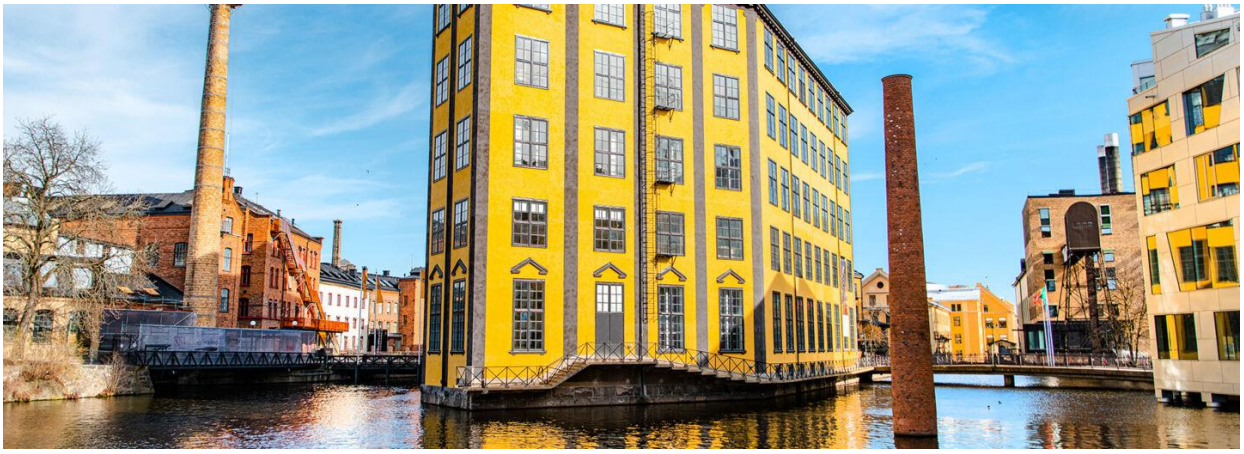
Swedish STS Conference 2024

Programme



Josefin Landhagen

Transmissions, Mediations, Interferences

Museum of Work, Norrköping

3-4 October 2024

LINKÖPING UNIVERSITY

Welcome!

We would like to welcome you to the Swedish STS Conference 2024, held at the Museum of Work in Norrköping, 3-4 October 2024, hosted by Technology and Social Change (TEMA T) and Tema Genus (TEMA G) at Linköping University.

It has been a joy to put this programme together – there were so many very interesting abstracts and sessions submitted. We are also very excited to have Kat Jungnickel and Laura Watts kick-off the conference with a joint keynote, and grateful that they have agreed to organize a creative workshop each, for us.

We would like to thank The Faculty of Arts and Sciences, Linköping University, The Department for Thematic Studies, Linköping University, and The Royal Swedish Academy of Letters, History and Antiquities for financial support to make this conference possible. We also thank our conference Scientific Committee members João Florêncio, Hannah Klaubert, Marko Marila, Corinna Kruse and Darcy Parks. A big thanks also to Natt Söderpil Jakauby, PhD student at Linköping University, for helping us out with administration and organization.

Here's hoping your time in Norrköping is filled with fruitful, fascinating and fun discussions!

The conference organisers

Jelmer Brüggemann, Ericka Johnson, and Julia Velkova (Linköping University)

Keynote

Two Time Travellers and the Hope they Wear: Transmitting Research Methods across the Centuries

A joint keynote by Kat Jungnickel & Laura Watts

We live in hope. We work in hope. We make the world in hope through our research practice, as two feminist STS scholars. Our hope is not vanity but hard scholarly work and a commitment to the possibility that, through our research practice being otherwise, we can make worlds that are otherwise. This joint keynote is an exploration of our STS methods for world-weaving hope in the midst of anthropogenic climate change and academic institutional transformation. We will sew together our research across the centuries: from the eighteenth century, through the present, into the twenty-second century.

Our journey through time begins in the early 1800s, in the patent archives. Here, Kat Jungnickel studies the attempts by clothing inventors to change the world, stitch by stitch. We then move through the present moment and its crises, to the early 2100s, where Laura Watts collaborates with energy and tech organisations to change the world through speculative fabulation ('SF') created through her ethnographic archive. Both patents and SF are instruments of power and erasure, but it is in their gaps and silences, in what is not quite written, that we find hope and possibility: the organisations and individuals we work with reframe, negotiate, and sometimes even remake their socio-political worlds in acts of quiet resistance. They pressed against binaries and conventional boundaries. We can do no less.

Inspired by our collaborators' persistent acts of hope across the centuries, we two time travelling scholars will weave together alternative research methods to show how we transmit research inside and outside the academy–and how we can wear hope on our scholarly sleeve.

Keynote speakers

Kat Jungnickel

Professor Kat Jungnickel is a Director of Methods Lab and PI on the European Research Council–funded project Politics of Patents (POP): Reimagining Citizenship via Clothing Inventions 1820-2020 (www.PoliticsofPatents.org) at Goldsmiths, University of London. Her research draws on STS and Feminist Technoscience to explore how people radically re-invent and re-imagine socio-political worlds with mundane and ordinary things. She currently leads a team of sewing social scientists in the POPLab using ethnographic research, interviews and speculative sewing – making and wearing historic data – to develop insights into the history of invention, wearable tech and citizenship. Recent publications include: (ed) How to Do Social Research With… (with Coleman and Puwar, Goldsmiths Press 2023), (ed) Transmissions: Critical Tactics for Making and Communicating research (MIT Press 2020), Creative Practice Ethnographies (with Hjorth, Harris and Coombs, Rowman & Littlefield 2020) and Bikes and Bloomers: Victorian Women Inventors and their Extraordinary Cycle Wear (Goldsmiths Press 2018).

Laura Watts

Laura Watts is an author, poet, ethnographer of sustainable futures, and Visiting Professor at both University of Copenhagen and Linköping University. As a Science & Technology Studies scholar her research and writing explores how energy and data futures are imagined and made in places at the edge. Her last book, *Energy at the End of the World: An Orkney Islands Saga* (MIT Press), won the 4S Rachel Carson Prize and was Shortlisted for Saltire Research Book of the Year. You can read her most recent short stories in the open access Climate Action Almanac and award-winning Shoreline of Infinity magazine

Programme grid

Abstracts can be found below as follows. Individual papers: p.7-ff. Preconstituted sessions and workshops: p.31-ff (in turquoise and pink below)

03-Oct								
		Folksamsalen (plenary)	*Alva 1 6th floor*	*Alva 2 6th floor*	*Lokatten 4th floor*	*Änglamark 4th floor*	*Gallerian 7th floor*	*Library 4th floor*
09.00-12.00					**Pre-conference** Writing workshop for PhD students and early-career scholars with Laura Watts			
12.00-13.00	LUNCH							
13.00-13.15		**Welcome Address** Julia Velkova Ericka Johnson Jelmer Brüggemann						
13.15-14.30		**Joint keynote session** Kat Jungnickel Laura Watts						
14.30-15.00	COFFEE BREAK							
15.00-16.30	Session A		**Session: Toward technographic portraits** Nirali Joshi Proshant Chakraborty Sophia Fragapane Carla Brandschert	**Expertise** ***CHAIR: Lisa Guntram*** Henriette List Shan Wang, Silvia Ecclesia & Roger Søraa Stefano Mazzilli Daechsell Corinna Kruse & Antti Silvast	**Session: How can STS theories contribute to social work? (Part 1)** ***CHAIR: Anne Aasback*** Nora Germundsson Anne Marie Dahler, Marianne Staal Stougaard & Marie Leth Meilvang Samuel Salovaara Matilde Høybye-Mortensen Katri Ylönen	**Roundtable: Future Health economics** Daniel Normark Jesper Meijling Mirko Pasquini Sofia Wagrell Jacob Hassler	**Session: The Digital STS Hub: Shaping the Digital / Shaping Society (part 1)** ***CHAIR: Francis Lee*** Charlotte Högberg Catharina Landström Alicja Ostrowska Ellinor Blom Lussi	**Methods** ***CHAIR: Angelica Johansson*** Niamh Moore, Mary Hanlon & Martina Karel Bregje van Eekelen & Seweryn Rudnicki Anna Günther-Hanssen
16.30-16.45	BREAK							
16.45-18.00	Session B		**Visual tropes** ***CHAIR: Karin Skill*** Jie Shen Suman Gosh Bojana Romic Natasha Webster & Qian Zhang	**Session: The Social Life of (Digital) Models** ***CHAIR: Elisa Elhadj*** Elisa Elhadj, Maiju Tanninen & Ine van Hoyweghen Maria Eidenskog Perle Møhl	**How can STS theories contribute to social work? (Part 2)** ***CHAIR: Nora Germundsson*** Heidi Pedersen & Heidi Green Samuel Salovaara Kristofer Hansson Anne Aasback Mikkel Rask Pedersen	**Workshop: "What do I do when I hear the siren?"** Linda Paxling	**Session: The Digital STS Hub: Shaping the Digital / Shaping Society (part 2)** ***CHAIR: Catarina Landström*** Francis Lee Johanna Sefyrin Thomas Zenkl Darcy Parks	
18.00-19.30	MINGLE at the Galleriet, 7th floor (Mingle sponsored by TEMA's Datalab)							
19.30	DINNER at restaurant Vy, 6th floor							

4 OCTOBER							
		Folksamsalen (plenary)	*Alva 1 6th floor*	*Alva 2 6th floor*	*Lokatten 4th floor*	*Gallerian 7th floor*	*Library 4th floor*
09.00-10.30	Session C			**Climate** ***CHAIR: Niamh Moore*** Karin Edberg Linus Ekman Burgman Malin Henriksson & Kelsey Oldbury Ann-Sofi Kall	**Embodied infrastructures** ***CHAIR: Tobias Olofsson*** Beatrice Hansen Bodil Axelsson, Hasti Radpour & Wiktoria Glad Signe Banke	**Workshop on Transmissions:** Kat Jungnickel	**Risk governance** ***CHAIR: Jelmer Brüggemann*** Lisa Guntram & Lisa Lindén Johan Söderberg Anna Bredström, Karin Krifors & Nedzad Mešić
10.30-10.45	COFFEE BREAK						
10.45-12.00	Session D		**Session: Doctoral Assemblages** Maria Paulsson Oshin Siao Bhatt Proshant Chakraborty Maria Arnelid Jakob Lundgren	**Session: Climate governance in the digital era** Angelica Johansson Maria Jernäs Eva Lövbrand Daniel Andersson Karin Skill	**Workshop: Vocabularies for thinking with data** Julia Velkova Minna Ruckenstein Dorthe Brogård Kristensen Katherine Harrison	**Temporalities and pacing** ***CHAIR: Karin Edberg*** Ida Raunkjær Rie Malm & Katerina Pia Günter Tobias Olofsson Chiara Rubessi & Gianluigi Viscusi	**Workshop: Playing in Tamed and Wild Environments** Isabel Löfgren Tatiana Sokolova
12.00-13.00	LUNCH						
13.00-14.30	Session E		**Health** ***CHAIR: Sofia Wagrell*** Jelmer Brüggemann, Ann-Charlotte Nedlund & Lisa Guntram Allan Lidström & Isabella Pistone Anna Bredström & Shai Mulinari	**Evidence and policymaking** ***CHAIR: Kerstin Sandell*** Alison Gerber Christel Backman, Cecilia Hansen & Corinna Kruse Dorthe Brogård Kristensen	**Data-driven practices** ***CHAIR: Ericka Johnson*** Andreea Strineholm & Karolina Uggla Erik Ljungberg Myrto Dagkouli-Kyriakoglou Isto Huvila	**Robots and platforms** ***CHAIR: Lisa Lindén*** Thomas Wahl Katherine Harrison Alesia Rudnik	**Methods** ***CHAIR: Isabel Löfgren*** Julia Velkova Silvia Bruzzone & Henry Stridsberg Isabel Löfgren Karl Palmås
14.30-15.00	COFFEE BREAK						

Individual papers

In alphabetical order by last name

Petter Almqvist-Ingersoll (Linköping University)

Social Mediation - A netnographic inquiry into narrative constructions of diagnoses and bio-digital citizenship

Early during the COVID-19 pandemic, it was found that individuals who had received a clinically confirmed, or suspected, infection were still experiencing symptoms months following the initial illness. Due to a lack of clinical and biomedical knowledge, as well as questioning about the origin and validity of these individuals' lived experiences from official healthcare institutions, people with remaining symptoms began forming communities and advocacy groups online. It was there, on social media, that the diagnosis long-COVID was constructed. Since then, long-COVID has become the dominant terminology in discourses surrounding the condition, illustrating an example of how online engagement, somatic expertise, and activism intersect with biomedical research to form our understandings of illness.

This project focuses on the knowledge creation that takes place in online spaces through collecting and analyzing narratives shared within LC/PC/PCC support and advocacy communities on social media platforms, such as X and Reddit. By selectively collecting and analyzing anonymous posts from these forums, themes are created that highlight different expressions of need for emotional support, healthcare, or biomedical knowledge, and/or intra-patient tinkering to treat symptoms. By viewing the internet as a site for knowledge production, using a netnographic framework, the study shows how interactions online have the capacity to construct and shape biomedical diagnoses, and theorizes how novel means of patient activism and advocacy can reshape conceptualizations of biosocial citizenship to make room for the biodigital. Thus, expanding on notions of biosociality and biosolidarity that have been discussed in previous studies on other medical conditions.

Bodil Axelsson (Linköping University), Hasti Radpour (Linköping University) and Wiktoria Glad Axelsson (Linköping University)

The underworld of water and watery relations

In this presentation we experiment with collaborate storytelling to convey how an embedded artist contributed to the understanding of human-technical-material relations in a social research project on domestic use of hot tap water. We start our story with presenting the project's final installation in a space once holding a water turbine. From here we unravel how the artist from participating in project meetings, reading theory as well as material from focus groups and interviews started to think by visual means and with things. Hence, we will discuss how drawings, collages, metaphors, and installations, all documented in three research diaries, became methodological vehicles. In particular, the artist's fragmented and deliberately open-ended portable installations served to open up inquiries and even to redirect research questions. Both in project meetings and subsequent focus groups they surfaced affective dimensions of hot water use and shifted the project's attention to the invisible infrastructures of water supply. The

installations, comprising of videos with sounds of dripping, running and slurping water, tiles, showerheads, pipes, drains, hygiene products and toys, prompted memories and stories in the intimate register of experiences and relations within the family. They facilitated embodied knowledge and material engagements. Knowing through artistic means, in this case personal yet systematic explorations, enabled the project to deepen the understanding of the affective dimensions of the materialities and infrastructure of hot water use, a topic that is related to energy consumption and sustainability, and typically addressed by technological solutions and prizing politics.

Christel Backman (University of Gothenburg), Cecilia Hansen Löfstrand (University of Gothenburg), and Corinna Kruse (Linköping University)

A Picture Is (Made) Worth a Thousand Words – How Surveillance Videos Are Made into Evidence

In this presentation, we will discuss how video material is made into useful evidence in the Swedish criminal justice system. Unlike popular understandings – for example hinted at in the recent government effort for more surveillance cameras – crimes are rarely caught on camera. Instead, we will show, evidence based on camera material, in particular in high-profile cases able to command resources, is the result of a painstaking assembly of both video material and other information into a meaningful and useful whole. In other words, we will show how video evidence relies on the intertwinement of camera and other technology, collaboration between different police professions, work, and dedication – in this way, pictures and videos are made worth a thousand words in court.

