



## Book of Abstracts

### P02 - Policies and Governance

*Bianca Prietl (University of Basel)*

#### **Knowing the world's health status: Changing artifacts and knowledge practices in global health governance**

*Julian Eckl (University of St.Gallen)*

The paper argues for the analysis of public data dashboards as a specific digital artifact, although many of the issues surrounding dashboards overlap with discussions on the governance through goals, indicators, and quantification on the one hand, and discussions on visual politics on the other. Studying public data dashboards in their own right allows researchers to account for their specific features and materiality as well as for the knowledge practices that have emerged around them. Moreover, it makes it possible to unearth the latent conflicts that come with these readily accessible public tools. The paper illustrates potential findings of such an analysis with initial insights from a case study.

#### **When epidemiology and proportionality meet: judicial discourse in the aftermath of a public health emergency**

*Mélanie Levy (Université de Neuchâtel)*

The Swiss Federal Supreme Court's case law on the legality of measures adopted by public authorities to contain the Covid-19 pandemic is currently unfolding. In the aftermath of this public health emergency, the Court finds itself in the unique position of reviewing measures adopted in a context of scientific uncertainty and rapidly evolving scientific knowledge. Based on the empirical evidence of the Swiss Federal Supreme Court's case law, I analyze how proportionality has crystallized as the guiding principle at the intersection of science and law, allowing the judiciary to evaluate public health measures. Through its creation of the terminology of "acceptable risk", the Court has found grounds for epidemiology and proportionality to meet and connect. My content analysis of the Court's case law depicts the unique character of proportionality, integrating both fact and law, the is and the ought. How does this encounter play out in judicial discourse? Traditionally, the culture of proportionality is rationalism, rooted in the technical and calculative, as it purports to demystify the human experience. Based on the empirical evidence of the Court's case law, I investigate if and how this culture has shifted in the state of exception of a public health emergency. Beyond this substantive issue, I pursue the institutional question of how the Court deals with the role and the legitimacy of expertise in judicial decision-making since defining and quantifying "acceptable risk" involves expert knowledge in law and epidemiology. Finally, I formulate conclusions about the epistemic origins of proportionality in judicial discourse following the Covid-19 pandemic.

## **Digitalization as arena. Alliances, opportunities, and digital strategies in the university ecology**

*Philippe Saner (University of Lucerne)*

*Luca Tratschin (University of Zürich)*

This paper investigates the recent diffusion and adoption of digital strategies in universities. Due to their openness and ambiguity, digital strategies need to be interpreted and translated into local organizational contexts. Universities serve as an empirical context as they are embedded in multiple environments that are simultaneously characterized by multiple forms of competition and cooperation. This specific institutional arrangement involves continuous mutual observation of other universities' strategies and actions. Combining an ecological approach with insights from STS, we investigate the manifold relation between universities and other actors that have emerged in the context of the digital transformation, and around digital strategies in particular.

Digitalization represents an interstitial arena between social spaces where new, heterogeneous networks of universities, tech companies, state agencies, private corporations, interest groups, think tanks, and other stakeholders have emerged. These coalitions are formed and maintained by strategic actors, organizational devices such as strategy documents, action plans, and financial investments, as well as common infrastructure such as research centers and platforms. These heterogeneous alliances enable spaces of opportunities (Eyal 2013; Saner 2022) that can be explored and exploited. We ground our analysis on an in-depth case study of public universities in Switzerland.

## **Economic Policy Advice and the Press: The Case of Late 19th-Century Britain**

*Dana Brahm (University of St. Gallen)*

The 2007 financial crisis brought forward the powerful position of economists as experts, and the role of public opinion and media in the debates surrounding economic policy advice. The rise and organization of economic expertise has been largely studied from the 1900s on, but its perception and legitimacy has been rationalized and problematized by the public, via popular media, before the modern institutionalization of technocratic financial and monetary advice (Flandreau, 2003; Fourcade, 2009). In this presentation, I explore the history of the role of newspapers in the dissemination, legitimization, and organization of economic policy advice in the late Victorian British era (1870-1900). This period is particularly interesting for three main reasons: (1) the rise of the modern state and its growing reliance on scientific knowledge, (2) the academic institutionalization of the economic discipline, (3) and the development of new institutions designed to collect, curate, and assess information, such as mass press. Indeed, by the late 19th century, British newspapers went from being a source of information to the political and social elite to constituting the main reading of the wider public. I use digital archives of regional and local Victorian British newspapers (e.g. *The Economist*, *The Times*, *The Telegraph*, *The Scotsman*) to qualitatively study the discourses related to economic policy advice and figures of economic expertise. Based on primary material and literature on scientific knowledge production and media studies (Jasanoff, 1990; Daston and Galison, 2007; Conboy, 2002), I argue that, in this context, Victorian newspapers had a dual role: they reported but also created political discourses on expert economic advice. As such, I show that they played a key role in the articulation of the growing force of public opinion in relation to economic expertise at a time when the practice of economic policy advice started to become institutionalized.

## **P03 - Knowing and Doing**

*Maria Eriksson*

## **Limits to the Circulation of Epistemic Critique in the Recent Reanalyses of the EHT Images of the M87\* Black Hole**

*Paula Muhr (Karlsruher Institut für Technologie (KIT))*

In April 2019, the Event Horizon Telescope (EHT) Collaboration famously revealed the first empirical images of a black hole, a cosmic object thus far regarded 'unseeable'. These revolutionary images were algorithmically reconstructed from non-visual data obtained by an array of radio telescopes. To obtain valid imaging results, the EHT team deployed multiple methodologies during the image reconstruction process, which all delivered sufficiently consistent results. Besides revealing their final images, the team also made their processed data and algorithms accessible to the public.

In 2022, five studies authored by scientists who were not members of the EHT team were published. Each study focused on reanalysing the publicly available EHT data, testing if they would obtain sufficiently similar images of the black hole. The stated purpose of these epistemic critiques was to verify the epistemic truth claims of the EHT's final images of the black hole. Some replicated the procedure developed by the EHT team; others developed alternative algorithmic techniques for reconstructing images from the EHT non-visual data. Four of the five critical reanalyses converged on their findings by obtaining images that were sufficiently similar to the initial EHT images published in 2019. One study diverged in their results and was subsequently criticised by the EHT team for its methodology.

As I will show, the circulation of this type of epistemic critique in the community of astrophysicists focused on imaging black holes is far more than a contrived academic exercise. Instead, it is of critical importance for the epistemological consolidation of the emerging research field of black hole imaging and, with its fine-grained methodological insights, has the potential to inform future EHT analyses and results. However, I will also point out that such discipline-specific epistemic critique remains opaque to non-specialists, making its circulation constrained mainly to a circle of experts.

### **Selecting and reproducing farm animals in times of ecological disasters: modes of valuation of cattle livestock in Belgium and The Netherlands**

*François Thoreau (University of Liège)*

*Jenske Bal (University of Liège)*

*Simon Vanderstraeten (University of Liège)*

The field of livestock selection and reproduction has been going far into the economization of life and the convertibility of productivity factors into actual currencies. However, farming practices are undergoing a lot of stresses; economic stress (productivity pressures, scale-up or die dynamics, debts...), climatic stress (greenhouse gases, methane and nitrogen emissions, ...) as well as social stress with cultured meat arising together with strong moral and ethical claims from vegetarian and vegan consumers. Farming institutions are trying to cope with these challenges and, in so doing, advocate other sets of values that would allegedly « remedy » what would be best described as a state of enduring disaster. Part of these responses partake with the scientific and rational endeavor livestock farming inherits from, especially with the prolongation of genetics into genomics. While genetics afforded impressive increases in productivity, it has also led to exhaust living organisms, biodiversity in herds and environments. In this contribution, focusing on the case of cattle livestock selection and reproduction through genomics practices, we will unfold and contrast two different modes of valuation that are more qualitative than quantitative. We will focus on cases of Belgium and The Netherlands, to show how different values such as « the health » of herd animals or « the environment » are cast, defined, and enacted in practices of selection and reproduction. This will hint us into the variety of « modes of valuation » as both performative and ontological operations, which end up materially shaping bovine bodies and rendering certain farming practices possible or impossible.

### **Collaboration and Cooperation in Opposing Patents: The case of Medicines Patent Pool**

*Siddarth Jain (Jawaharlal Nehru University)*

This study examines the practise and mindset of patent opposition among non-state actors in India, including journalists, social activists, and civil society organisations. Pharmaceutical Patents are often a subject of controversy for those working with the public health groups. Analysis of patents connected to

the Medicines Patent Pool (MPP) is part of this study. Alongside accessing databases related to patent opposition, a semi-structured interview with study participants will be included. The Indian Patents Act includes procedural mechanism for opposing patents at two stages: the pre-grant stage and the post-grant stage, mechanism like these can filter out patents that do not fulfil the patentability criteria and at the same time it becomes a question of accessibility and affordability. The pool has been functioning extensively in making medicines available to the public health groups that are continuously working with people living with HIV/AIDS, Hepatitis C and Tuberculosis. Since the pool is a joint effort established on an humanitarian ground by the United Nations, it continuously strives to make sure that the generic manufacturers get the access to patents owned by the pharmaceutical originator companies, through a voluntary licensing agreement. The results show that in these groups', there is cooperation and co-production and are the most important elements in shaping the agenda around a rights-based strategy, especially when dealing with Intellectual Property Rights which are transnational. It is observable that the civil society organisation form an entity that share similar belief and interest, Rights-oriented language, captivating meta-narratives and information, events, and news outlet/civil society organisation/legal aids cooperating to fulfil their ultimate aim are characteristic of collaborations and co-production with multiple actors. This paper can also be suggestive in the areas of policy making and especially enhancing the cooperation between patent enforcers and those opposing on the grounds of public health.

## **P20.1 - The Living Rooms of Computation: Practices, Alignments, Frictions (Session 1/3)**

*Florian Jatton (University of Lausanne)*

*Anna Jobin (Université de Fribourg)*

## **Putting Computational Design to Work? Infrastructuring Processes in Digital Architecture**

*Yana Boeva (University of Stuttgart)*

Algorithms and their sociotechnical environments have entered many aspects of life, including the production of architecture and the built environment. A corresponding approach is computational design, an umbrella term for combining various computational methods, software, and technologies, typically based on data and algorithms. As relational and hybrid arrangements, the algorithmic infrastructures of computational design are subjected to a continuous process of infrastructuring, that is, care and cure coming from social, political, and technological actions. However, a central problem of infrastructuring processes is their transparency. Coding and algorithms are frequently embedded in (proprietary) design software in the form of scripts, plugins, and visual programming with bounded manipulation options for many professionals. Recent AI-based generative design tools further blackbox coding and thus the infrastructuring of such algorithmic systems.

Following critical research in algorithmic studies, software studies, and infrastructure studies, this paper argues that the ongoing infrastructuring of computational design as an algorithmic system reconfigures practices and decision-making with increasing inscrutability and reorganizes professional design work. Computational enacted through computational design calls up such tensions in moments of heterogeneous infrastructuring, particularly through the interactions with algorithmic systems and the wider sociotechnical assemblages. The paper, therefore, foregrounds how decisions are made in these hybrid assemblages of algorithms, data, software, technology, standards, and across organizations, work practices, and human actors. Their sovereign application requires not only technical skills but an understanding of how a technology-related reconfiguration involves sociocultural, regulatory, and economic aspects. The paper draws on an empirical study of computational design processes for architecture and construction.

## **From the Graphical Processing Unit (GPU) to computing power: exploring the situated practices of liquid nitrogen overclocking**

*Cyrus Khalatbari (EPFL, HEAD – Genève (HES-SO))*

Drawing from a fieldwork conducted at COMPUTEX Taipei, one of the largest computer expo in the world, this contribution proposes to zoom-in at the level of Graphical Processing Units (GPU) manufacturers and their interactions with computer hardware hobbyists. More specifically, the paper focuses here on hobbyists competing during the event over liquid nitrogen overclocking: a computer hacking practice consisting of building custom GPU cooling rigs in order to increase computing power and benchmark graphically demanding games and simulations. From this empirical analysis, the contribution aims here to situate the crucial role of these hardware enthusiasts in collaborating with GPU manufacturers and corporations, “testing the limits” of such devices before these are produced and commercialised worldwide. This contribution is divided in three parts, shedding light through these hobbyists on the design, optimisation and commercialisation process of our GPU hardware chips. The first section inquires the community’s underlying discourses (or lack of discourses) about computing power and the digital. The section maps their motivations, objectives, goals and desires behind the development of such situated practices. Second, we further dive into the analysis of their strategies and techniques for computing power optimization. In other words, we shed light, here, on their modes of knowledge-building - from data collect, inscription to process optimization - for addressing the possibilities and drawbacks of liquid nitrogen GPU cooling. Finally, we expand on their partnerships with manufacturers and corporations through the process of feedback implementation. Using concrete examples, we show how competition and exploration practices of computer hobbyists impact the design of our GPU chips.

## **Infrastructuring the bureaucracy: putting AI to work in public administration**

*Semion Sidorenko (École Polytechnique Fédérale de Lausanne (EPFL))*

Drawing from a year-long participant-observer ethnographic study conducted within a public administration, this article delves into the challenges experienced throughout the development and deployment of a chatbot designed to address citizens’ queries. The research examines the project’s evolution, from its ideation as an intelligent chatbot entity by innovation leaders to its execution in a vastly reduced scope by an intrapreneurial team.

The article posits that the obstacles faced in utilizing artificial intelligence (AI) within public administration do not primarily stem from complex machine learning or programming issues. Instead, we demonstrate that operationalizing AI in public administration requires infrastructural work (Star et Ruhleder, 1996), with characteristics that are specific to the organizational context public administration and is often invisibilized by the framing of AI projects as purely technical endeavors and radical innovation initiatives. In addition to the activities of collecting, preparing, and making sense of data (Denis, 2018 ; Dagiral et Peerbaye, 2012), we describe three kinds of infrastructural work that emerge in the implementation of AI in public administration : aligning (e.g. making AI project compatible with public administration regulations), resourcing (e.g. procuring hardware and software for AI development), and integrating (e.g. operationalizing a prototype with legacy systems working across organizational boundaries). We conclude that the successful implementation of AI in public administration is hindered by the current framing of AI as disruptive and technical innovation, and would benefit for a more holistic approach taking into account the various kinds of invisible work required to apply IA.

## **Breaking the Paywall: unveiling the role of Open Journal System as a key infrastructural piece for Open Science**

*Matias F. Milia (University of Notre Dame)*

*Luis Felipe R. Murillo (University of Notre Dame)*

In the last few years, scientific research has undergone a rapid and steady adoption of Open Science (OS) standards in different stages of the research process. Most notably, the promotion and implementation of Open Access (OA) policies by funders, research institutions, and publishers have been at the forefront of this transition. On the assumption that the access to knowledge is unequally distributed, OA tries to dismantle the so-called “paywall”. Scientific journals have adopted different models to make this transition possible, stressing in many cases the importance of Article Processing Charges (APCs). Findings on the stratification effects of APCs suggest the largest effects in low GDP countries, where English-language publications already tend to be an essential vehicle for international recognition. These changes in the publishing models deepen the existing internationalization patterns.

From the early 2000s, the Free and Open Source software community has developed an essential piece of scientific infrastructure to facilitate the development of open-access, peer-reviewed publishing systems: the Open Journal System (OJS). OJS functions as a crucial scientific infrastructure to support the so-called ‘diamond model’ of scientific publishing. Of the 5.8 million published items using OJS, 79.9% were in the Global South, and 84.2% followed the OA diamond model. Scientific infrastructure research emphasizes the role of interconnectedness in technical systems as a means to bring together knowledge producers towards a common project. OJS, then, arises as a fundamental technical piece on the Open Science ecosystem enhancing the diversity of the scholarly publication landscape. Yet, little is known about the organizations and communities supporting its development, design and implementation practices. This paper offers an ethnography of infrastructure resorting to repository data and information on the installations of OJS over the world to analyze the implications of its development practices for “infrastructuring” the work of the Open Science community.

