construed by experts as irrational and emotional (Roeser, 2010), further marginalizing citizen voices. Nevertheless, anger over involuntary exposure to risky chemicals - whether in humans or animals - reflects a felt value judgment that is rational and deserves serious consideration. To address the lack of public engagement and neglected emotional dimension in these discussions, we have developed a dialogue session format inspired by Sabine Roeser's work. Roeser (2010) posited a public deliberation approach that takes emotions as a starting point for debates about acceptable
18:00 risks, and as a source of critical reflection . Moving beyond the framing of an 'emotional' public with irrational concerns, she argues that emotions can highlight legitimate evaluative aspects of technological risks, such as justice, fairness and autonomy. From Roeser's theory, we have built a dialogue tool that puts collective emotional-moral reflection into practice, and with this submission hope to beta-test our prototype in this conference track. Our approach enables emotional-moral reflection that is more accessible and helps to foreground ethical reflection rather than focusing only on descriptive facts. Values underlying risks and technology become more tangible and explicit rather than abstract cognitive concepts. In other words, the tool does justice to the way we encounter our own values in day-to-day life and enables conversation from there. Morality has a social dimension that requires deliberation with other as well as individual reflection, and this dialogue format can be useful to practice emotional-moral reflection with laypersons and experts, hence putting ethical reflection into practice.

References NCad. (2024). Evaluatie van het NCad advies "Transitie naar proefdiervrij onderzoek." Roeser, S. (2010). Risk, Technology, and Moral Emotions. Moral Emotions and Intuitions, 1–207. https://doi.org/10.1057/9780230302457/COVER

17:00-18:30 Session 16G: T8: Comparing Theoretical Lenses for Studying Contemporary Science-Society Interactions

Chair:

Koen Beumer

Location: Carré 3B

Anestis Amanatidis

Testing science through public participation

17:00 ABSTRACT. Coproductionist studies of participation show that how interactions between scientists and non-scientists happen tend to produce the issues, publics, and models of democracy associated with participatory practices. Analytically, this observation conflates the epistemic commitments that govern science with the political commitments that govern participation. In consequence, one can expect tensions to arise in how participation is done in

practice. While coproductionist research on participation has been focusing on the political consequences of participation formats, I highlight the epistemic effects of participation by asking how participation demands become actualised in scientific practices. To do so, I build on the work of Marres and Stark to conceptualise the articulation of public demands as 'testing' scientists' epistemic routines and attachments. This broadens the analysis to diverse kinds of participation, including critical expressions directed at science through protests or deliberate involvement in formalised participatory settings. In this presentation, I put this notion to work through different empirical illustrations, showing how scientists' epistemic attachments come to bear in different participatory situations and what strategies they employ in response. 'Testing', I argue, invites empirical explorations of participatory interaction and surfaces questions about the implied causal relationship between 'more participation' and 'more democracy' in view of sciences' epistemic commitments, such as normative questions about what 'good participation' looks like.

Marcus van Toor

Assembling the Collective: Rethinking Technocracy Through Latour's Dingpolitik

ABSTRACT. STS scholarship has a long tradition of critiquing technocracy by challenging the dominance of technical expertise in policymaking and advocating for wider societal participation. Existing STS scholarship that analyses the formation of alliances between scientists and other societal actors, however, often foregrounds human actors' ability to form these alliances, leaving out the crucial roles non-human entities can play. Examples include Callon's dialogic democracy or Jasanoff's technologies of humility. This study explores the role of non-human entities in assembling networks of scientific experts, concerned groups and non-human actors by answering the question: How can policies be science-driven without resorting to technocratic governance?

17:30 This study draws on Bruno Latour's notion of Dingpolitik to examine how nonhuman entities can contribute to the formation of political collectives and open up issues to be discussed by a wide variety of stakeholders and not just scientists. The ding, refers both to the inclusion of things in political theory and to an assembly, a meaning echoed in the names of Scandinavian parliamentary buildings (Storting, Alting, Folketing). In other words: the notion of ding draws attention to both the act of assembling as well as to the issue that is to be concerned. Dingpolitik holds a democratic promise as it presents issues not as facts to be discussed only by scientists but as a ding that gathers scientists, concerned groups and non-human actors. Combining interviews with documentary analysis, this study draws on an empirical case of steel slag contamination in the Netherlands. The slag, a by-product in steel production, is presented as a ding. It is argued that the steel slag is not just an object of scientific research, but a non-human political actor. By affecting and distressing concerned residents, inspectors, scientists, and politicians, the slag assembles a wide variety of stakeholders around it.

Maaike Pierik and Lotte Krabbenborg

Science-society interactions in telescope siting processes

ABSTRACT. Astronomers build telescopes in remote places to get the best views of the sky. Already since the 1970s, communities living close to telescope sites have raised protests about e.g.
18:00 the environmental impact of these telescopes and the ways these sites are appropriated by astronomers without consent of local people. These protests, visible in various ways, have happened for example against observatories on Mauna Kea (Hawai'i), Kitt Peak and Mt. Graham (Arizona). In response, some astronomers want to move from 'deficit to dialogue' and include local communities in their telescope development. However, it is not straightforward to change the way astronomers interact with citizens, because it is not part of their research culture to include non-scientific stakeholders at early stages of telescope development. In this presentation, we focus on the Africa Millimetre Telescope (AMT), a radio telescope that will be built in Namibia.

In order to 'prevent' societal upheaval, astronomers want to include Namibian communities as dialogue partners in the telescope development. We conducted 28 interviews among astronomers of the AMT and Namibians who are (in)directly involved in the AMT project. By employing the lens of 'material participation' (Marres, 2012) we aimed to compare the values, interests and concerns of both groups in relation to telescopes and telescope sites. We found, amongst others, that AMT astronomers under the heading of 'dialogue' primarily envisioned the new telescope as means to contribute to education and capacity building in Namibia. In addition, the telescope itself is seen by AMT astronomers as a potential symbol for North-South collaboration, and by Namibian respondents as a symbol for scientific and technological progress in the country. Finally, the telescope site itself has an important role in who is seen as a relevant dialogue partner.

17:00-18:30 Session 17: T11: Rural-Urban Knowledge Infrastructures for Transformation (Walkshop 2)

Tetem (Stroinksbleekweg 16, 7523 ZL Enschede)

Steven McGreevy, Corelia Baibarac-Duignan, Catherine Koekoek and Esther Turnhout

Artistic Fringe - Walkshop 2: Storytelling for multispecies governance: the Zoöp model at Tetem (site visit!)

ABSTRACT. From housing and energy cooperatives to community gardens, artistic practices and action groups, it seems that alternative rural-urban futures are already in the making. Such initiatives make space for and embody alternative values and relations in the here-and-now, while creating imaginaries of what such futures could look like. But what kinds of infrastructures allow for embedding local initiatives in processes of wider societal transformation? We propose to use the STS-NL conference itself as a knowledge infrastructure to further explore and bring together alternative spaces, practices and imaginaries at the University of Twente campus and in the cultural ecosystem of Enschede. Through two workshops, using artistic and walking methodologies, we ground our academic work in past and present practices, spaces and
17:00 imaginaries of commoning in the local landscape. Walkshop 2 explores arts-based methods for rurban transformation with artists and makers and seeks to strengthen connections between cultural organisations in Enschede (such as Tetem, Concordia, Rijksmuseum Twente) and the University of Twente. It builds on the Planting Seeds project, where we rethink and prototype libraries for biodiversity justice with Tetem. We will bring you on a site visit to Tetem, an inspiring cultural organisation in Enschede that has recently become a Zoöp – a governance model for including more-than-human voices in all processes at the organisation. There, we will test an interactive storytelling machine with stories about the Zoöp and reflect on challenges and promises of regenerative audience engagement in research and cultural work. This approach builds on ongoing collaborations with the RUrban Futures Collective. The RUrban Futures Collective is a transdisciplinary collective of researchers at the University of Twente who explore the conditions for just, biodiverse and democratic futures by addressing the interactions between rural-urban spaces, practices and imaginaries. Using collaborative, engaged and arts-based methods, we seek to democratise conversations about biodiversity, climate, and futures.

FRIDAY

09:00-10:30 Session 18A: T25: When Futures Get Stuck: The "Captivity" of Collective Futuring in Transitions

Chair:

Mareike Smolka

Location: Ravelijn 4231

09:00

Filip Rozborski

Towards an Integrated Framework for Research on Imagination and Future Orientation in Transition Studies

ABSTRACT. Sustainability transitions are inherently future-oriented, motivating transition scholars to explore future orientation and representations, which are recognized as critical arenas for agency and transformative action. Recent research, however, highlights significant constraints to future orientation, stemming from incumbent actors, techniques of futuring, affective states, and future cultures. Concurrently, attention is increasingly directed toward the role of imagination and imaginaries as powerful forces shaping temporal and spatial representations. However, despite growing interest, the study of imaginaries in transitions suffers from theoretical uprootedness, unclear conceptualization, conceptual overlaps, and predominant limiting attachment to the future. This theoretical paper addresses this gap by conducting a conceptual review of the literature on imagination, future, and temporal orientation across Sustainability Transition Studies, Futures Studies, and Science and Technology Studies, drawing on literature underlying imaginaries research and classic social theory to align approaches. This approach differs from previous systematic reviews of literature as the core aim is to present a framework that sharpens boundaries and clarifies relationships among concepts related to imagination, future orientation, and broader temporal horizons. Our primary focus is to provide an ontologically and theoretically sound reconceptualization of imaginaries as a critical link between how societies intelligibly connect future orientation with the past and present, and the material world. We also inquire into narrative forms of discursive representation, such as visions, narratives, expectations, and utopias. By doing so, we aim to provide a transparent framework for understanding the connections between imaginaries and other core concepts in the research of future and temporal orientation, one that addresses both structure-changing and structure-preserving perspectives. Our work paves the way for moving the field beyond fragmented, descriptive research on future orientation across different domains, towards interaction across different concepts, levels of structuration, and temporalities, thereby enhancing the analytical rigor of transition research and related disciplines.

09:30

Camilla Fiz

Nuclear fusion promises in the media: exploring the equilibrium between change and stabilisation of the energy system

ABSTRACT. Nuclear fusion is an experimental potential source of energy whose research has been ongoing for almost 80 years. Such a resource- and time-consuming process of research has been facilitated by extensive recourse to expectations and promises. Nuclear fusion is commonly depicted as a sustainable, safe, and practically infinite source of energy. On one hand, fusion represents an innovative technological solution that can meet all the energy needs of a modern society. On the other, it envisages an old-fashioned system for energy production akin to the one represented by nuclear fission reactors currently in operation. Indeed, although the ways in which nuclear fusion and fission produce energy differ from each other, their production facilities share similarities, and both fusion and fission assume a centralised energy system. Relying on STS

scholarship, this paper investigates an underresearched topic, namely the representation of the promise of nuclear fusion in the traditional and social media (i.e. leading newspapers and Facebook), which participate in constructing collective expectations of technoscience. This paper asks 1) how do the traditional and social media frame and define fusion promises, and 2) which is the future that these fusion representations envisage, such as a means of mitigating climate change and/or as an obstacle to the necessary transformations of the energy systems. Applying a mixed-methods approach, the paper places the analysis within the broader discourses on nuclear power. A long-term and cross-country analysis will enable the comparison of the fusion and fission promises in countries with and without nuclear power plants (i.e. UK and Italy). By examining the role of fusion promises in the capture of futures by the existing nuclear-fission-centred imaginaries, interests, and materialities, this research helps to explore the omnipresent dilemmas and tensions of technoscientific promising between novelty and continuity – between radical innovation and ability to deliver.

Annemiek de Looze

Futures in flux: episodes of epistemic reconfiguration in the energy transition

ABSTRACT. Energy transitions rely heavily on visions, scenarios and expectations about the future. These images of the future are not passive descriptions, they are performative: they actively shape which pathways are pursued, which technologies are supported, and which social values are incorporated or sidelined through investment decisions, policy directions, infrastructure design and public debates. This performativity is grounded in power-laden knowledge practices such as modelling, policy expertise, economic valuation, participatory inputs, etc. Futures do not become real simply because actors agree on them, but because certain forms of knowledge are seen as legitimate and have the power to define what futures are feasible, necessary, or desirable, whereas other forms of knowledge get sidelined/marginalized.

10:00 Futures can become stuck when particular visions harden, epistemic authority narrows and alternative perspectives are marginalized. This paper examines how such captivity of collective futuring emerges, persists, and is occasionally disrupted in the Dutch energy transition. We investigate how epistemic diversity expands or contracts over time, and how this contributes to particular futures becoming stuck. Through a comparative study of three energy technologies – hydrogen, onshore wind, and nuclear energy – we trace episodes of epistemic closure, opening and reopening in the Netherlands. Hydrogen illustrates a shift from political enthusiasm encouraging epistemic diversity to institutional and industrial stagnation and dominance (epistemic closure), onshore wind shows how social conflict can destabilize expert-led planning to make way for alternative knowledges (epistemic opening), and nuclear energy demonstrates how previously closed down futures can be rapidly reopened as a climate and security solution (epistemic reopening).