Signe Banke (University of Southern Denmark)

The Material-Material Menstruation: Theorizing the Material Boundaries of Material-Discursive Materializations

Relational ontologies present bodies as ever-fluid, forever subject to material-discursive re-materializations. Yet there is something solid to materiality, a brute thereness, existing and challenging exactly this open-endedness of new materialist writings. This paper theorizes this insisting materiality as material-material qualities, using the example of menstruation, arguing that the material-material qualities of menstrual products constrain how material-discursive bodies materialize. It contributes to new materialist theorization of bodies by providing an analytical anchor in the ongoing string of material-discursive materializations, dissecting materiality within, but also across, bodies. The paper builds on ethnographic fieldwork, multiple in-depth material interviews with 15 Danish menstruators focusing on their uses of various menstrual products and more than 150 anonymously submitted photos of menstrual blood. It will be argued that material-material qualities emerge relationally between materials. Material-material qualities describes what happens when a material touch, push or clash with another material. As menstrual blood for instance meets a disposable pad, the pad's absorbency is revealed - not what this absorbency means (that is the realm of the material-discursive), but what it does. The material-material solidifies over time through countless intra-actions materializing something, not differently, but as the same over and over, and this material-material quality thus comes to persist across different phenomena. Absorbency thus exists across various uses of pads, materially constraining how bodies and menstruation materializes. The material-material

analysis is thus fugitive for critically examining and changing the ways in which matter comes to matter.

Anna Bredström (Linköping University), Karin Krifors (Linköping University) and Nedzad Mešić (Linköping University)

New Risks and Old Forewarnings? The Swedish case of logics and risks in biometric interoperability

Legally sanctioned management of sensitive personal and biometric data in large scale migration and border control EU-databases has rapidly increased in the past decade. The databases include EURODAC, VIS and SIS-II but more are planned, including EES, ETIAS and ECRIS-TCN. Currently, EU-Lisa with its advisory groups of member state representatives, is engaged in technological and organizational developments aiming for easier access to data. Interoperability between the databases, including Europol and Interpol data sources, is in this context framed as the key to effective detection, identification, and prevention of crime and security threats. However, this development where functionalities over time evolve and expand aligns also with a general societal 'securitization' and criminalization of migration more specifically. It is also conducive to the normalization of risks, such as those of built-in 'function creeps', which researchers had articulated long prior to the current developments.

We have previously argued for further exploration of ethical and biopolitical consequences of this development (Bredström, Krifors and Mešić 2022). In this paper, we do so by identifying inherent logics and anticipated risks as articulated in expert discourses concerning the contemporary Swedish technological developments; the expanded use of biometrics; and the organisational implementation of interoperability. The analysis is based on perspectives provided in interviews with migration and law enforcement authorities, data protection experts, lawyers, and NGOs, and on studies of two investigations initiated by the Swedish Government, focusing Biometrics in law enforcement (SOU 2023:32) and Interoperability between EU Information systems in the fields of police and judicial cooperation, asylum and migration, borders and visa (Ds 2022:21).

Anna Bredström (Linköping University) and Shai Mulinari (Lund University)

Different worlds: racial medicine in post-racial Sweden

This paper tells the story of two separate worlds. On the one hand, Sweden adheres to a post-racial ideology that explicitly rejects the notion of human races. Using the concept of race is officially seen as deeply problematic, and there have been several attempts to eliminate the word race from Swedish law. On the other hand, racial concepts and categories are frequently applied in medicine. This happens, for instance, when standardized racial categories, primarily stemming from the USA, trickle down to Swedish medical policy through multinational clinical trials. Being seen as medically relevant, race in these contexts is thus implicitly or explicitly given a biological foundation. This goes for ethnicity too, which is also assigned a biological ontology in medical settings, in contrast to the general definition, which emphasizes its sociocultural basis. In this paper, we seek to explore how these two, seemingly contradictory, worlds can coexist. The paper draws upon qualitative interviews with key actors in the medical field, including doctors, researchers, pharmacists, policymakers, educators and patients. It analyses how the informants negotiate and argue around the use of racial concepts and categories in their everyday

professional and personal lives. Using theoretical tools from Science and Technology Studies, the paper shows the benefits of viewing race as a "boundary object" that has multiple shapes and expressions yet is stable enough to stretch across different spheres. Viewing race as a boundary object, we argue, enables us to comprehend the existence of racial medicine in an otherwise post-racial Sweden.

Silvia Bruzzone (Mälardalen University) and Henny Stridsberg (Mälardalen University)

Exploring Urban Flooding through Creative Dance. Methodological reflections

The paper explores how posthumanism expands and challenges education on climate change by applying on dance-based methodologies. Posthumanism proposes to move beyond dichotomies, such as nature-culture, in order to introduce a relational perspective focused on local sociomaterial entanglements.

From a pedagogical perspective, it takes materialities and the body into account in the learning process and subverts traditional approaches anchored in the reproduction of a given knowledge, to instead understand learning as engaging and becoming with the world.

The contribution takes as point of departure a workshop for students in industrial engineering in which creative dance is mobilized to explore urban flooding. In the workshop, students physically experience becoming bodies of water intra-acting with natural and hard infrastructures – thus exploring multiple qualities and ways of connecting to urban water beyond control and mastery.

The workshop is anchored in research on aesthetic learning processes which - by engaging the body, creativity, personal expression and emotions in open-ended ways – can be valuable in order to expand imagination and awareness of climate change.

The experience brings several methodological questions the contribution wants to focus on, such as: How can dance (and other arts) open to new ways of knowing and teaching sustainability issues? Which competences and sensibilities do we want to encourage in students' education and later work? How to build connections to other parts of their education? What are the methodological challenges of this interdisciplinary collaboration? What are the emerging issues in terms of ethics and response-ability?

Jelmer Brüggemann (Linköping University), Ann-Charlotte Nedlund (Linköping University) and Lisa Guntram (Linköping University)

Working the boundaries of "whining" – how patients and care professionals make sense of informal complaining practices

This study highlights informal complaining in health care settings, i.e., the kind of patient complaints expressed verbally to professionals in care encounters. In policy work and the complaints literature, informal complaints tend to receive little attention. Following Mulcahy and Tritter's (1998) observation, they are mostly framed as "potential" formal complaints, rather than a distinct phenomenon present in the everyday of patients and care professionals. Building on focus groups with care professionals and interviews with patients in Sweden, we study how these actors make sense of informal complaining practices. We zoom in on the work that patients and care professionals do around the boundaries (Gieryn, 1983; Lamont and Molnár, 2002) of

"whining", and how this work enacts normativities of informal complaining practices. In working these boundaries, we argue that patients and care professionals engage three different dimensions; they negotiate the validity and temporality of complaining and do so in relation to an identity of the complainer. In our presentation we will unpack each of these dimensions.

Myrto Dagkouli-Kyriakoglou (Linköping University)

'There is no up and down in space but there is certainly on Earth.' Digital mediated space mapping through a critical cartography lens

All maps are drawn from a certain perspective and so does the mapping of the universe. The maps aim less at mirroring reality and more at reshaping/producing a view of the world in which people live, from a certain perspective (Corner, 1999). Therefore, each map has a certain perspective according to the goal and the audience for which it is produced. Going a bit further, also the most common maps of bodies in space are oriented with north on top in the western context. Space mapping is a process that dates back thousands of years. Ancient cartographers had their own space-based methods of finding a place on earth by looking up. Some of the earliest maps for navigation weren't maps of the earth at all but maps of important constellations of each specific geographical context: star charts. Therefore, the choice was most probably impacted by the sailors' age-old reliance on the North Star for navigation in the Northern Hemisphere and Earth's magnetic North Pole.

However, nowadays, the geography of space is explored digitally, reproducing a distorted perception of space in connection to global inequalities, divides, and exclusions. Like world maps, space mapping seems to be mainly produced nowadays from and for the north hemisphere and specifically by the most powerful countries who have the financial resources to create the infrastructure to explore the space. Through theories of critical cartography, I attempt to analyze the inequalities, divides, and exclusions that digital space mapping may incur to the modern society, further reinforcing inequalities that have existed for centuries and have been depicted since the roots of cartographic science.

Karin Edberg (Linköping University)

Productive, inclusive and smart? The failure of shared cycle schemes in Stockholm, Sweden

An expansion and diversification of personal transport using small, lightweight, electric or muscle powered vehicles is taking place in urban areas world-wide. The development implies more vehicles of different types, diverse ownership structures and rhythms, as well as increased electrification. Such micromobility options are promoted as environmentally friendly, efficient, healthy, cheap and space saving, and shared solutions as flexible ways of reducing private consumption. The development is however also criticised, and shared schemes currently prohibited, restricted, downsized or replaced. The paper focusses on the life course of shared cycling schemes, and asks a) what is "shared" in the schemes, as well as how b) transmissions between different schemes and c) interferences within the schemes can be understood. The analysis derives from a case study in the Swedish capital Stockholm, currently lacking a shared procured cycle scheme after the failure to replace an old system with a new, "smart", expanded, and electrified system. Through a narrative analysis of interviews and policy documents, and by a theoretical framework inspired by the new mobilities paradigm and mobility justice, the findings

are discussed in relation to logics of neoliberal urban planning and ideas of the productive travel, including its effects on the inclusion and exclusion of different practices and social groups. How the agency and value of the cycles evolve as the shared scheme is dismantled is also scrutinized.

Linus Ekman Burgman (Linköpings University)

Between waste and resource

Sewage sludge is a contested material in Sweden and has been debated for decades, is it a fertilizer, pollution, fuel, landscaping material or an extractive source for phosphorus? I have analyzed researchers, stakeholders and certifiers' enactments of the sludge and pointed to the importance of ontological politics when the border between waste and resource is drawn. How can something multifaceted like sewage sludge become singularized enough to be useful? And what are the interests behind the ways to do this? The struggle is often framed as between pollution and resourcefulness. However, I point to the difference between a market-oriented extractivist approach and a view more characterised by sewage sludge as a common good for farmers to receive for free. This challenges the common assumption that markets are necessary for resourcifying waste and that economization can be done differently.

Alison Gerber (Lund University)

Pictures made of numbers: Culture, images, and evidentiary value

Despite decades of research on the social and cultural structures of scientific representations and expertise, questions remain about the cultural foundations of evidentiary value. Images have always been generative objects of inquiry for these questions, and technological change has introduced new challenges to our ability to believe our eyes. This paper asks: in a new and digitally inflected landscape of images - a world of pictures made of numbers - how do people who create and use evidentiary images make meaning of the things that they see? How do new kinds of visualizations produce agreement (or fail to) across diverse epistemic cultures? With data from a long-term ethnography of digital 3D tools, methods, and practitioners as they move between science and the law, I show how new approaches to the documentation, visualisation, and analysis of places and things surface the complexities of the emphasis on visual representations in truth claims. I focus analytically on two approaches to precision, fidelity, and objectivity - one focused on geometry, the other on texture - and show how they offer radically different possibilities for those who hope to use images to understand the world. Through attention to divergent attempts to capture the physical world and their effects, I revisit the cultural foundations of evidentiary value under conditions of uncertainty and technological change.

Suman Ghosh (Tampere University)

Remediation as a political act: Aesthetics of appropriated viral images

This article explores how art and activism converge to create powerful cultural icons through remediated protest art. Focusing on four cases between 2019-2020 – Black Lives Matter in United

States, Anti-Citizenship Amendment Act Protests in India, Strike Back protests in Lebanon, Rights protests in Hong Kong – I examine four digital protest images that transformed into metaphor of the protests. These viral digital artworks reflected the immediacy and hypermediacy of contemporary protest culture and offered a counter-narrative to dominant media, transforming live events into vibrant visual symbols of resistance and solidarity. Deviating from the Kantian interpretations of aesthetics as beauty (cite), I interpret these images from the lens of corpothetics (Pinney, 2004). By framing these images within the theories of remediation (Bolter & Grusin, 2003), digital art aesthetics (Hansen & Hansen, 2004), and corpothetics (Pinney, 2004), the research highlights their role as corporeal experiences, engaging viewers in a performative act of solidarity and resistance. The data for this article was collected through digital ethnography (Pink, 2012) and different tools of visual analyses was employed to understand how digital protest images become more than just visual signifiers of the protests to challenge narratives in different spatial and temporal register. The article attempts to reveal a newer form of solidarity embedded within such visuals. The article discusses the forms of practices and performances embedded in socio-cultural and historical context and its implications for communication of solidarity to discern the manifestation of collective voices through these icons.

Keywords: Protest Art, Remediation, Artivism, Corpothetics, Media Solidarity

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Lisa Guntram (Linköping University) and Lisa Lindén (Chalmers University of Techology)

What classification does: the constitutive role of diagnostic grading in the assessment and management of second-degree vaginal tears

The care for vaginal tears has, in Sweden and beyond, become a public and political matter of concern. In particular, improving the handling of 'second-degree' vaginal tears – i.e. a tear in the vagina and/or perineal muscle that needs suturing – has been enacted as key for improving maternity and postpartum care. As a daily, yet mundane and taken-for-granted, practice, the classification of vaginal tears plays an important role here. What care routines are followed – and which are not – is intimately connected to 'classification work' (Bowker & Star 1999). In this presentation, we draw upon interviews with care-seekers and care provides, and a workshop with specialists, researchers, and policy-actors, patient representatives who are working with 'second-degree' vaginal, tears to explore what the classifying of vaginal tears as 'second-degree' does.

The mundane act of classifying a tear is far from easy but has significant consequences. Notably, while the distinction between a 'second-degree' and a 'third-degree' tear may not be apparent in practice, the consequences are pivotal. Whereas 'third-degree' patients are closely followed, rehabilitation for 'second-degree' tears is largely absent. Consequently, we analyse the complexities and consequences of classification work concerning 'second-degree' tears, such as in relation to suturing and follow-up postpartum care. Ultimately, we ask how attending to the grading and classifying of vaginal tears as 'second-degree' as a mundane 'daily life matter' (Mol et al. 2010) allows us to intervene in debates about how to improve the care for vaginal tears.

Anna Günther-Hanssen (Stockholm University)

STEAM in Early childhood education – unproblematized potentialities for inclusive education

The concept of STEAM-education (STEAM = Science, Technology, Engineering, Arts, Mathematics) has lately become increasingly influential in many parts of the world. To date, the research literature on STEAM has mainly addressed education for older students, while studies on STEAM in Early Childhood Education (ECE) are fewer. The majority of the existing research on STEAM (in ECE) share a unified and often unproblematized idea about the benefits of STEAM education, describing that the addition of Arts to STEM (automatically) fosters problem-solving, innovation, agency, creativity, curiosity, critical thinking and communication skills in children. Another common assumption is that STEAM-education (automatically) leads to inclusive teaching where all children, regardless of gender, social class, ethnicity etcetera can participate. However, explicit examples of how STEAM education can create inclusiveness are rare. Moreover, many studies that do include examples from ECE practice described as STEAM-education, in many cases mostly concern STEM. The aim of this presentation is therefore to both problematize ideas of STEAM in ECE and contribute with examples where the merging of Arts and STEM in preschool education can lead to inclusive teaching and learning. The presentation is built around a number of agential cuts (Barad, 2014) from a current Swedish research project on STEAM and gender in preschool. For example, the agential cuts show how the interplay of movement, embodiment, force, drawing and biology, as well as dance, sounds, mathematics, technology and visual arts enabled inquires that interfered with and transgressed traditional norms connected with both Arts and STEM.