## **P11 - Interspecies Communication: Challenging Divided Perspectives**

*Mylène Tanferri (Associate researcher at STSLab, University of Lausanne)*

*Konatsu Ono (University of Zürich)*

*Marcelo R. Sánchez-Villagra (Universität Zürich)*

### **Consolidating conflicting definitions of “communication” between disciplines**

*Konatsu Ono (University of Zürich)*

Language has always been confined to humanity. It still is, yet slowly fields of animal communication and more recently plant communication have entered the discussion. Already “Language” and “Communication” are two terms that function to differentiate humans from other-than-humans in the act of communicating. Linguists argue that one concept embedded within the definition of language that lacks in the definition of communication is that participants act with intention. Comparative psychologists have since strived to find “intentionality” in non-human animals to ensure their communication is not just a mechanistic reaction to their environment i.e., instinct. “Instinct” has been historically used to categorize all animal behavior, and this belief is still held true for plant behavior. Plant biologists often define communication as the exchange of information over a common signaling system that benefits both sender and receiver. Critically, this definition does not address if what is occurring in plants is just a diffusion process or an intentional signal.

Scholars from human sciences point out that natural scientists are still influenced by the great chain of being, and thus strive for definitions that reflect human language. They instead argue that communication is a phenomenon that naturally occurs between participants, and this phenomenon is what should be studied. By avoiding concrete parameters to define communication, they leave open all possibilities of communication to be observed.

One way to consolidate these opinions is by finding a definition that can satisfy all. Each humanities researcher defines communication necessarily when recognizing a phenomenon as communication. Trying to identify the mutual characteristics between these definitions could reveal common parameters.

On the other hand, natural sciences do not need to prove the existence of intentionality but instead accept its existence if the most parsimonious explanation of a behavior is to assume intentionality.

### **Boquila trifoliolata mimics neighboring plants, an intriguing ability**

*Felipe Yamashita (Universität Bonn)*

*František Baluška (Universität Bonn)*

Humans and other closely related animals are typically credited with possessing the main cognitive functions, including speech, memory, and learning ability. Any association of these abilities to plants is commonly regarded as anthropomorphism, which means attributing human qualities to non-human entities. Plants, lacking neurons or a brain, must employ alternative means for sensory perception and organ coordination compared to animals. In fact, plants have specialized sensory systems that enable them to adapt and thrive in their surroundings, such as the emission of chemical compounds or electrical signals by their shoots and roots acting as a way of talking to neighboring plants, herbivores, and predators. Furthermore, plants may also be able to recognize their surroundings. Vision is highly variable across kingdoms, the most known and understood form is animal and human vision based on eyes. Although numerous organisms, such as Chlamydomonas, dinoflagellates, cyanobacteria, and cuttlefish, have so-called eyespot, ocelloid, or skin vision. Plants may not be so far behind with respect to vision. Our study indicates that *Boquila trifoliolata*, a woody vine found in the temperate rainforests of southern Chile, possesses an extraordinary ability to modify the shape of its leaves according to the surrounding host plants, potentially demonstrating a form of vision via plant-specific ocelli.

### **Behavior and communication in fish**

*Carolyn Sommer-Trembo (Paläontologisches Institut, University of Zürich)*

*Marcelo R. Sánchez-Villagra (Paläontologisches Institut, University of Zürich)*

Communication is an essential aspect of animal behavior that allows animals to interact and respond to their environment. Through communication, animals can convey information about their identity, location, mating status, social rank, and potential threats. Fish are the most diverse and species-rich group of vertebrates and, thus, show a wide variety of communication signals including visual, chemical, and acoustic cues. Depending on the species, fish show highly complex courtship and mating behaviors, exhibit elaborate care for their offspring, form social bonds, recognize familiar individuals and betray their competitors by intended misleading signaling. However, how advanced is our understanding of fish behavior and what are the state-of-the-art tools that enable us to decipher the “language” of fish? Naturalistic observations are fundamental to advance our understanding of interspecies communication in fishes. Experimental approaches are also contributing to this endeavor. In the context of our global biodiversity crisis and the critical status of our marine and freshwater eco-systems, the relevance of increasing our knowledge about the behavior of fish reaches beyond basic research. Likewise, this knowledge concerns any attempt to understand the evolutionary history and deep homology of interspecies communication across vertebrate animals.

### **Shared origins of acoustic communication in land vertebrates**

*Gabriel Jorgewich Cohen (University of Zurich)*

*Marcelo R. Sánchez-Villagra*

Acoustic communication plays a fundamental role in parental care, mate attraction and other various behaviours in many vertebrate animals. Some groups are highly vocal, such as frogs, birds and mammals. Previous large-scale analyses have ignored reports of vocalizations derived from naturalistic observations of animals such as turtles and other animals presumed mute. Evidence for 53 species of four major vertebrate clades in the form of recordings and contextual behavioural information collected through underwater sound recordings and videos and a broad literature-based dataset demonstrate

widespread acoustic abilities in land vertebrates, a feature present in their last common ancestor over 400 million years ago. Our study highlights the importance of naturalistic history studies of animals. Field biology, increasingly ignored in large analytical studies, can benefit from collaborations with bearers of local knowledge – this synthesis can overcome long held assumptions and provide fundamental new insights on evolution.

### **The theft of rationality: Empiricism in the New World and the European Encounter**

*Marcelo R. Sánchez-Villagra (Universität Zürich)*

Spanish conquistadores attempted to find out if indigenous Americans were humans by checking if they had a soul. Locals did so by letting dead Spaniard bodies in water and tested if they putrefied. This anecdote cited repeatedly by Lévi-Strauss and Viveiros de Castro among anthropologists concerned with the New World, exemplify the extent to which chronicles and ethnographic work contradict the widespread notion that indigenous Americans are like children in their fantastic world-views and irrational cosmovisions. European Enlightenment and the civilizatory teachings of the latter would liberate the rest of the world, including America, of myths and other forms of irrational thinking. In fact, recent scholarship presents evidence of the influence of Native Americans in European thought of the XVII century following the encounter of worlds and the voyages of indigenous people to Europe. Colonial relations have resulted in disregard for the scientific contributions of indigenous people (e.g. Johannes Karwafodi, Ali Wallace). Local knowledge tends to be more empirical than speculation of universals leading to metaphysics. Comparative studies of myths reveal their references to the natural world based on empirical observations. There is a long history of appropriation of ideas in the West, as in Goody's (2006) 'The theft of history' (Cambridge). The communicatory capacities of living organisms are subject of many new insights. A return to an appreciation of natural history observations in Biology is likely to bring a revalorization of the value of direct observation and experience reported for Amazonian people in ethnographic work – including their knowledge of animal and plant communication.

### **P14 - Walking Methodologies: Embodied Research in Emergent Anthropocene Landscapes**

*Nick Shepherd (Aarhus University and the University of Pretoria)*

*Christian Ernten (Maastricht University)*

#### **Foot Notes. Experimenting with walking-writing seminars**

*Nataša Rogelja Caf (ZRC SAZU)*

*Špela Ledinek Lozej (ZRC SAZU)*

*Martina Bofulin (ZRC SAZU)*

On the basis of a series walking-writing seminars carried out in the research programme Heritage on the Margins and the research project Route Biographies (both at ZRC SAZU), we will reflect on the use of walking and writing as two interrelated research methods. In the paper we will present different thematic pathways of our seminars (physical space as personal biography, walking with the river, the interplay of borders and routes, landscape in writers' works ...) that have served us as sites of discussion, raising questions about the relationship between walking and participant observation, between research essay, field notes and field-work diary, between scholarly text and essay, also between walking and writing. Furthermore, we consider the skills and knowledge required to perform various 'walking' and 'writing' methods, we think about the circumstances under which they are feasible and also which topics lend themselves to such methodology. We are interested in the kinds of shared knowledge we participate in when walking and writing and finally we consider walking-writing seminars as ethnographic events where we try to think about methods beyond procedures, reflecting also on the



possibility of research meditation as a specific kind of epistemology. As such, our walking-writing seminars embrace uncertainty, admit to unknowability, and are open to the unexpected.

### **Walking Together: Methodological Perspectives on a Paradigmatic Social Phenomenon in the Racialized Space of Post-Apartheid South Africa**

*Anna Bloom-Christen (University of California, Los Angeles)*

Walking together is a seemingly unassuming and common way to socialize in public space. We tend to take it for granted. At the same time, its particular manner of performance embodies context-specific norms of interaction. This tension between the assumed universality of this social practice and its local character becomes especially apparent in a place permeated by racial segregation.

This talk reflects upon norms of walking together in the highly racialized public space of post-apartheid South Africa. Dwelling on extensive fieldwork with members of the first generation born into post-apartheid South Africa – also known as the “‘born free’ generation” – I discuss how specific styles of group walking both embody and respond to the legacy of racial suppression and division, offering an account of its function as a shared act of resistance against segregated public space.

On a methodological level, I call into question the epistemological benefits of walking together as a research tool. The talk uses the lens of an everyday practice – walking – that encompasses both participation and observation to interrogate the status of testimonial evidence as foundational to ethnography.

Both lines of inquiry – the ethnographic interpretation of pedestrian encounters in South Africa and the methodological reflection on walking together as a research tool – will be discussed as a matter of sensory, bodily experience. I will argue that if going for a walk with someone is to count as a shared, communicative action with the epistemic benefits advertised by participant observation (as numerous recent publications suggest), then this shared experience has to work in the service of acknowledging the \*difference\* in experiencing racialized public space as well.

### **"RECCE 8952" a videowalk in the urban periphery of Zurich**

*Lukas Sander (ZHdK Zürcher Hochschule der Künste)*

Here I am sending you an artistic project in the format of a videowalk (known from the artist Janet Cardiff) that me and my team produced in 2020. It was shown at the Gessnerallee in 2020 and 2021 and took place on the outskirts of Zurich / Schlieren.

—> <https://www.lukassander.com/index.php/installationen/recce-8952/>

(english subtitles available)

The audience of this performative project walks with a tablet and headphones and the film leads the way through the urban periphery of the city. The images show the route and a voiceover of a location scout tells the story of a movie that is possibly to be produced in this area in the near future.

In sight of possible motifs and scenes the project deals with spatial theory regarding questions of the peripheral urban space, scenic potentials of the area for a fictional post-apocalyptic scenario of an emptied world that correlated with the pandemic situation around the time of its production a lot.

Thematically the project connects urban questions happening besides the city centres, the growing Swiss peripheries between the connecting metropolitan areas and inherent fictions deriving from the specific and rather anonymous atmosphere in these areas that can be witnessed first hand along the way. The semi-fictional layer complementing reality accompanys the audience in a walking practice that lies between the real walk and the film diverting from the surroundings in small details connecting the two spheres of fiction and reality. A cinematic and affective sound design amplifies existing atmospheres and furthermore blurs the lines of the documentary and fictional approach of the project.

I am sending this work to discuss it in the context of urban anthropocenic landscapes as I am producing a follow-up project in Zurich / Manegg that sets out to deepen the urban, natural and anthropocentric discourse even more.

### **Walking tours in International Peacekeeping Training Centers**

*Silvia Peirolo (School of International Studies, University of Trento)*

Building on the spatial turn in peace and conflict studies, I analyze two international peacekeeping training centers: the Center of Excellence for Stability Police Units (CoESPU) in Italy and the Kofi Annan International Peacekeeping Training Center (KA IPTC) in Ghana. Peacekeeping training centers are understood not only as geographical locations, but as social, material and symbolic arenas where the construction of what constitutes peace and security is continually re-made. Drawing on maps, interviews, and participant observation through touring practices, the paper aims to show how touring practices open the way for understanding peacekeeping training centers' space as constituted socially, politically and discursively. While undertaking walking tours, I collected data on the visual, aesthetic, and physical aspects of everyday life inscribed in the two international peacekeeping training centers. Through touring practices, I argue that the centers are presented as epistemic (regional) communities with their identity, motivations, ability to influence and organizational arena. Through tours, the peacekeeping center is rendered visible, open, and accessible while otherwise it is kept ordinarily secret and invisible as a closed and exclusionary institution. However, their visibility is generally carefully limited as visitors are disciplined into a regulated crowd to observe a certain spectacle. Hence, tours in peacekeeping training centers present a certain narrative crafted in spatial, material and visual elements, that can be highlighted, framed, excluded or articulated in different ways, in order to promote or prevent certain readings. Hence, tours in peacekeeping training centers create chains of meanings and experiences about what peacekeeping is and how to build peace and security in conflict-affected areas.

### **P21 - In Search of the Ecological Class: A Collective Exploration**

*Paula Bialski (University of St. Gallen)*

*Julien McHardy (University of St. Gallen)*

### **The sensitiveness of ecological class, in search of a new atmosphere for ecology**

*Claudio Coletta (University of Bologna)*

The paper focuses on the issue of affectivity: how to build an aesthetics, and then a poetic and epic for the new ecologic class? How to create an atmosphere for ecology? Latour and Schultz highlight the lack of an aesthetics able to nurture any political passions of the new class different beyond fear and fatalism, which are emblematic of the actual paralysis. My invitation is to consider the concept of class consciousness in terms of class sensitiveness, and I argue that the sensitiveness of class is a crucial point, both in descriptive and performative implications. I discuss my conversations with the practitioners engaged in climate "transitions" that I encountered during my research. Moving in between public and private, business and politics, with an eye on the market and an eye on the social, the practices of climate transition seem performed by many "machinations" and "passionate interests" and the work to organise and produce transformative actions may be fragile, mutable, and unorthodox. For this reason, I argue, this sensitiveness is not (and should not be considered) innocent. As Nature is not a victim to be protected, climate actions performed by practitioners, researchers, and others belong perhaps more to the universe of noir genre à la James Ellroy, or better still to the cli-fi à la Kim Stanley Robinson. The ecologic class is still in search of an overall epic enacting a common and dispersed sensitiveness, a new atmosphere for ecology.

## **metabolic creative practices**

*Jamie Allen (CML IXDM FHNW)*

I am interested in attending the upcoming discussion as much of what I'm working on these days attempts to create new energetic, material and ecological relations between beings and with the environment they are a part of. It would be a pleasure to deepen my understanding and share thoughts on how critical thought, knowledge production and practice can help us both envision and build more just, livable worlds through collective action. Another main orientation I would hope to explore, related of course, are notions of the liberal notion of 'freedoms', or presumption thereof, and the ways in which rituals, commons, and collectivity can be re-articulated in the context of things like 'planetary boundaries'. I'm looking forward to exploring these ideas further with fellow participants, in discussion.

## **P08 - Science, Expertise, and Trust**

*Margarita Boenig-Liptsin (Assistant Professor of Ethics, Technology and Society, ETH Zurich)*

### **Is it faith or trust in science?**

*Rishabh Kachroo (Shiv Nadar IoE)*

This paper seeks to problematize the imagination of science as a type of body of knowledge and its hegemony accepted not only by its supporters but an implicit acceptance by its detractors, too. It discusses what is considered 'scientific' and asks if its acceptance rests more on faith than on the inherent usefulness of scientific knowledge forms. The paper begins with a description of knowledge questioning the conceptualization of the rigid understandings of sciences. It brings to the fore the dichotomy of the supposed acceptance of sciences by the people as well as the denial of basic dictums of science and an overwhelming support of unscientific and pseudoscientific beliefs. The paper asks whether it is, in fact, not the acceptance of science because of its inherent usefulness but because of faith that the people accept it. Using the COVID-19 pandemic and the prevalence of Liv.52 (an ayurvedic formulation) in India as exemplars, it further asks if there's a crisis in knowledge in the making, and whether the State, as an all-powerful actor, has a role to play in creation and continuation of this crisis. It also asks, via a problematisation of the supposed singular entity of the "scientific community", whether the scientific community has a role to play in this, if any. It concludes that the acceptance of this hegemony of the sciences by the people because of an implicit trust arising out of faith and not realisation of the inherent usefulness is a problem that demands further analysis.