Through document analysis and semi-structured expert interviews, we map how different epistemic bases can gain or lose performative force. We identify mechanisms through which collective futuring becomes captured, as well as conditions that enable its release, through the lens of epistemic diversity.

09:00-10:30 Session 18B: T23: Fixing the split of knowledge and its ownership: In search of material and technological decolonisations

Chair:

Annapurna Mamidipudi

Location: Ravelijn 4237

Annapurna Mamidipudi, Vivek Oak and Gauri Nori

Sonthanga: Decolonising Cotton Textile Production

ABSTRACT. Tracing knowledge ownership offers us a method that can investigate extant inequalities of knowledge and technological progress. We locate this investigation in an experiment of decentralized production that connects different artisanal actors engaged in the production and use of handwoven Indian cotton textiles. To unweave colonial ruptures, we will present attempts of an Indian handloom research collective to facilitate knowledge exchanges between local farmers, spinners, weavers and customers in the hope of building a 'handloom knowledge commons', where knowledge ownership is both individual and collective.

09:00

Furthermore, this presentation will set up yarn, textile and film installations to teach participants how to read textiles, an exercise that is designed to make textile literacy part of common knowledge. This interactive exercise will upturn knowledge hierarchies created between those who name their knowledge (producing texts) versus those who perform their embodied knowledge (producing textiles). The installations will exhibit material and technological interventions carried out by the artisanal collective that resulted in successfully repurposing colonial machines that were originally designed to cater to American cotton monocultures grown in large scale plantations, to produce yarn of various counts and twists from short and medium staple hybrid varieties of organically grown indigenous cottons grown by smallholder cooperative farms.

Jonathan Arentoft, Koen Beumer, Marcel Proveniers and Ellen Moors

Making crop biotechnology African: boundary work, ownership and autonomy in Kenya and Ghana

ABSTRACT. Amidst protracted patent battles over foundational CRISPR–Cas9 technologies and the growing concentration of proprietary seed-sector patent portfolios, knowledge ownership of gene editing (and their derivatives) are often performed through legal mechanisms. Yet, in contexts historically excluded from crop biotechnology research and innovation, we argue that knowledge ownership extends beyond legal mechanisms to include the ways in which the African-ness of research and innovation practices and infrastructure is foregrounded in efforts to build scientific autonomy.

This paper examines how knowledge ownership in crop genome editing is understood and performed by scientists in Ghana and Kenya working to institutionalize gene editing within national agricultural research systems. Drawing on ethnographic fieldwork and 30 interviews

09:30

with molecular biologists, plant breeders, and research administrators, we investigate how boundaries around crop genome editing are enacted in practice through efforts to make these technologies "African."

Our findings show that knowledge ownership, as articulated by our interlocutors, extends beyond questions of patenting or access to CRISPR technologies. Instead, ownership is interwoven with efforts to build scientific autonomy, retain control over research agendas, and align innovation with national development visions. We find that "African-ness" is performed and recognized through situated practices, including who initiates research projects, where genetic engineering physically takes place, how research infrastructures are assembled, and which development trajectories knowledge production is made to serve. Yet our interlocutors do not problematize the historical and geo-political context from which CRISPR-Cas9 has emerged nor the expertise, material, and services provided by foreign companies and researchers.

By foregrounding how scientists in historically marginalized research contexts enact knowledge ownership that go beyond the legal sphere, this paper contributes to rethinking dominant Science

and Law knowledge regimes and highlights crop genome editing as a site where alternative forms of knowledge ownership are being contested

Ernesto Domínguez López and Carlos Luis Hechavarria Cabrera

United States and Latin America in the shifting geopolitics of knowledge capitalism

ABSTRACT. The global transition toward knowledge capitalism has reconfigured geopolitical power, economic relations, and policy agendas in the contemporary world-system. Within this transformation, three interconnected dynamics structure the United States' current engagement with Latin America. First, the transition has intensified the peripheralization of Latin American economies, as the region becomes increasingly marginalized from knowledge production and capitalization and integrated into innovation-driven global value chains primarily as a supplier of strategic resources, data, and low-value segments rather than as a site of technological creation. This marginalization is geopolitically consequential, as economic and technological asymmetries have historically underpinned asymmetric political relations between the United States and Latin America. Second, the relative decline of U.S. power and the emergence of China as a global actor have reshaped U.S. geopolitical priorities, reinforcing Latin America's position as an arena of strategic competition. This shift cannot be fully understood without accounting for U.S.–China rivalry in knowledge production and capitalization, which underlies the recent reinforcement of U.S. hemispheric power across the Western Hemisphere. Third, the U.S. agenda of hegemonic projection toward the region has been reshaped by the imperatives of knowledge capitalism, encompassing priorities such as semiconductor supply-chain "de-risking" and securing access to rare and strategic minerals. Together, these dynamics highlight how science and technology have become central instruments of geopolitical strategy, redefining U.S. influence in Latin America and the region's position within an evolving global order shaped by technological rivalry.

10:00

09:00-10:30 Session 18C: T6: Research Cultures: Neglected questions and (non)answerable institutions

Chair:

Daniela Craciun

Location: Ravelijn 3231

Anne Slootweg

Evaluating relevance in research assessment: an ethnographic inquiry of academic whiteness

ABSTRACT. The practice of research assessment is one of the ways in which the contemporary western(ized) university is made to give an account of itself. In this paper I reflect on this practice as a performance of 'academic whiteness'. Based on ethnographic research carried out during the Dutch research assessment of law in 2017 and of philosophy in 2019, I zoom in on how the issue of 'relevance' (or impact) is grappled with in research assessment. Shifting to a decolonial perspective, I argue that by tapping into repertoires of relevance, academic whiteness tends to systematically delocalize itself. Repertoires of relevance involve the affective calibration of a relation between 'science' and 'society' - the thing which science is required to be relevant for. Under conditions of academic capitalism, this relating is predominantly shaped by market logics, although this is paradoxical as science would lose status if it were to be fully reduced to it. Thus, relevance becomes flattened out as virtually any practice of mobilizing knowledge for capital, while at the same time a counter-narrative of scientific autonomy and independence is deployed to legitimate this. Science gets affectively performed as neutral, objective, and pure, negating how epistemic practices that have come to be called scientific have always come from particular epistemic locations. Analyzing the ways in which science is assumed to be relevant to society,

09:00

while answerability with regards to who and what it is relevant for remains systematically displaced, I argue that society gets mobilized as an empty signifier. Thus, as repertoires of relevance perform both science and society as demarcated, neutral, and implicitly white spaces, research assessment allows the university to be continued as an institute of coloniality.

Melpomeni Antonakaki

Not Just the Career of One Researcher: Social Safety, Research Culture Reforms and the Politics of Governing Dissent in Dutch Academia

ABSTRACT. Research culture reforms in Dutch universities have foregrounded social safety as a national priority and institutional responsibility, resulting in an expanding infrastructure of policies, reporting mechanisms and accountability frameworks aimed at preventing intimidation, discrimination and power abuse. While these reforms promise to delimit exposure of academic minorities to inappropriate behaviors, a series of public controversies suggests that they also reshape the conditions under which critique, dissent and feminist knowledge-making can be articulated within academia. I here examine social safety as a contested site, where governance ambitions, epistemic authority and lived experiences of harm intersect. Based on an STS controversy study-design and analysis of the court proceedings and their public documentation,
09:22 my contribution centers on the dismissal of Professor Täuber from the University of Groningen, treating the case not as an isolated personnel conflict, but as a strategic site for analyzing how universities govern dissent under conditions of reform and public exposure. Täuber's 2019 paper on DEI policies, which aimed at exposing how inclusion schemes still reproduce exclusion, was reframed as overly personal and institutionally damaging, despite being formally cleared of research integrity violations. What followed (years of mediation and formal dismissal) reveal a mechanism through which power-critical scholarship becomes epistemically downgraded and morally reclassified. The case shows how governance-oriented safety frameworks can discipline feminist dissent while remaining nominally aligned with reform ideals. And at this breakdown point two partially incompatible epistemologies of safety are in tension: one approaches it as a matter of governance and procedural control; the other understands safety as shaped by power asymmetries and unequal risks attached to competing along the academic track. I conclude by arguing that research culture reforms in the Netherlands must confront this tension if universities are to remain spaces where critical, reflexive and power-sensitive knowledges can flourish, without becoming career-ending endeavors.

Mariusz Finkielsztein and Izabela Wagner

Secret Academia: Hidden Structures, Informal Power, and Academic Misconduct

ABSTRACT. Debates on research culture often foreground transparency, integrity, and reform, yet much of academic life is structured through what remains informal, opaque, and unofficial. This paper introduces the concept of "secret academia" to describe the hidden cultural layer of academic culture through which power is exercised, careers are shaped, and misconduct is normalized or concealed. The Secret Academia conceptualizes academic culture not only as
09:44 formal governance, evaluation metrics, or ethical frameworks, but as a system of informal rules, tacit expectations, and unspoken dependencies that operate alongside official institutions. Secret academia manifests in practices such as selective silence around abuse, informal patronage networks, reputational shielding, and the normalization of self-exploitation under conditions of precarity and competition. These practices are not anomalies but integral to contemporary academic culture, particularly within neoliberal research regimes that reward productivity, loyalty, and strategic conformity. By making these hidden structures visible, the paper challenges individualizing accounts of misconduct and instead frames harm as systemically produced and culturally sustained. The contribution engages ongoing discussions on uncertainty and reform in academic research by arguing that meaningful cultural change requires confronting not only

policies and incentives, but also the informal power structures that shape everyday academic life and limit accountability.

Mark Cassidy and Niki Vermeulen

First-Generation staff and the intersection between academic work, careers and class

10:06 ABSTRACT. In this paper we will reflect on our current Wellcome Trust funded project on first-generation staff and the intersection between academic work, careers and class. This topic is a neglected element in current research cultures discussions as well as STS research. Yet, existing research indicates that educational and social backgrounds form an important factor in an intersectional nexus which shape academic trajectories and expectations. From initial conversations we learned how openly talking about experiences related to class and cultural backgrounds can raise insecurities and even shame, leading to concealment, especially in a UK context where privatisation of education and high university fees maintain stratification and negatively affect social mobility. While there is attention for "Widening Participation" (WP) on the student level this is not connected to academic careers. How, then, do first-generation staff experiences intersect with research cultures, and what type of reform is required to increase visibility and sense of belonging? Given the short-term character of the funding, we are nearing the end of this 10-month challenge which is allowing us to broaden the 'research cultures' discourse. By combining historical research, interviews, auto-ethnographies and creative non-fiction we are opening-up conversations and explicate common – epistemic, social and emotional – dimensions of first-generation staff experiences. However, how can we amplify these conversations in meaningful ways, and develop relevant policy interventions in the current UK context in which research environments are threatened by budget cuts and an increasing emphasis on efficiency?

09:00-10:30 Session 18D: T19: STS Research into Interdisciplinarity: Studies of Interdisciplinary Practice

Chair:

Annemarie Horn

Location: Ravelijn 3237

Sabrina Sauer

Strategies to draw interdisciplinary expertise to the center of higher education at the boundary of STS and Digital Humanities

09:00 ABSTRACT. This paper focuses on the higher education practice of building students' interdisciplinary expertise within the large-tent discipline that is Digital Humanities from the vantage point of an STS researcher-educator. I argue that providing an STS perspective within such an interdisciplinary and – at times – instrumentally-oriented setting leads to being positioned either as an interloper or, in a more positive light, as a boundary worker (Sauer & Hagedoorn, 2022). From the vantage point of the boundary worker, developing a pedagogical approach based in cultivating interdisciplinary expertise in students can feel like being Sisyphus: pushing the notion of interdisciplinary expertise and skills in a field wherein students struggle to define "where they stand to begin with" while they simultaneously recognize the value of interdisciplinary expertise in their present and future professions. How does one move forward as an STS researcher-educator on the periphery of a discipline that is inherently interdisciplinary? I present three strategies that have helped realise more agency for interdisciplinary expertise within the University of Groningen's Digital Humanities curricula: (1) Including thematically-focused interdisciplinary exercises within theoretically, methodologically, and making-oriented courses,

(2) Fostering interdisciplinary collaboration between educational practitioners by means of co-taught courses, (3) Application of interdisciplinary expertise as part of knowledge infrastructure building work beyond the walls of the classroom (projects, grant applications) that culminates in the development of new educational activities (Sauer, Hagedoorn & Aasman, 2024). This is not to say that these strategies have been immune to tensions and notable challenges. I want to discuss, with the peers present at this panel, how we may actively exchange best practices and challenges, so as to create a sense of community within the Dutch STS field, and to foster collaborations.