Beatrice Hansen (Stockholm University)

With this (watery) body of mine: Early encounters with water

In this paper, I will report on some of the findings from my PhD project where I have worked with 1–2-year-old preschool children and their teachers aiming to develop methods of embodied and sensory explorations with water in early science education.

The dominant force behind understanding water has been to pace its cycles to the demands and needs of humans. Therefore, STS and feminist materialist scholars have urged for a re-thinking of human-watery relationships, arguing that there is a pressing need for transformative approaches that aims to uncover what knowledges can be found at the "unruly edges" (Tsing, 2015) of conventional practices. Through a post-phenomenological lens, this research attends to the notion of transcorporeal relations with the more-than-human world by exploring toddlers' lived experiences through the feminist figure of "watery bodies" (Neimanis, 2017). That is, as watery (human) bodies, we live at the borderline of material meaning that emerges in the meeting of embodiment and water (Neimanis, 2018). A post-phenomenological perspective invites us to see toddlers as lively and flowing beings whose experiences are shaped with their relational engagements with time, place and more-than-humans, such as water.

Following Donna Haraway's (2016) call that it matters what stories tell stories, that stories create worlds, and worlds create stories, this research aims to think with toddlers' and the multiple stories that emerge from their watery encounters by staying with the kind of watery stories that emerges when the ways of communicating in the early, vulnerable stages of human lives is included. Within both early childhood research as well as science education research, the experiences of toddlers is often overlooked, which emphasizes the significance of extending the body of research to also include the youngest children in early childhood education. By focusing

on toddlers' lived experiences of science – marked by relational, embodied, and unpredictable dynamics – there is an opportunity to reimagine stories of both science and young children and the knowledge creation that occurs outside of linear progression. For this presentation, I will offer some case examples on toddlers' sensory and embodied water-worlding and how these stories intersect with different and contaminated scales of, for instance, scientific paradigms and the phenomenological lived experience. By acknowledging the sympoietic relationships between place, bodies and more-than-humans, this paper seeks to enrich our understanding of water as a dynamic and relational element within early childhood education.

Katherine Harrison (Linköping University)

Failures, frictions and dead-ends in human-robot research collaborations

This paper concerns an ongoing project about social robotics in which collaboration with roboticists, computer scientists and engineers has been a central component. My work focuses on failures in human-robot interactions, and what this can tell us about norms and expectations in such studies. In crossdisciplinary projects such as this, the ability to transmit ideas and questions across epistemological and methodological boundaries is key. For me, the stakes are high as I hope (together with my collaborators) to make a substantive change in the practices of an established field in order to introduce a more ethical, power-sensitive approach to human-robot interaction.

This paper narrates three occasions on which attempts to intervene and transform the practices of the empirical field were met with failure. These three occasions happened at different stages of the process: planning an experiment, analysing material after an experiment, and publishing results from early encounters. Whilst my responses at the time were marked by frustration and disappointment, reframing these moments through the literature on failure from both critical theory and HRI has helped me to analyse how assumptions about the ""successful"" outcome of research may be disrupted through embracing failure.

Building on earlier published work from this project around failure and adaptation, I will suggest how a critical examination of the "failures" in my research allowed me to diverge from expected ways of doing research, learn skills, and produce a dynamic "ripple effect" that opened new doors for transmission.

Malin Henriksson (Statens väg- och transportforskningsinstitut) and Kelsey Oldbury (Statens väg- och transportforskningsinstitut)

All lab and no policy? A study of Swedish policy labs as a tool for mobility transformations

Policy labs have been put forward as a key method to approach complex societal challenges such as the inertia of the current transport system. Still, it is unclear if policy labs live up to this promise and if they are a driver of change, and what kind of policy they actually deliver. The aim of the paper is to explore the role of policy labs in a Swedish transport context, where policy labs predominantly have been run in parallel to the testing of new technologies and services. By applying a policy transfer framework, we analyse "Drive Sweden", a government initiative that aims to support innovation in the transport sector through a policy lab approach. The analysis is based on key documents produced as a result of the policy lab, such as reports, evaluations, and

poster presentations. We ask who the key actors behind the lab are, what kind of knowledge that is transferred by whom and with the hopes to achieving what goals. The result points to a focus on technical tests of what is seen as high-end solution to complex problems, rather than testing or suggesting policy outside the technical realm. The focus on knowledge creation related to technical innovation can be explained by the limited mandate involved actors experience they have to influence public policy. In this way, transport policy labs do not meet the need of new policy approaches that has been formulated in sustainable mobility research for decades, that moves beyond technical fixes.

Isto Huvila (Uppsala University)

Scientific and scholarly practice and its documentati0n as transmission

Science and scholarship is communicated through a large number of more and less established practices and genres. Besides explicit communication and informing, it takes place also through doing science and scholarship in practice. It is often referred to through metaphors like craft and appreticeship but it becomes particularly visible when the chain of practice it is either voluntarily or of necessity broken in attempts to document, describe, inscribe or explain it. The presentation draws from empirical work conducted in the CApturing Paradata for documenTing data creation and Use for the REsearch of the future (CAPTURE) project to discuss how scientific and scholarly practice and different means to document it function as modes of transmission of science, scholarschip, and scientific and scholarly knowledge. The presentation contrasts practices themselves and various “things that can be appropriated as informative of processes and practices” termed paradata, and how they provide different opportunities and obstacles to conveying and passing on practices and practice knowledge. The both including diverse forms of paradata have limitations and complementarities, and the perhaps most significant conundrum is how to link them to each other.

Ann-Sofie Kall (Jönköping University) and Marie Widengård (University of Gothenburg)

Diverse Desires, Just Transitions: Exploring Biofuels in Sweden through Creative Methods and Digital Engagement

This abstract outlines a segment of the research project titled “Visions of Just Biofuels” (Visioner om rättvisa biodrivmedel). By using creative methods to mediate scholarly research in the development of a digital platform/website, the goal is to create engagement, thinking, and rethinking, thus moving beyond the mere extraction and one-way transfer of static knowledge. By emphasizing the diverse configurations of desire and material reality within the context of biofuels in Sweden and its relation to just transitions, we put focus on the complexities and variations in how justice is enacted. Using framing and scaling as conceptual tools, we unfold how material and social practices and narratives are implicated in Swedish fuel transitions, exploring the multiplicity of justice. Framing shapes the narrative and perception of biofuel justice, influencing how issues are defined, who is included in the conversation, and what solutions are considered viable. Scaling addresses the spatial and temporal dimensions of just transition, examining how social and material elements can travel between and across time and place. These concepts and perspectives not only guide our exploration of creative tools and methodologies in the

development of the digital platform/website but also resonate with the theme of the conference, ”Transmissions, Mediations, Interferences”. Drawing inspiration from this theme, our project seeks to provoke dynamic and reflective engagement with unorthodox modes of transmitting scholarly research.

Dorthe Kristensen (University of Southern Denmark) and Perle Møhl (University of Southern Denmark)

Imaginaries and Practices concerning AI in Breast Cancer Screening

Europe’s health workforce crisis is often likened to a “ticking bomb”, due to a number of challenges, including post-COVID budget constraints, an aging population, shortages of healthcare workers, and an overall health workforce crisis, posing a threat to long-term stability. In response to this complex scenario, policymakers view AI technologies as a potential solution, and a way to increase workloads and increase efficiency. This paper will present a case study focusing on the implementation of AI in radiology, specifically in breast cancer screening. The aim is to analyse the arrangement of human/ machinic forms of expertise and the emerging frictions and challenges. Despite the prevailing optimistic portrayal of AI in media and political discourse, the actual implementation reality is considerably more complex. While AI solutions are seen as crucial and inevitable, the arguments are accompanied by considerable, often unexplored uncertainties. AI systems operate and produce outputs and decisions in ways that appear obscure (Burrell 2016). Moreover, studies indicate that contrary to popularised images of a future where AI replaces human workers, automated systems require human assistance and workarounds to function, even though this human labour is often rendered invisible (Bruun & Krause 2022; Ruckenstein & Turunen 2020). Against this backdrop, the paper aims to piece together different parts of this complex reality, including interpretations of clinical evidence, as well as skills, workflow and institutional decision-making and management.

Corinna Kruse (Linköping University) and Antti Silvast (LUT School of Engineering Sciences)

Epistemic Cultures and interdisciplinary collaborations

Twenty-five years after its publication, we want to revive interest in Karin Knorr Cetina’s Epistemic Cultures and underline its continuing usefulness as a lens for examining the processes by which knowledge-oriented communities generate and validate their understandings through specific machineries of knowledge production. This paper revisits the foundational principles of epistemic cultures, discussing the theoretical underpinnings and the methodological commitment to ethnographically exploring knowledge practices across different situations and sites.

With the help of material from our own work – on forensic evidence in the Swedish criminal justice system on the one hand, and on energy and climate change research on the other – we demonstrate that epistemic cultures has the potential to fruitfully inform also contemporary critical debates on knowledge and power in STS: In understanding the movement of forensic evidence-to-be through the criminal justice system, the notion contributes crucial insight into the

complexity of collaborations across very different professions. In analyzing interdisciplinary research on energy and climate change in UK, Norway, and Finland, it offers a way to understand the multifaceted ways in which actors leverage, contest, and negotiate authoritative knowledge to steer perceptions and decisions, with a potential to shaping governance.

That is, this paper will argue that, especially in combination with a focus on and theoretical terms for the movement of knowledge, epistemic cultures is still a relevant and useful concept today.

Allan Lidström (University of Gothenburg) Isabella Pistone and (University of Gothenburg)

Science, Technology, and Disability - A Literature Review on Approaches to Disability in Science and Technology Studies

Disability matters. Not only to disabled people and their allies but for how we organise society and understand the human condition in general. How disability is understood in areas such as medicine, law and politics have real impacts on the lives of disabled people. It is therefore critical to note that disability is a contested category that is subject to heated debates over both its meaning and its implications. Such debates are ongoing in academia, most prominently in the field of Disability Studies (DS), where scholars seek to intervene in disability politics through their research. Over the last decades several STS scholars have joined in this discussion, resulting in a distinct body of works. Given recent debates on engagement and agnosticism in STS, this literature offers an interesting site for exploring STS theory politics in action. How is disability approached in STS? How are STS sensibilities used to understand disability? What ontological, epistemological, and political commitments underlie these endeavours and how do these relate to core sentiments expressed in DS? To explore these questions, we draw on systematic review methods for comprehensive database searches and identification of relevant literature. The gathered literature is reviewed through a combination of bibliometric and narrative analyses. Apart from contributing to both STS and DS by mapping and analysing the intersection between them, the study will also be used as an entry point to more general discussions on knowledge production and cumulativity in STS.

Henriette List (University of Southern Denmark)

Knowledge, expertise, and collective decision-making in Danish Cancer management

Throughout recent decades, multidisciplinary team conferences (MDTs) have emerged as an integrated and valued method for collective diagnostics and planning of treatment strategies in Danish cancer management. MDTs are weekly organized meetings, where various medical specialists meet to discuss complex patient cases. Despite a growing body of cancer literature within social science, little attention has been given to the MDTs. Based on long-term, multisided ethnographic fieldwork at five Danish hospitals, we ask what MDTs are on an ontological level by investigating the everyday interactions and negotiations between patients, biomedical objects, healthcare professionals, medical guidelines, and social, moral, and economic norms of life and death. We identify and name three kinds of actions and interactions (calibration, stabilization, and spatialization) which constitute and verify MDTs as a legitimate and authoritative technology for decision making. We highlight the significance of the patient case list (the MDT list) in these

processes. We conclude that MDTs shall be considered an important technology which not only have vast implications for patients' treatment paths but also for professional identity, collaboration, resources and objects. Knowledge, considerations, expertise, bodies, procedures, and decisions is today a collective matter. It creates connections which both releases and obliges.

Erik Ljungberg (Royal Institute of Technology)

Circulating Reference and Digital Membranes: Translating Forests via Satellite Data

This paper interweaves C.S. Peirce's semiotic theory with Bruno Latour's concept of circulating reference to analyze how satellites translate the forest through extended chains of reference. These chains transform electromagnetic waves into modulated radio waves and finally into pixels on a computer screen. Empirically, the paper takes as a starting point a 1998 case study of a Swedish forest remote sensing project. This project used machine learning to compute forest information from satellite data. The paper traces the material-semiotic trajectory along which reference was made to travel; from light rays in space to the offices of environmental agencies that consumed its final product. Using Peirce's concepts of indexical and iconical sign-types, I introduce the concept of the indexical envelope to describes the emergence of a digital skin made of sensors and devices. The indexical envelope is a membrane that translates different kind of waves in the environment by being affected by them, and then passes those effects onward by translating them as indexical and iconical signs. By doing a material-semiotic interpretation of the four different stages that the chain of transformations passes through—from electromagnetic waves to electric current to radio waves to light in fiber-optic cables—the paper shows how the indexical envelope became incorporated into Sweden's management of forest areas trailing the increasing understanding of forests as carbon sinks in the 2000s. Furthermore, it shows how using sensors, computers, and algorithms to translate light in the environment has become tantamount to producing politically relevant knowledge about forest carbon stocks.

Isabel Löfgren (Södertörn University)

Either We Stay or Disappear: Using social theater to untangle the future of the city

Like many cities struggling with the legacies of their industrial past, Stockholm is undergoing a process of urban transformation that seeks to replace industrial heritage with new housing developments. This is done to allegedly alleviate a housing crisis and to transform so-called derelict areas into safe and profitable urban environmentsaccording to developers and local politicians. However, former industrial areas are often considered part of cultural heritage which poses a dilemma to new developments as to what is deemed worthy of keeping as

cultural value versus what should be demolished to give way to new construction. Questions arise about the future of the city. Should the future of the city be determined by speculative capital or can a sense of polis still be reimagined taking into account the history and memory that constitute a sense of place and identity? What is the role of memory in envisioning the future of the city?

The case study to be examined is the project Nya Lövholmen, at Lövholmen industrial neighborhood in Stockholm where a new development is envisioned to revotalize a formerly

industrial site. However, the development envisions the demolition of many industrial buildings, including a 40 meter tall industrial chimney that currently dominates the landscape.

Our intervention recounts the process of an artistic investigation on memory and identity of the Lövholmen industrial site that involves many mediated aspects and public interactions to ignite a public discussion about the preservation of the chimney. The objective of the project ""Either We Stay or Disappear"" (2024) by the author is to make apparent the inherent frictions between democratic participation, political influence and capitalist speculation on the future of the city that puts into question processes of gentrification and ""smartization"" of cities while cultural aspects are devalued.

By using social theater (i.e. Theater of the Oppressed, urban theater, and lambe-lambe traditions from South America) in a trifold way - as a research method, as a means of communication, and as artistic expression - to investigate the politics of city planning, the project seeks to ignite a public discussion framed as a critical spatial practice.