### **Refused knowledge and its legitimation in the public sphere. An analysis of laypeoples' argumentative repertoires on health and well-being issues**

*Luca Serafini (University of Naples Federico II)*

*Maria Carmela Agodi (University of Naples Federico II)*

*Ilenia Picardi (University of Naples Federico II)*

"Post-truth" theories inscribe the credibility gained in the public sphere by knowledge which is refused by science within the framework of a general epistemic crisis of Western society.

In this contribution, instead, we consider the willingness to accept knowledge claims refused by science as rooted in widespread argumentative repertoires, which are inserted in a more complex relationship with institutionally validated scientific knowledge. Our hypothesis is that these repertoires are available and ready to be activated, in the appropriate situations, not only within specific communities, but generally in public discourse.

In this paper, we describe the detection of this kind of argumentative repertoires through the analysis of 14 focus groups organized between April and July 2022 in six different Italian cities. Solicited by

situationally differentiated stimuli and audiovisual materials, participants expressed themselves in relation to claims refused by institutional science and related to four different topics: 1) vaccination hesitancy 2) the “Five Biological Laws” 3) the benefits of alkaline water 4) risks associated to 5G technologies.

A multiplicity of argumentative repertoires was identified, which made people, even unfamiliar with the topics of refused knowledge mentioned above, open to adhering to them in specific situations, such as: a) Repertoires questioning the accountability of institutions legitimized to produce knowledge in health matters through accounts based on non-epistemic associations; b) Repertoires anchoring the willingness to modify practices to previous pragmatic investments and to the networks of associations on which they are based.

The intertwining of the epistemic, pragmatic and social dimensions allows us to place the present work in the wake of those theories that interpret the phenomena of so called post-truth not in terms of an alleged crisis of rationality, but as the effects of a more complex reconfiguration of the bonds within which knowledge is formed and acquires credibility and legitimacy.

## **P19.1 - Critique-in-Action in Medicine and Health (Session 1/2)**

*Nolwenn Bühler (University of Lausanne and Unisanté)*

*Anna Mann (University of St. Gallen)*

### **Critique within and beyond healthcare institutions**

*Giada Danesi (Universität St.Gallen)*

This paper will address critique to traditional biomedical science and healthcare raised by patients, their relatives and patient associations. I will mobilise a drafted project I am working on that explores the legitimation of patient knowledge within and beyond healthcare, my previous research on diabetes self-management and experiences of cancer survivorship and a crucial body of literature at the intersection between social sciences of health, STS and anthropology of knowledge engaging with “experiential” and lay knowledge of patients and patient associations.

Recipients of biomedical healthcare and those who challenge it and seek alternative routes because they cannot find the answers to their healthcare needs in traditional channels of care in the Global North produce critique on processes of medicalization and power relations within medical systems and institutions. Its investigation highlights various and at the same time specific norms, values and practices among these actors and at the same time enable researchers to engage with their points of views and needs. Thanks to the work done by patient associations and advocacy groups and by researchers this critique impacts the current ways of envisioning and doing biomedicine and providing healthcare and its can thus be grasped as a political engagement of all persons and institutions taking these voices seriously. The emergence of new actors, new experts and new sites where healthcare is provided – such as expert patients in healthcare institutions, representative of patients in political commissions, panel of patients in public and private research, charismatic people who share and develop online and offline initiatives on various fronts or ordinary persons who share their health experiences online – are interesting cases of the impacts of this critique.

This critique deserves to be taken seriously as part of the current socio-material situations of political engagement and involvement of lay expertise in science, medicine.

### **Staying true to the here-and-now of research practices: An inquiry into living methods**

*Sonja Jerak-Zuiderent (University of Amsterdam - Free University | AmsterdamUMC)*

Science and Technology Studies scholars have problematised scholarly critique and engagement for long. Feminist inspired STS scholarship insisted thereby on not forgetting about 'matters of care' (Puig de la Bellacasa 2015). Drawing on such scholarship, this paper argues that attention to the mundane as it happens in a 'here-and-now', deserves utmost attention. This allows us to explore, what Ferreira da Silva (2015) refers to as, an 'excess of possibilities' always already there, of how to live in difference together. Drawing on ethnographic research in public preventive care and encouraged through the reading of feminist STS and decolonial scholarship, this paper aims to explore what scholarly practice can learn from those who attending to the everydayness of the encounters 'go all the way' (Star 2015) and thereby 'stay true' (Verran 1999) to metaphysical commitments as they instantiate in the 'here-and-now'. What does it mean to attend to the everyday 'going all the way'? And how does this allow for 'staying true' to metaphysical commitments? Public preventive care professionals in the Netherlands seem to hold on to their non-modern experiencing in how they 'do and know', live their practice by 'doing whatever is necessary' in their everyday encounters. How do they resist the fragmentation that modern knowing produces in encountering and that refigurates 'whatever is necessary'? How do they undo the metaphysical commitments of modern knowing while staying true to the excess of possibilities always already there instead? This paper argues that, approaching the mundane through the non-modern experiencing of the 'here and now,' as lived by the preventive care professionals, allows them to be 'tact-ful' to the excess of possibilities always already there. Such non-modern experiencing of the 'here and now, makes tangible the importance of learning to attend to the metaphysical commitments of how we engage with the world.

### **Constructively Critiquing the Emerging Epigenetic Research on Hysteria/Functional Neurological Disorder**

*Paula Muhr (Karlsruher Institut für Technologie (KIT))*

Hysteria is characterised by diverse bodily symptoms (e.g., paralysis, seizure, blindness) that appear to lack an organic cause. Freud regarded it as a psychological disorder caused by traumatic memories. In the humanities, hysteria is considered to no longer exist. Yet, recently, sustained medical research into hysteria has been revived. Now renamed functional neurological disorder (FND), hysteria is said to be a prevalent medical condition. Much of the current research into FND deploys neuroimaging technologies such as functional magnetic resonance imaging (fMRI), thus reframing FND into a disorder arising from a not yet understood brain dysfunction. But used on its own, fMRI has been unable to shed light on the potential aetiological roles of traumatic life experiences in the development of FND symptoms. Since 2020, several studies have begun to explore epigenetic changes in patients with FND, either in conjunction with or independent of fMRI-based findings, looking for possible mechanisms of pathogenesis based on the interplay of biological and environmental factors. In the humanities, neuroimaging and epigenetic research, in general, have been widely criticised for their biological reductionism. And although such wholesale critique could be applied to the recent epigenetic studies on FND, I argue that simply dismissing these studies on general grounds would miss their epistemic potential in the situated practice of FND research. Despite their relative biological reductionism, in the context of FND research, these studies present the initial, still tentative steps to systematically examine how environmental factors, such as stress and trauma, might induce measurable physiological modulations that give rise to FND symptoms. In the future, this research could significantly expand the medical understanding of this vaguely understood disorder. Thus, I constructively critique the context-specific methodological shortcomings of this emerging FND research strand while foregrounding its potential to generate new multifactorial aetiological explanations concerning FND.

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## **P09 - Science and State-building in Contemporary Africa**

*Sara de Simone (University of Trento)*

*Edegilign Hailu Woldegebrael (Institute of Peace and Security Studies, Addis Ababa University)*

### **New War Frontlines: Technology and Diplomacy**

*Mercy Mulugeta (Institute of Peace and Security Studies, Addis Ababa University)*

*Yonas Tariku Metaferia*

In many ways, the civil war in Ethiopia is nothing close to previous civil wars the country and Africa knew too well, particularly due to the utilization of advanced technological weapons and the crucial role of diplomatic struggles. One dimension of this is the pace with which the conditions on the war front developed, the scale of atrocities and lives/property lost in the first year, the game-changing role of advanced technologies (drones particularly), and the aggressive mobilization of international media and diplomatic support by the TPLF. This chapter zooms in on the new dynamics created by the utilization of advanced war technologies from the side of the Ethiopian government (drones) and the strategic utilization of the social media. The chapter argues that in addition to its strategic contribution to taking out strategic missions, the use of drones created an atmosphere of fear among the civilian population in Tigray. The utilization of social media platforms enabled the TPLF and associated activists to extravert the domestic politics of intrastate insecurity complexity to a global audience in a fitting narrative of genocide and the intentional use of rape as a weapon of war (see chapter 10). That narrative potentially influenced policy of some key states in a manner which further exacerbates the insecurity complex by putting undue pressure on the federal government.

### **Is Mundane Science Shaping Urban Normativity in the Global South?, Insights from Public Health Interventions in Marginal Settlements of Kampala City**

*Hakimu Sseviiri (Urban Action Lab)*

*Viola Nuwahereza (Urban Action Lab)*

Urban science is undergoing critical phase of experimentation that has come along with new paradigms shaped by the diversity and shifting geographies of global urban transitions. At the same time, there are changing relations between science, practice and policy on pressing issues like climate change, energy, smart cities, health and community wellbeing among others that are shaping global south urban transformation towards the everyday mundane practices, experiences and experimentation. Such have triggered critical thoughts on the limits of Euro-centric or American legacies in urban studies, planning and management and open space for appreciation of multiplicities, diversities and dynamism in the everyday urbanism of the global south. We draw on urban processes of public health interventions in marginal settlements of Kampala city to illustrate how mundane urbanities open up pathways to remake urban services imaginaries through experimentation, reflexivity, co-production, adaptation and new modes of citizen participation. Such urban processes offer springboards for deliberative institutionalization of not only place specific realities but also citizen led innovations a way of creating ambitious visions of a just and inclusive city.

### **Health Systems Capacity and Abortion Provision in Kenya**

*Lynn Thomas (University of Washington)*

When Kenya became politically independent in 1963, its male leaders retained a British colonial law that rendered most abortions illegal. Abortion was common but largely unsafe and illicit. By the 1970s, clinics in Ward 6 – the obstetrics and gynecology emergency ward at Kenyatta National Hospital in Nairobi – faced a dire situation. At certain times of year, upwards of twenty women arrived daily with incomplete

and sometimes septic abortions. Treatment entailed dilation and curettage (D&C), a surgical procedure that required general anesthesia and an operating room. Women could wait days and even die before care was available.

In 1987, Dr. Khama Rogo, the medical director of Ward 6, adopted a new abortion technology, Manual Vacuum Aspiration (MVA). In the 1960s, the US government, building on earlier vacuum technologies from USSR and China, developed MVA as tool for staving off overpopulation and communist insurrection in resource-poor health systems the world over. MVA consists of flexible plastic tubing and a syringe, and evacuates the uterus through suction rather than a sharp instrument and does not require an operating room or even electricity. It is equally effective at completing abortions as inducing them. MVA's safety, efficiency, and low cost appealed to Rogo and his colleagues. What had been developed as a Cold War technology became in Kenya and elsewhere an instrument for managing women's health crises in public facilities increasingly strained by structural adjustment policies.

My conference paper will examine the introduction of MVA in Ward 6 as a revealing episode in Kenyan efforts to increase health systems capacity amid the material constraints of structural adjustment policies and the political constraints of conservative laws. MVA's introduction leveraged Ward 6 clinicians' social prestige and political connections while sidestepping the issue of abortion's legality by focusing care on completing abortions started elsewhere.

### **The Role of Scientists in the EPRDF's Hydro-state Building: Evidence from the Gibe Hydro-dam Projects, Ethiopia**

*Edegilign Hailu Woldegebrael (Addis Ababa University)*

*Sara de Simone (University of Trento)*

Since the early 2000s, Ethiopia's ruling coalition, the EPRDF (Ethiopian People's Revolutionary Democratic Front), propagated a "developmental state" discourse that focused on achieving highly ambitious economic growth targets defined at the centre with little or no regard for local needs (Mosley & Watson, 2016; Woldegebrael, 2018). Hydropower development, through the construction of large dams, was identified as one of the most important pillars of the country's strategy for economic growth.

Over the past two decades, scholarly and policy debates over large dam investment projects in Ethiopia and its state developmentalism have focused on the role of the state (Carr, 2017; Verhoeven, 2013) and on their local impacts (Abbink 2012). However, as it is typical of a high modernist approach to development (Scott 1989), various kinds of international and local experts and scientists were deeply involved in the planning of and decision-making over hydropower dam projects, and have played a major role in shaping the Ethiopian government's approach to river basin development.

Based on a grounded qualitative fieldwork, this contribution will analyze the process of knowledge production and decision-making around the Gibe III dam, Ethiopia's first and majorly contested mega-dam. It will argue that the production of techno-scientific knowledge around the construction of the dam and the overall development of the Omo river basin, variously sustained since the 1960s by the Ethiopian government, international donors and Salini (the Italian company that has built all the existing Gibe dams while also engaging in development planning in the region), has greatly contributed to the rationalization and depoliticization of dam construction. A "scientific truth", established through technical reports and assessments, has contributed to legitimize state-directed hydropower developmentalism as a means of entrenching the central state's reach into its peripheries, while depoliticizing development related decision-making processes and delegitimizing criticism expressed in non-scientific terms.

### **P20.2 - The Living Rooms of Computation: Practices, Alignments, Frictions (Session 2/3)**

*Florian Jatton (University of Lausanne)*

*Anna Jobin (Université de Fribourg)*

## **Big computers for big science: The beginnings of scientific computing at CERN**

*Arianna Borrelli (TU Berlin and c:o/re (RWTH Aachen))*

Research in particle physics is today dependent on computing practices for planning, building, performing and analysing experiments. Accordingly, one is easily led to assume that, in that field, computing very early on became a means of knowledge production. Contrary to these expectations, though, computing practices found their way into particle physics only slowly and relatively late, during the second half of the 1950s. Thus, when the European Organization for Nuclear Research (CERN) was founded in 1954, there was neither a budget nor a plan for acquiring a computing machine: CERN bought its first mainframe computer, a Ferranti Mercury, only in 1956, with the machine actually delivered in late 1958.

The example of early computing at CERN appears as a good starting point for better understanding the relationship between computing practices and knowledge production in fundamental research in the 1950s. The paper will take a closer look at the process through which CERN acquired its first computer and the factors that played a role in this decision. Interestingly, the sources suggest that the main motivation came neither from the European particle physics community, nor from the CERN Directorium, and was also not the consequence of advertising campaigns by computer producers like Ferranti or IBM. Although these factors would later contribute to shape CERN computing, archival material shows how its beginnings can be primarily traced back to the personal initiative of physicist Lew Kowarski, at the time CERN's Director of Scientific and Technical Services, and to a vague, but powerful image of computers as new scientific instruments which at the time was emerging in state-funded nuclear physics research centres.

## **From measuring to managing: studying open ground water data in Brabant**

*Gijs van Maanen*

For about a decade, governments have been experimenting with the publishing of 'open data'. The concept of open data usually refers to data made available by governments with technical features that allow for easy reuse by non-governmental actors such as citizens and journalists. The act of publishing open data, then, is thought to strengthen values like openness, transparency, collaboration, participation, and accountability. But not much is actually known about the effects of open data-policies. In what way do open data-policies effect society? How does open data change the functioning of governmental organizations themselves?

This chapter draws from about one year of in-depth empirical research of open data-practices related to ground water policies in the Dutch province of Brabant, and draws from a mixture of political theory, ethnography, and 'praxiography'. The local government responsible for water management (the 'water board') produces and communicates water level data as a means to be more open and transparent.

I 'followed the ground water data' and identified nine different practices in which the ground water-data was being used. These ranged from practices of ground water measurement, to data-based decision-making, to the redistribution of responsibilities, to the inclusion of citizens in decision-making processes through practices of citizen science.

While the ground water data was used in multiple ways, the open ground water data in the end presented and reinforced a particular version of the problem the water board was dealing with: a 'games of water', which comes at the expense of a more environmentally-oriented problem formulation that emphasized the interconnectedness of water, soil, flora, and fauna.

The 'open' data thus closed off other ideas and proposals to engage in water governance, and the openness of the data that was communicated depended heavily on the open character of the water board responsible for its production.