Sauer, S., & Hagedoorn, B. (2022). Linking Data and Disciplines: Interdisciplinary brokering in digital humanities research. DHQ: Digital Humanities Quarterly, 16(3). Sauer, S., Hagedoorn, B., & Aasman, S. (2024). 'De-Google-ing'our Students: A User Approach to Understanding Archival Media Discovery in the Classroom. VIEW, Journal of European Television History and Culture, 13(26), 47-61.

Anna Jacyszyn and Harald Sack

Challenges of Coordinating an Interdisciplinary Consortium: Leibniz Science Campus DiTraRe

ABSTRACT. Leibniz Association connects around 100 independent research institutes across Germany which are active in varying fields. These Leibniz institutes collaborate with local universities in multiple ways, including the form of an innovative Leibniz Science Campus (LSC). With the aim of forging new paths in research, such regional partnerships create networks and encourage interdisciplinarity.

"Digital Transformation of Research" (DiTraRe) is a LSC which started in September 2023. Within this consortium, FIZ Karlsruhe - Leibniz Institute for Information Infrastructure collaborates with Karlsruhe Institute of Technology (KIT). Creating a very diverse and interdisciplinary team, DiTraRe is divided into various working groups. We base our work on four use cases, originating from different KIT faculties: sensitive data in sports science, Chemotion electronic lab notebook, AI in biomedical engineering, publishing large datasets (climate research). On top of that, four
09:30 dimensions study different aspects of each use case. The dimensions are: exploration and knowledge organisation, legal and ethical challenges, tools and processes, reflection and resonance.

In DiTraRe we are aiming at establishing a new research branch which is digitalisation of research. Making such a growth core successful requires implementing multiple different tasks with the aim of building a community. DiTraRe team organises regular interdisciplinary colloquia, workshops and sessions at conferences, manages newsletter and social media accounts. We also concentrate on conducting research which connects the main topics of our working groups and applying for third-party funding.

In my talk we will introduce the idea of a LSC with a special focus on DiTraRe and its structure and activities. We will present our main challenges which originate from the interdisciplinary nature of the consortium as well as our solutions and ideas on solving them. We will also bring unanswered questions which we would like to discuss with the audience and create possibilities to connect and collaborate.

Britta Acksel

Opening the toolbox – investigating formats for interdisciplinary facilitation

10:00 ABSTRACT. Much has been written about interdisciplinarity, about its logics, its translation problems, its (epistemological) frictions. Anyone who has worked or tried to work interdisciplinarily knows about the many challenges involved. Nevertheless, one of today's commonplaces is that existing problems and crises do not care about disciplinary boundaries; inter- and even transdisciplinarity is called for. Research and research institutions are often

valued, justified and funded (or not) according to how publics and policy perceives their "impact". With this in mind, it is not surprising that the number of formats aimed at facilitating interdisciplinary work is growing.

This paper looks at formats that aim to facilitate interdisciplinary work, and explores practices and proposed practices to enable interdisciplinarity. Interests lie in how disciplines and interdisciplinarity are enacted and problematised in these formats. How is knowledge integration supposed to be enabled? What roles do different kinds of frictions play (or not)? And how are power dynamics dealt with and addressed (or not)?

To answer these questions qualitative content analysis has been employed towards different facilitation formats including tool boxes, peer-reviewed articles, blog posts, guidance documents and card sets. The thematic focus is on sustainability research, but the observations travel more broadly.

09:00-10:30 Session 18E: OT: Approaches to Knowing III

Chair:

Ewert Aukes

Location: Ravelijn 2231

09:00

Sander ten Caat, Aarthi Meenakshi Sundaram, Nynke van Uffelen and Marion Collewet

Co-creation for a just energy transition? An assessment of the transformative potential of participatory modelling in the heat transition in Utrecht

ABSTRACT. In developing plans for the energy transition, policy makers increasingly rely on computational models. These models play a crucial role in (de)legitimizing actors' perspectives and steer which questions will be asked, addressed or left out. Participatory modelling – the construction and assessment of models with stakeholders – is a promising way to include more diverse perspectives and create a greater perception of justice in the decision-making process.

We took a four step approach to an inter- and transdisciplinary participatory modelling project for the heat transition in the Dutch city of Utrecht. This was a collaborative process among Leiden University (public administration, economics), TU Delft (energy system modelling), the local municipality and an energy cooperative. First, we defined the central problem to be modelled. For this, we conducted 12 stakeholder interviews, used as input for a workshop where stakeholders decided upon the model scope and central modelling question. The second step consisted of a Participatory Value Evaluation among local inhabitants, to gather their values and perspectives. In the third step we constructed the model based on the input gathered in the previous steps. Finally, the fourth step consisted of a sense-making workshop, in which stakeholders worked with and reflected upon the model to come to a representation of the local heat transition that would, ideally, respect the diversity of perspectives among stakeholders.

In this paper, we assess the transformative potential of our participatory modelling approach. We reflect upon its effects on both the research and decision-making processes. We pay special attention to stakeholders' experience of the process, the perspectives embedded in the model, the change in stakeholders' perspectives resulting from the modelling process and the effects of the process on the interaction among stakeholders. In so doing, we wish to contribute to democratization of energy modelling and energy policy making.

09:30

Aleksandra Kazakova and Wenzel Mehnert

The Heart of Beijing: A Hermeneutic Reading of Hutong

ABSTRACT. In the centre of Beijing, a city with a population exceeding 20 million, which embodies Chinese statehood and economic "miracle", lie historic neighborhoods of traditional courtyard residences known as "hutongs". Having witnessed the eras of imperial urban design, socialist city planning, and post-industrial transformation, hutongs exemplify persistence and adaptation of the social worlds against the background of technologization, gentrification and museification. Surrounded by the large-scale contemporary infrastructures and modern architecture, hutongs maintain both material and imaginary borders, preserving a microenvironment and communities with tense connections and shared lifestyles. At the same time, they are fully integrated in the city space, permeable to various mobilities and flows. The symbolic meanings, social organization, and embodied space-objects relationships of hutongs simultaneously stand in opposition to the rest of Beijing and preserve its memory and identity. The flexibility of hutongs are challenging for the formal categorizations and the modern distinctions between urban and rural; village, town and city; pre-industrial, industrial and post-industrial; center and periphery; authenticity and commodification. In this report, we will explore the sociomaterial organization of hutong from a hermeneutical perspective. The research question is: what are the meanings and interpretations of the hutongs arising in the context of Beijing city? Drawing on the methods of visual sociology and ethnography, micro-observations and artistic representations, we examine the internal tensions and reconciliations between the private and the public spheres, and between tradition and modernity.

Gerben Koers, Kevin Raaphorst, Merel van der Wal, Gerald Jan Ellen, Bart Rijken and Sander Meijerink

Redeveloping a climate service by considering contextual sensitivity through an Actor Network Theory-lens – The case of the RuimteScanner-tool

ABSTRACT. Land is a finite resource, yet demands for housing, industry, agriculture, energy, nature, recreation, and climate adaptation continue to rise. Many of these functions compete, requiring difficult trade-offs. The Netherlands exemplifies these tensions. Rising spatial pressures led to the development of the RuimteScanner, a tool designed to translate future spatial claims into integrated spatial visions. Initially used to support national spatial planning, it is now being repurposed by the Directorate-General for Water and Soil (DGWB) as a conversational tool to facilitate regional dialogues under the Water and Soil–based planning policy. This transition places the tool in a fundamentally new operating context. This poses a problem.

Climate service research shows that such contextual factors strongly shape usability. Viewing the RuimteScanner as a climate service underscores the need to understand how it functions within broader decision-making processes. Traditional human-centric approaches to usability, although valuable, focus mainly on direct interactions between users and tools. As a result, they often overlook wider contextual influences and the position a tool occupies within complex networks of actors, institutions, and decisions.

To address this limitation, we adopted an Actor Network Theory perspective, which considers both human and non-human actors—such as tools, policy documents, and organizational structures—as interconnected network components. From this perspective, usability depends not only on user interaction but also on how effectively a tool can enter, adapt to, and integrate within these networks.

Our research aims to include this "contextual sensitivity" into the RuimteScanner's redevelopment. By observing project meetings, conducting interviews with original users, developers, and future users, and organizing workshops/focus groups, we identify the RuimteScanner's evolving objectives, translate these insights into design criteria, analyze the developers' decision context, and test the redeveloped tool with potential users. Through this approach, we assess whether greater contextual sensitivity leads to higher usability.

10:00

09:00-10:30 Session 18F: T3: Ethics and Technology in Practice

Chair:

Anne Bonvanie

Location: Ravelijn 2237

09:00

Steven Dorrestijn and Wouter Eggink

The Fundaments of an Ethical Parallel track; building blocks for practical ethics in design processes

ABSTRACT. In the context of a practical turn in the philosophy of technology (Eggink & Dorrestijn, 2026) and in line with ethics of technology as accompaniment to technology development (Verbeek 2011) we introduced the concept of an "ethical parallel track for innovations" (Dorrestijn & Eggink, 2021; Dorrestijn et.al. 2024). Ethics can be made practical in technology development by applying a series of ethical tools for specific phases or aspects in design. Together these interventions build up to a parallel track for ethics all along a design process. The better the ethical interventions connect to the design process, the better this ethical parallel track works. Therefore, a foundational question is: parallel to what, and parallel how? What are relevant models for innovation processes, and how can ethical deliberation become connected in a parallel track? As a contribution to answering this question, we will discuss some of models for theoretical understanding and practical governance of design and innovation processes. We will identify what are fundamental elements where ethical intervention can be connected. One innovation process model are the Technological Readiness Levels. For connecting ethics it seems useful if a notion of ethical readiness (levels) becomes elaborated. In design methods there are often successive phases (such as problem statement, concepts, pilot), which prompts the question if there are specific ethical aspects in different phases. Other elements in design methods we will discuss are diverging and converging phases (Roozenburg & Eekels, 1991), the mutual development of problem and solution as the core of design thinking as described by Dorst (2011), and the iterative nature of development processes (Buijs, 2012). This theoretical exercise is in support of a practical ethics, which will be made accessible by visual representations of the design models and ethical track.

09:30

Egbert Siebrand

Ethical Workforms for Design and Designers: Structure and Coherence

ABSTRACT. There exists a wide range of practical workforms that can be applied around the design process to support ethical reflection. This research has resulted in a simple framework in which such workforms can be positioned. The aims of this framework are (1) to help designers choose from the large number of available workforms, (2) to make explicit the purposes for which these workforms can be used, and (3) to help identify where there is room for the development of new worksforms.

This research was initiated with the following research question:

What is an appropriate classification of different workforms addressing the impact and ethics of technology, such that it becomes clear at what moment and for what purpose they can be applied?

A large number of workforms were examined looking at the stage of the design process at which they can be applied and the possible outcomes they may generate. A complex overview was subsequently strongly simplified into a concise framework. This framework shows that workforms can broadly be divided into two areas of application. First, considering societal impact helps determine adjustments in design and implementation. Second, design choices also have a

personal impact, and methods can support reflection on how these choices affect designers on a personal level or influence their professional role as designers.

Design processes take many forms but consist of one or more successive divergent steps as well as steps in which decisions are made. In parallel, for both societal and personal impact, methods can be deliberately deployed in alignment with these phases. In divergent phases, workforms introduce "slow" reflective questions that broaden perspectives and expand the range of possible options. In convergent phase of the design process, by contrast, it is essential to arrive at ethical decision-making.

Samantha Copeland

Values Taking Shape Workshop

ABSTRACT. This workshop presents a toolkit for working with divergence and convergence toward common ground on what values are important, how they work together and what they mean in a particular context of technology development. The toolkit itself comprises of the shapes that values will take for the purpose of the workshop, and these physical, handheld objects offer participants an unique abstract language with which to discuss things that are important to them in the role they are playing, within their research team, as a developer or user, or in representing a stakeholder. This particular workshop will start with a question or context from the audience, relevant to the 'practical turn' engaged by the track. Having a secondary function, the
10:00 performance of the workshop will not only generate discussion around the topic of the practical turn itself, but will provide insights into how normativity generates relationships, between objects, and with as well as between people. The workshop will end with observations from the workshop leader as well as participants on spatial aspects of the workshop's performance, noting how these both embody and enable or constrain relationships between the shapes and the participants, between the shapes as values, between the model of the question or context built through the shapes during the workshop and the ideals originally held by participants about the values they initially chose. In sum, the workshop enacts and illustrates the values of the practical turn, by examining the question itself more deeply through exercises in divergence and convergence, abstraction and embodiment. Further, it demonstrates how to use an effective tool for working through plurality, highlighting the importance of (expert?) mediation in enabling the interaction between abstraction and the concrete that underlies values talk in general.