The notion of critical spatial practice (Rendell, 2003), situated between theory and practice, public and private, and art and architecture, will be the cornerstone of the presentation that aims to highlight the mediated encounters as they unfolded in a series of artistic interventions on the site at Lövholmen in the spring of 2024. Beyond the spatial interventions done by the author, we also want to discuss the theater play and performance as embodied practices (Spatz, 2017) and research methodologies as instruments of critique that can be used by researchers in other fields. A performative aspect to the presentation may be considered if conditions of time and duration are possible.

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Rie Malm (University of Copenhagen) and Katerina Pia Günter and (Umeå University)

Challenging fieldwork practices with a slow-science approach

Today's performance pressures in universities that push for quantity over quality exacerbate existing problems of equity in research as well as in teaching practice. In field-intensive disciplines such as biology and geology, this fast-paced culture impacts teaching quality and the production of knowledge, and reduces time and resources needed to effectively implement inclusive, equitable practices. Fast-paced fieldwork thereby becomes an exclusionary environment reproducing fieldwork cultures that systematically exclude already marginalized students along axes of oppression of for instance ability, ethnicity, and gender. Beyond physical challenges, mental challenges such as isolation and fear have potential to be enhanced in a field setting, traditionally constructed as harsh, white, and male. This paper proposes a slow science framework for field-based disciplines to foster a more diverse, healthy and collaborative academic culture, allowing for hesitation, exploration, failure, and connection. Slow science calls for curiosity-driven as opposed to research-driven explorations by performance targets in order to create "knowledges that are worth being cultivated" (Stengers, 2018, p. 82). Slow science furthermore inspires us to create liveable, sustainable, and creative ways of being in academia (Dionne, 2020). Ideally, fieldwork can be a space that leaves no one behind or outside of the

relationality, where we are together-apart (Barad, 2007) in learning and living. We argue that a slow field-based framework can create a shift in perspectives needed for humanizing the field sciences allowing students and instructors to be seen as humans who need time, space, and safe communities in order to learn and thrive in the field.

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Stefano Mazzilli Daechsel (University of Oslo)

The Past and Present of 'Evidence-based' Research in Criminology, a Genealogical Approach

From medicine to social policy, the qualifier 'evidence-based' is growing in popularity due to the scientific, social, and political weight it carries. The field of criminology, broadly defined as the study of crime and crime control, is no exception to this trend. This paper presents initial findings of a genealogical study of the notion of 'evidence-based' research in criminology that is part of a wider ERC-funded project entitled 'Digital DNA.' Working with a corpus of texts from the 19th through to the 21st century, I trace the migration of the notion of 'evidence-based' research into the criminological field from neighbouring disciplines and its mutation over time. In so doing, I pay particular attention to the role of databases and other information-storage media in shaping 'evidence-based' research practices. I conclude with an assessment of contemporary 'evidence-based' criminological research and its use of big data technologies.

Niamh Moore (University of Edinburgh), Mary Hanlon (University of Edinburgh), and Martina Karel (University of Edinburgh)

DIY Academic Archiving: A seedbag for a seed bag for terraforming research

Inspired by Donna Haraway's 'seed bag for terraforming with earth others' (2013) and Ursula Le Guin's 'carrier bag theory of fiction' (1986), we tell a story about how to tell a story about gathering, carrying and sharing qualitative research data. We re-orient accounts of 'open' qualitative data away from the unwanted impositions of funding bodies, away from the open data movement infiltrating academia, away from heroic stories of new tech possibilities and neoliberal injunctions to extract new value from data. Instead we offer alterstories of sharing data which do not rely on uneasy analogies with quantitative data. We take some new archival turns, drawing on the generative theory and praxis of community archives, and feminist, queer and decolonial archivists, as more promising sites of inspiration for social scientists. In this paper, we recount our own process of creating an online DIY archive of qualitative data, which opened us to DIY academic archiving's potential to invent new traditions for (public) sociology (Moore et al. 2021). We suggest that diving into the work of creating containers, archives, for carrying and sharing our research stories, reveals archiving as a process and method for gathering together research participants' stories and artefacts as seedbags for 'telling the stuff of living' (Haraway 2013: 138).

DIY Academic Archiving then is not so much a refusal of open data, but rather a commitment to building of new and just data imaginaries where alternative social worlds are documented, imagined and manifested.

Tobias Olofsson (Lund University)

Out of time: Alienated temporalities in archaeological knowledge production

The transformation of complex spatial and temporal patterns into mapped and recorded archaeological data requires archaeologists to translate temporally non-distinct processes of exploration into a series of visual recordings of distinct moment of discovery. These visual records, produced by articulating key moments in the excavation process as cleaned and documentable contexts and finds, form a collage of multitemporal evidence entangled, first, to other contexts articulated previously and later in an excavation, and second, to a category of temporally distant past of which it is said to be a record. These practices of temporal and contextual alienation, which isolate parts of a processes to construct collages of moments frozen in time, echoes the loss of authenticity, or aura, that Walter Benjamin recognized as a consequence of the mechanical reproduction of art. However, while Benjamin understood mechanical reproduction to lead to the removal of art's historical anchorage in magic and religious rituals, which had previously granted it its meaning, the alienation required to translate moments in and archaeological excavation into stabilized data takes a different form: the reproduction of context as data. Drawing on ethnographic fieldwork and interviews with archaeologists working at the cutting edge of digital data recording, this paper explores the visual and epistemological practices involved in translating context into archaeological data and what happens to context and complexity when individual moments of archaeological exploration become decontextualized and later recontextualized as recorded data out of time and out of place.

Ida Raunkjær (University of Southern Denmark)

Environmental organisations' utilisation of post-anthropocentric narratives

The paper presents an anthropological examination of the recurrently proposed hypothesis that narratives are major mobilising factors regarding climate action (Latour & Schultz 2022; Haraway 2016; Tsing 2015). Grand narratives have always been driving large-scale changes in human societies (Lyotard 1979), and "a new mindset is a precursor to reorganizing production and consumption patterns," (Wolf in PACA 2023). Accordingly, this specific project examines the extent to which environmental organisations' post-anthropocentric ontologies manage to mobilise an "ecological class" (Latour & Schultz 2022), which collectively supports new sustainable, ecological consumption and production practices. My research explores what constitutes successful strategies of environmental organisations (EOs) aiming at mobilising members for climate action, with a particular focus on EOs' strategic utilisation of post-anthropocentric narratives on nature and climate. It is examined how this utilisation may influence members' consumption practices in alternative ways.

As an ideal case to study this phenomenon, the largest EO in Denmark, Danmarks Naturfredningsforening (DN), counts 135,000 members and has a strong basis in a party-politically broad segment of the Danish population (DN 2020: 32). In my research, I focus particularly on DN's way of balancing post-anthropocentric narratives (i.e., basing their official

politics on an understanding of human existence as ecologically interdependent with planetary eco-systems) with anthropocentric narratives on nature (i.e., when members are encouraged to use or consume nature as a product (Askegaard 2021), further stressing a distinction between humans and non-humans, as well as an ontological nature-culture divide) as a successful strategy of effective climate action.

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Bojana Romic (Malmö University)

Floating faces and blue brains: the messy research on AI images

In this presentation I will introduce my work-in-progress research that investigates trends in visual representations of AI across media.

I observe how images of AI sediment and cross-pollinate over a variety of different media, thus shaping imaginaries about current and future technologies (Jasanoff, 2015).

One of the aims of this research is to discuss ‘tendencies’ or ‘popular approach’ in representations of AI. These images can be found almost everywhere in the informational ecosystem, from conference posters to social media. Most of them are sourced from stock image databases, or social network sites for creators such as DeviantArt. The existing images feed into recursive feedback loops, as they contribute to further AI training (Romele & Severo, 2023). Using situated methodologies approach (Haraway, 1989), my ambition is to loosely group these images into thematic clusters and observe their intertextual connections with other popular media.

The prompt 'artificial intelligence' renders a variety of images across ten search engines: images of AI are often bathed in blue hue, feature a brain ("a thinking thing") with electronic circuit, a robot or a floating androgenous face made of digital particles.

Based on this, I identified several visual tropes that keep reoccurring: "blue brains", "the floating face of AI", "Creazione di Adamo in a technoworld", and "Imagined corporeality of AI". Each of these themes will be discussed in a separate chapter of my book. I am looking into relational aesthetics of these images, with stylistic choices borrowed from other media artifice (e.g., a recognisable blue hue can be linked to the sci-fi movie TRON (1982)).

I refer to this research as messy, since the sample is dynamic and ever growing; a variation of images presented to different users should be considered as well, so my insight is situated and partial. This research serves as a proposition (Latour, 2004) for the messy and incomplete knowledge-making (Mellor, 2001).

In my presentation, I will explain the key themes of this ongoing research. My book will be published by Palgrave Macmillan in the second half of 2025.

Note: I am particularly focused on the analysis of images *of* AI, though these images are increasingly being produced *by* AI, in a form of assemblage between human and nonhuman producers.

Chiara Rubessi (Istituto Superiore per le Industrie Artistiche) and Gianluigi Viscusi (Linköping University)

Maintenance of memory and time trajectories: the case of house-museums

This article analyzes the various maintenance practices and their different time trajectories in the specific setting of heritage, or what we would define as "maintenance of memory". In particular, we are interested in the different associations of artifacts-maintainers (Latour, 1984) in taking care of the memory and the different temporalities that they enact (Barad, 2014) either as "representation" (for example as the setting of movies) or "exhibition" (for local events not connected with the original historical context). Furthermore, the article investigates the entanglement of power and maintenance (Jackson, 2014) in the resulting hierarchies that time(s) and the materiality of their supporting spaces eventually exhibit. For example, some areas considered at low maintenance can be simply "repaired" for occupation by science and technology fairs or events, while other areas are considered as electives for replicating and enacts the duration of the "original" time-space or generating new possible time-space representation reflecting the values exhibited by the original time-space materiality. To this end we consider the case of a heritage site, the house-museum Villa Necchi Campiglio in Milano, Italy. Completed by the architect Piero Portaluppi in 1935 for the Necchi Campiglio family, part of the rich industrial middle class of Milano in the 1930s, the house presents different association artifacts-maintainers and different time representations resulting from the maintenance work carried out over the years. The interpretive study is based on interviews, observations, and an analysis of archival materials on the history of the maintenance of the site. The research aims to provide a situated understanding of the unfolding of multiple-time configurations enacted in spaces that aim at the "maintenance of memory" and how the intra-acting in these different times are combined, kept apart, or hierarchized, in the materiality in the materiality of the associations of

the diverse artifacts-maintainers as well as in the appropriation of spaces-time representation that enact the maintained-house museum.

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Alesia Rudnik (Karlstad University)

Digital platforms as 'places' of protests: re-considering conceptualization of technology in social movements

Starting from rationalistic approaches that propose formulas of a sufficient number of participants for achieving a large scale of protests (Kuran, 1997) to post-structural accounts on the concrescence of analogue and virtual platforms of protests (Poell & Van Dijck, 2016) – numerous important contributions to social movements studies address spatial characteristics of protests, while not necessarily engaging with the concept of place analytically. Bruno Latour once wrote: "When you wish to discover the new, unexpected actors that have recently popped up and which are not yet bona fide members of 'society,' you have to travel somewhere else and with very different kinds of gear." (Latour, 2007, p. 22). When approaching examination of protests, I wonder, where exactly does a researcher find unexpected new actors? Where is somewhere else if protest action is dispersed and decentralized across multiple offline and online sites? How does knowing where somewhere else is improve an understanding of an actor or a protest network? Curiosity in answering these questions is the first reason for a discussion within this paper. To briefly provide the second reason, I believe reflecting on what happens with protest sites as technology entangled in political protests will equip scholars to locate new focal points of political conflict, additional power dynamics, and effects that emerge throughout an increasing digitalization of protests. Throughout this paper, I argue that it is precisely through examination of digital places and traditional protest locations that are co-produced, co-mediated, and co-maintained by humans and technology, social movements scholars approach wider opportunities to identify structure and participants of protest networks to follow the traces of protests key characters and events, to embrace power dynamics and relations, assess effects of political collective action. In this paper, I seek an updated reflection on offline and online spaces and places, venues, and sites that host, hold together, and reinforce modern protest action. As I aim to define places in relation to modern, highly digitalized protests, I also argue that place production occurs as humans and technology form and maintain protest networks. Granting the notion of place a stronger analytical power expands the methodological toolbox of social movements scholars (Breyman et al. 2016; Baron & Gomez 2016). At the same time, as this chapter concludes, a stronger focus on places in the context of modern technology-mediated

protests poses new theoretical questions and challenges related to the concept of protests in modern social movement theories.

Linnea Saltin (Karlstad University)

"Catholics judging me in my living room, watching me play VR" – experiences of using AI transcription as part of field study on VR-usage in homes

Transcription is understood as the first step of analysis by many social scientists. But it is also terribly arduous. Needless to say, the emergence of machine learning and AI transcription services has been met with great enthusiasm and framed as a time saving technological development. This paper has its starting point in my usage of an AI transcription service for my thesis, an ethnography of Virtual Reality, VR, usage in Swedish homes. Though the act of transcription has always been affected by technological development and practically oriented, the emergence of machine-made transcription services marks a shift from some earlier transcription practices. Through field diaries of using the transcription service, this paper explores how transcription through machine learning affected the creation of the material as a sensuous and mediated process. This raises questions of getting to know the program as a co-producer of the material and recognizing the material as the interviews performed. Findings include a shift in what is considered hard to distinguish in transcription work: dialects, who is talking and what is said. While the machine can "hear" some things better, which provides for a higher quality transcription, it also makes strange mistakes and assumptions (cats judging you is not apparently not as at hand as Catholics in a gaming living room setting?). This also provides for absurd corrections and cleaning as a part of transcription work.

Sati (Satenik) Sargsyan (Linköping University)

The case of the fax: use and discarding of welfare state communications infrastructure and imaginaries

"That's an interesting hill to die on," my friend said upon learning I was interested in studying the fax machine. Her reaction is perhaps not out of line with the popular conceptions of the fax machine as out of use in highly digitalized Sweden. While there has been some specialized discourse recently on the continuous widespread use of the fax in public administration, the role of the thousands of fax machines in-use in datafication of public administration is understudied. As significant research aims to address new forms of technologies and mediations, this paper seeks to understand how an 'old' medium such as the fax can help understand the 'new' datafied welfare state. How has the continuous role and relevance of fax in an age characterized as 'digital' been valued by its welfare state users, politicians and telecommunications providers.

In this exploratory research, based on ethnographic methodologies, I investigate the material use/misuse/disuse of the fax machine in the daily work of some Swedish municipalities and regions to understand its transformational social, cultural and political role. The use/misuse/disuse emerge as processes embedded in socio-technical imaginaries of the welfare state, focused on care. Who cares for the fax machine, and for whom does the fax machine care? I employ concepts from discard studies by Josh Lepawsky and Max Liboiron, and use by Sara

Ahmed to explore the meaning and role of the fax in transforming values and norms, power relations and temporalities of the (digital) welfare state.