## **How vulnerabilities became commodities? A short history of ethical hacking**

*David Bozzini (Uni Fribourg)*

Securing digital systems involves several processes; one of them is to allow people to report vulnerabilities they found on a service, a device, an infrastructure or a piece of software. This is called vulnerability disclosure. This paper addresses the history of vulnerability disclosure to understand the emergence of the defensive market for vulnerabilities and how ethical hacking was repurposed into the labor of finding security bugs for monetary compensation. Tracking these changes in the practice of vulnerability information exchange and their outcomes in term of a discrete socio-technical order also allows us to better understand the political, ethical/ideological and economic arrangements of current models of disclosure. From an anthropological and a political economy perspective, I show that such integration of ethical hackers into the cybersecurity industry contributed to the disciplinarization and governmentalization of hacking on the one hand, and the current changing nature of the digital industry security posture. With this new avenue, I contribute to and discuss with recent histories of hacking such as Menn (2019), Elis & Stevens (2022), Goerzen & Coleman (2022) and Söderberg & Maxigas (2022).

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Goerzen, Matt, and Gabriella Coleman. 2022. *Wearing Many Hats. The Rise of the Professional Security Hacker*. Data & Society.

Menn, Joseph. 2019. *Cult of the Dead Cow. How the Original Hacking Supergroup Might Just Save the World*. New York: PublicAffairs.

Söderberg, Johan, and Maxigas. 2022. *Resistance to the Current. The Dialectics of Hacking*. Cambridge, MA: MIT Press.

## **Data profiles as sites of friction and struggle: A case study using food-delivery platforms**

*Luca Perrig (University of Geneva, Institute of Sociological Research)*

Most of the sociological literature addressing the gig economy takes workers as its entry point. As platforms themselves are difficult to approach, field work mostly consists of interviews with workers (Seaver, 2017). This often leads to a depiction of platforms as almighty actors, able to optimize the workflow by gathering loads of data that is processed using sophisticated algorithms. The focus is thus mostly on the surveillance and control that platforms exert on workers (Newlands, 2020; Gregory and Sadowski, 2021). This paper will take an alternate perspective. By focusing on the management of platforms in the gig economy, it will attempt to depict how platforms struggle to automate a market with limited data. This will allow for a fruitful discussion of platforms as frail organizations, engaging in deceitful strategies in order to reap network effects and make up for this lack of information (Shapiro, 2023)

This paper will rely on an observation within a food delivery platform as well as interviews with top managers from several such platforms in Switzerland. Completing this qualitative data with personal data that couriers requested for the study, I will attempt to reconstitute the couriers' profiles as available to the platforms in order to highlight the points of friction, the resistance from workers, and the strategies that are ultimately pursued in order to ultimately obtain the couriers' consent to work (Nguyen & Beijnon, 2023).

Data

This paper relies on a fieldwork that consisted in a prolonged engagement for several platforms as a bike courier (6 months), observation in the offices of a delivery platform (one month), and interviews with workers (n=24) and platform managers (n=12) in French-speaking Switzerland.

## **P29.1 - Knowledges Revisited / Students' Perspectives (Session 1/3)**

*Charlotte Nachtsheim (University of Basel)*

*Alain Müller (University of Basel)*

### **Streaming Music: Practices and Patterns of (Un)Availability**

*Charlotte Nachtsheim (Universität Basel (Basel))*

"Spot" and "identify" – these two words used by Spotify's founders to map out and coin the meaning of its name, pinpoint the close connection between the music streaming platform and knowledge practices. Spotify's slogan, "Music for everyone", is equally insightful, opening the question of what is being made accessible to whom. This paper examines Spotify as a site of knowledge production and explores practices and patterns of availability and unavailability.

Recent research on Spotify analyses the platform as infrastructure (Magaudda 2023), gatekeeper (Bonini/Gandini 2019) and black box (Eriksson et al. 2019), and addresses asymmetric patterns of knowledge and agency, e.g. in terms of opaque curation processes – both human and algorithmic (Bonini/Gandini 2019).

Emerging patterns of (un)availability are constantly negotiated, solidified and contested. For example, when artists remove their music from Spotify in protest, or when Spotify launches special playlists to support and showcase female artists.

In my upcoming ethnographic research, I aim to approach the topic with a focus on the everyday use of Spotify and the interaction between the platform and its users. Selection, classification, showcasing, but also browsing, searching, listening, and boycotting are practices of interest here. The paper explores some of these practices and emerging patterns of availability and unavailability, asking how (un)availabilities, agency and knowledge are connected in everyday music streaming practices.

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### **Packed Knowledge. Navigating the Epistemical Dimensions of Snackboxes**

*Anina Branger (Universität Basel)*

A mango shouldn't be eaten daily and a cereal bar is insufficient, a slice of cheese, however, is an appropriate snack according to cantonal guidelines of Basel-Stadt (Kinder- und Jugendgesundheitsdienst 2020). Obviously, what is packed into a snackbox is a complex matter. However, it is not much talked about in the field of Food Anthropology and STS. This paper examines the multi-layered epistemology of snackboxes with the lens of snackboxes as materialities of knowledge and its embedment in everyday practices. It offers an insight into an ongoing qualitative-empirical research project in the Basel area. Based on the current state of the project, three dimensions in knowledge (re)productions can be identified.

Firstly, snackboxes dictate a certain behavior, the small compartments of the box for instance demand that food is sliced. This knowledge, which is to be understood as a call for action, is intrinsically preserved in the snackbox. It is a stored knowledge inherent in the materiality of the object.

The snackbox has, secondly, an organizing effect on time. By making the snackbox, the day is structured and to a certain degree already pre-enacted. The snackbox can thus be understood as a materialized knowledge about the future.

And lastly, the snackbox offers outsiders an access to knowledge. In the context of a kindergarten, the snackbox gives the teachers an insight into the assumed conditions at home. Thus, ontological parenting is taking place and parents are always under scrutiny.

Building on these observations, I propose that snackboxes function as boundary objects (Star/Griesemer 1989). This theoretical approach opens up further dimensions. Snackboxes traverse spaces, they are mobile and build links between the private and the public sphere. In doing so, they come into contact with different actors, who constantly epistemically reframe snacks as politics, yet without breaking the framework of care work.

### **Becoming farmer: witnessing the narratives cultivated around conventional agriculture in Swiss farming education**

*Pina Haas (Universität Basel (Basel))*

“Why are we the dumbest peasants here anyway?” an agricultural apprentice asks his mate, while sitting on a ladder in a tree and chopping off branches. What does it mean to call others or oneself a peasant? Which narratives are shaping “conventional” agriculture and how are future farmers navigating these?

As a practice of producing food, caring for plants and animals, and cultivating land, agriculture is crucial for social reproduction and serves as a primary location for institutionalized intra-actions between humans and non-humans today. In a world shaped by overlapping social, political and environmental crises, what is called “conventional” agriculture is increasingly blamed for contributing to the climate crisis, representing conservative political values and backwards thinking. Inspired by a palette of approaches - most importantly multispecies ethnography, feminist STS and decolonial and political ecology - I am interested in understanding the narratives cultivated around conventional farming and representing the currently hegemonic processes of knowledge production and transfer about agriculture in Switzerland.

Following this interest, I visited a class of conventional agriculture students in their farming school in Switzerland for a couple of weeks, as a foundation for my master thesis. Informed by a grounded theory framework, I immersed myself in this context with no fixed hypothesis and little previous literature revision, but with the aim to be attentive and empathetic to the narratives as they are constructed, mediated, and embodied in the apprenticeship for becoming a farmer. Drawing on my field notes, I am currently piecing together an interpretive, grounded narrative about my experiences and observations in this context.

With this research I hope not to scapegoat and vilify individual farmers, apprentices or institutions but ambitiously trust that detailed and empathetic interpretations of the working-practices present in this context will feed imaginations for collectively transforming towards more regenerative and less

### **Multimedia in the academic knowledge transfer/ Multimedia in academic teaching**

*Sven Hartung*

The use of multimedia content is commonplace in higher education teaching in 2022 and is constantly increasing due to technological developments. Most recently, the Corona pandemic has also intensified this trend. At some universities, lecture halls that almost resemble cinema halls and presentations with video, images and text are the absolute norm. Supplementing this with online courses from professors or supplementary digital learning platforms are now also the norm. This has long since affected not only the practice-oriented universities of applied sciences, but also the universities. Increasing pressure from politics and business to use more media and the universities' desire to be perceived as progressive

(especially by local employers) are additionally driving digitalisation in university teaching. This process is also supported by voices from academia. For example, a study by the American psychologist Richard E. Mayer attributes a strong added value to multimedia learning in terms of receptiveness.

However, little research has been done on how the parallel or sequential use of multimedia content in lectures and seminars affects the transfer of knowledge itself. How do sources, information, data and facts change through the change of medium and, above all, how do they influence the students' competence in dealing with media in their academic environment.

On the one hand, the paper takes a historical view of the multimedia lecture in order to identify and interpret possible changes or an increasing black boxing. On the other hand, it will use actor-network theory to examine a specific lecture to see how different entities relate to and influence each other. In this way, conclusions can be drawn about how knowledge transfer is changing or how knowledge is being influenced or changed.

## **P15 - What Counts But Cannot Be Measured**

*James Merron (Basel University)*

*Susann Ludwig (Leipzig University)*

*Hanna Nieber (Max Planck Institute for Social Anthropology, Halle)*

### **Measuring the construction of interdisciplinarity in legal science proposals within social science research centers ? The case of the National Center for Education in Cameroon**

*Abdou NJIKAM NJIFOTIÉ (Centre National d'Education)*

The contribution of legal science research proposals to transdisciplinary knowledge is important, but difficult to measure in the overall activities of a social science research center such as the National Center for Education. Indeed, it is not often taken into account that formal and informal scientific activities bringing together researchers from different social science disciplines could have a methodological and epistemological effect on the knowledge produced by this research center. In a narrative approach, this paper presents the determinants of informal discussions with fellow historians, anthropologists and sociologists, as well as scientific aspects of collaborations with these colleagues have influenced my methodological research practice in legal sciences between 2014 and 2023. A narration of the interdisciplinary scientific construction, in an autobiographical perspective, in order to propose a measurable dimension to the construction of inter and transdisciplinary knowledge, in this Cameroonian scientific context. It is a reflexive contribution to the scientific discussion on the modes of production of knowledge and on the relationship between objectivity and subjectivity in science.

Keywords: interdisciplinarity, transdisciplinarity, creation of knowledge, scientific proposals, measurement of law, research in legal sciences, research center.

### **Statistics: Measure What Counts or (Make) Count What is Measured?**

*Servan Luciano Grüninger (University of Zürich)*

Statistics has long become an auxiliary science in empirical disciplines and is intimately linked to scientific standards. It is instructive to look back at the early days of statistics in order to highlight two distinct traditions within statistical thinking: 1) statistics as an attempt to measure what counts; 2) statistics as an attempt to (make) count what is measured. I analyze these two approaches by contrasting the works of statisticians Stefano Franscini and Adolphe Quetelet, both of whom were active during the 19th century but followed different approaches to statistics as a science and as a tool to describe and inform society.

Quetelet's views were heavily influenced by the natural sciences, particularly astronomy and meteorology. He held that statistical descriptions could unearth "laws" governing natural and societal processes. Thus, Quetelet sought to justify normative claims with statistical measurements by framing these measurements as the (unavoidable) results of societal and natural laws.

Franscini, on the other hand, was influenced by historical, pedagogical, and economic studies. As such, he did not try to move statistics into the vicinity of the natural sciences but rather demanded statistics to be for the present what an "impartial historiography" should be for the past. In this view, statistics does not in itself show what ought to count but instead presupposes a (political) understanding on what counts and what does not count. Only if it is clear what should be measured, statistical methods can provide competent guidance on how to measure.

As such, the examples of Franscini and Quetelet serve as illustrations of two diverging applications of statistics: The first aims to quantify what is deemed meaningful, the second assigns meaning to what is quantified. I argue that both approaches remain influential to this day but that the latter has supplanted the former in many fields.

### **Ideal chronicler and digital leftovers: interrogating the archive of Stanford Artificial Intelligence Laboratory**

*Alina Volynskaya (EPFL)*

In delineating the contours of historical knowledge, Arthur Danto proposed a thought experiment in which history is written by an ideal chronicler who in real time perfectly records everything that happens the way it happens. Danto's parable materializes in the Stanford Artificial Intelligence Laboratory Archives (SAILDART) which preserve all the contents of the lab's computers from 1972 to 1990. The archive stores all kinds of digital inscriptions, both human- and machine-made: software code and its documentation, system logs, backup and memory dump files, along with more traditional archival materials like drafts, correspondence, and memos. SAILDART thus, perhaps, brings us closer than ever to the historian's major dream: the total archive with no room for oblivion, in which everything is preserved just the way it was.

But as with the ideal chronicler, the SAILDART case raises the problem of making sense of all these digital leftovers. Are they to be interpreted as materialized collective memory of the scientific community, or are they capable of providing some new knowledge within the history of science? How to deal with the problem of translation – the fact that 1970-80s formats, programs, and programming languages are hardly decipherable from outside of the very laboratory community that produced them? Finally, what can a historian of science learn from such an archive? What blind spots, gaps and omissions in biographies, histories of discovery, and other historical accounts of the early AI could the archive of digital leftovers uncover and elucidate?

### **P28 - Trying Times / Experimental Expertise? Temporal Orders of Technology Testing**

*Philippe Sormani (University of Lausanne)*

*Noortje Marres (Centre for Interdisciplinary Methodologies, University of Warwick, UK)*

### **Interfacing 'Intelligence': Of Machines, Media, and Montage**

*Philippe Sormani (University of Lausanne)*

Over the last decade, there has been a renewed interest in "artificial intelligence" (AI), notably in the form of "machine learning" (ML). This renewed interest may seem paradoxical, insofar as John McCarthy introduced the term "AI" in the mid-1950s to mark a distinction with ML, championing deductive reasoning over automated induction (e.g., Cardon et al. 2018). By contrast, the current reversal, towards

ML-based forms of “AI,” marks the statistical, if not spectacular, revival of automated induction. However, the terms used – revival, renewal, reversal – beg the question of the common ground of the involved alternatives. Taking its cue from recent historical (e.g., Penn 2020), relevant conceptual (e.g., Shanker 1998), and prior critical (e.g., Agre 1997) inquiries, this paper outlines a praxeological answer to the raised question. For the purpose, the paper dwells on and discusses a series of video reenactments of “machine intelligence” demonstrations, ranging from highly publicised demonstrations (such as the “AlphaGo show” in 2016) to more prosaic applications (such as “edtech” devices currently deployed in public schools). How in the examined cases is “intelligence” interfaced (cf. Lipp 2023) - that is, made available in machine form to its prospective user, on the one hand, and configured as prospective user of machine operation, on the other? In probing two-way “intelligence” interfacing in situ, the paper dwells on the tricky interplay between machines, media, and montage, while making explicit and reflecting upon how particular configurations of “enchanted determinism” (Campolo and Crawford 2020) are staged and locally performed in and as different settings (public demonstrations, pedagogical experiments, etc.).

### **A Window of Opportunity, Clocked Extraordinariness, and Agile Expertise. On the Transformation of Swiss University Libraries**

*Désirée Waibel (University of Lucerne)*

*Vera Tauber (University of Lucerne / Zentralbibliothek Zürich)*

In our contribution, we want to approach the question of Trying Times / Experimental Expertise? by presenting interacting temporal orders transformation of Swiss university libraries. In 2020, the field of Swiss University Libraries entirely changed its organizational and infrastructural make-up by replacing its associations (in which groups of libraries shared a digital infrastructure) with a national platform (in which university libraries turned into “customers” of a newly founded organization that licenses the technological infrastructure from a global IT-provider).