10:30-10:45Coffee Break

10:45-12:15 Session 19A: T25: When Futures Get Stuck: The "Captivity" of Collective Futuring in Transitions

Chair:

Harro van Lente

Location: Ravelijn 4231

Elena Gomel Cordeiro

The Future of Sustainability, Nutrition and Food Safety in European Circular Food Systems

ABSTRACT. The EU's Farm to Fork Strategy painted an ambitious vision for the future of food
10:45 systems in Europe, integrating sustainability, nutrition and food security. In 2025 the Vision for Food and Agriculture has has shifted the attention from sustainability, nutrition and the protein transition towards agricultural competitiveness and supporting rural communities. Still, the promotion of circularity as a solution for food systems sustainability remains as a priority across these policies, as reflected also in the Bioeconomy Strategy and the Circular Economy Action Plan.

This paper examines what future vision of an EU circular food system is assembled across EU policies, how a transition towards it is enabled or limited, and asks: what does this vision mean for environmental sustainability, nutritional quality and food safety? While in the policy discourse circularity is uncritically equated with environmental sustainability, this is not always the case. Moreover, scientific research has emphasised the food safety risks of waste and by-product valorisation, and while revalorised food products can provide nutritional benefits, processed foods are at odds with understandings about healthy food. Through a document analysis of European policies and legislation relevant to circular food systems, my study adresses how policy goals and instruments mobilised to achieve circular food systems in the EU interact with the three goals of environmental sustainability, nutrition and food safety. My preliminary findings suggest that EU circularity visions mobilise a transition pathway based on large scale biorefineries to process agricultural biomass, where animal production remains stable and food safety requirements are simplified to promote innovation. This can be interpreted as a 'capturing' of food system futures by competitiveness ambitions, global trade conditions and techno-optimism which might have detrimental consequences to environmental sustainability, nutrition and food safety, while foreclosing alternative pathways.

Merle-Marie Johannsen, Julia-Lena Reinermann and Hannah Müller

Imagining Carbon Futures: A Comparative Analysis of Sociotechnical Imaginaries of Industrial Carbon Management Technologies in Germany

ABSTRACT. Climate neutrality has emerged as a central political objective shaping national and supranational climate strategies. In this context, Industrial Carbon Management Technologies (ICMTs), including carbon capture (CC), carbon capture and storage (CCS), and carbon capture and utilisation (CCU), have gained increasing prominence in debates on net-zero pathways (European Commission 2024). While these technologies were initially discussed primarily as technical mitigation options, early public controversies indicate that ICMTs cannot be understood solely in technical terms but are deeply embedded in social, political, and institutional contexts (Wesche et al. 2023; Sitinjak et al. 2023). This development highlights the need for social-scientific perspectives that move beyond assessments of technical feasibility and cost-effectiveness. This paper analyses ICMTs through the lens of sociotechnical imaginaries (STIs). Following Jasanoff and Kim (2009; 2015), STIs are understood as collectively held and institutionally stabilised visions of desirable futures in which science, technology, and society are co-produced. The concept is particularly relevant for emerging technologies such as ICMTs, whose development and
11:15 implementation are shaped by future-oriented narratives, expectations, and socio-technical contexts. While STIs have been widely applied to other energy technologies, such as nuclear or wind energy, their systematic use in the field of ICMTs remains limited (e.g. Lefstad et al. 2024; Hougaard und Christiansen 2025). Especially analyses addressing multiple ICMTs across different actor groups in Germany remain scarce. Empirically, the study utilizes discourse analysis to examine documents from different actors that are actively involved in stabilising or contesting dominant imaginaries of ICMTs in Germany. The paper addresses three research questions: (1) which sociotechnical imaginaries of ICMTs can be identified in the German context; (2) how do these imaginaries differ across actor groups and between different ICMTs; and (3) how power asymmetries manifest within the discourse, particularly with regard to the institutionalisation of specific imaginaries.

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Kathrin Lutz and Benjamin Doubali

Restart after Stalling? Future Imaginaries and Re-Combination in Sociotechnical Transitions

ABSTRACT. Future imaginaries—whether technological, ecological, or political—do not merely emerge; they circulate, proliferate, and endure through deliberate and often invisible infrastructures. Whether from policy, media, business, and public engagement, future visions spread communicatively (via policy papers, sci-fi, concept videos) and materially (through prototypes, exhibitions, demonstrations). We argue that actors—governments, corporations, activists, engineers—deploy diverse strategies to ensure "their" futures remain mobile and resilient, resisting stagnation. Yet, futures do get stuck— not simply due to failures of their advocates or loss of credibility, but (1) in moments of transition from communicative formats towards materalization or (2) when they encounter other, contradictory future narratives and imaginaries. With our contribution we explore how actors try to manage transitions and dissolve contradictories by linking future imaginaries together in order to make them actionable again. We draw on the notion of re-combination (Besio/Meyer 2015) as a critical process involving negotiation, alignment, or hybridization of plural futures to specify and stabilize them in practice. Comparing cases from industrial platformization and sustainable AI, we discuss three kinds of re-combination processes: with (1) decoupling future visions are rhetorically embraced but structurally disengaged from implementation; whereas (2) translation adapts futures when crossing institutional, cultural, or epistemic boundaries; (3) interfaces are points of engagement that can be used by different actors according to their needs. We conclude that “stuck” futures reveal the friction inherent in pluralistic, heterogenous, co-constituted futures. Our contribution lies in reframing future-making as a relational and contested practice. By showing that futures are not “stuck” but rather “stalled” and can get going again, we offer analytical tools to better understand—and intervene in—the dissemination of future imaginaries, particularly in contexts demanding sustainability, equity, and resilience.

11:45

10:45-12:15 Session 19B: T27: Act Now! On Obstructing, Envisioning and Enacting Radical Change for Just and Liveable Futures: Obstructing & Envisioning

Chair:

Marije Miedema

Location: Ravelijn 4237

Guus Dix

Academic research as vehicle for obstructive fossil solutionism and transformative change

10:45

ABSTRACT. Using publicly available data on research funded by the European Commission combined with freedom of information requests to Dutch universities I build a picture of fossil fuel industry's strategies to keep false solutions in the air. Covering a thirty year period, I show how

fossil fuel involvement skewed research and policymaking in the direction of incremental, fossil-friendly "solutions" such as CCUS and hydrogen to the detriment of disruptive socio-behavioural solutions with a greater transformational potential. In the formative period of climate policymaking in Europe, we see how a network of allied researchers, policymakers and industry representatives established a central position in research and policy; sneaked in dual use of CCS for enhanced fossil fuel extraction; and manufactured an appearance of consensus for false solutions that keeps criticism and uncertainties at bay.

Paola Altomonte

Lessons from the past: being a woman, an activist and a scientist in the second half of the 20th century.

ABSTRACT. When an unprecedented number of women entered the natural sciences during the 1960s and 1970s, they did so at a time of profound social and political turbulence. While feminist groups were challenging established power structures and early environmental movements were calling for greater environmental awareness, some scientists began to question how the scientific knowledge they helped produce reinforced systems of injustice. These early efforts to develop more accountable ways of producing knowledge were foundational to the emergence of STS.

11:15 This paper examines what we can learn today from both the successes and failures of these early interventions through two contrasting cases. Through the story of Ruth Hubbard, I present a perspective from "the inside," highlighting the challenges, compromises, and negotiations involved in advancing a feminist political agenda while working within institutionalised science at Harvard University. In contrast, the case of Anne Innis Dagg illustrates the contestation of science from "the outside," revealing both the possibilities and the costs of challenging scientific authority after losing institutional support. The stories of these women, activists and scientists provide a good example not only of the negotiations and challenges that were required for the institutionalisation of critical debates (now increasingly under scrutiny) surrounding the relationship between science and society, but they also serve as a reminder of the strong relationship STS has and needs to have with activists movements that demand science to be held accountable from a societal perspective and to hold on to the responsibilities of being citizen scientists in the original sense of the term, as practitioners who see their professional role as being directed by their concerns as citizens.

Anne Beaulieu

Foregrounding relations for action

ABSTRACT. Relations are present across different aspects of knowledge infrastructures including data gathering and filtering, fieldwork practices, processes for configuring and supporting users, pipelines for analysis, and arrangements for access and accountability. The effect of obfuscating or foregrounding relations is significant, as is the process of deciding which relations to care for and
11:45 about, using discernment. Relations therefore connect ethics, politics and epistemology. In relatable knowledge infrastructures, relations are visible, palpable, assessable, and can more easily be called into question and accounted for. This contribution describes what would be required to further develop such infrastructures, by considering change from three angles: in terms of the constituents of knowledge systems (systematicity, reflexivity and distributivity), in terms of strategies for STS scholars and organisations, and finally in terms of ensuring openness to liveable futures through imagination and hope.

10:45-12:15 Session 19C: T6: From productivity to care: researchers' perspectives on sustainable research cultures

Chairs:

Melpomeni Antonakaki and Judit Varga

Location: Ravelijn 3231

Esto Mader

Dis/abling academia? Research culture between pressure to perform, barriers and opportunities in Germany

ABSTRACT. All academics navigate the competitive research culture, which creates an uneven playing field and makes it difficult to sustain research positions especially for those who are discriminated in multiple ways. The concept of intersectionality has taught us that categories of discrimination such as race, class, gender and age intersect with disability. This contribution examines the following questions through an intersectional lens: How do researchers with disabilities and impairments experience research culture in Germany? What barriers and opportunities can be identified? We aim to go beyond the focus on barriers and additionally investigate opportunities for marginalized researchers in academia to broaden the view on academic inclusion.

10:45 Our data was generated through 12 interviews (within a mixed method design for a survey) on career paths of marginalized researchers at four universities in Germany. Implementing intersectionality in research methods requires intentional integration of its principles at every stage, with a focus on power, complexity, and context. The analysis of lived experiences does not narrow its focus exclusively to disability but centers discriminating experiences more broadly. This allows for a heightened analytical sensitivity to intersectionality, as the individuals in question are not addressed or categorized primarily through identity labels.

The presentation addresses the tension between productivity, equity and wellbeing. The results show that pressure to perform and the precarity of German academia affect researchers differently, depending on their social position. We call intersecting obstacles researchers face multiple barriers, to highlight the specific situation facing multiple discrimination. Experiences in our interview material can be systematically categorized into the multiple barriers: structural and knowledge-related conditions, invisible normativity and internalized stigma. At the same time, academia offers opportunities that have positive effects on self-actualization and increase inner capacities for marginalized and in particular disabled researchers.

Ingrid Holme, Xiaojian Zheng and Ruben Flores

Research Culture: Janteloven, Sins and Notions?

ABSTRACT. Growing scientific research talent requires technical training, material resources, and nurturing researchers' social well-being, especially as progression is impacted by factors such as gender and ethnicity, producing a widely acknowledged leaky pipeline. Funded under Research Ireland's Science Policy Research stand, this project explores the research talent pipeline and research culture(s) in Ireland, Denmark and Singapore as examples of small, advanced economies.

11:07 Our project uses qualitative interviews to map the lived experiences of postdoctoral staff (n=50) within the talent pipeline to understand the cultural practices, traditions, and mores that constitute the qualitative and quantitative elements, as well as the constraints and blockages. We seek, in an anarchist form, to mis-use value stream mapping, a core lean management tool (used in industries such as manufacturing to document all steps within a production process), to trace often invisible elements which form the production process of postdocs within the higher education ecosystem. Stepping beyond discussions of precariousness and gender equality, our aim is to visualise material resources, information flow, value and waste. In this paper, we direct our attention to the interaction(s) between Neo-Fordism and social mores (cultural habits and folkways). For example, the advice 'ask for forgiveness rather than permission' often echoes in the hallways of Irish universities, a system born during British Colonialism, a strikingly different

history than the Scandinavian Janteloven, a set of cultural mores first noted in Aksel Sandemose's novel "A Fugitive Crosses His Tracks" and summarised as “You are not to think you're anyone special, or that you're better than us”. Our intention here is to question how postdocs in these rich sociohistorical settings experience the push towards a notional transnational research culture.

Eva Sievers, Annemiek de Looze, Aisha So, Esther Jansen and Jay Gietzelt

Letters from the In-Between: On Being and Becoming Transformative Researchers

ABSTRACT. As academic research cultures undergo intensified pressures toward productivity, disciplinarity, and performative impact, early-career researchers engaged in transformative, inter- and transdisciplinary research often find themselves navigating profound uncertainty, tension, and vulnerability. These experiences - emotional, embodied, relational, and political - remain largely invisible within dominant academic knowledge practices. This paper explores how such ‘in-between’ spaces can become sites of collective sense-making, care, and transformation.