Jie Shen (University of Amsterdam)

With digital and intelligent technologies increasingly permeating today's Chinese cities, governments and companies are developing smart city concepts and practices. In terms of urban imaginaries, a shift is worthwhile to be noticed. A decade ago, Chinese cities were designed based on the concept of "mechanized cities" where different functions zones and spaces are used to regulate people and maintain social order. However, nowadays, the smart city is imagined as a brain. The city brain doesn't give people predetermined rules, instead, it senses people's behaviours by the sensors from environments, and reacts to them in an ad-hoc way. What does this new metaphor of "city brain" entail? And how can we interpret the shift from mechanized cities to the brain?

To address these questions, this work critically examines the government and corporation's co-development of discourses and practices for China's smart city.

This paper challenges the dominant critique that China's smart cities function as a disciplinary apparatus. Instead, it argues a novel vision behind the ""organic living being"" metaphor: a cybernetic vision. This paper delves into how cybernetics has been localized in Chinese smart cities and what new features have been added to develop a different form of cybernetics. From this new angle, we could see how citizens, governance, and the society are perceived alternatively. This work moves beyond the Western universalism and could advance global debates of the new ways of thinking under the intelligent infrastructure.

Andreea Strineholm and Karolina Uggla (Mälardalen University)

Visualization in Manufacturing Industry: Tracing Practices of Engagement

This paper reflects upon the journey of exploring industrial visualizations within a Technology Centre in Sweden. These visualizations were taken out of their everyday context as tools for aiding maintenance, monitoring and decision making. Barad (2007) proposes a view of representations as "traces of multiple practices of engagement", and in this paper we want to see a meaning making process as a performative action, in how the workshop participants assign meaning to the visualizations in the conversations. We engaged 16 visualizations collected during one year of ethnographic study, in an interactive workshop setting. By bringing them to the centre of attention, instead of just sticking to their assigned use, we aimed to discover the witness that visualizations bear with them, from their intertwined relations of daily uses and process they are part of, through participants' reflections. We did that by printing them on paper and asking each participant to freely choose two of them, providing a way of engaging with materials, for eliciting emotions, memories, complete stories, carrying many layers of associations and meanings (Sanders and Stappers, 2012).

The participants work within the Technology Centre, an organization in-between the regional manufacturing industry and academia, and have different roles as well as visualization competencies. The workshop resulted in discussions on the different visualisations' meanings,

from which we identified several traces of practices of engagement, such as recognising the actants and the effects they produce, embracing limitations and appreciating imperfections.

Johan Söderberg (University of Gothenburg)

Managing risk in alternative addiction care: The Ibogaine subculture

The presentation consists of a case study of an alternative addiction care treatment with the controlled substance Ibogaine. The plant-derived substance is reported to have unique, anti-addictive properties. The discovery of these properties and early development of therapeutic practices took place in addict self-help networks. Over the years, a medical subculture has grown and professionalised. It has compiled a clinical protocol for Ibogaine-assisted detoxification and collected data on treatment outcomes. The Ibogaine medical subculture offers a prime example of patients and activists contributing to the development of novel therapies and drugs. The presentation dives into the downsides of the trend of "research-in-the-wild" by foregrounding the risk of adverse events, and how the subculture tries, with limited success, to mitigate those risks.

Bregje Van Eekelen (Delft University of Technology) and Seweryn Rudnicki (AGH University of Science and Technology)

Artifacts of creativity: The material mediation of creativity as we know it

According to cultural-historical analysis, current understandings of creativity have been shaped in the mid-twentieth century, when creativity emerged as a valuable resource, was measured through a scientific gaze, and was practiced in the form of brainstorming and other organized and coordinated activities (Van Eekelen 2017, 2018; Reckwitz 2018; Franklin 2023). Our presentation argues that this socio-cultural 'invention' of creativity has been enabled and constituted through different kinds of materials, tools, and artifacts that were mobilized to practice idea generation in the early, pre-post-it period. We will illustrate this argument by analyzing materials and artifacts appearing in three 'sites' of creativity: idea suggestion boxes systems (as used in US factories during WWII), brainstorming sessions (as conducted in advertising agencies and consultancies), and the material settings of creativity trainings conducted in industrial companies before and after WWII). This materially mediated culture of creativity, we show, contributed to the emergence of creativity as something organized, manageable, calculable and thus adequate for rationalized organizations, but also as something distinct from the routine ways of work, and evoking varied forms of collectivity, power distribution, and economic value.

Julia Velkova (Linköping University)

Remaking relations to data materialities through a pop-up book

Amidst debates about the societal transformations that machine learning and large language models are bringing, one thing is certain -- they will require computers and green-labeled electricity. In this presentation I introduce a hand-made prototype of a pop-up book that I mobilise as a device to entangle the audience in a relation to the materialities, human and more than

human anxieties, and landscape transformations upon which current digital computation- and everyday data practices hinge. The pop-up book tells the story of making wind productive for Google's computation infrastructure that gains its label as ""green"" and ""sustainable"" from within a hill located in the country of Jämtland in Sweden. The pop-up book narrative is based on fieldwork that I conducted in 2023, exploring the constitution of relations and friction (Tsing 2005) between Google and wind in a place. I conceive the pop-up book as a relation-making and ""transmission"" (Jungnickel) device -- a mediator capacious of inducing a transformative relation to data materialities by exposing and making relatable categories, objects and relations around data that are often presented in flat, detached or abstract terms -- like carbon metrics, megawatts of grid capacities, personal and sensor-data, or data infrastructure. The pop-up cuts distance and makes these abstract categories concrete, embodied, emerging, sensorially graspable. It translates experiences of anger, grief, and anxiety that accompany the increasing computation and energy demands of the data industries, simultaneously building and remaking relations between and the people, places and objects that make up ideas of ""sustainable"" computation futures visible, and the these entities and the audience/reader that experiences wind turbines pop-up from the pages of the book, pine forests collapse, and reindeers as well as humans attached to them alter their lifepaths.

I conclude with a discussion of the transformative potential that such form of transmission and scholarly communication can have for changing industrial practices and for engaging people in a different relation to data and digitalisation.

Thomas Wahl (Mälardalen University)

Re-imagining humanness in the context of AI

In the case of artificial intelligence, hyperbolic predictions of the emergence of intelligent machines, even ‘super intelligences’, consist of both dystopian fears of human suppression and extinction, and utopian hopes of human flourishing through freedom from labor and illness as well as unparalleled economic growth and prosperity. At the heart of the controversies between these two, we argue, are emergent and conflicting assumptions about what it means to be human, or rather, what defines humanness.

To address this topic, of how the understanding of humaness is constructed in relation to AI and how the (future) agency of AI and Humans are imagined, we turn to the genre of popular science and the imaginaries of the possibilities and effects of a future in which intelligent machines have bypassed many human capacities. Popular science as a genre is interesting in its ambition to translate inter-academic knowledge production about AI development while at the same time dramatizing it and making it relevant for business, politics, and the public.

First, the chapter deconstructs the imaginaries of a future shaped by super intelligent AIs and discusses how this imagined future builds on particular and narrow definitions of humanness - as essentially biological cognitive processors, but also as distinguishable as creative/non-creative and neuro-typical and neuro-diverse/passive and active. Secondly, we turn to the construction of AI as a “floating signifier” an object, a thing, that is devoid of meaning.

Shan Wan (Norwegian University of Science and Technology), Silvia Ecclesia (Norwegian University of Science and Technology) and Roger A. Søraa (Norwegian University of Science and Technology)

Transmitting Expertise: Delegation between humans and non-humans in AI-based worker recruitment

This paper explores how AI-based worker recruitment can be understood through delegation theory, which focuses on the shift in responsibilities and agency within assemblages of people and digital technologies. Delegation theory in the case of AI usage among recruiters can illuminate how assemblages are formed, and how responsibilities and roles move around. Such delegation of working tasks between humans and AI not only influences recruiters' working behaviours themselves, but also reshapes recruiters' understanding toward their role in this process as knowledge, expertise and practices change. Our empirical basis is on how recruiters negotiate their role in the age of AI and consists of 37 semi-structured interviews with HR practitioners in Italy and Norway. The interviews show that AI delegates various tasks like completing repetitive jobs, improving ethical measures, and advising on new ideas. However, not only existing tasks have been given to AI, but the technology also created new demands and standards for recruiters to follow. Meanwhile, the division of tasks between humans and machines reshaped the recruiters' understanding of human expertise in hiring and selecting employees. With AI enabling more structured and efficient recruiting processes, more emotional labor and ethical sense-making is expected from the human recruiter's side. The "human touch" and adaptability of the recruiter become then to be perceived as the foundational components of a recruiters' professional identity. The introduction of AI for recruiting, therefore, meant a delegation not only in responsibilities and tasks but also a reshaping in disciplinary boundaries.

Natasha A. Webster (Örebro University) and Qian Zhang (Stockholm University)

Beyond the romantic gaze: Travelling to WWOOF farms through digital affect and atmosphere

Technologies have been shaping spaces and places. With the rapid evolution and multiplication of media forms from print brochures, magazines to digital screens and interactive platforms, the space and process of communications around tourism are changing rapidly and tremendously. This study seeks to renew understandings of touristic presentations and gaze through exploring affect and atmosphere in digitally mediated agritourism spaces. Focusing on farm-based volunteer tourism WWOOF in Sweden, 30 images without humans are selected from Instagram. A visual content analysis is conducted, from mapping visual components, to assessing atmosphere, and finally identifying archetypes. This systematic detailed analysis enables us to show that, the images portray the rural in very specific ways that are spatial, temporal and social-relational. The gaze is romantic but more importantly a form of digital affect and atmosphere, which draws on social meanings and engages digital spaces as a continuum of experience and interaction. Tourist hashtags, which condition the image results and thus related presentations and gaze, create digital geographies of rural spaces. This study contributes to emerging tourism studies that nuance the connections between physical, digital and emotional geography in social-technical changes.

Preconstituted sessions and workshops

How can STS theories contribute to social work? (Part 1)

Hosted by Samuel Salovaara (University of Lapland), Nora Germundsson (Stockholm University) and Anne Aasback (Norwegian University of Science and Technology, NTNU)

While (digital) technologies have been utilized in social work context for several decades, emerging forms of technologies provide new opportunities and challenges, and therefore social work technologies needs to be explored and conceptualized in new ways. In Sweden, as well as in other Nordic countries, for example, governments display high hopes that AI will unequivocally solve many of the most endemic problems faced by welfare states. Indeed, several scholars have raised concerns that this dominant top-down perspective applies an instrumental view of what social work is and what it should be. Moreover, it has been argued that social workers are generally excluded from the shaping both the materiality and the adoption of technologies into social work practice.

In a society where the use of technology has become integrated into most aspects of both work and private life, we need to consider how the field of social work can shape and be shaped by the technologies that are adopted in practice. New research and novel approaches to the current and future development of social work as mediated by various forms of technologies are therefore needed. We invite scholars in social work or adjacent fields to submit abstracts on previous, current or planned research on social work from an STS perspective. Our session will provide a platform for discussions on the role of technology in social work and the research initiatives and approaches that are currently needed.

Reducing Administration? Unpacking the adoption of Robotic Process Automation in Swedish Social Assistance

Nora Germundsson (Stockholm University)

Aligned with the global trend towards digitization, digital automation has become a politically endorsed strategy to enhance efficiency and transparency in public service delivery. One such example is the adoption of Robotic Process Automation (RPA) in administering Social Assistance (SA) in Sweden. While SA is a municipally organized means-tested subsidy for the most financially vulnerable, RPA functions as highly standardized software executing administrative tasks based on predetermined rules. Employing a sociomaterial perspective, this study analyses group interviews conducted in four Swedish municipalities to explore if and how RPA adoption configures the dynamics of SA casework administration and practice. Findings suggest that RPA adoption does not inherently lead to expected enhancements such as faster and fairer eligibility determinations or a more client-centric approach in SA casework. Instead, the instrumentalist approach of leveraging digital tools to achieve specific outcomes, combined with the task delineation required by RPA, appears incongruent with the nuanced nature of casework. While caseworkers also attest to organizational adjustments and a more instrumental approach towards clients' situations alongside RPA adoption, this study underscores the inadequacy of the rationalist notion of segmenting SA casework in order to achieve efficiency in casework that, by law, should be based on individual judgements by professional social workers.

Disentangling social and digital exclusion

Anne Marie Dahler (UCL University College), Marianne Staal Stougaard (UCL University College)

and Marie Leth Meilvang (UCL University College)

The public sector in Denmark is one of the most digitalized in the world, meaning for example that the encounter of citizens with the welfare state is highly mediated by digital technologies. As it has been stressed by various researchers, digitalization of welfare services has the potential to exclude citizens who are already in vulnerable positions, e.g. elder citizens, citizens with language issues, socially marginalized people and citizens with disabilities. In the presentation we argue that an elaboration of how social and digital exclusion processes are linked, are central to social work in a digitalized society, and that STS notions of e.g. entanglement can contribute to elaborate on this link. In the presentation we ask how social and digital exclusion processes are entangled in frontline work practices with potentially digital marginalized citizens. The analysis is based on the data from two studies of respectively frontline work in relation to citizens in vulnerable positions and voluntary work in relation to elder citizens in need of digital help.

Socio-technical system of social work knowledge formation

Samuel Salovaara (University of Lapland)

The study examines information systems (ISs) in the formation of social work knowledge within the framework of socio-technical theory. The study asks what roles and tasks are constructed for ISs in the socio-technical system as part of social work knowledge formation.

The study uses multi-triangulation by combining different data, methods and theoretical models in the four sub-studies. National surveys for social workers and managers together with interviews of IS developers will be used as research data. The results are interpreted within the framework of socio-technical theory.

As a result, an interpretation of the extended socio-technical system of social work knowledge formation is produced, in which the IS has numerous roles and tasks as part of various knowledge formation processes. The extended socio-technical system illustrates the various stakeholders with different interests involved in the knowledge formation processes of social work.

Data, Knowledge, and the things between

Matilde Høybye-Mortensen (VIA University College)

The desire to use data to drive welfare organizations is a global phenomenon (Reutter 2022, McGuire et.al.2020). To use data as ‘fuel’ require obviously a vast data producing infrastructure. The nuclear of this production is the social worker who meets citizens – and introduce their data in the various administrative systems (Høybye-Mortensen & Ejbye-Ernst 2018).

In this article I try to answer the call from Andersen et. Al. (2023), whose review shows that the amount of empirical research on data in social work is still limited, and that there is a lack of conceptualization and theory on data.

On the basis of observations of 13 workshops where managers from municipal welfare organizations worked with interpreting and using data I try to illustrate how data is processed, used and interpreted by low level managers in municipal social work organizations. On and on the basis of these illustrations to conceptualize data use on management level in a social work setting.

In this article data is not viewed as universal or singular, but rather as an assemblage with multiple configurations (Maguire, Langstrup, Danholt & Gad 2020). What data is, is always an empirically situated question. This article brings together the literature on digitalization of social work/street-level work and the STS tradition or Critical Data Studies (CDS). By combining these two perspectives, the ambition is to provide new insight into how data is produced, used and interpreted in social work organisations by avoiding the a priori understanding of digital tools as a management tool detrimental to professionalism.

The emergence of technostress in the use of information systems in Finnish social work

Katri Ylönen (University of Jyväskylä)

Despite increasing time spent on information systems and noted challenges like poor usability and complexity (De Witte et al., 2016; Gillingham, 2013; Salovaara & Ylönen, 2022), research on technostress in social work is limited. Technostress seems linked to high workloads and general job stress among social workers (Scaramuzzino & Barfoed, 2021).