In our talk, we want to present three vignettes of interacting temporal orders based on which we discuss the current Swiss library field as an “ecology of testing” (Marres and Stark 2020). The first – “A Window of Opportunity” – looks at how the temporal ordering of technological infrastructures (e.g., discontinued discovery tools and library systems) was used to break the long *durée* of the organizational field. The second – Clocked Extraordinariness – shows how perpetual updates on the part of the IT-provider currently clocks the daily work of librarians in such way that prevents the reflection of problems that necessitate lengthy projects. The third – Agile Expertise – conveys the emergence of a novel way of institutionalizing expertise that is driven by the highly encouraged form of “agile working”, i.e., short-term collaborations across the field to tackle concrete, small-scale problems.

While the three vignettes present different aspects of this specific ecology of testing, they also illustrate the general importance of temporal ordering for understanding the current trend towards experimental expertise, especially in fields that increasingly depend on large-scale infrastructures. Importantly, it sensitizes for the fact that temporal ordering determines what is doable and/or worthy to be put to test in the first place – and what is not.

### **Beyond the Patent Office: How historic clothing inventions put social relations "to the test"**

*Kat Jungnickel (Goldsmiths, University of London)*

Patents are legal instruments that protect an idea and transform it into an economic medium that can be transferred, sold, and distributed. Patents are also socio-political artefacts that provide insights into past problems and proposed solutions to trying times. This paper takes a historic approach to technology testing by focusing on lesser-known inventions in the form of wearable technology. Clothing patents might appear small and mundane, yet they often have larger socio-political aims and “adversarial design” (Di Salvo 2012) at their centre. Data comes from my ERC funded project Politics of Patents which takes an inventive mixed-methods approach to the study of inventions to explore how experimental forms of clothing have been used by non-experts to resist, contest, or subvert hegemonic

norms and in the process bring alternate expressions of citizenship into being. For this paper, I focus on examples of clothing inventions patented in the last century around struggles for women's rights to freedom of movement in public space. Using "speculative sewing" I stitch data, theory and fabric into inventions described in patents and analyse the resulting three-dimensional arguments in relation to current issues and on contemporary bodies. Overall, I argue that clothing patents offer glimpses into alternate materialisations of knowledge, social situations and gender relations and suggest they can be "studied not on the basis of what they resolve but what they generate" (Marres and Stark 2020).

## **P12 - Multiple Pluralisms in Scientific Policy Advice**

*Caspar Hirschi (University of St.Gallen)*

*Karim Bschr (Universität St. Gallen)*

### **Delegating Decisions to Expert Commissions: The Case of Animal Research in Switzerland**

*Servan Luciano Grüninger (University of Zürich / Reatch! Research. Think. Change.)*

Political expert commissions need to reconcile both scientific and political constraints. In this case study, I use animal research commissions as an example to highlight two sources of conflict that arise from these dual constraints:

The first conflict stems from the ever-evolving scientific landscape, which shapes and modifies the requirements needed to receive an animal permit without necessitating explicit legal codification of these requirements. As a result, individual voices within the animal research commissions and the veterinary offices have an extraordinarily large influence on the conditions under which animal research is conducted. This can lead to both scientific and legal frictions. From a scientific point of view, it can be deemed problematic that individual non-scientists or scientists from different disciplines have such a large say on the way other fields conduct their research. From a legal point of view, the shifting but never clearly codified requirements put in jeopardy the principle of legal certainty.

The second source of conflict arises from the introduction of scientifically and legally unexplored concepts into scientific research. For instance, the concept of the "dignity of living beings" was first introduced into the Swiss constitution in 1992 but was only legally defined in 2008, after the revision of the animal welfare law. However, this definition again introduced new ethical and legal terminology whose meaning within the context of scientific research was far from clear. In particular, the law demanded from authorities and researchers that "non-pathocentric burdens" on the animals, such as burdens caused by "excessive instrumentalization" or "humiliation" of animals, had to be included into the assessment of animal research applications, even though the exact meaning of such types of burden is still a matter of scientific discussion.

Col statement: The author is member of the animal research commission of the Canton of Zurich.

### **Scientific Responsibility, Integrity and Legitimacy in Knowledge Translation Practices - Tracing Paradigms and Expectations regarding Scientific Policy Advice in Germany After the Pandemic**

*Janine Gondolf (Karlsruher Institut für Technologie (KIT))*

The relevance of scientific knowledge in and for society does not need to be emphasized in knowledge societies. Scientists have long been called upon to support politics and society in the decision-making process and in the legitimization of decisions already taken, especially in the field of policy advice. And from a sociological perspective, a reflective critical practice has accompanied this interface for just as long. This article presents part of a collaborative epistemological-linguistic project that aims to enrich this debate by assessing the practice of scientific policy advice in Germany. The DFG-funded project "Scientific Policy Advice as Socio-epistemic Practice: Textual procedures ascribing significance, executive authority and responsibility" (2021-2024) examines this field of science-policy interaction and

its artifacts in order to inquire about the possibilities and limits of democratic participation in the policy advice process.

Our starting point in this paper is an overarching question: we want to discuss what the case of scientific policy advice can tell us about concepts that are regularly used to address scientificness, be it the quality or nature of something being "scientific". Thus, we review how standard views have framed, articulated, modeled, and explained the science-policy interface. We then briefly outline some of the current and pressing challenges facing the science-policy interface in the public sphere. Drawing on case studies from the work of the project, we show how these relate to specific (co)creative practices in science policy advice that have been neglected in the standard view. Finally, we propose an alternative perspective for imagining the science-policy interface by challenging the underlying philosophical notions of what constitutes science.

### **Participatory Policy Advice – About the Entanglement of Lay People, Experts and Moderators**

*Gereon Rahnfeld (Bauhaus-Universität Weimar)*

Following the 'participatory turn', policy advice as well has become increasingly participatory (Krick / Christensen / Holst, 2019). Examples of this are the desired involvement of lay people through formats like citizens' assemblies, consensus conferences etc. (see for the analysis of a citizens' conference Bogner, 2004). However, while these formats are supposed to integrate the perspective of non-politicians as well as non-experts into processes of policy-making, they are also dependent on other entities: first of all, on experts who are supposed to provide knowledge to lay people in order to enable them to participate and, secondly, on moderators who organize and conduct the participatory event. This leads to tensions with regard to the normative (citizen participation), epistemic (integration of experts) as well as the institutional (organisation by moderators) level.

My talk takes this observation as a starting point and discusses an empirical case study of the citizens' assembly 'Germany's Role in the World'. The aim of the citizens' assembly was to integrate citizens directly into the policy-making process. In order to do so the invited citizens discussed specific policy issues and created a list of recommendations which they forwarded to representatives of the German parliament. While ca. 150 citizens participated in this non-binding form of policy advice, there were also 59 experts involved as well as a team of 81 organisers / moderators. How did citizens, experts and moderators relate to each other during the citizens' assembly? And what tensions arose between the normative, epistemic as well as institutional level during this implementation of participatory policy advice?

### **P19.2 - Critique-in-Action in Medicine and Health (Session 2/2)**

*Nolwenn Bühler (University of Lausanne and Unisanté)*

*Anna Mann (University of St. Gallen)*

#### **Providing access to fertility preservation for trans people: Criticizing in action gendered medical norms and practices**

*Solène Gouilhers (University of Geneva)*

*Delphine Gardey (University of Geneva)*

*Raphaël Albospeyre-Thibeau ()*

In France and Switzerland, sterilization is no longer mandatory to obtain an official gender marker change. Preserving one's gametes before starting hormone replacement therapy therefore emerges as a medical standard of care. However, the reproductive rights of trans people remain a contested matter. Scholars have criticized the cisheteronormativity of reproductive medicine, highlighting the discrimination faced by trans people.



Based on 26 interviews with caregivers engaged in providing access to fertility preservation to trans people, we examine how their practices do to the procreative order. While “damage-centred research” (Tuck 2009) is fundamental, scholars and activists are beginning to emphasize the importance of producing more positive narratives about trans experiences. In line with these claims, we highlight how caregivers strive to make reproductive infrastructures more inclusive in practice. Drawing on Bowker and Star’s (2000) approach to infrastructures, we approach fertility preservation as materially, collectively and spatially distributed in multiple associations between people, spaces, knowledge, techniques, laws and administrative documents.

Therefore, we describe the ways in which caregivers are engaged – not through a frontal criticism of colleagues opposed to gamete conservation for trans people – but through their care practices as a form of “politics by other means.” We first describe their efforts to standardize fertility preservation procedures for trans people. By providing access to these procedures to trans people via existing protocols, they turn such access into routine care and construe it as a medical duty. Secondly, we describe how practitioners transform their work and workplaces, adapting technical gestures, spaces, interactions and administrative forms. New equipment – and thus new knowledge – is implemented to foster a caring experience. Finally, we discuss the importance of expanding definitions of “critique.” We demonstrate how describing the practical commitments – and situated resistances – of caregivers to transform exclusionary infrastructures is fruitful for both knowledge production and political reflection.

### **In and of public health or how to elaborate critique with care**

*Nolwenn Bühler (University of Lausanne and Unisanté)*

Elaborating critique requires distancing, whether relational, epistemic, or physical. It demands to displace observations, discussions, feelings, persons one encounters in the fieldwork and what they represent for us, from the relational space of empirical research, to the intellectual and analytical space of ideas and concepts. Yet this distancing and detachment may come at odds with the care one invests in research. Care for the persons, for their realities, for what they are striving to accomplish, for the time spent together. How to elaborate critique with care? Is it possible, desirable and through which practical and analytical moves? This presentation will explore these questions by focusing on various anthropological projects investigating the worlds of public health in relation to environmental and viral exposures. Building on long-term relations with public health actors, I adopted different positionings over the course of these projects which framed the critical stances I could make. The tension between proximity and distancing, between attachment and detachment, has also been negotiated, reworked and evolved over time. Reflecting back on the different positionings adopted will allow me to shed light on the importance of the relational work of care in producing critique, some of its costs, but also on the various forms of care, critique may (or not) take.

### **“... and the palliative care team, if they haven’t been involved already!” Emergences of an alternative**

*Anna Mann (University of St. Gallen)*

Care-in-practice ethnographies (Mol, Moser, Pols 2010) have argued that next to dominant forms of enacting good care, alternative and more desirable ways of living with and treating disease exist; which we, as STS scholars, can articulate. But how do alternatives come about? To address this question, the talk presents ethnographic materials collected in a paediatric intensive care unit. There, in the treatment and care provided to a 5-year-old patient, an involvement of the paediatric palliative care team became planned, did not happen, and ended up taking place two weeks later. Rather than interpreting this as a “failure”, I will analyse how the goings-on highlight how palliative care could become initiated earlier and more smoothly. It reveals how healthcare could become “otherwise” (Leigh Star 1988). My main argument will be that it is not only possible to articulate alternatives, but also to analyse how alternative forms of good care, for instance palliative care, emerge in dominant practices, such as prolonging life,

in which they are embedded. By re-conceptualising a form of critique developed in STS, the paper, thus, contributes to discussions on critique-in-action between STS, medicine, and health.

### **Potentials of deconstruction: the idea of ectogenesis as an ambivalent feminist utopia.**

*Celina Beck*

Reproductive technologies have so far operated within the framework of a constant practical difference, the "basic problem" of reproduction: the process of pregnancy and giving birth has so far been linked to a person with a uterus. Associated with this are implications for the person's professional and social life (Kendal, 2015). Research has been conducted for many years on the elimination of this physical difference in the form of an artificial uterus (ectogenesis). A 2017 study created a type of artificial uterus, a "biobag," which was used to gestate a preterm lamb for an additional four weeks (Partridge et al., 2017). Last year, 2021, a study was also published that succeeded in growing mouse embryos eleven to twelve days (equivalent to half the regular gestation period) in an external uterus (Aguilera-Castrejon et al., 2021).

An examination of ectogenesis from a feminist perspective can focus on various aspects: the restriction of reproductive rights (such as abortion rights), capitalism and the body, understandings of nature, or intersectional discourses and reflections of Western white discourses, to name a few lines of discourse. Inherent in these discourses are conceptions of gender and motherhood/parenthood. The leading research question is: to what extent does ectogenesis offer the potential to deconstruct (binary) conceptions of gender?

Based on a queer-theoretical and deconstructionist approach, the feminist (theoretical) discourse around ectogenesis will be analysed. Across disciplines, 20 feminist texts in the period from 1970 to 2022 that deal with ectogenesis will be selected according to predetermined criteria and analysed using the method of qualitative content analysis (Kuckartz, 2018; Mayring 2015) regarding inherent ambivalent construction processes of gender. The focus here is on the deconstruction and reproduction of the gender binary and the associated utopian and/or dystopian realities of life.

### **P27 - Reconfigurations of Life Sciences Research: Biomedicine, Healthcare and Beyond**

*Wairokpam Premi Devi*

#### **Recasting relationship between social and biological: A Sociological Understanding of Epigenetics**

*Santosh Kumar (Jawaharlal Nehru University)*

Epigenetics refers to the study of environmental influences, such as pollution, nutrition, and anxiety, in relation to gene regulation. In social sciences, epigenetics represents an essential expansion of biological reasoning for many social scientists studying social and political dimensions of biological science. In order to understand how the social environment affects the body and health at the molecular level, the social environment must be taken into account. The research will be based on a qualitative study that attempts to provide historical accounts of epigenetics, a subfield in life sciences. The research will try to trace history of the recent development in epigenetics and find a relationship between sociology and biology by doing extensive secondary literature review. The philosophical premise of epigenetics is that the distinction between nature and nurture is becoming obsolete as these two are getting completely intertwined. A debate between nature and nurture appears to be blurred in the realm of epigenetics. In this context, it is pertinent to revisit the sociological and historical understandings of nature and nurture brought by sociologists and anthropologists. The subsequent question of the research is the study of

nature and nurture, what constitutes nature and nurture. Scientists working in the laboratories in the field of epigenetics understand environment in relation to human body, for example, food is quantified as nutrition that is permeable to human body and can have an impact on health and disease.

### **Innovations in Genomic Innovation: Precision Medicine and Development Plans in Singapore**

*Wairokpam Premi Devi ()*  
*Ian McGonigle ()*

The concept of 'genomic innovation' has recently attracted the attention of STS scholars. Drawing on insights from the social study of biosciences, this paper examines Singapore's prevailing imaginaries of genomic innovation co-produced with a distinctive and collectively shared idea of nationhood and national development. We discuss this imaginary of genomic innovation by building the concept of 'sociotechnical imaginaries,' which combines a strong instrumental view of S&T with the psycho-social dimensions of national development. We describe Singapore's characteristic approach to framing risks and benefits, to both public and private interests, and how effectively respective biomedical institutes articulate their imaginaries and tailor their strategies to design precision medicine. We thus show how these sociotechnical imaginaries relate to Singapore's political culture, its conceptions of nationhood, and its vision of a globally networked economy. Overall, this demonstrates the utility of studying the entanglements of national development and national identity through the lens of biosciences.

### **P05 - Ecologies of Knowledge Regimes**

*Marion Schulze (University of Basel)*

#### **Boundary workers: facilitating dialogue between STS and the scholarship of ITD to address societal challenges**

*Bianca Vienni-Baptista (TdLab, ETH Zurich)*  
*Isabel Fletcher (University of Edinburgh)*

In academic and policy discussions, interdisciplinarity and transdisciplinarity (ITD) are seen as important means of producing knowledge to address societies' grand challenges. However, the literature on ITD is widely dispersed (Vienni-Baptista et al., 2022), leading to disconnects between different communities who undertake collaborative research. This disconnect is particularly puzzling in the case of Science and Technology Studies and ITD scholars who often share research topics – the nature and development of disciplines, day-to-day practices of knowledge production, the influence of funding on the knowledge produced, and broader science-policy interactions. Yet, with some notable exceptions, there is little articulation between these communities, perhaps because the uncertain status of both fields means that the risks to academic credibility outweigh the benefits of collaboration. We see this as problematic as knowledge and recognised good practice on how to better foster inter- and transdisciplinary research are rendered invisible, causing unnecessarily fragmented approaches to societal challenges. Instead of research capacity increasing, there is an unnecessary process of rediscovery leading to supposedly novel solutions for previously identified problems. In this paper, we explore the reasons for this perceived reluctance to work across knowledge boundaries, using data from three international projects bridging STS and ITD, as well as our personal experiences as researchers working at this interface. Insights from semi-structured interviews and an extensive literature review enrich our analysis with perspectives from both communities. We conclude with recommendations on how to facilitate ongoing mutual learning between these communities, thereby improving challenge-oriented research and its uptake.