One year after participating in a course on transformative research, a group of 21 early-career researchers re-convened to reflect on what it means to be and become transformative researchers within and beyond academia. Drawing on the Circle of Letters method, we engaged in a dialogical, circular exchange of personal letters followed by collective reflection and collaborative analysis,
11:29 combining poetic inquiry and participatory narrative inquiry. This two-step approach intentionally separates phases of opening up - attending to emotions, resonances, and tensions - from phases of closing down, where shared themes and narratives are carefully synthesised.

Rather than aiming for fixed conclusions, our process foregrounds becoming-with: a relational mode of inquiry that treats subjectivity, vulnerability, and care not as methodological risks, but as epistemic resources. Empirically, the project surfaces how early-career researchers navigate tensions between personal values and academic norms, practice relational forms of scholarship, and sustain commitment to transformative research under conditions of uncertainty. Methodologically, it demonstrates how dialogical letter writing and poetic-narrative analysis can function as low-threshold, collective infrastructures for reflexivity across time zones and institutional contexts.

By making visible the lived realities of transformative research work, this paper contributes to debates on research culture(s) in transition, offering both a critique of prevailing academic norms and a generative example of alternative, care-centred research practices.

Victor Avramov, Jaron Harambam, Eline Ramaaker and Willemine Willems

Caught in the Fray. How climate scientists navigate the public sphere

ABSTRACT. Research culture transitions can be shaped by shifts in policy and infrastructure, but they can also be spurred on by changing discourses within scientific communities. In the case of climate science, debates around the appropriate roles and activities of researchers have become increasingly polarized, prompting individual researchers to demarcate and defend their positions as climate scientists in the public sphere. In doing so, these scientists are renegotiating long-
11:51 standing academic norms and legitimate scientific roles in the face of current climatic and socio-political transformations. In this study, we interviewed thirty-five climate scientists across diverse disciplines and career stages working in the Netherlands about their perceptions of their roles and activities in the public sphere. We identify two empirically salient dimensions along which climate scientists delineate their roles and activities, which we term politicization and participation. Taking these dimensions as structuring axes, we have constructed an analytic framework on which we map the statements of our interviewees. Furthermore, we highlight four boundary registers centered on scientific credibility, political efficacy, normative responsibility, and individual capacity that scientists mobilize to demarcate their roles and activities in the public sphere. Our

research provides empirical grounding for theoretical conceptualizations of scientists' public roles and reveals how climate scientists are actively reshaping norms around public engagement in response to the evolving Dutch climate research context.

10:45-12:15 Session 19D: T19: STS Research into Interdisciplinarity: Reflections on and Analyses of Interdisciplinarity as a Concept

Chair:

Jochem Zuijderwijk

Location: Ravelijn 3237

Dario Feliciangeli

Living in Complexity: Disciplinary Identities and Knowledge Integration at the Complexity Science Hub (CSH)

ABSTRACT. 'Complexity science' has existed as a scientific label for roughly four decades, never quite managing to become fully institutionalized. Indeed, scholars agree that this field cannot be parsed as an established discipline or described as simply interdisciplinary or transdisciplinary. Rather, it has been defined as a 'quasi-discipline' or a 'scientific platform'. Epistemologically, complexity science combines an antireductionist impetus and the formal acknowledgement of uncertainty with a purely quantitative methodological toolbox. Yet, the semantic openness of the term 'complexity' allows it to encompass a broad array of research foci. Since its early days, the field explicitly embodied a challenge to academic tradition and, increasingly, it is associated with the production of societally relevant knowledge. An idiosyncratic example of contemporary
10:45 disciplinary rearrangement, complexity science shows that efforts to improve science are the messy and unstable result of contrasting forces. From an STS perspective, it is crucial to attend to how scientists navigate these forces, both collectively and individually.

To this end, I carried out empirical research at the CSH, a research center in Vienna. I relied on document analysis, interviews and participant observation, and specified my research interests to identity work and interdisciplinary practice. First, the institutional flexibility of complexity science emerged as both a challenge and an opportunity. Indeed, while researchers struggle to feel a sense of belonging or security in complexity science, they value the possibility to cultivate research interests more freely than in their 'home disciplines'. Second, my research shows that the integration of different knowledges in complexity science is fraught with asymmetries. This is mainly predicated on the epistemic authority of quantitative approaches, which biases the complexity science landscape towards a few dominant disciplines, and on publication pressure, which is experienced even by the most well-intentioned scientists as an insurmountable bottleneck for the careful practice of interdisciplinarity.

Luisa Cortesi

One researcher, multiple disciplines: perils and payoffs of navigating solo across epistemologies through the concept of experience

ABSTRACT. Despite a long standing history of anthropology as an interdisciplinary discipline,
11:15 existing literature on interdisciplinarity—within and beyond anthropology—emphasizes collaboration and negotiation among scholars from disparate fields. However, less work addresses researchers who, educated across scientific domains, integrate multiple disciplinary methods during solo ethnographic research, shifting interdisciplinarity from a collective enterprise to a lived, individual practice. Drawing on reflections from investigating everyday knowledge of drinking water—an inherently, albeit not uniquely, interdisciplinary topic—this presentation

examines what unfolds when ethnography navigates multiple epistemologies without the buffer of a team. It explores the risks and advantages of one researcher moving between multiple knowledge frameworks, proposing "ethnographic interdisciplinary experience" as a concept emerging from such embodied, situated crossings. Engaging John Dewey's concept of experience, the talk conceptualizes interdisciplinary work as a series of situated "undergoing and doing" episodes that transform both researcher and inquiry over time. This perspective foregrounds how learning other sciences is not mere acquisition of methods but reconstruction of habits of perception, inference, and judgment in concrete research encounters. The talk highlights solo navigation's unique contributions to knowledge production, urging recognition of such approaches in interdisciplinary scholarship.

Annemarie Horn and Sjang ten Hagen

The Conceptual Co-Evolution of Interdisciplinarity and Integration

ABSTRACT. Integration is often considered a defining characteristic of interdisciplinarity, distinguishing it from other forms of discipline-crossing, such as multidisciplinarity. But this definition is debated. To better understand the relationship between the terms "interdisciplinarity" and "integration", we set out to explore how the discourses of these terms became connected, which understandings they carried prior to their linkage, and how their understandings evolved since.

We took a sample of recent (2020-2024) interdisciplinary education literature to understand how authors defined interdisciplinarity and its relationship to integration when using the term to characterize educational initiatives. We related this to how interdisciplinarity and integration were understood – in relation to one another and separately – in 20th century literature.

11:45 We found that recent authors often did not provide definitions of interdisciplinarity, which confirms and updates the decades-old concern that interdisciplinarity is often used while left un(der)conceptualized. Those who took integration as a defining characteristic of interdisciplinarity often substantiated their definition with direct or indirect reference to texts that made this link in the 1950s to 1970s. Particularly, the collaborative understanding of interdisciplinarity and integration that sprang from the social sciences movement towards interdisciplinarity was prominent in the recent literature, including the use of integration as an evaluative criterion of 'genuine' or true interdisciplinarity. Moreover, the 'integrated curriculum' discourse from Northern American general and liberal education literature was reflected in recent publications. In contrast, unity of science logics that were prominent in older literature, was not apparent in our sample of recent interdisciplinary education literature.

Taken together, we demonstrate that current understandings of interdisciplinarity, and particularly its reliance on integration, are founded on conceptualizations coined between the 1930s and 1970s. This relationship and its underlying reasoning are, however, often left implicit and the concept integration often remains insufficiently precise to serve as an evaluative or analytical category.

10:45-12:15 Session 19E: T17: Digitilisation for Equity?

Chairs:

Jessica Coetzer and Lea Lösch

Location: Ravelijn 2231

10:45 Jessica Coetzer, Nicole Goedhart, Christine Dedding and Teun Zuiderent-Jerak

Digital health as a Matter of Care

ABSTRACT. It is well established that when digital health technologies (DHTs) are implemented through a lens of equity, they have the potential to reduce existing health inequalities. Unfortunately, current practices routinely ignore health equity and justice as both the means and ends of DHT implementation. Instead, system actors tend to focus on the other perceived gains of DHTs, such as efficiency, or on their risks, such as privacy. As a result, health inequities may (at best) stagnate or (at worst) be exacerbated. Whilst we do see a growing concern for the impact of DHTs on health inequities, this concern does not always translate into action. Using María Puig de la Bellacasa's framing of Matters of Care, which encourages us to move from simply recognising an issue as complex towards committing to transforming it, our research explores the moments in which the practices of system actors start to resemble Care for digital health inequities rather than remaining at the level of cognitive concern. We explore these moments through multiple field labs, employing diverse participatory, action-oriented and transformative methods. Whilst this is still a work-in-progress, we present some early results that navigate key conundrums such as: why do people express concern about digital inclusion in health until they realise the work such inclusion actually entails? How do health systems actors working on digital inclusion enact inclusive practices in a world that makes it difficult to prioritise inclusion? And how do we get system actors to care about digital health equity when there are so many different issues in health care to care about?

Lisa Burghardt

Humanitarian VR as a Matter of Care: Plurifying Digital Humanitarianism through STS

ABSTRACT. Humanitarian Virtual Reality (VR) is often framed as an "empathy machine," promising to cultivate care for distant others through immersive, technologically mediated encounters. Such narratives tend to stabilize care as a singular moral outcome and assume a universal spectator who feels and responds in predictable ways. Drawing on feminist STS, postcolonial theory, and debates on matters of care, I engage with care as an analytical and methodological lens to plurify what humanitarian VR is and what it does.

Rather than treating care as inherent to VR, I approach humanitarian VR as a socio-material care assemblage through which care is practiced, negotiated, and contested across networks of human and non-human actors. This approach allows for a more complex understanding of how care is
11:07 enacted, how it becomes knowable, and how power dynamics shape whose concerns are foregrounded or neglected. Empirically, the paper draws on three ethnographic case studies: curating "Phoenix of Gaza" at a humanitarian rights film festival, observing "Shelter" at the Dutch Ministry of the Interior and Kingdom Relations, and facilitating "Under the Same Sky" at DocLab. Tracing practices of making, curating, facilitating, and experiencing VR reveals multiple, coexisting forms of care that often remain unnoticed in dominant debates focused on empathy and impact.

By attending to these multiplicities, the presentation moves beyond assumptions of singular affective responses or care practices. Care becomes a way of following relations, noticing overlooked practices, and understanding how technologically mediated encounters shape engagement with humanitarian issues. In line with the panel's call for equity and justice in digitalisation, my presentation aims to open up speculative space through care: how might care be practiced differently? What alternative sociotechnical futures become possible when care is treated not as an (assumed) outcome, but as a situated, contested, and world-making practice?

Patrick Pieters, Susan Van Hees, Dea Van Lierop and Ajay Bailey

11:29 Between digital efficiency and care: Everyday negotiations of equity in community transport

ABSTRACT. Older adults' ability to travel and maintain social relations within their communities is widely recognized as crucial for well-being. Yet, age-related life changes often complicate the use of conventional transport modes such as public transport, driving, and cycling, constraining access to shops, healthcare, and social networks. Community bus services (also known as special transport services or paratransit) offer alternatives through demand-responsive, door-to-door travel that meets some older adults' needs and preferences. Drawing on full participant observations as a driver on a community bus once a week for eight months in The Hague, the Netherlands, 12 semi-structured interviews with travelers, co-drivers, planning staff, and board members, and forthcoming co-creation workshops, this study examines everyday negotiations of equitable transport on a community bus. Adopting a situated intervention perspective, the community bus is approached as a sociotechnical intervention where digital and non-digital arrangements are adjusted, negotiated, and contested in practice. The bus functions as an experimental site where values related to efficiency, care, and equity are enacted through booking procedures, operational zones, and on-board interactions. The analysis shows how perceptions of fair and equitable transport are co-produced through interactions between human actors (travelers, drivers, planners, and board members) and non-human actors (the bus, booking systems, rules, and norms). While many participants argue that digitalizing planning and booking could improve efficiency, travelers and volunteers value the informal, makeshift, and caring character of the service. Older adults prioritize recognition and care over speed or reaching all destinations, and employ coping strategies to navigate rigid procedures, often reducing autonomy and increasing anxiety. We argue that, amid increasing digitalization and emerging self-driving alternatives, transport equity cannot be reduced to efficiency or system-wide optimization, but is negotiated through everyday practices of care, adjustment, and coping, offering insights for STS scholarship and informing policies for inclusive, fairer transport futures.