Technostress in social work, though understudied, is evident, often viewed negatively but occasionally positively (Califf et al., 2020). For instance, mandatory technology use, especially in public social work, contributes to technostress (Bhattacherjee et al., 2018; Brod, 1984). Since the 1990s, increased organizational accountability has heightened administrative tasks, leading to techno-overload, a key aspect of technostress (Gillingham & Graham, 2016; Tarafdar et al., 2011). Insufficient training on information systems worsens stress levels (Ylönen, 2023). Recent events, such as the Covid-19 pandemic, blur the lines between home and office, indicating a shift to hybrid work environments in social work (Scaramuzzino & Barfoed, 2021).

The aim of this article is to examine technostress in social work that is caused by information system. Article focus on Finnish social workers (n=19), who work in public sector in different social work tasks. The article addresses two research questions: 1) how technostress is reflected in social workers' accounts of using information systems and 2) what are the main factors that cause technostress? The data is analyzed using content analysis (Elo & Kyngäs 2008). This study is important firstly to raise awareness of technostress, but also to identify it early.

How can STS theories contribute to social work? (Part 2)

Hosted by Samuel Salovaara (University of Lapland), Nora Germundsson (Stockholm University) and Anne Aasback (Norwegian University of Science and Technology, NTNU)

While (digital) technologies have been utilized in social work context for several decades, emerging forms of technologies provide new opportunities and challenges, and therefore social work technologies needs to be explored and conceptualized in new ways. In Sweden, as well as in other Nordic countries, for example, governments display high hopes that AI will unequivocally solve many of the most endemic problems faced by welfare states. Indeed, several scholars have raised concerns that this dominant top-down perspective applies an instrumental view of what social work is and what it should be. Moreover, it has been argued that social workers are generally excluded from the shaping both the materiality and the adoption of technologies into social work practice.

In a society where the use of technology has become integrated into most aspects of both work and private life, we need to consider how the field of social work can shape and be shaped by the technologies that are adopted in practice. New research and novel approaches to the current and future development of social work as mediated by various forms of technologies are therefore needed. We invite scholars in social work or adjacent fields to submit abstracts on previous, current or planned research on social work from an STS perspective. Our session will provide a platform for discussions on the role of technology in social work and the research initiatives and approaches that are currently needed.

Social Barriers and Opportunities for a Universally Designed Digital Teaching and Learning Environment

Heidi Pedersen (Norwegian University of Science and Technology) and Heidi Green (Norwegian University of Science and Technology)

Introduction: The authors will present the findings of a recent research project that delves into the accessibility aspects of students' learning milieu within higher education. Encompassing organizational frameworks, psychosocial dynamics, and pedagogical strategies, the study scrutinizes how both lecturers and students perceive the integration of digital learning technologies within the student learning environment.

Method: This empirical investigation adopts a social constructivist perspective, grounded in Science and Technology Studies (STS). Semi-structured interviews were conducted with lecturers and students at both bachelor and master levels across three departments of a Norwegian university. These interviews aim to highlight the experiences of both lecturers and students in different disciplinary contexts. Additionally, data were collected through workshops involving bachelor students. The ensuing analysis employed a thematic approach.

Findings: The findings reveal that digital lectures present both social and academic challenges and opportunities for students. Notably, barriers were observed in students' ability to articulate their needs and in their inconsistent physical attendance. Some students experience the digital teaching appropriate, giving them the learning support they need. The use of images and visual stimuli can facilitate their learning process. Lecturers expressed that they could serve as positive role models for inclusion for their students by designed their digital teaching well. Digital learning technology used in teaching had the potential to work well, but often contributed to challenges that at their zenith, impede effective learning and participation.

Redefining Child Protection: A Social Network Analysis Approach to Understanding Organizational Networks and Actor Relationships

Samuel Salovaara (University of Lapland)

The current complexity and crisis of the child protection system creates a need to explore and conceptualise child protection in new ways. In order to develop new theoretical approaches, we need to abandon the idea of child protection as an activity taking place in clearly defined institutions and understand it rather as a flexible and complex entity (Bauman 2000; Harrikari & Rauhala 2019). In our current research project attention is paid to the relationships between different actors and the structures of the networks by using the methods of social network analysis (SNA). The use of SNA in social work research is still rare. SNA offers considerable promise for social work research, as the focus of social work is on the relationship between the individual and their environment (e.g. Richmond 1922; Bartlett 1970) and SNA offers unique methodological tools for studying these relationships (e.g. Prell & Schaefer 2023). The focus of the research is on organisational networks, but these networks are seen to take their form in practice through the interaction between actors, including not only social workers, clients and collaborators, but also information systems and other technical elements. The study draws on actor-network theory (Latour 2005; Law & Hassard 1999) to explore the functioning of networks, considering both social and technological network elements, whose multilayered interconnectedness is examined in the light of organisational functioning and the implementation of the child protection mandate.

Dealing with assemblages of assemblages in social work

Kristofer Hansson (Malmö University)

In this presentation I will present data from focus group interviews with professionals within social work and how the talk about knowledge in relation to digitalization. In today's social work knowledge circulation has become increasingly important. The work must be conducted with evidence-based knowledge, complex problems require new knowledge and so on. Knowledge circulation could be seen as a buzzword for modern social work. In the interviews, digital technologies are the solution for many social workers to get new knowledge, but also circulate it in the organization. At the same time technology also add new problems and limitations. One problem is the amount of data. Most social workers feel that the get to much information through e-mail.

How can this form of knowledge circulation be analyzed with an STS perspective? And how can the mundane working life for the social worker be used to develop the STS perspective? I will in this presentation use Manuel Delanda´s perspectives on assemblage theory. I am particularly interested in how assemblages are composed of "heterogeneous components"; like persons, machines, buildings and so on, and how these components are part of larger assemblage. We are here "dealing with assemblages of assemblages" (Delanda 2016: 129), which can say something about the territorialization of social work in times of digitalization. This is a theoretical perspective that can further develop how we understand the role of technology in social work.

Digitalization in Social Work – How the Intersection of Technology and Profession Shapes Social Work Practices

Anne Aasback (Norwegian University of Science and Technology)

One of the most significant challenges facing social work is effectively utilizing digital technology to develop high-quality services. This presentation addresses the research question of how the digitalization of social work is negotiated at the intersection of technology, social workers, and service users. The empirical data for this research is collected as a part of a Ph.D. project. It is based on qualitative interviews and participatory observation with Norwegian social workers who provide services for both children and adults.

The findings from this study illuminate how social workers engage with digital technology in critical and creative ways. While the intended use of technology does not always seamlessly align with specific real-world situations, social workers adapt its application to better achieve their work objectives. This adaptation involves building trustful relationships with service users, clarifying support needs, and avoiding misunderstandings or conflicts. Consequently, social workers actively shape the use of digital technology and the practices surrounding it to uphold traditional values within social work, such as participation and empowerment.

However, the design of digital technology also imposes constraints on professional practice that cannot be influenced solely by social workers. The study reveals that the interaction between digital technology and social workers occurs within a complex interplay of organizational guidelines, political directives, and user dynamics. These dynamics introduce new dimensions to the traditional dilemma in social work related to the delicate balance between help and control.

Converging professions: the hybrids in digitalized social work

Mikkel Rask Pedersen (Aarhus University)

Digital systems and data are at the core of a new neoliberal public management strategy to improve the quality of welfare services while making them less expensive.

It is anticipated that within a digital transformation, increasingly capable systems will help standardize social work, automate the dissemination and distribution of data, and replace human interpretation in favor of predictive algorithms.

Digitalization often implies replacing, improving, or having some effect on something. However, such perspectives tend to forego investigations into how digital systems, data, and social work could rather exist in a hybrid in which all shape each other.

In this paper, we conducted semi-structured interviews of 12 social workers in different roles across two Danish municipalities. We used an inductive thematic analysis to visualize ideas and convergencies surrounding their professionality and data work.

Here, their data work both supported and burdened them and citizens and figured in and out of constellations of how data work either suspended, emphasized, or transformed their role and importance as social workers. Citizens' legal right to access their journals on demand appeared here as a potent junction to see how data work and social work converged on multiple points.

The digitalization of social work is not a conclusion, but an idea and process entangled in the imaginations of both promises and failures. Expectations within and towards both digital systems, data, and social work carry with them these imaginations and, in turn, shape how and when data work and social work converge or not.

Playing in Tamed and Wild Environments: Unusual places, temporalities, and artistic methods for learning in non-artistic disciplines

Hosted by: Isabel Löfgren and Tatiana Sokolova (Södertörn University)

What happens when we write course papers in dance studios, supervise theses in art galleries (or cemeteries) and run examinations on metro trains? What happens when, while teaching non-artistic disciplines, we borrow and steal from performing arts, deconstruct theory through creative writing and brainstorm student projects on graffiti walls? What do these ways and places of teaching and learning do to power asymmetries in educational structures and societies at large? What happens when we do research inside cultural institutions, employ creative methodologies, and co-create knowledge with others in the field?

This workshop explores how what we do inside and outside the university and the classroom when engaging with aesthetic and emancipatory theories of research and education, that creates spaces and instances of care, critique, and freedom. As researchers, teachers, and students of environment-related subjects, we approach research and education as an apprenticeship using tacit and embodied learning. We challenge the spatio-temporal distinction because we deal with time and space simultaneously. As teachers and students, we are not on opposite sides of the barricade or divided by lines drawn on maps. As researchers, we face the challenges of creating and presenting knowledge together with several actors and connecting to more diverse audiences. As teachers, we recognize our students' potentialities and walk with them in uncharted territories in their becoming through time. As students, we invite our teachers to adjust their stride to our rhythms.

We welcome STS Conference participants to exchange tools and practices for a 90-minute participatory session at the conference at the Museum of Work and/or the surrounding area. How can we bring the voices of the other-than-human into the research and learning environments? How do we engage with decoloniality and intersectionality through creative and differently placed pedagogical and academic communicative practices? How can we create and maintain excitement in the research process and the classroom – à la bell hooks, teaching to transgress? Researchers and teachers may offer to share their experiences of success or failure, methodological work-in-progress, or show perspectives on creative modes of research and experiential learning by practicing their methods on and with us. Recent graduates and students are welcome to share their experiences, good and bad, of learning – and ideas of how they'd like things to be done differently.

All welcome!

Isabel Löfgren is a Senior Lecturer in Media and Communication Studies at Södertörn University. Her research includes the visual politics of the green transition, media activism, and social movements connected to environmental, social, gender, and racial justice. Her teaching practice

includes media production and creative processes, focusing on aspects of the production of the gaze. Her artistic practice includes participatory public art and installations using several mediums, and she has exhibited in several cultural institutions in Sweden and abroad, often with correlated art pedagogical programs.

Tatiana Sokolova is a doctoral student in Environmental Studies at Södertörn University, researching the politics of environmental knowledge for sustainability transformations. She has amateur training in physical theatre, flamenco, and creative writing. She has organized courses, workshops, and conferences connecting academic and artistic perspectives on sustainability at Södertörn University and Färgfabriken.

Doctoral Assemblages: Exploring transmissions in ethnographically oriented doctoral projects

Hosted by: Maria Paulsson (University of Gothenburg) and Oshin Siao Bhatt (Chalmers University of Technology)

Doctoral Assemblages: Exploring transmissions in ethnographically oriented doctoral projects

A well-known and often studied phenomenon within the STS community is that knowledge production entails the enactment of certain realities, as researchers intervene in their field of inquiry and make relevant data and theoretical propositions, resulting in certain world-ordering processes. Within doctoral projects, knowledge is created in conjunction with a complex set of interactions – with, for instance, colleagues, supervisors, conferences, journals, access to study objects, financial opportunities and limitations, regulations, and personal cares. In line with the conference's specific appeal towards doctoral students and early career researchers, this session aims to address knowledge production within the scope of ethnographically oriented doctoral projects. Treating these projects as material-semiotic assemblages, it intends to provide a forum for early-career researchers to mutually reflect upon the ways in which the transmissions that occur through these interactions shape and transform our doings of, and engagements with, our fields. Organized as an 'immersive panel', the session will seek to address three broad questions related to the broader thematic, in three 30-minute sprints. Each sprint will consist of a 10-minute presentation by an invited speaker – a current or recently graduated doctoral researcher – addressing one of the three themes. This will be followed by 15 minutes of visualization, writing, and discussion in smaller groups, which will finally be tied together with a 5-minute share-out of interesting points discussed in the smaller groups. The three themes will be further elaborated upon in each of the invited speaker's abstracts. The total duration of the session will be 1.5 hours.

Sprint 1

The first sprint will call attention to the ethico-political considerations and situated knowledges that inform the ways in which we attend to the work of knowledge production within a doctoral project; and the realities that are enacted through this work. Proshant Chakraborty, a doctoral student at the School of Global Studies in Gothenburg University, will open this sprint by drawing

on certain methodological and metaphorical congruities between his doctoral fieldwork with engineers and workers at a railway car-shed, and the doctoral dissertation that he is currently writing based on his auto/ethnographic exploration of repair, maintenance, and commuting in suburban Mumbai's railway trains. His presentation will make the following contributions. First, in a conventional STS fashion, he posits that it is productive to think about academic labour through notions like sociotechnical systems/assemblages which point to interaction of diverse agencies, particularly when it comes to the (re)production of knowledge and institutions. Second, on a more personal level, his presentation will look at how he navigated the techno-bureaucratic world of the car-shed as a non-engineer anthropologist and the halls of Swedish academia as a commuter-ethnographer turned public servant, where he tries to make sense of how infrastructure and education can and should frame ideas of public good. Finally, he will reflect more closely on the congruities between repair and research, particularly interrogating the way both interventions can avoid reproducing dominant political value systems. Here, notions of care and critique—which have animated his prior research—become important lenses through which we navigate both public institutions and public life at large.

Sprint 2:

The second sprint will seek to explore the ways in which transmissions of knowledges, messages, questions, materials, artefacts, and research objects at different stages of research shift the ethico-political considerations and situated knowledges that shape our work of knowledge production. Maria Arnelid, a doctoral student in the department of Thematic Studies at Linköping University will address this theme through her PhD project which studies how care work is imagined, restructured and (de)valued in the development and implementation of 'care robots' and other 'welfare technologies' for elder care in Sweden. Her presentation will focus on one study which was carried out through collaborative ethnographic methods. Instead of being tied to a particular field site, this study revolved around a collaboration undertaken with a cognitive science PhD student – Sofia – who was developing and testing the robot Furhat for elder care homes. The collaboration allowed – or perhaps required – her to become less of an observer and more of an active participant in the work of developing care robots. She will reflect on the process of coming to terms with this shift in position, both practically and ethically, and how the notion of strong collaboration (Matsutake Worlds Research Group 2009, 2016) helped her along the way.

Sprint 3

The third sprint focuses on how our objects of study are co-constructed through interactions with actors we encounter in our empirical work. Jakob Lundgren, postdoctoral researcher at Halmstad University College, will draw on his experiences as a doctoral student to discuss this topic. He will address how his empirical description of research fields in sustainability was shaped through an iterative process of interaction with the fields in question. Because two of the papers in his dissertation are published in environmental studies journals, this process did not end after the submission of manuscripts but also included the reviewing process and subsequent reading and use of the papers. The topic thus both touches upon the doing of research how that research takes on its own life once it is released.