#### **Expertise in and of co-creation: organising citizen participation**

*Ariadne Avkiran (University of Vienna)*  
*Sarah R Davies (University of Vienna)*

Co-creation – one means of supporting public participation in science and its governance – aims to empower citizens to shape research questions and agendas, collaborate across disciplinary boundaries and sectors, and help develop research that responds to societal challenges. In this paper we consider how expert knowledge is negotiated within such processes, focusing in particular on the expertise that is necessary to carrying them out. Our analysis builds on STS literature that views expertise as something that is performed rather than a stable attribute (Hilgartner 2000), and explores how expertise is acknowledged, contested, and articulated – meaning, we are concerned with what kind of practice expertise is represented as, differentiating between expertise as episteme ('knowing that'), techne ('knowing how'), or phronesis ('knowing why'; Mehlenbacher 2022). We draw on a multi-sited ethnography of a co-creation project that included regular field visits, participant observation, and semi-structured qualitative interviews. Our argument is that while different forms of expert knowledge are performed, acknowledged, and contested within the project, expertise relating to carrying out societal engagement with research is central but relatively little acknowledged or valued. In addition, we find that the work of organising interactions and negotiations between academic, lay, and lived knowledges - work that often entails engaging with moral questions - is performed as phronesis ('knowing why'). We thus argue that organising co-creation can itself be understood as an expert practice, one that comprises not only technical but embodied skills such as networking, translation and care. Our analysis is therefore relevant to discussions of how expert knowledge (from science and elsewhere) is present in, and comes to shape, social identity, political citizenship, and cultural heritage in contemporary societies.

### **Situating Interlinked Cultural Heritage Data on the Web**

*Julien Antoine Raemy (Universität Basel (Basel))*

This paper focuses on situating data produced by humans and nonhumans engaged in the cultural heritage field and published on the Web in line with the Open Science and Citizen Science movements.

It aims to map the associations among various communities of practice, particularly within libraries, archives and museums, and the precarious balance between exhaustiveness and a rigid structure of data description versus the potential for multiplying assertions, bypassing cataloguing rules and their underlying postcolonial constructs. The openness and interconnection of data makes it possible to examine the form of description as well as the method of publication, and inevitably to analyse the biases linked to the associated vocabularies.

For instance, the Web, which has claimed to be a Semantic Web for several years now, has a centrepiece known as Resource Description Framework (RDF), a general method for describing and exchanging graph data and a Web standard since 2004. The Semantic Web offers major opportunities for the Humanities because it allows data to be reasoned together, to be understood by machines via RDF-based ontologies, a formal way to represent human-like knowledge. Developing infrastructures, or sites of assemblage, capable of creating and maintaining RDF statements and other related technologies or building on this standard to interconnect online records is not straightforward and requires a fair amount of socio-technical elements to be implemented.

As a demonstration, I will look at the practices of two community-driven initiatives, mainly active in the cultural heritage field, through an Actor-Network Theory (ANT) lens: the International Image Interoperability Framework (IIIF) and Linked Art, which have developed shared specifications and related services on agreed-upon design principles.

### **P20.3 - The Living Rooms of Computation: Practices, Alignments, Frictions (Session 3/3)**

*Florian Jatton (University of Lausanne)*

*Anna Jobin (Université de Fribourg)*

### **Guiding code development: Evolutionary construction of recommender systems**

*Camille Roth (Centre Marc Bloch (CNRS))*

*Jeremie Poiroux (Centre Marc Bloch (CNRS))*

Recommender systems have become an important object of sociological research, primarily because of their effects on the online world, particularly on digital public spaces (Hallinan and Striphias, 2016; Plantin et al., 2018). More recent sociological and ethnographic works consider that algorithms encode and implement human and organizational intentions (Kellogg et al., 2020; Seaver, 2018; Airoidi, 2021). For our work (Roth and Poiroux, 2022), which is largely rooted in the field of Science and Technology Studies, we understand recommender systems as “socio-technical assemblages” (Glaser et al., 2021; Ananny, 2016), i.e. the collaboration between humans and machines in order to recommend content or objects to users on online platforms, which we examine through a qualitative study based on interviews with about 30 developers from as many different organizations. Our main result is as follows: since recommender systems are deployed on platforms with a large number of users, we observe that their code evolves in a hybrid manner that is continuously dependent on both the work of developers and the actions of users. Tests, especially the so-called A/B tests (Kohavi and Longbotham, 2017), quantify user reactions in real time in terms of objectives that are essentially commercial in order to arbitrate between many code variants. From this perspective, code development is to a large extent a semi-autonomous evolutionary process in which user testing is the main decision maker who, not unlike a manager, “validates” all changes and forces engineers to abandon ideas that do not produce sufficiently satisfactory results. In the configurations we have observed, the socio-technical assemblage operates at a meta level: it is just as if the test platforms were regularly and almost autonomously updating algorithms that have been slightly modified by human engineers who are mainly in charge of introducing genuine yet incremental transformations in the code.

### **Situations of Machine Learning. Reflexive Problem Calibration in Art and Science**

*Richard Groß (TU Dresden)*

In my talk, I will draw upon John Dewey’s understanding of situations to present machine learning as a material practice that takes shape through challenging episodes. Based on a comparative ethnographic case study of machine learning in art and science, my argument will focus on problems concerning the practical requirements of successful cooperation between heterogeneous human as well as non-human “machine learners” (Mackenzie 2017).

I will present two situated cases of machine learning – one in media art, and one in honeybee research. In my analysis, I will point out that these engagements with contemporary computational technologies feature a distinct style of tinkering and trial and error approaches. While experimentation is typical of art and science as “forms of world exploration” (Rheinberger 2019, 236), the particular dynamics of the observed situations also reveal how specific problems in machine learning are addressed. Specifically, I will focus on how visualization techniques serve to establish intuitions about machine learning models as well as the structure and the implications of the datasets the models are based on.

While presenting as challenging to the involved practitioners, the observed situations do at no point indicate a breakdown of the practice. Far from that, they are cultivated as an integral part of the practice. Based on this observation, I will argue that it is through their productive transformation in experimental settings – ‘weak’ situations with relatively little at stake – that common issues faced in machine learning are resolved in practice. Such issues include the addressability of machine learning models and the incomprehensibility of their outputs as related to questions of contingency (Esposito 2022) and (in-)visibility (Amoore 2020). While these issues cannot be eliminated, they can be productively calibrated in practice.

## **Ground(ed)-truth? Building a dataset in the industrial context**

*Louis Devillaine (Univ. Grenoble Alpes, CNRS, Sciences Po Grenoble, Pacte, 38000 Grenoble, France)*

The creation of a supervised artificial intelligence system (AIS) requires the construction of a training dataset, referred to as the ground-truth (Jaton, 2020). In the industrial context, these ground-truths serve as references for the AIS and allow them to perform decisional or predictive tasks in order to increase productivity.

We have led an ethnographic study in a large high-tech company in France, where we used a method of participant observation in its quality department to investigate the design and the deployment of a new AIS. The goal of this AIS is to improve the detection of specific quality issues on the production line by automating specific alerts.

Throughout this study, we analyze the enactment of an AIS' dataset (Orlikowski, 2000; Barley & Leonardi, 2010). This helps to better understand the co-construction of both the technology and the representations of their designers through their reciprocal interactions.

By highlighting three parallel steps of the dataset's design – categorizing, filling and annotating – we display the different practices of truth of the AIS trainers (Henriksen & Bechmann, 2020). The dataset is the dynamic result of a process of knowledge reification (Forsythe, 1993) that produces a contingent, instrumental and negotiated ground-truth. Using synthetic data that they produce themselves alongside realistic samples, AIS trainers become both judges and judged of what constitutes the quality (Grosman, 2019). This new ground-truth makes limited use of the prior knowledge from technicians who face these quality issues on a daily basis. Along with Florian Jaton, we suggest the notion of grounded-truth to reflect the subjective and situated aspects of the constitution of datasets (Jaton, 2020, p. 76).

## **P29.2 - Knowledges Revisited / Students' Perspectives (Session 2/3)**

*Charlotte Nachtsheim (University of Basel)*

*Alain Müller (University of Basel)*

### **Drawing diagrams in the sand: Reconciling tensions between innovative knowledge production for design practice versus peer-reviewed publication**

*Niti Bhan (Aalto University)*

My contribution to the conference theme of Knowledges Revisited/Students Perspective looks back at my research-based practice as a designer with 30 plus years of experience who has entered academia as a novice scholar after age 50. Only by reflecting on one's own transformation journey (Mezirow; Mertens, 2017) can one offer insights that may help build creative knowledge bridges as a cultural interface between practice, research, and social change. I identify three areas of tension in the interstitial spaces between basic and applied research, and use these to re-visit my scholarship and re-interpret my research context and aims for better fit with society's needs for sustainable development and decolonization.

One approach that seems promising is to use cognitive justice as a lens by which to approach research planning. Rooted in decolonial thought and attributed to development scholar Shiv Visvanathan (1997; 2005; 2021), cognitive justice promotes the recognition of a plurality of knowledge systems, and opens the door to incorporation of Indigenous ways of thinking (Yunkaporta, 2019) developed on the foundation of Nakata's Cultural Interface theory (Nakata, 1998; 2007) which seeks to reconcile incommensurable knowledge systems through identifying commonalities and points of overlap as a means to build bridges for innovation and creativity (Yunkaporta, 2009). I develop this thinking further in my reflective paper which seeks to reconcile the conflicts and tensions of practical knowledge production for innovation and design with the requirements and restrictions of publishing within the academy. Thus, I also respond to

Gaver et al.'s call (2022) to "more openly embrace the potential for design research to be radically emergent and reflect this in the way we report and evaluate our work".

### **What kind of experts are patent examiners?**

*Benedicto Acosta Díaz (UNIVERSITY OF SALAMANCA)*

Expertise is one of the key issues in recent philosophical reflection, especially in epistemology and political philosophy. Most philosophers concerned with the issue tend to understand expertise by referring to three conditions, which are not necessarily exclusive. Expertise is said to be a) a range of skills, b) a type of knowledge, c) a form of social recognition. The aim of my research is to discuss these conditions in the wake of a scientific and technical institution that seems to have been forgotten by the literature: patent systems. To do so, I make use of information gathered from in-depth interviews with twelve Spanish patent examiners.

In my study I try to show how patent examiners, when confronted with inventions that are mostly novel, have difficulties in understanding what exactly those technologies or artifacts they evaluate consist of. I start from a twofold hypothesis: if, on the one hand, the examiners accurately understand the invention they are evaluating then there is a likelihood that it is already part of the state of the art, and therefore not novel; if, on the other hand, examiners are not able to understand all the details or mechanisms of the invention, the likelihood that it is original is higher, but the ability to discern the veracity or the industrial application is diminished.

For these reasons, I argue that the expertise of the patent examiner may consist in some kind of ability to read patent documents, to detect which parts claimed as novel are actually novel, and not only in the exhaustive knowledge of the performance or mechanisms of the inventions they evaluate. This conclusion is supported both by the information gathered in the interviews and by the existing literature on patent filing strategies.

### **111 Multi-Method Investigation of Standard Datasets may Improve Machine Learning Model Accountability**

*Tim Cech (Digital Engineering Faculty, University of Potsdam)*

Today, in many Machine Learning research papers, standard datasets are used for evaluating the proposed technique. Such standard datasets usually contain example data with labels considered ground truth. For evaluation, Machine Learning techniques are tested on how well they predict the ground truth labels from an unseen test sample. Many research papers do not argue why a specific dataset is used. We argue that this practice results in hidden threats to validity usually not discussed in the paper and thus impede model accountability. One such standard dataset for text classification is the 20 newsgroups dataset. Regarding this example, we argue that the language used on a loosely moderated mailing list concerned with atheism in the 90s may not be representative of the general discourse on the topic of atheism. Furthermore, labels usually do not account for nuances in the example data because the labels represent the use case the original author intended which may differ significantly from the investigated use case. To address those problems, we propose that evaluations should also report how the investigated use case and the dataset are related. We strongly encourage researchers to invest in close reading of the dataset, especially in application scenarios targeting fairness and bias in Artificial Intelligence. By accounting for such nuances, we argue that this increases the goodness-to-fit between investigated Machine Learning technique and the intended use case and thus increase model accountability.

### **P22 - Distributed Authorship and Responsibility**

*Margarita Boenig-Liptsin (Assistant Professor of Ethics, Technology and Society, ETH Zurich)*

## **Adorno on Radio – Improvisation and its Images of Authorship**

*Frederike Maas*

In the 1950s and 60s Theodor W. Adorno was one of the most sought-after guests on German radio. However, he never wanted his broadcasted works to be understood as part of his oeuvre. Subsequent to this decision, it can be asked what differentiates philosophical discourse held on the mass medium radio from its written equivalents. Adorno particularly excelled in the format of the radio conversation, in which he discussed contemporary issues with one or more interlocutors. The basic principle of the conversation appears to be that it is “improvised speech”: The speaker answers to what his/her opposite says and unless the conversation is entirely scripted this always leaves room for the possibility that s/he has to react to something unexpected, thus, to improvise. This improvised character of the radio conversation might be what made Adorno devalue these works as something “imperfect” intended for a wider audience than his linguistically sophisticated books. In my presentation I do not want to challenge Adorno’s own devaluation but argue that the format of the radio conversation inherently questions conceptions such as “oeuvre” or “authorship” via the practice of improvisation, which I understand as being based on combinatorial reproduction instead of constituting a genuine and spontaneous creation. With this shift of perspective, the problem yet arises who is to be held responsible for what is being said. In this regard, I would like to demonstrate how in the case of Adorno’s radio conversations the idea of a “transcendence of the author” can function as an aesthetic strategy that creates a form of authority by invoking the historically charged image of “inspired speech”. As I would like to highlight, references to such traditional formula serving here to dress up a new technology should be critically attended to as they might imply suggestive effects.

## **Seeing an AI-therapist: The co-construction of artificial care**

*Greta von Albertini (University College London)*

One in eight people suffered from mental illness worldwide in 2019, and levels of anxiety and depression rose by up to 28% the following year because of the Covid-19 pandemic. Due to stigma, inequalities, and underfunded public health services, most people are left untreated (WHO, 2022). The use of artificial intelligence (AI) for psychotherapy is increasingly marketed across Europe and America as a solution to these rising mental illness rates – despite a considerable knowledge gap regarding its societal impacts and risks (The Nuffield Council on Bioethics, 2022). Proponents of the digitisation of mental healthcare emphasise its potential public health benefits: low-cost interventions, increased accessibility, reduced stigma, flexibility, and scalability. However, conceptualisations of the ‘global mental health epidemic’ neglect systemic inequalities and “underlying social causes of mental ill health” (Rose et al., 2021: 4), resulting in an erroneous sense of a ‘universal cure’ as desirable – or even possible. Such novel technologies and the surrounding narratives shape the ways in which we think about mental health and illness; what to expect from the therapeutic encounter; and who bears responsibility for ‘getting better’. I will apply Woolgar and colleagues’ (2022) analytical tool of the ‘imposter’ to AI-based mental healthcare to raise “questions and concerns this figure evokes” (17) and the social relations surrounding it, because the “effects of imposter, [...] are multiple, situated and relational” (ibid.: 25). Impostering is not an individual action, but an assemblage of socio-technical relations (ibid.: 26) – eg. the audience, readership, or users are complicit in the production of impostering and deceit (ibid.: 19). ‘Thinking with’ the imposter about mental health apps opens questions about authorship, responsibility, and human agency as it sheds light on the co-construction of a chatbot as ‘therapist’ or companion within the socio-technical assemblage.