Lingyun Yue

The Translation Wars of Bias: Discursive Negotiation and Power Struggles among Government, Industry, and Civil Society in SIS II

ABSTRACT. Biometric technology has been widely adopted in border control, identity authentication, and law enforcement, raising growing concerns about "bias." While much scholarship focuses on algorithmic errors or data quality, fewer studies have examined how different actors construct the meaning of "bias" through discourse. This paper addresses this gap by analyzing the Schengen Information System II (SIS II), a key EU law enforcement infrastructure, to investigate how government, industry, and civil society discursively translate the concept of bias, and how their interactions shape power asymmetries in digital governance. Drawing on Actor-Network Theory (ANT), Foucault's concept of governmentality, and Critical
11:51 Discourse Analysis (CDA), this research develops a hybrid analytical framework. It critically revisits ANT's notion of "translation" and proposes two original concepts: governmentalized translation structure and co-constructed Obligatory Passage Points (OPPs), to account for how dominant actors predefine governance boundaries rather than negotiate them symmetrically. Empirically, the study analyzes official policy documents, corporate brochures, and civil society reports using a two-stage coding process and network visualization. It finds that government and industry, by respectively providing and reciprocally deploying governmental discourses of legitimacy and technicity throughout the translation process, engage in a pre-defined collusion that defines bias as a technical issue of data optimization and risk management. This process marginalizes the critical translations of structural bias advanced by civil society. The paper contributes to critical scholarship on digital infrastructures by foregrounding how discourse operates as a technology of power. It offers an empirical analysis of SIS II bias governance, and proposes a critical extension to ANT for analyzing actor asymmetries in governance systems.

10:45-12:15 Session 19F: T3: Ethics and Technology in Practice

Chair:

Wouter Eggink

Location: Ravelijn 2237

Jonne van Belle and Anne Bonvanie

Visualising AI Perceptions for Ethical Reflection in the Dutch Public Sector

ABSTRACT. Artificial Intelligence (AI) is rapidly evolving and highly present in different forms of public discourse, such as the media, the workplace and informal conversations. Yet, the term “AI” is rather muddled. It encompasses different applications, diverse interpretations, imaginaries and narratives that shape how organisations perceive and approach this technology. These perceptions matter: they influence strategic decisions, ethical considerations, and implementation practices. Especially in the public sector, these imaginaries can shape the development, implementation and use of AI and therefore its impact on society.

10:45 In this prototype presentation, I explore which stories and imaginaries of AI circulate within public organisations and how they frame organisational responses. I present several interventions that visualise existing AI perceptions, based on exploratory interviews with five Dutch public organisations. The interventions can serve as ethical conversation starters and guide decision-making on an organisational level. By making the different perceptions and expectations around AI more visible in a creative way, the interventions aim to enable more productive and context-sensitive ethical reflection on AI.

Using the interventions, I argue that understanding the underlying perceptions of AI is a crucial first step towards value-driven AI governance. Future research will build on this idea by integrating AI imaginaries into structured ethical reflection processes, supporting responsible and transparent decision-making about AI in the public sector.

Eduarda Boing Pinheiro, Juliano Camillo, Betzabé Torres-Olave and Elizandro Maurício Brick

Scientific practices for the transformation of unjust realities

ABSTRACT. Along with contemporary scientific and technological advances, we face a context of "perverse globalization" (Santos, 2000), since development is not committed, for instance, to liberating people from hunger, forced labor, poverty, or the consequences of the environmental crisis. Pinto (2005) conceptualizes the epistemology of technique as praxis, i.e. a mediating theory and practice through labor that relies on prior culture. Praxis can be alienating insofar as it distances people from perceiving reality as a concrete totality in which humanity could recognize itself as the agent of intentional and ethical transformation of reality mediated by technique
11:07 (Freire, 2019; Kosik, 2007). We are challenged to identify and mobilize either techniques and scientific, popular, and ancestral knowledge based on ethical-critical rationality (Dussel, 2012; Silva 2004), struggling with communities of victims to build a world that promotes life. We aim at answering the question: What is the potential of participatory forms of scientific knowledge production to integrate local and practical knowledge when addressing global crises? Prosa (Center for Studies and Research in Ethical-Critical Education and Technology) is a group affiliated with the Federal University of Santa Catarina, Brazil, that seeks to develop actions engaged with communities of victims (Dussel, 2012). In 2024, a project was developed in the Rural Education Degree program, educating rural teachers in Natural Sciences and Mathematics. Relying on Thematic Investigation (Freire, 2019; Silva, 2004), the project aimed at interdisciplinary planning and implementation of educational practices committed to the realities of three different communities, starting from the contradictions identified in these contexts. The themes addressed

included transportation, public management, urban planning, and social inequality. The content (scientific and popular knowledge) of the educational practices was selected based on these themes. Furthermore, the project sought to develop collective strategies for overcoming these problems, using science and technology to benefit the communities.

Jan Kaptijn, Jolan Schreuder and Anne Bonvanie

Should Ethics be Agile?

ABSTRACT. There is a growing awareness in both corporate and governmental contexts that ethics should be part of operational practices. As ethicists, we welcome this development. While academic ethical research is valuable in its own right, its societal relevance increases when ethical theory is practiced in the real world. However for ethics to be adapted in corporate and municipal decision-making and practices, it must be perceived as applicable, accessible, and practically useful to those facing concrete dilemmas. Without this adaptation, awareness alone achieves little.

Moving from awareness to adaption requires, to some extent, that ethics is "sold" to practice. In this presentation, we reflect on a range of tools and approaches that we have introduced in corporate and municipal settings to bridge the gap between ethical theory and everyday decision-
11:29 making. These approaches were designed to address challenges of applied ethics, such as the limited perceived relevance of ethical reflection and the misconception that substantial background knowledge is required to engage with ethical theories.

To "sell" ethics, theory is often translated into simplified questions, an agile diagram, or interactive formats, for example by offering feedback in the form of ethical scores, like doel-middel.nl. While such approaches can lower thresholds for engagement and stimulate reflection, they also generate new ethical dilemmas of their own. Simplification may obscure normative complexity, and scoring mechanisms may steer behavior in unintended or problematic ways.

During the presentation, we will discuss concrete examples of these methods and critically reflect on their ethical permissibility. Drawing on insights from ethics of technology, we bring to light ethical dilemmas that arise when selling ethics. Insights from psychology are used to better understand implications on ethical reflection when engaging with such tools. Ultimately, we address the question: what is the ethically responsible way forward for an "ethics salesman"?

Daniela Fuchs and Margit Hofer

Fostering responsibility in data sharing practices?

ABSTRACT. Data sharing is expected to boost economic growth, and the glittering promise of digitalization has motivated companies to generate, accumulate and store different data from various industrial and business processes (Gizelis et al., 2024). To live up to these promises, data sharing requires infrastructure to mediate collaboration between different actors. The Horizon Europe project DATAMITE develops such an infrastructure to simplify data exchange for organizations.
11:51
To fully exploit its potential, the project included responsible innovation practices, such as exploring the non-monetary impacts of data sharing for organizations like SMEs as well as the general public (Gizelis et al., 2024). Our respective analysis showed that the technical interventions shape (and are shaped by) business visions and practices of our pilot partners, with non-monetary benefits playing a significant role in changing their business practices. Based on our analysis, we co-developed a reflection tool on non-monetary impacts of data sharing for businesses (and other organizations) together with our pilot partners of the DATAMITE project.

While feedback has been promising, the development of the tool remained challenging, bridging between comprehensibility and usability in practice, especially as it is intended to be used beyond

the project (and in different sectors accordingly). Therefore, we are interested in discussing and learning from experiences how to best foster considerations of responsible innovation in future data sharing practices from the outset.

Literature Gizelis, T. I., Maglogiannis, I., Iliadis, L., Macintyre, J., & Jayne, C. (2024). Data monetization opportunities and challenges: The European landscape by DATAMITE. In I. Maglogiannis, L. Iliadis, J. Macintyre, & C. Jayne (Eds.), Proceedings of Artificial Intelligence Applications and Innovations. AIAI 2024 IFIP WG 12.5 International Workshops (pp. 62-79). Springer. https://doi.org/10.1007/978-3-031-63227-3_5

12:15-13:15Lunch Break (Atrium) & WTMC Member Meeting (RA1501)

13:15-14:45 Session 20A: T25: When Futures Get Stuck: The "Captivity" of Collective Futuring in Transitions

Chair:

Filip Rozborski

Location: Ravelijn 4231

Renee van Dis and Mireille Matt

Nestedness of collective futures: Scales, Time and Depth of change

ABSTRACT. Mission-oriented research and Innovation (R&I) offers promises for a better future. However, directing R&I activities towards transformative objectives requires systemic approaches that consider the context of the mission and the role of various actors in driving societal change. To contribute to societal transformations, forward-looking activities play a crucial role in creating collective visions of the futures to which R&I seeks to contribute. Within transformative R&I experimentations (e.g. research projects, co-creation processes or living labs), such collective visions contribute to scaling and embedding of alternative solutions in society. However, transformative change is challenged by systems' multilevel and nested nature, and directionality and actors' responsibility must be defined at each level. In this paper, we ask how a nested
13:15 approach to visioning desired futures supports the contribution of R&I activities to societal transformations. Within the field of agricultural and marine systems, we use three case studies in which the ASIRPA Real-Time (RT) formative evaluation approach was an integral component. We study two French mission-oriented research programs—focused on pesticide eradication and on sustainable and just marine socio-ecosystems—as well as a living lab on natural farming in India. In all three cases, ASIRPA guided participating actors in envisioning collective desired futures. We show the importance of considering the nestedness of collective futures to achieve transformative change, between: 1) Scales – e.g. between projects, the program and the external context, or between an individual, a community and a region; 2) Temporal – e.g. visioning futures should be embedded iteratively within R&I trajectories; 3) Depth of change – e.g. visions oriented toward shallow or deep leverage for systemic change. We argue that, in contributing to transformative change, desired futures must be envisioned and articulated in interaction across all levels of the system.

Inez Dekker, Barbara Van Mierlo and Cees Leeuwis

Enacting an ecology-based agrifood system in living labs of a sustainability transition programme

13:45 ABSTRACT. In response to large-scale biodiversity loss in the Dutch agricultural landscape, sustainability transition programmes aim to stimulate systemic change towards biodiversity-enhancing agrifood systems in the Netherlands, such as agroecological systems. These systems are characterised by specific, complex interactions among multiple species, including microbes, soils,

crops, animals, and climatic conditions, and necessitate changes in current practices around supporting such multispecies interactions. In this context, system learning is considered essential, as it can enable such transformations by exposing and reshaping current systems' relationships and practices. How such transformations occur is insufficiently understood. This study, therefore, focuses on the changing multispecies interactions and system learning in the agroecological transition programme CropMix. Here, the focus was on the enactments of these interactions, which emphasizes that these are not pre-given but are actively brought into being through practice. Through participant observation in four online meetings of two living labs, it was examined whether and how shifts - from more general to specific - in the enactments of multispecies interactions contributed to processes of system learning. This research showed that there is no positive correlation between shifting enactments of multispecies interactions and system learning. Specifically, an inverse relationship emerges: the more specific multispecies interactions are enacted (such as interactions between 'nasturtiums' and 'nematodes'), the less system learning is observed, and conversely, generalized and less specified enactments (such as interactions between 'crop' and 'insect') tend to coincide with more extensive system learning processes. Based on the findings of this study, it can be argued that while specific understandings and practices of multispecies interdependencies are essential for agroecological systems, they are insufficient on their own to support sustainability transitions. Instead, such transitions require deeper, system-level reflexive processes that critically engage with existing political, cultural, and institutional arrangements.