"What do I do when I hear the siren? - a workshop on the breakdown of a critical information infrastructure during a crisis scenario"

Hosted by: Linda Paxling (Malmö University)

When a crisis occurs, we experience uncertainty and worry and look for different information outlets to try and understand what is going on and what needs to be done. Different bodies will react differently to uncertainty. Some bodies are already familiar with an environment that is not designed for them. Others are not. What do we do when the familiar becomes unfamiliar?

In our networked world our dependance on critical infrastructures such as telecommunication and power are ever increasing. In many digitized societies the telecommunication infrastructure is often taken for granted and perceived as almost immaterial. Sweden is ranked as one of the most digital countries in the world and during the covid-19 pandemic, for instance, people living in Sweden could easily access up-to-date information, receive emergency help, and stay in touch with each other online. However, connectivity and accessibility differ a lot depending on where you are situated, and in many parts of the world a vulnerable, fractured and very corporeal telecommunication infrastructure is quite prominent.

If we start having power cuts here in Sweden and the network services fail, we can no longer communicate and access information like we are used to. What then?

This session will be an interactive workshop where we will explore our actions and reactions during a crisis scenario focusing on the breakdown of the information infrastructure.

Please note! The session will be a temporary disconnect with the outside world and will include some loud sounds and a setting with little to no light. You are free to leave at any time.

Toward technographic portraits: Ethnography, biography, technicity

Hosted by: Proshant Chakraborty (University of Gothenburg)

This panel invites submissions to sketch out technographic portraits of everyday technologies and infrastructures. Inspired by STS notions like de-scription and stabilisation (Akrich 1992) and delegation (Latour 1992), as well as notions of the ethnographic and sociological imagination (Willis 2000), potential presenters are encouraged to portray everyday or mundane objects through a combination of biographic/ethnographic and technical narratives. Rather than following the contemporary trends of studying infrastructural networks at large—like subways or trains (Fisch 2018; Latour 1996; Sadana 2022) or water infrastructures (Anand 2017; Björkman 2015), to name a few—this panel focuses attention on somewhat discrete and relatively small(ish) objects that can tell larger stories, whether of ingenuity and invention or failure and breakdown. Some contemporary examples include heritage sites and retrofitted bridges (Henke & Sims 2020), shipping containers (Leivestad 2022), and care robots (Johnson 2023). In doing so, this panel attempts to speak to the broader themes of this year's conference—transmission, mediation, and interference—by asking questions like, what social, technical, and political visions do these technographic portraits represent? What are the metaphorical/material dynamics and dependencies that technographic portraits can reveal? How can technographic portraits de/familiarise objects to their wider communities of users, designers, fixers, and so forth?

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1. Stepping over the line

Nirali Joshi (Åbo Akademi University)

Deemed anti-pedestrian, movement barriers (rather than bridges), symbolic and concretised forms of stalemates (rather than solutions) – footbridges have come to be studied and critiqued predominantly as classical failures of design, equitability and sustainability in urban transport planning principles. This paper presents stories of three footbridges across Mumbai's busy commuter railways where surface-level trains intersect with high urban densities, entangled land uses, and a criss-crossing of jurisdictional and formal boundaries. It draws attention to the techno-legal complexities, territorial fractures between railway and city governance and the varying temporal rhythms of bureaucratic procedure that produce the presence, or conversely, the absence of footbridges in particular sites. It examines the unremarkable footbridge not as a 'single' utilitarian design entity within the techno-spatial assemblage of the railway, but as a complex construction (or conversely - fragmentation) of segments, materials, expertise, resources and priorities as it straddles railway territory and sets foot into the city at either end of its landings. The paper further layers this analysis with stories by local users and residents involving their embodied experience of co-existing with tracks and using/demanding/critiquing

footbridges. The stories are both – forms of situated knowledge, and modes of iterating contextual realities, articulating vulnerabilities and recovering agency through non-linearity, creativity, detailing, and embodied narration. These narratives of how the already built, half-built and still to be built footbridges are outcomes or failures of procedure, politics and recognition eventually inscribe this mundane mobility infrastructure with a more core politics of life and care.

2. Retrofitted trains: Frankensteinian assemblages in Mumbai's suburban railways

Proshant Chakraborty (University of Gothenburg)

This presentation is a technographic portrait of retrofitted AC-DC trains in Mumbai's suburban railway network, named so because these older trains were modified to operate on both 25,000-volt AC and 1,500-volt DC power, which characterized Mumbai's centuries-old railway network about a decade ago. From the late-2000s to late-2010s, retrofitted AC-DC trains were an iconic fixture in Mumbai's suburban railway system, a unique sociotechnical assemblage that served millions of commuters during a moment of infrastructural transition in one of the world's most densely-packed and oldest public transport networks. At present, though, these trains are relics and ruins—gathering rust and covered in vegetative overgrowth on stabling lines—even as a few functional ones play a vital role in repair and maintenance. Drawing on key ideas in STS and ethnographic scholarship, particularly Julian Orr's work on the socialisation of technology and its analogy with Mary Shelly's science-fiction novel Frankenstein, this presentation looks at how retro AC-DC trains were a sort of Frankensteinian assemblage. Retro trains, for instance, were reverse-engineered from newer technologies but also faced several engineering and organizational hurdles resulting from wear-and-tear. Inasmuch as these trains ensured the suburban network's stability, they were also unruly objects prone to breakdown and failure, thus necessitating newer, caring interventions. My technographic portrait of AC-DC trains illustrates stories of engineering expertise and bureaucratic management in a network at overcapacity, where retrofitting and ruination serve as paradoxical but productive forces that illustrate congruities between care, repair, and technological progress.

3. Masts of Change: Technographic Tales of 5G and the Socio-Technical Fabric of the Black Country

Sophia Fragapane (University of Gothenburg)

As the UK propels itself toward a green industrial revolution, this research delves into the intricate temporal gears and cultural cogs of emerging infrastructure, with 5G masts as its focal point. A technographic portrait emerges, interweaving a biographical narrative of the Black Country – a region with a storied industrial past. By tracing the nuts and bolts of 5G's implementation, this study sheds light on both material and metaphorical dynamics. Rather than viewing these masts as passive objects, we recognise them as active agents shaping socio-economic winds of change. Beyond their physical form, these structures enfold both aspirations for future progress and apprehensions of the present. A critical juncture in this study lies in the interplay between government policies – enacted through public-private partnerships (PPPs) – promoting 5G and local resistance; often termed NIMBYism ("Not In My Backyard"). Paradoxically, the technocratic nature of innovation and sustainability can fuel a form of 'neo-luddism,' further entrenching

technocracy. This opposition transcends mere rejection of technological intrusion; it reflects broader societal tensions and dialectics. Such as the delicate balance between surveillance capitalism and digital sovereignty, widening digital divides, amidst a revolt against techno-solutionist narratives. These forces collectively reshape power dynamics and participation in the digital age. The research aims to demystify the masts, thus revealing the dependencies they forge and the futures they promise. By recontextualising 5G within its diverse community of stakeholders – from policymakers to the public, engineers to environmentalists – we contribute to a nuanced technographic portrait of a transformative technology network.

4. Bluetooth basal thermometers: Rethinking reproductive health

Carla Brandschert, (University of Gothenburg)

In today's discussions about birth control, which mainly revolve around hormonal methods, the Bluetooth basal thermometer is re-discovered as an appealing alternative. By measuring the body's basal temperature - a crucial indicator for ovulation calculation -, it provides a natural and safe way to manage fertility, gives insights into overall health and helps tailor lifestyle choices to menstrual cycles. This paper analyzes the effects of Bluetooth basal thermometers and investigates how these devices, once seen as neutral tools, reflect societal values and might reinforce gender stereotypes and power imbalances in reproductive health settings. Examining how Bluetooth basal thermometers are designed, marketed, and used is essential to challenge prevailing beliefs and advance social justice. The research questions the idea that these technologies automatically lead to better healthcare, expressing concerns about shifting responsibility away from healthcare systems and worsening existing inequalities in reproductive health. In summary, while Bluetooth basal thermometers offer a way to understand and manage reproductive health better, they also prompt us to think about the balance between relying on technology and understanding our bodies intuitively. This duality highlights the need to carefully consider their societal impact and advocate for comprehensive approaches to reproductive healthcare.

Vocabularies for thinking with Data

A workshop chaired by: Julia Velkova (Linköping University), Minna Ruckenstein (Helsinki University), Dorthe Brogård Kristensen (University of Southern Denmark)

This session will take the form of a workshop. We will talk about the vocabularies that we need to describe issues brought by digitalisation and datafication in their manifold manifestations. While much scholarly and public debate is centered on emerging technologies, their qualities, imperfections, transformative capacities and authority, these debates are often powerfully shaped through industry buzzwords and hypes that often come to frame too much scholarly vocabularies and approaches. In this workshop we discuss how the vocabularies we use matter, when and why, and explore what terms we might need for capturing, describing and intervening better for transformative relations with data, digital industries and for the making of collective liveable futures with data.

The workshop will feature a series of short, 5-7min long igniting talks and provocations that address a selected keyword by an invited speaker, followed by an interactive group exercise-discussion with paper and pen. We also discuss how words/terms can act as devices of

interference, and transformative critical engagement for scholarship, industry and policy on data-related developments.

Short Inspirations/Provocations by: Minna Ruckenstein (Helsinki University), Julia Velkova (Linköping University), Katherine Harrison (Linköping University), Dorthe Brogård Kristensen (University of Southern Denmark).

The workshop is organised by TEMA's DataLab, the REIMAGINE ADM and the REPAIR research projects.

Climate governance in the digital era: What 'techknowledge' does (not do) for transparency, accountability, and equitable participation.

Hosted by: Angelica Johansson and Maria Jernäs (Linköping University)

Our knowledge about the climate crisis is rapidly growing and the Paris Agreement sets an expectation to base climate policies on the "best available scientific knowledge" (UNFCCC, 2015, p. 1). This commonly materializes as technocratic approaches to governance and knowledge where models, metrics, and technologies play a central role (Hanekamp and Bergkamp, 2016). For example, under the UN Climate Convention, nonstate actors' climate contributions are gathered to enable quantification and aggregation (Jernnäs & Lövbrand, 2022). In the courts, attribution science is tested as evidence in climate litigation cases (Stuart-Smith et al., 2021). The rapid evolution of artificial intelligence (AI) is the latest invention in this regard arguably posing opportunities to make climate action and governance more efficient and accurate (Francisco and Linnér, 2023).

In these digital times, the production and use of knowledge are central to understand if and how transparency, accountability, and participation in climate governance can be ensured. For research, the rapid evolution and dissemination of digital tools poses questions on which types of knowledges they rest upon and project, and what room there is for other imaginations in climate governance.

In this session, we connect researchers working in the nexus of climate governance, knowledge politics, and digital tools. The session will take the form of a panel discussion (approx. 1.5 hrs.) where panelists present ongoing research projects and explore synergies between them. Together, we will identify and discuss core questions for the growing research agenda that bridges the world of climate politics and science and technology studies.

Session participants:

The following participants will participate in the panel session:

1) Professor Eva Lövbrand, Linköping University, Department of Thematic Studies – Environmental Change. Eva will introduce her work in the Virtual Worlds project, where she examines the roles of digital technologies in transparency processes of the UN Climate Convention.

2) Dr Daniel Andersson, Linköping University, Department of Thematic Studies – Environmental Change. Daniel will present his work on synergies between climate politics and Science and Technology Studies.

3) Dr. Karin Skill, Linköping University, Department of Thematic Studies – Technology and Social Change. Karin will introduce her research on Sustainable Development and Digital Technologies such as AI, big data and digitalization.

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The Social Life of (Digital) Models

This session delves into the multifaceted development, deployment and use of digital models and computational modelling techniques by exploring their interwoven socio-technical lives. Models serve as both bridges for and generators of knowledge, and are said to be the meeting point between knowledge and reality (Leonelli, 2007; Morrison & Morgan, 1999). Thus, digital models aim to digitally scale up/down, simulate or envision (living and non-living, existing and imagined) entities such as buildings, cities, ships, human organs and even planet Earth, and configure how we perceive ourselves and the world we live in. Hence, this session is intended to draw attention to how we, as scholars, can make sense of digital models and investigate how they are shaped, narrated, negotiated and imagined.

The session will feature three individual presentations exploring various facets of the social life of digital models. Each presenter will shortly introduce their paper, leading into a general discussion with appointed chairs. They will guide the discussions after each presentation, helping to bring the content of the papers together and ensure a lively conversation with the audience. Each paper will be allocated a 30-minutes slot for both the presentation and discussion.

Questions that we will address include: What goes into a model and what does not? What happens when models do not work? How does power format what the model comes to look like? Whose values and knowledge count? And, more generally, how do we make sense of models?

Paper 1: Exploring and Reflecting on Imaginaries of In Silico Models and Digital Twins

Although the modelling of the human body is not novel, especially of the heart, recent technological progress, particularly propelled by in silico modelling techniques, has facilitated modellers' capacity to simulate and capture the interactions between different biological systems (Van Sint & Geries, 2019). Yet, it is not just the combination of physics-based modelling and AI-driven approaches that have helped the in silico medicine community to gain in attention, but also the hype around medical digital twins. In this paper, we explore the packaging of in silico models and digital twins by the European in silico community. The term 'packaging' in this instance can be best understood through the analogy of wrapping a gift, in which we make an effort to beautifully package a gift to enhance its appeal and capture the interest of the recipient, this performative element is particularly interesting to observe with the computational modelling of the human body as it plays with the attractiveness and imaginaries of the digital double (see Mørk et al., 2006; Ivanova & Simonsen, 2023).

By delving into the hype discourses, actual practices and the network of experts of the in silico community, through ethnographic fieldwork, document analysis and semi-structured interviews, we seek to grasp how computational modelling of the human body is talked about. This paper is guided by the following questions: how is in silico modelling packaged, who defines what matters and what gets modelled, and who participates in imagining and shaping the future of in silico models and digital twins?

Authors: Elisa Elhadj, Maiju Tanninen and Ine Van Hoyweghen, KU Leuven

Paper 2: When models fail to model - caring, tinkering and knowing

Digital models are becoming increasingly complex and now we try to model everything from a single building to the ecosystem of the earth. These models are used to create knowledge about complex phenomena but the work of reducing complexity requires not only computer power, but also a persistent tinkering and changed knowledge practices. The simplifications need to be done in a specific way to create legitimised knowledge and to form new standardised knowledge practices. The term data care arrangements (Jarke and Buchner, 2024) has been suggested to describe how different versions of mundane data work is enacted, challenged, and stabilised in organisational settings. The everyday tinkering with models and data is especially important when the model is questioned or under scrutiny. In this presentation, I will show data care arrangements when models used in the construction of buildings fail to correctly predict the building´s capacity to uphold its own weight or to save energy. Through the failures, the involved matters of cares (Puig de la Bellacasa, 2011) becomes visible as blame is appointed and some knowledge claims are made present while others are neglected. In the following discussions, we jointly explore what we can learn from the failures of models in different settings and if, and then how, models change what matters we care for.