## **P10 - Global Collaboration for Knowledge Co-Production**

*Fabian Käser (Swiss Commission for Research Partnerships with Developing Countries (KFPE))*

*Anja Bretzler (Swiss Commission for Research Partnerships with Developing Countries (KFPE))*



## **Coloniality, development, and global research collaboration**

*Pascal Schmid (University of Basel)*

This paper argues that the debate about ethics, fairness and equality in ‘South-North’ research collaborations, as reflected for instance in numerous guidelines, tends to ignore historical and structural aspects that are specific to global relations in the postcolonial world and therefore runs the risk of de-historicizing and de-politicizing the unequal playing field on which research collaboration takes place. Research collaboration is not happening in a vacuum, but is framed by international relations, a joint history, the global economy and transcultural spaces. This contribution a) seeks to historically trace some epistemological and structural aspects of coloniality in knowledge production; b) reflects on the relationship between development (aid) and research (collaboration) since the colonial development state and the role of notions of development in the current global academic landscape; and c) explores the value of concepts such as intercultural communication, development diplomacy and science diplomacy, and reciprocity for framing the debate about global research collaboration.

## **One Health - global transdisciplinary collaboration**

*Kristina Pelikan (Swiss Tropical and Public Health Institute)*

*Jakob Zinsstag (Swiss Tropical and Public Health Institute)*

One Health should be understood here as the linkage of the health of humans, animals and their environment. Thus, One Health is always interdisciplinary mainly global. We all need health and only together can we be sustainably healthy. In order to achieve this, the work in the field of One Health is increasingly transdisciplinary, meaning the cooperation (integration) of academic researchers from different disciplines with non-academic participants, often between different cultures and languages, in co-creating new knowledge and theory to achieve a common goal for One Health. This creates incremental added value, insights or benefits that are not gained in interdisciplinary collaboration alone. One Health, as understood here, is based on a multi-epistemic approach with values and concepts manifested in language (embedded in various communicative practices and strategies), which contradicts the use of a common language. Even when using a lingua franca, so-called intralingual multilingualism occurs due to the different technical languages and dialects within a language: One Health is therefore always multilingual, which has also ethical implications. We analyse qualitatively communication examples of different international and transdisciplinary projects in the field of One Health for presenting our multiepistemic collaboration in One Health and its specificities regarding communication and consensual intercultural hermeneutics. It will become apparent that only through strategically used multilingualism can the added value of transdisciplinary communication in the field of global One Health be achieved.

## **Jacqueline Tyrwhitt’s Circulation of Grey Building Literature, 1955–1972. Creating an Alternative Knowledge Network**

*Martin Kohlberger (ETH Zürich)*

Working from the second row in first row organizations such as the United Nations or Harvard, the urban planner and academic Jaqueline Tyrwhitt was establishing an alternative knowledge network. From 1957 until 1972 she edited the Ekistics Journal and thereby published more than 2.000 reports and abstracts. By uncovering different knowledge from all around the world, abstracting articles and disseminating them via her personal network and through Ekistics, she made subaltern knowledge accessible to a wide audience of practitioners, academics, and development advisors. While working within and outside of dominant systemic relations, through distributing these abstracts and promoting hands-on ideas Tyrwhitt managed to provide mutual aid and help locals in indigenous communities in sustaining their livelihood.

Analyzing and categorizing the abstracts she published in the *Ekistics Journal*, I compare her approach to ongoing trends of that time. In my paper, I try to understand the roles Tyrwhitt took such as an expert and advisor at the UN, as an assistance professor in Harvard, and especially by editing *Ekistics*. I argue that she skillfully adapted to changing conditions of technical assistance and a monetarization of knowledge to gain valuable information. Thereby she managed to connect various non-canonical knowledge fields of grey building literature.

By an extensive data analysis of the *Ekistics Journal* and the networks made visible within the single abstracts, the paper tries to discuss the position Tyrwhitt was working in. How is it possible to relate the networks she fostered to a simultaneous change of language and topics in urban planning and development aid from hands-on to policy-oriented. How did she tweak the discourse dominated by the legacy of colonial networks – and later big American-centered organizations? And how did she manage to restructure the relationship of knowledge out of the second row but globally privileged positions she inhabited?

### **Ukrainian-French cooperation: development in the conditions of war?!**

*Inna Shulga (Université Paris-Saclay)*

The report considers whether February 24, 2022 became a pause or a new commencement for Ukrainian science and its partners. We suggest turning to the experience of Ukrainian-French cooperation in the field of nuclear and high-energy physics between the Laboratoire de Physique des 2 Infinis Irène Joliot-Curie and the NSC "Kharkiv Institute of Physics and Technology" (hereinafter Institute). Although from the beginning of the full-scale Russian invasion, the Institute suffered significant destruction, it continues its work today in conditions of military danger, being located only 20km from the Russian border.

Despite the realities of Ukrainian life (constant rocket attacks, lack of electricity, etc.), as well as the ban on men going abroad, the Institute has maintained scientific ties. Interest in Ukrainian-French cooperation is a valuable both partners' choice. The project research and educational directions, which developed fruitfully before the war, are implemented remotely. From September 2022, monthly online seminars for Ukrainian students resumed. Under these circumstances, it's an effective way of attracting young people to communication with leading French specialists on current topics. Such meetings complement the lectures of Ukrainian teachers, motivating students to study and further work.

Drawing historical parallels, let's note that the Institute continued working during the WWII. The scientists, along with equipment and library, were evacuated to Kazakhstan. Although the main activity of the Institute consisted in the fulfillment of defense-related tasks, during 1941-1944 physicists published their previous results in the "Journal of Physics". Thus, the Institute preserved its material base, scientific potential and subject matter.

In the war conditions, the development of science, a scientific life seem impossible, being incompatible with human and cultural values. Therefore, the "restart" of cooperation is not only support, but also recognition by the scientific community of the right of Ukrainian scientists to actively participate in the modern science development.

### **P18 - Digitalization in Feminist STS Perspective**

*Bianca Prietl (University of Basel)*

*Doris Leibetseder (University of Basel)*

*Anna Kerstin Kraft (University of Basel)*

### **From digital inclusion to transfeminist IT appropriation**

*Sol Martinez Demarco (IZEW, Eberhard Karls Universität Tübingen)*

Promoting the participation of females and other marginalised groups in the IT sector is based on the perceived economic benefits of a diverse labour force, on ethical considerations such as justice and equality, and in the Free and Open Source Software (FOSS) community on reasons such as joy, autonomy, empowerment and emancipation, which are inherent to its voluntaristic character. However, these groups remain a minority in the IT labour market and the FOSS community. While the interest and support for diversity inclusion in technology from industry, academia and politics has been growing since the turn of the century, the specific issue of volunteer groups (communities, collectives, associations, and others) in IT promoting diversity has not featured prominently in literature or policy. Moreover, the acknowledgement of the importance of digital inclusion has mainly been considered from a quantitative perspective (Montes Agudelo et al., 2017). The social, normative and substantive aspects, as much as the legitimacy and reflexivity characteristics of inclusion (Kok et al., 2021; Hoffman, 2021) are not part of the design and implementation of these policies. Addressing these concerns, literature on IT appropriation from a Latin American perspective (Lago Martínez et al., 2018) has focused on understanding practices and processes of relating to technologies at personal, collective, institutional and social levels. In this paper I will adopt this perspective to present preliminary results of my fieldwork (participant observation and in-depth interviews) with a transfeminist community of volunteers promoting the inclusion of marginalised groups (gender, sex, sexual orientation, body size, ability) in the IT labour market of Argentina. I hope to expose the political aspect of inclusion (who determines who is included and in what ways) as much as the transformative aspect of appropriating IT (reflexivity and autonomy as basis for new imaginaries about digital societies).

### **Activating Queer Bodies in the Digital Lifeworlds**

*Qingyi Ren*

This paper discusses the intersection of gender and artificial intelligence (AI). By reflecting on my previous art practice looking at gender narratives in face databases to explore how the binary concept of gender is deeply embedded in digital space. And using media art practices to activate the queer body in the digital world, it discusses the role of the queer body in dismantling the heteronormative hegemonic digital order and challenging the binary concept of gender. And understanding the queer body as matter - that is, as living substance and as digital matter - as a hybrid body discusses spatializing identities queering digital space and as an extension of the body that responds to the performativity of gender in digital space.

### **P25.1 - Knowing Microbes. Ferments, Homes, and the Industry (Session 1/2)**

*Elise Tancoigne (University of Lausanne)*

*Henri Boullier (CNRS)*

#### **“Slow science” and human microbe relations: The case of Fermented Bamboo Shoots in Manipur, India**

*Wairokpam Premi Devi*

*Hemant Kumar*

In Manipur, fermented bamboo shoots (FBS) continue to be a staple of traditional cuisine. Local amateur fermenters perform the fermentation process, and fermented food is produced as a result of the actions of non-human actors from the typical microorganisms of succulent shoots, including fungi and bacteria. The pre-operational process for the manufacture of FBS is fairly straightforward and conventional, in contrast to the fermentation of other crops and vegetables. These practices are reminiscent of the "small" or "little" scientific culture of the 19th century, in which amateurs or non-experts participated in the creation of knowledge rather than acting as consumers of science. In FBS processing no modern technology, no scientific understanding, and an almost informal way combined with cultural beliefs were

practised. In this article, we investigate the pattern of interactions between humans and non-humans in the context of slow science and how this shapes amateur fermento knowledge. Additionally, it investigates how actors—both humans and microorganisms—and their networks are represented in these relationships. What are the sources, boundaries, and methods for assembling the group of actors and actants to maintain a set of relationships? The research is exploratory in nature, employs a descriptive research design, and examines instances of FBS fermento in the north-eastern Indian state of Manipur. We interacted with the numerous actors involved in the process and observed multiple fermentation sites. We discovered that there is a complex interaction between human and non-human actors throughout the fermentation process. The majority of the action is carried out by non-human actors, and it was fascinating to observe the human-microbe relationship, where equilibrium and coexistence are essential. There are many aspects of the process that are determined by non-human actors. It suggests that the interaction between humans and microbes illuminates the concept of microorganisms as co-workers and allies.

### **From the production of knowledge related to a fermented drink to their dissemination: The water kefir in France**

*Renaud Debailly (Sorbonne Université)*

*Christophe Lavelle (Sorbonne Université, Museum National d'Histoire Naturelle)*

This presentation will deal with practices and representations of consumers in France of a specific fermented beverage, the water kefir. This homemade beverage, with poorly known properties, is produced thanks to a ferment composed from a symbiotic community of bacteria and yeasts. We observe a growing interest in the media and among consumers which see it as a drink that will have positive effect on health. This food innovation based on its quality as a healthy-food leads to the rediscovery of practices and know-how that were until now confined to the domestic sphere in which they were transmitted.

This research addresses three aspects related to this beverage. The first aspect relates to the consumption and the representations associated to it. The challenge here is to show that individuals turn to this drink for health-related reasons or because they have known it since they were young. The second aspect brings us to the circulation of the ferment. When producing this drink, the question quickly arises of what to do with the multiplying ferment. The consumer can choose to donate, to sell it or even to get rid of it to keep only what is necessary for his or her personal production. The last aspect leads us to address the formal and informal rules that govern the production of the drink. Individuals don't just trade kefir grains on forums or websites. They also contribute to the diffusion of knowledge, know-how and beliefs about the drink and its effects.

Finally, this exploratory study, focusing on lay expertise among consumers, advocates for a better interrelation between the understanding of kefir in the laboratory and the way consumers change the initial substance in applying recipes or inventing them.

### **Groping and composing with bacteria and the hygiene and safety standards imposed on small dairy sheep herders at high altitude (France, Pyrénées-Atlantiques)**

*Sandrine Ruhlmann (CNRS)*

In a village in the high Pyrenees mountains, Émile recalls how from 1990, with the arrival of tanks, the “cheeses became more stable” – “there was a lot of breakage before” – but that they had to “add natural lactic flora”. They then tried to add “yogurt from the day before” to return to a more “natural” production, but the cheeses were “no longer stable”. In fact, today his mother Rose-Marie and his younger sister Michelle, who make the cheeses in a standard production room, add a tiny dose of ferment “to stabilize”, “to help”, whereas before there was no need –before, they just added some rennet “to curdle” the milk. Émile summarizes: “we put more ferment to encourage good bacteria” and we “use lyes to clean the pipes [of the milking machine] and avoid coliforms” that make the cheeses “swell” or “explode”. This

involves finding the “best balance in the environment”, neither too much nor too little “bad bacteria”, in order to favor the “good bacteria”, which implies compromising between local practices, passed down from generation to generation, for the production of a cheese with a local identity, and hygiene standards imposed from 1975 onwards and strengthened in the 1990s. The herders are therefore groping and composing to preserve the texture and taste of the “tomme”, while ensuring a stable quality for the sale – a small-scale local sale. On the basis of an ethnographic field survey, the aim is to examine the practices and discourses of a few families of herders in order to draw the contours of their microbial ecology and its evolution in the face of a desired mechanization and a forced hygienization policy perceived in an ambivalent manner and with which the herders juggle according to some experiments they choose to carry out at times.

## **P32.1 - Governing Conflictive Sociotechnical Transitions (Session 1/2)**

*Nicolas Baya-Laffite (University of Geneva)*

*Basil Bornemann (University of Basel, Departement of Social Sciences, Sustainability Research)*

### **Assessing societal dynamics of transitions: ecology, energy, and beyond**

*Stefan Cihan Aykut*

### **Twin transitions? The environnement, the digital, and the narrative of conciliation**

*Nicolas Baya-Laffite (University of Geneva)*

The idiom of the "twin transitions » emerged recently to conciliate two global transformations that are currently taking place: the transition to a ecological, sustainable, low-carbon society (referred to as the « green transition" or "climate transition") and the transition to a digitalized society (referred to as the "digital transition" or "digital transformation"). The green transition aims at mitigating climate change by, for exemple, adopting renewable energy sources, improving energy efficiency, promoting sustainable practices, and transitioning to cleaner technologies. The digital transition, on the other hand, aims at driving the ongoing integration of digital technologies into various aspects of society, such as communication, commerce, governance, and industry in such a way that efficiency, productivity, connectivity, and innovation are enhanced across multiple sectors. Both transitions encompass a wide verity of actors across multiple sectors, including energy, transportation, agriculture, and industry, making them wicked governance problems, particularly as both suppose transforming the very same sociotechnical infrastructures of contemporary societies. Recent political discourse has framed these structural transitions as « twin »: by highlighting a specific form of interconnectedness among them, such narrative implies that both transitions can and should mutually reinforce and support each other. Drawing on the outcomes of a research seminar organized during the spring 2023 on "governing conflictive transitions\*", this paper proposes a research program to investigate critically the construction of the "twin transitions" narrative as a form of digital techno-solutionism to the environmental crisis that aims at hiding the central need for a politics of limits, while reinforcing specific powerful, dominant digital imaginaries. In this light, instead of looking at digital environmental convergences in termes of technical solutions, the proposed program invites to reflect on the role of conflict as a core driver for both processes of transformation, in particular regarding the construction of enforceable regulation. Thus, the paper concluded by highlighting the need for a history focused on the learning from one transition to the other, rather than on ecological synergies or tensions.