Eduardo Urias

Competing Imaginaries in Mission-Oriented Innovation Policies: Power, Justice, and the Politics of Sustainability in the Brazilian Amazon

ABSTRACT. Mission-oriented innovation policies (MOIPs) are increasingly promoted as vehicles for sustainable development, yet their politics remain under-examined—especially in the Global South. This article interrogates the Brazilian Amazon +10 initiative to "rewire" science, technology and innovation toward a new bioeconomy for the Amazon. We ask: how do competing sociotechnical imaginaries configure power, directionality and justice in its early governance? Drawing on Critical Discourse Analysis of verbatim transcripts from four high-level "Science for the Amazon Day" panels (≈ 340 min) we trace how policymakers, scientists, Indigenous leaders and private-sector strategists publicly construct and contest missions for Amazon. Iterative inductive–deductive coding reveals three dominant imaginaries: (i) a techno-scientific, data-driven vision centred on satellite monitoring and enforcement; (ii) a bioeconomy-led green-growth vision that commodifies nature as genetic assets; and (iii) an Indigenous-led, community-centred vision grounded in Bem Viver and territorial self-determination. The first two coagulate into a powerful policy bloc that secures institutional primacy by aligning "science-based protection" with "green markets", while risking marginalising debates over land-rights, colonial legacies, global market dependencies and epistemic plurality. For instance, bioeconomy proponents frame "green growth" as apolitical, ignoring how carbon markets recentralize control over Indigenous territories. Proponents believe this approach can mobilise resources across institutional boundaries and attract large-scale investments to drive rapid, systemic change toward a low-carbon, bio-based economy that reduces deforestation and carbon emissions while boosting GDP growth trough exports. In contrast, the indigenous-led imaginary is mostly acknowledged as supplementary to those strategies, relegating indigenous epistemologies to a subordinate role. In conclusion, there is a need for MOIPs to recognise that some sustainability imaginaries are incompatible with existing governance models and socio-economic structures. Rather than closing off alternative pathways, MOIPs should remain open to multiple visions of future. This, in turn, demands a critical examination of the material, political and epistemic structures that shape participation and determine whose voices are heard – or silenced – in decision-making processes.

14:15

13:15-14:45 Session 20B: T27: Act Now! On Obstructing, Envisioning and Enacting Radical Change for Just and Liveable Futures: Workshop

Location: Ravelijn 4237

Marije Miedema, Guus Dix and Anne Beaulieu

Workshop

ABSTRACT. You are invited! Radical change takes a lot of individual and collective effort. In the workshop Act Now!, we aim to build something new together. First, we design more radical messaging by examining the narratives that academic institutions currently use. Can we work on transformative commitments by reshuffling words and recreating meanings? Beyond messaging,
13:15 we will map institutional power structures and ask how we can transform institutions through a social movement campaign. What escalation ladder do we need to move beyond words to institutional change? Finally, we follow Bartleby in exploring what it feels like to 'become an academic obstacle'. In Melville's short story, this 19th-century Wall Street clerk replies in the very same way to all requests from his superiors: "I would prefer not to". What unsustainable stakeholder would you prefer not to work with, and what unsustainable routines would you like to obstruct? By partaking in these three different approaches to action (imagining, planning/strategising, obstructing), we hope to help each other expand our repertoire for action.

13:15-14:45 Session 20C: OT: Governing Socio-Technical Change

Chair:

Gabrielle Canalli

Location: Ravelijn 3231

Matthijs Mouthaan, Koen Beumer and Hens Runhaar

The promises and pitfalls of consensus-seeking politics in times of polarisation: Lessons from the Strategic Dialogue on the future of European agriculture

ABSTRACT. STS has a long recognized the importance of stakeholder participation to ensure diverse forms of knowledge and plural values are incorporated in decision-making. At the European level, decision-making is increasingly characterized by polarisation. Even in this polarized climate, participation and consensus-oriented politics are prioritized, inspired by the dominant rational-deliberative political philosophy.

At the same time, a growing body of literature highlights the value of productive conflict and the necessity of agonism in a pluralistic society. The challenges posed by pluralism and polarisation for
13:15 consensus warrant a critical look at the design of consensus-oriented stakeholder participation, and particularly the design choices aimed to generate consensus. We critically analyze one such participatory initiative: the Strategic Dialogue on the Future of European agrifood.

Launched by the European Commission at the start of 2024, this Dialogue mandated the heads of 29 influential yet highly diverse stakeholder groups to formulate – by consensus – a desirable future for European agrifood, intended to inform the European Commissions' strategic priorities. After eight months, its participants presented a 'conceptual consensus' that suggested a successful convergence and integration of different values and forms of knowledge.

Through 19 interviews with participants, invited experts, and the chair of the dialogue, we analyse the design of the Strategic Dialogue to identify key choices that were conducive to find consensus, while critically considering the limitations of these choices for the legitimacy and transformative potential of such participatory initiatives. Integrating these insights with political science

literature, we develop a framework of design choices for reaching consensus. Through our case, we identify the promises and pitfalls of each design choice for consensus-oriented participation in a pluralistic and polarised society.

Emma Remédios Lameiras

Affected Microbiome: Assembling Caring Relationalities between Humans and Microbes In and Through Microbiome Engineering

ABSTRACT. Anthropological and scientific interests converge in an attempt to draw out new microbiomic knowledge at the nexus of health, nutrition, taxonomy, and the industrialisation of biological processes. “Microbes are becoming new links between separate worlds, assuming the role of connectors between human, animal and vegetable health” (Ilaria Capua 2019, 65 in Raffaetà 2023, 40). In an attempt to assemble the multiplicit processes that socially, technically and discursively construct scientific knowledge about our fragmented microbial counterparts, I trace the practices and histories of microbiome research through the lens of multispecies entanglements and affect theory, situating research within the epoch of anthropogenic aftermaths (Landecker 2024). Configuring the human as a microbially-entangled superorganism, nuanced relational
13:37 understandings of human-microbe exchanges in bioengineering work emerge from within laboratory research practices (Lorimer 2016,70-71). To analyse the entanglement I leverage the Post-Pasteurian modes of affection that between researchers and their bacteria, manifest through the practice of care — an affective practice cutting across the social and technical materialities in the laboratory and an avenue of experiencing affect that transcends species confines. Microbial care is critically questioned as a formation of moral economies which contours its objects of care and disregards others (Martin et al. 2015, 636), building on new iterations of microbiopolitics in practice (Paxon 2008). My research question is as follows: How do microbiome researchers care for microorganisms, in relation to ecological and technoscientific futurity? What insights about changing microbe-human relationships emerge from current bacterial care practices in the lab? Through ethnographic observation in the laboratory and interviews with microbiome scientists, I investigate the affective care and politics embedded in and directive of microbiome research. I ask how microbiome sciences and its technoscientific applications shift when bacteria are no longer perceived as foe, but as symbiotic co-mediators of human health and scientific knowledge-making.

Else Giesbers, Thomas Mattijssen and Cees Leeuwis

Inclusivity and transitions, intertwined or incompatible?

ABSTRACT. Including citizen participation in decision-making for sustainability transitions is often seen as a way to strengthen the legitimacy of decisions and to enlarge the support for decisions. Not solely considering academic knowledge but including lived experiences of citizens in governance structures ensures that decisions better reflect and fit to reality. In current decision-making processes, however, often citizens are not involved and if they are, power dynamics often hinder a fair involvement. Some academics point to the ‘sustainability-inclusivity’ dilemma that
13:59 hinders an efficient involvement of citizens in transitions. This dilemma mentions that decision-making for sustainability transitions often requires acting when a momentum arises and therefore requires quick responses. Including citizens and especially including them in an inclusive way which comprises an equitable participation process and providing enough time for everyone, takes time. These two parts are then seen as difficult to correlate from a theoretical perspective. But how is this dilemma experienced in practice? In this paper, the reflections on experiences of practitioners and policy makers are provided concerning this dilemma. Practitioners of food system transitions reflected in a workshop on inclusive citizen participation and if they experience this dilemma or other dilemmas. Similar questions were asked in interviews with policy makers in the domain of food system transitions where they reflect on this dilemma and how they tackle issues like these in the organisation of participatory processes. By reflecting on this dilemma, this

paper discusses an often-heard concern that is brought up when participatory practices are mentioned. It thereby aims to give guidance to forms of participatory governance in which power can be distributed differently and therewith to the development of inclusive and sustainable policies.

Robin Hillenbrink

When the World Outgrows our Words: How Socially Disruptive Technologies Reshape Moral Conceptual Frameworks

ABSTRACT. Abstract STS conference 2026, University of Twente Robin Hillenbrink, PhD candidate at the University of Twente, Philosophy section

14:21 Technologies impact not only social and moral practices, but the conceptual frameworks through which we interpret, express and govern techno-social and techno-moral shifts. This paper analyses how Socially Disruptive Technologies (SDTs) induce conceptual disruptions in moral conceptual frameworks by focusing on the mechanisms through which technologies generate conditions that inherited moral vocabularies struggle to capture. First, I distinguish technology as driver or enabler of conceptual disruptions, following Woodward's interventionist account of causation and Mackie's INUS model. Technology-driven conceptual disruption occurs when a technology directly alters the empirical conditions presupposed by a concept's application. This involves systematic dependencies where manipulating a technological capacity predictably modifies the world-state relevant for concept use. An example is the mechanical ventilator, which enabled respiration independently of brain function and challenged the assumption that cardiopulmonary failure and death coincide. Technology-enabled conceptual disruption occurs when technologies expand possibility spaces that only become disruptive through uptake within wider socio-technical constellations of discourse, norms, institutions, etc. Examples include AI companions, which enable new intimacy practices, and invite the migration of moral-relational concepts such as 'partner', 'care', or 'infidelity' into new technological domains. Second, I present a theoretical account in which I infer six recurrent mechanisms of SDT-induced conceptual disruption: (1) novel ontological phenomena, (2) new decision options, (3) novel socially meaningful practices, (4) new or reshaped relationships and social roles, (5) novel epistemic visibility that becomes morally salient, and (6) domain transposition, where concepts migrate into technological domains that outgrow their original conditions of use. Methodologically, the paper combines causal-mechanistic analysis with conceptual-discourse mapping to build a preliminary taxonomy of disruption mechanisms. It clarifies how SDTs create shifting conditions of epistemic and practical possibility that inherited moral classifications cannot accommodate. This in turn reveals how social and moral concepts come under pressure during large-scale socio-technical shifts.

13:15-14:45 Session 20D: T16: When the Public Goes Private: The Entanglement of Financialized Actors in Public Sectors

Chairs:

Fenna Nijboer and Lucy van Eck

Location: Ravelijn 3237

Yashi Punia and Felice Diekel

A Vocabulary of Green Justification: Creating New Not New Environmental Truths

13:15 ABSTRACT. Contemporary climate governance increasingly frames "tools of green transition" as a necessary route toward sustainable futures. This research approaches such initiatives as knowledge–political projects that do not simply manage ecological worlds, but participate in

reconstituting them as economic and governable entities via complex power relations. Through policy devices such as nature-based solutions, and offsetting schemes, ecosystems are rendered calculable, and commensurable. In this process, multispecies relations become reframed as financial assets, infrastructures, and speculative frontiers. Drawing on decolonial theory, and feminist STS, this research argues that these developments extend capitalist rationalities under conditions of planetary crisis. Rather than encountering ecosystems as relational, multispecies worlds, tools of green transition repeatedly reframe them through shifting consumerist lenses: as climate solutions, investments, and risk-mitigation tools. Each reframing produces a new "version" of nature aligned with prevailing economic and governance priorities, layering on new and at the same time not new versions of nature. This continual ontological remaking remains grounded in anthropocentric assumptions: ecological value is affirmed primarily through usefulness to human prosperity and wealth accumulation. As a result, the agencies, vulnerabilities, and ethical claims of non-human others risk being subordinated to technocratic calculation.

This research adopts a conceptual and discourse-analytic approach to examine how policy vocabularies, funding infrastructures, and expert knowledge stabilise these shifting regimes of environmental truth. Such regimes normalise commodification as both rational and morally necessary, while obscuring the uneven power relations and forms of dispossession embedded in green governance. In doing so, this research highlights how ostensibly sustainable interventions can reproduce extractive and exploitative relations, even as their justificatory language changes continually. We will endeavour to present this research via a mixed media method and a performative dialogue as an alternative way to think and explore the multiple layers of constructed meaning ascribed to our socio-ecological systems.

Lisa Jansen, Rob Timans, Ronald S. Batenburg and Lilian H.D. van Tuyl

A typology of network governance: exploring (not-) for-profit networks of general practices in the Netherlands

ABSTRACT. Background Like other healthcare sectors, the field of general practice increasingly faces challenges that inform organisational innovations. Traditional models with mostly sole-practitioner practices have given way to a multitude of governance models. These are often purported by external actors (i.e., outside the healthcare field) whose core activities consist of non-care activities like management, accounting, finance and procurement.

External actors come in various shapes and guises. Some pursue profits through upscaling and centralising care delivery, whereas others follow a logic aligned with the doxa of general practice, emphasising cooperation and relieving general practitioners of non-care burdens. Both assume the role of a central governing organisation (cgo) in a network of general practices. As cgo's they employ a distinct network governance model that is an assemblage of elements with political, managerial and valuating linkages.

Theory We propose that these networks can be understood as dynamic constellations that are shaped by the logic of the fields in which the actors operate, the role of the cgo and the governance tools that mediate these networks. We employ a relational perspective, combining insights from Bourdieu's field approach, the network governance perspective of Provan & Kenis and Actor-Network Theory to interpret how these networks operate and are legitimised.