Author: Maria Eidenskog, Linköping University

Paper 3:

Studying the makings of digital models and questions of code-ability

What goes into creating a digital model? The selection and quality of training data is generally emphasized, and anthropologists tend to broaden the analysis by considering relational, political, economic, and value-related factors that contribute to shaping the conception of a digital model (Seaver 2017; Suchman 2023). The imaginaries and envisioning of the problems to be solved, along with the human expertise to be assisted or replaced also warrant inquiry. But certain tacit professional skills pertaining to carrying out the tasks are often overlooked. This may stem from a perception that these skills are irrelevant or simply that they cannot be translated into code - they are not ""code-able"" (Amoore & Piotukh 2015). This shapes not only the technologies but transforms how societal problems are reconfigured as machine learning problems (Amoore 2023).

In this presentation, I introduce a newly launched project involving engineers, shipowners, and suppliers collaborating to improve energy efficiency and reducing carbon emissions in shipping through the development of mathematical models and digital twins. Conceiving of the ""user"" as everyone involved and ""the human factor"" as everything contributing to the process, I present two central questions that I'm currently grappling with: For one, which forms of expertise and often tacit sensory skills fall out of the mathematical models, either because they are not acknowledged or because they are not seen as within the realm of code-ability? And secondly, how can we study the makings of a digital model ethnographically?

Author: Perle Møhl, University of Southern Denmark"

Future Health economics (Round table discussion)

Chair: Daniel Normark & Jesper Meijling

Can we set a price on human life? While this is morally a highly controversial issue it is still something that, for better or worse, is conducted on a daily basis in practice – especially so in situations where life is precious, threatened or treated. In medicine and health care, this question is intertwined in everyday practices of treatment as well as in the planning and organization of hospital resources through assessments, prioritizations, allocations and valuations. "Primum non nocere" – ""Above all, do no harm"" – as a classical assessment is perhaps only described within the healthcare professions – rarely addressed in societal assessments of the cost and burden of the welfare system.

Recent development within health care systems, nationally and abroad, can be seen as adaptions towards a specific economization of medicine – namely the adjustment of the health care organization according to perspectives of health economics. Developed from the public choice school in the 1960-70's, as a new sub-discipline of economics, health economics has grown into a go-to shop of solutions for prioritizing and financing in health care and, in extension, for the issue of the value of life and health. This development has not been a smooth and obvious one: its transmissions from the specialized research environments of health economics have carried with them, from the very outset, frictions and conflicts when boundaries between different knowledge models, ethics and ontologies have been unsettled and redefined (cf Porter & Teisberg 2006). The connection to social and medical consequences is emerging (cf Grafström, Qvist & Sundström 2021).

As a consequence of the success of health economics, the logics of care are becoming subverted and replaced by the logics of economy – situated practices of treatment are adhered to forms for

generic assessments of fiscal accountability (cf. Mol 1998; 2002; 2008). Researchers and practitioners have raised deep concerns about the discrepancy especially between situated treatment and management of health care. Practices within care have been adjusted (calibrated) to be standardized, accounted for and valuated to fit the economic organization of welfare, and those treatments that defy optimization or profitability become anomalies that no longer fit a redefined healthcare system. From the conceptual perspective of medical and care practices/ontologies, this kind of redefining activities could be interpreted as a transgressive and heavily biased approach that needs to be scrutinized, challenged and critically re-assessed.

While acknowledging this, the purpose of this roundtable is to present multiple, heterogenous health economics as alternatives to the contemporary hegemony. We need to find positive alternative or suggested ways out of the anomalies of economization. Medicine and economy are both hugely important fields or modes of existence that exist side by side (Latour, 2013). They have to be treated in relation to each other – but heterogeneously, situated, and each within their different logics and requirements of adequacy. The problem is not that we value life but how we do it, and by what means these valuations are made. The heterogeneousness of the ambition is also why this project, by default, has to be interdisciplinary, taking into account both the variable geometry of medicine in its multitude of forms and formations as well as the variable geometries of social sciences and humanities.

With the roundtable we draw together experiences and perspectives from different scholars such as Jesper Meijling, Mirko Pasquini; Sofia Wagrell and Daniel Normark (a few more will hopefully be added) to discuss the intersection between economy and medicine and the frictions that the different ontologies create and how they rupture each other. Various consequences of health economic management have been investigated

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The Digital STS Hub: Shaping the Digital / Shaping Society

Hosted by: Charlotte Högberg (Lund University), Catharina Landström (Chalmers University of Technology), Francis Lee (Chalmers University of Technology), Alicja Ostrowska (Chalmers University of Technology)

How can Science and Technology Studies illuminate the intricate processes through which the digital and society are co-produced? This session convenes STS scholars to delve into the dynamic interplay of artificial intelligence, algorithms, and data in contemporary society. By examining the mutual shaping of digital technologies and society, we aim to understand how these technologies are transforming knowledge production, reconfiguring social order, and influencing cultural practices. This exploration not only enhances our understanding of digital transformations but also offers critical insights into the broader societal implications of these shifts.

Francis Lee (Chalmers University of Technology)

Algorithms of Kinship and Evolution: Assembling Antibiotic Resistance

Abstract for the session The Digital STS Hub: Shaping the Digital / Shaping Society

This paper investigates the role of algorithmic assemblages in shaping our understanding of kinship and evolution within the context of metagenomics. It emphasizes biology's growing reliance on digital infrastructures, illustrating how bioinformatics has transformed our comprehension of genetic changes and the history of life.

Empirically, the paper focuses on the algorithmic analysis of antibiotic resistance genes, examining how the environmental "resistome" is constructed. It delves into the use of digital infrastructures by researchers to model horizontal gene transfer, which propagates antibiotic resistance genes across microbial species. This rhizomatic ontology, characterized by a networked view of microbial evolution, contrasts sharply with the linear kinships depicted in traditional phylogenetic trees, emphasizing a supergenome where genetic material flows horizontally.

Through a detailed case study, the paper explores how algorithmic tools, databases, and computational techniques map antibiotic resistance genes, revealing the complex network of genetic exchanges in various environments. This investigation highlights the critical role of algorithmic assemblages in forming specific biological ontologies and relationalities, fundamentally altering our understanding and engagement with microbial life and antibiotic resistance.

By tracing these genetic and computational pathways, this chapter contributes to Science and Technology Studies (STS) discussions on the material-semiotic practices shaping scientific knowledge. It underscores the performative nature of algorithmic assemblages in contemporary biosciences, illustrating how they enact specific understandings of microbial life and resistance.

Catharina Landström (Chalmers University of Technology)

The epistemological politics of digitalized environmental science

In the last few decades environmental science has changed radically. From relying on field work to produce observations of processes in nature, researchers now deploy digital technologies for data collection as well as analysis. Outlining examples from research on water, conducted with computer simulation models, big data and digital twins I reflect on the philosophical implications of this shift.

While it is common to analyse these research technologies separately, looking for the links between them is illuminating. Computer simulation modelling has been regularly used in water science and water management since the 1970s. Today it is, in some places, the main approach for both knowledge creation and risk management. Modelling requires big data. Scientific water models are often described as data hungry, without sufficiently comprehensive data the models cannot run, or generate high quality outputs. Advances in digital sensor technology have made it possible to collect unprecedented amounts of data. The development of digital technology underpins a new technoscientific imaginary of digital environmental twins that would enable scientists to undertake experiments on digital versions of real-life environments. However, digital twin is a technology originating in manufacturing and creating a digital copy of something that is exhaustively known to its maker is very different from simulating complex, only partially known, processes in nature.

Drawing out the philosophical implications of relying on digital tools to generate new knowledge about environmental water makes it possible to discern the features of the epistemological politics of digitalized environmental science.

Charlotte Högberg (Lund University)

“It is still assumptions you need to make”: Ground truth assemblages for medical AI

This study explores assemblages of ‘ground truths’ for the making of medical Artificial Intelligence (AI). The concept of ground truth is used by computer scientists to describe the perceived true values of a modeled phenomenon (e.g., Kang, 2023). The datasets with these ‘true’ values do not pre-exist but have to be constructed, which shapes algorithms by defining both their input labels and output targets (Jaton, 2017). By drawing from interviews and observations, I examine how researchers involved in developing medical AI relate to their ground truths and their epistemic implications. As these datasets are assembled from different sources, and produced, augmented and synthesized, this study shows the role of human expertise, the (in)stability of medical classifications (Bowker and Star, 1999), and sometimes, the data frictions (Bates, 2018). Moreover, the image of AI classifications as stable neutral entities is shattered by different valuations of data sources and perceived brittleness of documentation and labels. As the machine learners are often outsiders to clinical practice, they work pragmatically from a place of uncertainty to model prediction and detection of disease. The limits and absences of ground truths also make visible perceived promises and worries pertaining to medical AI. These results can inform how practice fits together with ambitious calls for medical AI to be fair, trustworthy or transparent. To distinguish the possibilities of making such matters doable, we need more knowledge on the assumptions upon which medical AI is built.

Alicja Ostrowska (Chalmers University of Technology)

AI as Attachments and Detachments - Case Study at NASA

Witnessing the intensification of AI development over the last years, there is yet no drop in its effects and new investments. This powerful technological development is urging us, STS-scholars, to undo the ”thingness” of AI (Suchman, 2023). Countering the discourse about AI as a stable object, I suggest to approach AI by asking: where does AI begin and where does it end?

To make AI controversial, we need to take into account the organizations, objects, humans and their decisions, that constitute the technological tool, without loosing sight of its further effects. I propose that bringing attention to attachments and detachments can render the relations visible by delineating their transformations. Asking questions about attachment and detachment (of what? by whom? for whom?) can in turn help to explore who benefits from the development of AI.

In this panel, I draw on ethnography with scientists and programmers at NASA designing AI to search for biochemistry - signs of life and habitability - in outer space. From being framed by researchers as a technological tool facilitating a more efficient scientific analysis in NASA missions, I re-frame it and tell the story about a construct made by humans and their choices to select what counts and what does not. The story of NASA researchers designing AI is full of

tensions. I will exemplify how it is torn between detachment of people, data and models from the context of data production and on the other hand, attachment to people, places and ”real” data.

Johanna Sefyrin (Linköping University)

Fictions and Frictions in Sustainable AI – A Case Study of a Datacenter Hosting AI in a Swedish Northern Municipality

Digitalization as well as sustainability can be understood as two ‘sites of hyper-projectivity,’ which can be made to mean a variety of things in different contexts. This research-in-progress paper aims to explore frictions between different imaginaries of digitalization and sustainability. The empirical context is ongoing plans for a ‘green’ industrial datacenter establish-ment in a municipality in the northern Sweden, planned to host AI. Central actors in this industrial ‘symbiosis’ are a datacenter company with a sustainability profile, a greenhouse company reusing heat from industries, a re-gional electricity company, the municipality, municipal inhabitants, plants, birds and bats, and a forest. The analysis indicate that the different organizational and human actors all view themselves as aiming for sustainable development, but based on quite different views of what this might mean. Hence the frictions that were found concerned different imaginaries of sustainability and of a livable future for the municipality and its various human, non-human, and more-than-human inhabitants. This is discussed in terms of how AI is part of conflicting stories of prosperity and sustainability, and tensions between different imaginaries of a sustainable future in which dominant eco-modernist ideas of progress, technological solutionism and growth are confronted with other, alternative imaginaries of sustainability.

Darcy Parks (Linköping University)

The _____ approach: getting app studies back on track

The field of app studies has traditionally focused on apps where there is interaction between users, such as social media and dating, where there are not only ethical concerns for researchers but also methodological challenges due algorithmic governance. But there are many more mundane apps that are nevertheless important examples of how digital platforms reconfigure social and economic life in areas such as transportation, shopping, banking, and health and well-being. For many of these sectors, there is such a diversity of apps and such a face pace of change that traditional social science methods—interviews with users or developers—are unfeasible.

In the field of app studies, the walkthrough method is a prominent approach to studying apps, building on the technical walkthrough as way of generating empirical material. However, the walkthrough method is flawed because of a mismatch between the methods it proposes, the aims it sets out to achieve, and the theoretical concepts used to justify the analysis.

The _____ approach is a proposal to get the walkthrough back on track. It builds on the technical walkthrough as a way of generating empirical material but combines it with an STS-inspired theoretical perspective that focuses on the socio-material entities and relations enacted by apps. The _____ approach avoids assumptions about the actions of users, common with the concept of affordances, while also avoiding assumptions about the intentions of designers. The only problem with the _____ approach is its name. What should it be called?

Ellinor Blom Lussi (Lund University)

13 billion reasons why: the use of digital welfare surveillance technology in a high trust state

The Swedish welfare state is said to be undergoing a significant transformation, a transformation that involves increasing welfare fraud. In response to these changes, the Swedish state has introduced a new public agency, Utbetalningsmyndigheten (UBM). The authority will make use of algorithms and automation to detect and prevent inaccurate welfare payments, that is, an authority for digital welfare surveillance. Welfare surveillance is not a novel phenomenon - the tension between care and control in the welfare sphere has long been known. However, it has been argued that the use of new technologies, such as artificial intelligence (AI), in digital welfare surveillance risks magnifying historical and current biases and further marginalise already vulnerable citizens.

The motivation for establishing UBM is said to be inaccurate welfare payments that amounts to SEK 13 billion. That is, the justification for introducing a digital welfare surveillance scheme is seemingly financial. However, when following the ongoing discussion of welfare fraud and potential counter measures, the number seems to fluctuate, and the origin remains quite unclear. This indicating that SEK 13 billion is rather a symbol, than an actual figure. In this study, the aim is to further understand the justification behind the establishment of UBM. By employing genealogy as a method, I will answer the research question how is the amount corresponding to the incorrect welfare payments in Sweden used in discussions about welfare crime and digital welfare surveillance?

Thomas Zenkl (University of Graz)

The Dialectical Taming of Sociodigital Futures in Public Employment Services

Applications of artificial intelligence are anticipated to impact the delivery of public employment services (PES). Sparked by discourses between utopian notions of automated job allocation and rather dystopian side effects of discrimination and loss of agency (Allhutter et al., 2020; Busemeyer, 2022), this study explores perceptions and anticipated effects of algorithmic technologies from the perspective of frontline-workers as “analog interfaces of the digital welfare state” (Kaun & Liminga, 2023).

Based on 23 interviews with employees of the Austrian PES, I find that concerns associated with the use of algorithms and AI (loss of jobs, biases, formalisation) are being “tamed” within workers’ aspirations of futures (Appadurai 2013) by emphasizing the importance of the “human”, while simultaneously affirming technological developments. Situated within the entanglement of digital transformations of the welfare state and the resulting shifts in governance regimes (from “street-level” to “system-level” bureaucracies, Lipsky 1981; Bovens & Zouridis, 2002), such aspirations are rooted within problematisations of present working conditions (not enough time for clients and resources) and role reconfigurations (administration of systems instead of supporting clients) which they envision to repair.

By synthesising futures that promote the values of a truly “human” counselling situation through “machinic” means, such taming is dialectical: As prevailing logics of datafication are sought to be overcome by resorting to imaginations prioritizing workers’ ""humanity"" and highlighting the necessity of ""customer care"" over ""data/system care"", these sociotechnical futures challenge

a perceived status quo while intrinsically relying on the very means of computation that are considered responsible for it.