Methods and results To understand the governance structures operating within networks we employed a data-driven approach to explore organisational forms in Dutch general practice. We arrived at a first rudimentary typology of 'mechanisms of influence': hierarchy, executive board membership and contracts. We also observed hybrid networks that combine different mechanisms.

13:45

Implications We discuss how emerging networks may reshape general practice and address the increasingly complex and untransparent nature of these networks. We propose future research on the governance tools underlying the identified mechanisms of influence, with particular attention to how actors innovatively recombine them to create new structures.

Lucy van Eck, Marcello Aspria, Iris Wallenburug and Rik Wehrens

Action without resolution: Private knowledge practices in public healthcare networks

ABSTRACT. In contemporary public challenges that lack clear ownership and cut across sectoral and institutional boundaries, reliance on consultancy has become routine. A paradoxical tension becomes visible: despite acknowledgement across both consultants as well as their clients that consultancy offers no guarantee of durable or structural resolution, these external experts continue to be hired as indispensable intermediaries. This persistence cannot be accounted for by outcomes or effectiveness alone. Taking this tension as its starting point, this paper examines how private knowledge practices reframe public issues in ways that enable continued action, while potentially leaving more fundamental questions unaddressed. This paper asks: how do private knowledge practices become entangled with public healthcare organisations in complex care networks, and how does entanglement shape the articulation of public care challenges. It draws on qualitative
14:15 research in regional Dutch healthcare project networks within the Action Programme Misunderstood Behaviour. We approach consultancy as a heterogeneous set of epistemic practices. In this way, consultancy includes independent advisors, advisory firms, deployment agencies and hybrid actors who move between roles such as project leader, researcher, programme manager and grant writer. Consultants' positions in these networks are relationally negotiated. Care organisations and public partners deploy consultants for multiple strategic reasons, including gaining access to expertise, shifting responsibility, and legitimising or temporarily stabilising contested issues. By foregrounding these practice-based dynamics, the paper moves beyond critiques that treat consultancy as an abstract managerial elite and frame the client as passive or lacking any form of agency. Rather, it traces how consultancy is enacted through collaborative knowledge work. This paper opens up a perspective on healthcare consultancy as epistemic practice situated at the intersection of public healthcare and private expertise. It proposes a reconsideration of how routinised performance of solutions sustains the paradox of action without resolution that shapes public care challenges.

13:15-14:45 Session 20E: T28: European AI: Towards Digital Sovereignty and Alternative Approaches to AI Technology

Chair:

Andreas Liesenfeld

Location: Ravelijn 2231

Andreas Liesenfeld

Panel Introduction: understanding AI infrastructure in Europe

ABSTRACT. Solid scientific understanding of AI infrastructure underpins both tech regulation and
13:15 recent European efforts for greater (AI) tech sovereignty. This contribution is primer to European AI infrastructure and an introduction to methods and approaches of how the social sciences and STS can contribute to explore, describe and evaluate the physical and digital aspects of AI infrastructure. The talk introduces recent work on the topic in the fields technology assessment, organisational ethnography, and infrastructure in STS.

Arya Rahimi Golkhandan, Andreas Liesenfeld, Mark Dingemanse, Dick Blankvoort and Nityaa Kalra

Open source AI in Europe: how building blocks are falling into place right now

ABSTRACT. Europe is pouring funding into building independent capacities in AI, and hopefully this will not just mean more of the current closed-source, corporate-monopolised and venture capital-fuelled generative AI models. In theory, the European approach to AI is open source – not mere 'open weight'. Only true Open Source AI has the potential to address fundamental flaws such as alignment with some GDPR requirements and circumventing the fundamental hallucination
13:20 problem of gen AI systems by allowing verification of information sources in the training data (for a proof-of-concept, see AllenAI's OlMo Trace system). But this approach cannot be left to the private sector because full openness goes against business models. Instead, public bodies like universities need to lead the charge of advancing Open Source AI. This talk recaps recent developments in the field: (1) a survey of the current genAI landscape; (2) the potential of current OSAI proof-of-concepts and demonstrators, (3) policy work by the Open Future Foundation, Mozilla Foundation, Linux Foundation, and the Open Source Initiative. The aim is clear: a future-proof regulatory framework that builds on exemptions for OSAI laid out in the EU AI Act but preserves as much of the spirit of the GDPR as possible.

Tamar Sharon

O digital sovereignty, wherefore art thou?

ABSTRACT. Digital sovereignty has become a key priority for EU policy in recent years, but it is a polysemic and contested concept. In this presentation I provide a short "justification analysis" of
13:41 EU policy discourse on digital sovereignty based on the "orders of worth" framework developed by Boltanski and Thévenot (2006). I argue that common justifications for digital sovereignty rely on a negative conceptualization of freedom as non-interference – namely autonomy from Big Tech – whereas a positive conception of freedom encourages us to think about what autonomy from Big Tech is for. I suggest that this question can best be answered by focusing on the core values and missions of public sectors undergoing digitalization, and that this focus should become central to digital sovereignty efforts.

Simone Casiraghi and Niels van Dijk

Constituting a sovereign European identity through AI ethics. A critical exploration

ABSTRACT. This contribution traces the role of values in constituting a European identity, from the Maastricht Treaty until today. Since the failure of formal attempts at European constitution-making, this political project of value-based identity building has been progressively delegated to the 'sub-politics' of institutionalized ethics in the form of expert groups opinions and research programs. After a broad chronological sketch of how ethics and values have been mobilized in the European Union to build an 'internal' European identity, from biotechnology (1990s) and
14:02 nanotechnology (2000s) to early initiatives on the ethics of robotics in the 2010s, we move to the recent trends in AI. We focus, first, on the mandate, creation and output of the High-Level Expert Group on Artificial Intelligence to produce ethical guidelines. Secondly, we delve into the increasing calls for technological sovereignty, especially because of the increased dependence of the EU on foreign critical digital infrastructures, which has become evident especially during the Covid-19 pandemic. What is distinct about ethics in the digital domain, compared to bio- and nano-tech, especially with the recent AI agenda, is 1) the move of ethics back to the political level, sometimes portrayed as an alternative to traditional law-making 2) the purposeful program to distinguish an EU technological approach of embedding its common values in digital infrastructures and achieving technological sovereignty. Building on STS debates on institutionalized ethics and the political construction of Europe, we argue that, despite the

ambition of the EU to create value-based and ethical technologies as global standards, this approach does come with a cost, especially concerning democracy and the rule of law, as the initiatives made in the name of ethics and EU values lack democratic representativity on the one hand, as well as the procedural quality guarantees under the rule of law on the other hand.

Dick Blankvoort and Harshvardhan Pandit

Investigating Training Data Transparency in the EU AI Act: a Reconstruction-Based Approach

ABSTRACT. Concerns regarding the vast training data being used by General-Purpose AI (GPAI) models has prompted the AI Act's Article 53(1)(d), requiring providers to publish a public summary of their training data which enables stakeholders to investigate rights violations and take corrective actions. Providers who do not publish this information may face fines, with enforcement beginning August 2026. It is highly likely that existing tech companies will not comply in good faith and the investigation and corrective enforcement will take a long time – thereby also prolonging the associated rights empowerment. It is also likely that small providers, especially those based in the EU and those who provide open models, may face difficulties in filling out the public summary due to lack of resources or legal expertise. In this work, we tackle both of these
14:23 problems through investigating the research question: "To what extent can the information required in AI Act's Article 53(1)(d) public summary be determined from existing model documentation made available by the provider?"

Our analysis shows overlap of the AI Act's Article 53(1)(d) public summary with existing datasheets, model cards, and publications meant for technical audiences. Though this overlap has been the basis for the public summary as an obligation, no mapping yet exists that can benefit stakeholders. We show how this overlap can be utilized in investigating the consistency and accuracy of information in published summaries, and for developing evidence for enforcement actions through adversarial reconstruction of public summaries. We show how analysis benefits small and open-source providers by providing guidance for how their existing technical documentation can be adapted to meet the AI Act's public summary requirements. Finally, we demonstrate the feasibility of our work by reconstructing and comparing public summaries with those published for the SmolLM3 and Apertus models.

13:15-14:45 Session 20F: T3: Ethics and Technology in Practice: Workshops

Chair:

Steven Dorrestijn

Location: Ravelijn 2237

Konstantin Lackner and Lea Stöter

To Prompt or not to Prompt: A Mini-Workshop on Academia's Relationship with Generative Artificial Intelligence

ABSTRACT. Generative artificial intelligence (genAI) could be considered a hot topic of scholarly practices: Some researchers are turning to editorials, opinion pieces, and articles to either
13:15 denounce or encourage the use of genAI in knowledge production processes (e.g. Jowsey et al. 2025, Nguyen and Welch 2025, Anis and French 2023). Meanwhile, the promise of increased efficiency may create a sense of necessity around adopting these tools for everyone else (Bin-Nashwan et al. 2023).

As general application tools, the use of genAI is already shaping research processes, the peer review system, and higher education (Barros, Prasad, and Sliwa 2023). Next to these touch points within academia, the impact of genAI can also be seen in the published output: Andrews et al. (2024), for

example, discuss the emergence of pseudoscientific language and assumptions in machine learning research. Shardlow and Przybyła (2024) identify tendencies of anthropomorphising language in NLP research reporting.

In the proposed mini-workshop we draw on speculative design (Auger 2013) and fabulation methods (Hartman 2008, Rosner 2018), inviting participants to imagine diverse futures for academia and its touch points with genAI. Structured in three parts, we invite participants to examine different areas of academia, for example research, education, self-service or peer review, based on their respective interests. Following a short introduction, participants engage in word-building supported by brainstorming exercises, before entering the paper prototyping phase to speculate and imagine, how a curriculum, abstract or call for papers might look like in their imagined world.

Overall, the workshops aim is to bring together interested scholars to discuss questions such as: At which points might academia resist or embrace generative artificial intelligence? How might processes of scholarly production be shaped by the introduction of this technology? What are the roles and responsibilities of researchers and educators in these scenarios?

Nathan Douenburg

Narrative Design Cases: Design engineering case studies for technology ethics through practice

ABSTRACT. In the last decades design education has shifted their lens from the product-level to the systemic-level. It is proposed that new design pedagogies are needed to teach students how to deal with the complex and contested topics at hand. This paper elaborates on a design education toolkit that incorporates The pedagogy of discomfort as proposed by Boler & Green into design education contexts. Circumstantiated with the work from philosophers Donna Harraway on narratives, and Judith Butler on ethical violence. So, to create a toolkit that can be implemented in
13:45 Design Education for the student to reflect upon their own position and ethics as a designer.

The toolkit mainly uses assignment cards, which are done in two parts. The Narrative Design Cases themselves are set up to 'be impossible by designing first'. Whereas a diverting narrative in the first part makes 'the usual design analysis methodologies' fall short to create needed concepts. In the second part, the card is cut open to reveal more information about the actual complexities and accompanied with philosophic and ethical questions for reflection on the case itself. This toolkit has proven that the concept of Narrative Design Cases based on the pedagogy of discomfort, narratives, and ethical violence, stimulates critical reflection on difficult and uncertain topics, and place them inside the system the students aspire to design for.

Heleen Groote and Anne Bonvanie

When the Heart becomes Technology: A Practice-Oriented Ethical Exploration Using Phenomenology and Public Intuition

ABSTRACT. Emerging biomedical technologies raise ethical questions that extend beyond technical performance. The development of a Total Artificial Heart (TAH), proposed as a response to the growing demand for donor hearts, is one such example. I argue that while expert discussions
14:15 predominantly focus on safety, functionality, and biocompatibility; ethical reflection on lived experience, identity, and embodiment often remains underrepresented in innovation practice. Exploring these themes are of great importance, as lived experience has become more valuable the past couple of years than ever before.

Using the Holland Hybrid Heart project as a case study, this contribution combines philosophical analysis with public engagement. The theoretical framework is inspired by Jean-Luc Nancy's phenomenological reflection L'Intrus, which describes the experience of living with a life-preserving yet foreign heart. Although Nancy reflects on a donor heart rather than an artificial one,

his notions of dependency and vulnerability are of great use in creating a practice-oriented lens for understanding public intuitions surrounding a TAH, rather than a biomedical theoretical one.

To collect public intuitions about a TAH, I organise focus group discussions with members of the general public. It is expected that these discussions reveal ethical relevant concerns regarding identity, bodily integrity and changing attitudes towards organ donation – subjects that are often marginalized in expert-discussions. Rather than treating these responses as irrational or emotional barriers, the study aims to reframe them as ethically informative signals that can guide design choices, communication strategies, and implementation pathways.

By translating phenomenological insights and public engagement into a structured reflection, this paper contributes to the practical turn in ethics and technology studies. I expect to gain an insight in how ethical reflection can be embedded as a normal and actionable component of biomedical innovation.