### **Governing digital infrastructures in the light of ecological imperatives**

*Leo Girard*

Often reduced to its virtual dimension in socio-technical imaginaries, the Internet is being exposed in its material form in certain places and for certain specific audiences. If we consider the situation in Europe, its most significant territorial manifestation is the datacenter, which cannot easily be relocated for reasons of technical efficiency and sovereignty - unlike the other massive material elements of this system that are located outside European borders (mines, factories, waste storage...). Hidden face of the cloud, this key element of the digital infrastructure is revealing itself to a few actors, particularly in the light of important environmental issues: to public authorities as energy concerns grow, to the inhabitants of a village who see huge warehouses set up on the site of their open-air theater... This spotlighting of the digital infrastructure is prompting the actors developing government tools to better understand the issues at stake. Numerical evaluation and mathematical modelling, ubiquitous tools in governance, occupy a particularly central place in the governance of the environmental impact of digital technology. Bridging the gap between the digital world's ideals of calculability and optimization, and its ecologist critics, eco-indicators are at the heart of standards and regulations applied to the environmental challenges of digital infrastructures. This talk will provide an overview of existing research on datacenter governance as a central issue at the crossroads of digital and ecological transitions and discusses my own research on the case of datacenter governance in Vaud canton, along with current indicators and standards used therein.

### **P17.1 - Capitalization: Critical Perspectives on Innovation, Entrepreneurship, and the Start-Up Economy (Session 1/2)**

*Loïc Riom (University of Lausanne)*

*Tanja Schneider (University of St. Gallen)*

### **Value in transformation in the Anthropocene. How the climate and ecological crises reshape assetization in the platform economy. A research program.**

*Franziska Cooman (WZB Social Science Center Berlin)*

The global political economy is witnessing a significant shift in its structure due to the effects of the ecological and climate crises. At the same time, the platform economy has emerged as crucial new socio-economic sector. In the platform economy value is created via a layered process of assetization along the investment chain. Venture capital investors assetize startups to create rents for themselves and their capital providers; startup companies assetize, amongst others, data, intellectual property, or natural resources. As the climate crisis worsens, there is an increasing need — socially, politically, and economically — to reconcile this pursuit of financial value along the investment chain with ecological sustainability. Instead of addressing the general question of whether or not an actual reconciliation is possible, this project studies 'value in transformation' in the Anthropocene and the concurrent recoding of power. Specifically, my main interest lies in the ways in which the ecological and climate crises are reshaping assetization in the European platform economy. I present results from previous research on venture capitalists valuation practices and outline a future research program, which focuses on green assetization in the platform economy.

### **Academia Matters: Reimagining the Patent System In the Indian Context**

*Siddarth Jain (Jawaharlal Nehru University)*

This paper makes an attempt to study the valorisation concept around academic research. Today's research is continuously pacing up with the evolving technological changes, hence the idea of capitalising a research is entirely depended on its outcome, which can be publications or patents. Even furthermore, the idea of valorising academic research amounts to patents being filed and how successfully they are capable of being translated for commercialisation. The STS curriculum evenly points out and differentiates the need to have both basic research and applied research, but orienting a

research for the sake of filing patents to further capitalise their research has become a subject of discussion, especially when Global South are trying to mimic steps taken by Countries from the Global North. One Such example is the Bayh-Dole Act of the United States, an act that primarily facilitates patenting by research institutions. As a part of study, it proposes to do an in-depth comparative analysis in the areas of policymaking where discussions on proposing a similar act for developing economies are considered. Encouraging Research institutions through Intellectual Property Rights for seeking research funds will soon become a subject amongst the public institutions, a step towards bureaucratisation in academia. India has long been considering in placing a similar act, thus the research institutions are increasingly looked as a vehicle for return on investment. The research also proposes and identifies the creation of epistemic 'Patent' communities, the underlying reason being the conflicting opinion on Patents in correlation with academic research institution. Thus a new set of administrative process will interfere in the research institutions where performing research and generating its output will no longer be looked the same way. The findings of this study will throw light on the subject of academic patenting through the lens of STS field.

### **Trade show spectacles, capitalization and the actualization of markets**

*Tanja Schneider (University of St. Gallen)*

*Lena Rethel (University of Warwick, UK)*

Professionally organized events – ranging from small expert meetings, to industry conferences to large trade shows – have become a key feature of global market life. Indeed, as Aspens and Darr (2011) show, such events play an important role in connecting people and introducing new products. While the study of events has become a discipline on its own called critical event studies (e.g., Robertson et al. 2018), what has received much less attention is the role such events – and their proliferation - play in capitalization practices. In this paper we examine this role of events by focusing on industry trade shows and food markets. We specifically draw on our ethnographic research on the promotion of halal foods and FoodTech innovation at prominent innovation summits and industry trade shows. Based on our analysis we argue that industry trade shows play an important role in what we term 'the actualization of markets'. We show how food markets are actualized in novel ways through the event of trade shows and innovation summits, be it in the form of the production of new networks/ecosystems or – and this is closely related – their increasing capitalization. More specifically, these events play a "spectacular" role in turning businesses in the halal and FoodTech sectors into viable "business propositions" and connecting them to investors.

### **P13 - The Rule of Experts, Revisited.**

*Sebastian De Pretto (University of Bern)*

*Lucas Müller (University of Geneva ? Departement of Geography and Environment / Scientific Collaborator)*

### **Squaring the Circle? The Role of Protection Forest Experts in Negotiation Processes with Local Rural Populations in Switzerland since 1876**

*Michael Flüttsch (University of Bern)*

Today, almost half of all Swiss forests have a protective function. The federal government and the cantons invest around 150 million Swiss francs annually in their management. In return, these forests make an indispensable contribution to preventing or at least reducing risks from natural hazards.

The now strongly institutionalized system of Swiss protection forest policy slowly developed from the second half of the 19th century onwards, largely under the influence of forestry experts such as Johann Coaz (1822-1918) or Elias Landolt (1821-1896). Actors like them gave rise to an "epistemic community" with the common goal of forming and implementing a modern Swiss forest policy.

The core of this paper is the comparison of the two case studies "St. Antönien" and "Bergün" to illustrate which strategies forestry experts have used since 1876 to implement their protection forest concepts locally and how they interacted with the rural population. The comparison of the two regions is appealing, since one used to be an isolated mountain valley without significant economic importance, while the other one came into national focus in 1898 as a critical waypoint of the new Albula railroad. However, what both case studies have in common is that the local population at some point neglected the strongly patriarchal approaches of early Swiss forestry policy.

Thus, the focus of the paper is to examine how these experts dealt with such local conflicts and how modern protection forest concepts were finally implemented in both places. The question is raised to what extent the local population was involved in this process, how potential conflicts were defused and how acceptable solutions could be found for all actors involved. Thus, the contribution is also relevant for the present, as Swiss protection forest policy is to face significant adjustments due to climate change in the coming years.

### **Chemical research between policy and science. The Chemisch-Technische Reichsanstalt as a governmental research institute from 1920 to 1945**

*Simon Große-Wilde (Universität Bielefeld)*

Chemical research between policy and science. The Chemisch-Technische Reichsanstalt as a governmental research institute from 1920 to 1945

The founding of the German Imperial Chemical-Technical Institute (Chemisch-Technische Reichsanstalt; CTR) in 1920 as successor of the Military Experimental institute (Militärversuchsanstalt; MVA) was a compromise due to the specific circumstances after the First World War. Because in Germany military research was forbidden, relevant scientists, industrialists and governmental employees decided to follow up with the scientific research of the former MVA by using its expertise under the new control of the Reich Ministry of the Interior in the newly founded CTR.

Based on Eva Barlösius' work on governmental research, the CTR can be described as a hybrid institute between policy and science: As a governmental research institute, the CTR produced regulatory knowledge needed for administrative decision making, but the CTR was also an active part of the scientific community, which meant a continuous exchange and sometimes conflict with other scientific institutions and organizations. Therefore, the science-based expertise of the CTR's employees played an important role for enacting laws or for decisions of committees in political practice.

In my presentation, I will focus on the history of the CTR as a governmental research institute in the period from 1920 to 1945. Since too little is known about the institute itself and the work of its employees, we need to reconstruct their scientific and also their political work during this period. This allows us not only to get a deeper understanding of the significance of the CTR in the Weimar Republic and Nazi Germany, but also enables us to analyse and compare the influence that these different political systems had on the work of the CTR and how the CTR's expertise influenced the political system and decision-making.

### **Challenging the expertise from within: The case of the Scottish Government Natural Capital**

*Jose Antonio Ballesteros Figueroa (The James Hutton Institute)*

One of the dispositifs through which climate change is expected to be managed is through notions like Natural Capital (NC). The UK government has developed the Enabling a Natural Capital Approach (ENCA), a blanket guidance expected to be followed across ministries and devolved governments. ENCA is an example of a broader push to link the value of environmental elements to their usefulness to human societies. In this sense, natural capital operates under the assumption that the only way for humans to care about the environment is by valuating it in economic terms (Redford and Adams 2009). This approach provides the "least possible information that can be shared about events and objects"



(Bowker 2007:109). This includes ripping out aesthetic, religious and spiritual elements. Bowker argues that financial institutions built the entire paradigm around biodiversity, starting with the OECD, which set the environment as a "pre-requisite for a strong and healthy economy" (2018:22). Through the discourse of "only that which is monetarised can be protected," nature's diversity and the multiple ways humans relate to it have been black-boxed.

Part of a larger project trying to understand how ENCA is being -if at all- enabled by the Scottish Government and multiple stakeholders, this paper will discuss preliminary results of interviews conducted to policymakers and civil servants. I deal with the processes through which assetisation occurs. The objective of this paper is to understand the minutia within expertise by examining how complex relations (nature-nature and nature-humans) are reduced to economic terms. Therefore, this is a practical paper where policymakers may provide a deeper understanding of the limitations, frustrations and perceived benefits of their everyday work. We expect to understand whether ENCA is being challenged or modified by civil servants.

### **Real estate valuation in practice**

*Uri Ansenberg (The Open University)*  
*Oz Gore (Kinneret Academic college)*

STS disciplinary research involving the studies of economic values and valuations came into fashion in the last few years. These studies, stretching over a large scope of topics and agendas, have not sufficiently addressed what seems to be an important political and economic arena of valuation practices - the real-estate valuation field. This paper aims to help in filling the gap in literature by ethnographically following real-estate values, and valuations in their circulation in and across cities, with a particular focus on real-estate valuation disputes. This study aims to fill this gap by shedding light on the social and material practices that shape the creation, negotiation, and contestation of real-estate values and valuations.

Drawing on findings from a 15 months ethnographic research conducted in the 'neo-liberal' city of Tel-Aviv, and the, occupied, and contested city of East Jerusalem, as well as interviews with real-estate appraisers, in depth analysis of valuations reports and a review of the relevant literature, this paper provides an understanding of the experts and expertise behind the movement of real-estate values and valuations. It shows how this movement, molded by various scientific instruments, models, and tools, is responsible for shaping the economic, social, and political reality of the city, as well as its urban planning, trade strategy, housing policies, and tax collection approach

### **P06 - Infrastructures, Maintenance, and Society**

*Alain Müller (University of Basel)*

#### **Quantum Technologies and the Public/Private Partnership Paradox**

*Thibault Ponchon (Univ. Grenoble Alpes, CNRS, Sciences Po Grenoble, Pacte, 38000 Grenoble, France)*

Quantum technologies (QT) as others emerging technologies promise radical innovations but remain uncertain and requires deep technoscientific developments (Rotolo, Hicks, et Martin 2015).

To stabilize this domain and make it safer, industrial commitment is presented as a condition for QT to emerge (July 2010). However, these technologies do not yet exist, nor does the industry to produce them. Their advent requires "long R&D cycles". These conditions do not fit in with the industry's current timeframes. Committing to such uncertain paths is too great a risk for companies, especially if they require profound technological changes. Nevertheless, QT are arousing a wave of interest among private players.

In this context, we try to clarify the paradox of public/private partnership: the private investment is expected to reduce the risk of QT whereas the risk is higher for the industry. This presentation outlines the tools and solutions developed by academic's stakeholders, policies, and companies to minimize the uncertainty for the industrial sector. We endorse the sociology of expectations approach (Brown and Michael 2003; Van Lente H. 1995; Borup et al. 2006) as a framework to measure both the attractiveness of the domain and the risk evaluations. We answer this question by analyzing the initiatives of several public and private actors in the "French quantum ecosystem" based on in situ studies and sociological interviews. It focuses more closely on the cases of 5 quantum startups.

We identified two types of solutions: the first solution is based on information and the second on financial strategies. First, evaluation tools such as TRL, roadmap, benchmarking help producing a more predictable outcomes for this future industry. The second solution consists of funding projects in relation to industrial interest and with private partners. Start-ups represent a way of combining the two strategies and minimizing risk without reducing technological uncertainty.

### **On becoming an infrastructure: Participatory and praxiographic interventions in a collaborative research institution**

*Fabian Pittroff (Ruhr University Bochum)*

Because there are multiple modes of knowledge and ways of doing science, one of the most difficult challenges of transdisciplinary research clusters is their integration. Even within the humanities, disciplines speak and work differently. Especially in long-term multidisciplinary research institutions, collaboration under a common program requires an ongoing process of bringing together and translating distributed interests and practices. Additionally, contemporary research environments are virtual in multiple ways: Every discipline uses at least some digital tools for their coordination or data handling, and meeting online is the new normal. This virtuality layer of current research environments is not just one more problem to handle, but a possible starting point to research and foster integration. Against this backdrop, the paper reports on the first year of a research project tasked to build a virtual research environment with and for a Collaborative Research Center (CRC), a long-term university-based research institution in Germany consisting of dozens of subprojects working under one theme. What distinguishes this infrastructure endeavor, is the deployment of ethnographic and participatory methods to inform and accompany the sociotechnical design process. The project follows participatory design principals (Simonsen/Robertson 2013) to develop a sensibility of what researchers actually use and need for their work. Besides workshops and user studies, a key element of this inquiry is an in depths praxiography (Mol 2002) of the multiple ways in which science is being done at the institution in question. That's why, this sociotechnical design project delivers insights into the challenges and opportunities of building a virtual research infrastructure in tight collaboration with the people using it. On this basis, the paper reviews the question if and how these participatory and praxiographic interventions, as well as the person doing them, will have to become part of the virtual research environment they are commissioned to build.

### **Servicing Transmission Lines and the State: the Story of High-Status Electrical Maintainers in Indonesia**

*Anto Mohsin (Northwestern University in Qatar)*

In the literature on maintenance and repair studies, we rarely encounter stories of maintainers and repairers who occupy a reputable position in a job hierarchy. Although Russell and Vinsel once argued that professional managerial classes could be considered "maintainers of corporate order" (Russell and Vinsel, 2017), these managers hardly see themselves as maintainers. Nor are they deemed by other people as necessarily doing maintenance work. Instead, most maintainers are low-status employees. They occupy (or forced to occupy) the bottom of social and job hierarchy and generally treated poorly. "Nearly all maintainers experience condescension on the job. Whether it takes the form of being ignored,

talked down to, or taken advantage of” (Vinsel and Russell, 2020). This paper discusses power line maintainers as high-status workers in the Indonesian state-owned electricity company (PLN). Formed in 1993, these electrical workers are selectively recruited, highly trained, and well equipped to carry out their risky jobs maintaining energized transmission and distribution lines to ensure uninterrupted electricity supply to the company’s millions of subscribers. Initially largely invisible like many maintainers and repairers, they evolved into very respectable workers within the state power company. In 2010 PLN leaders dubbed them the company’s “elite team.” The Indonesia media adopted the term in their coverage of these workers, elevating their status and visibility further. Based on an analysis of textual and digital sources as well as interviews with several maintainers, this paper details the sociocultural and institutional conditions that enabled these workers to thrive and earn the admiration of their peers, managers, and electricity customers. It also talks about their recruitment, training, work rituals, organizational structure, and innovations. It argues that as that these electrical maintainers keep the country’s overhead transmission lines in good condition, they also keep intact the functioning of the Indonesian state.

### **Sociology of Translation, Development Anthropology and Ghanaian Waterworks**

*Jean-Pierre Jacob (Graduate Institute of International and Development Studies)*

the paper presents a case study of pipe scheme implementation in Ghana, using one of the important propositions drawn from the sociology of translation —the agency of things— to look into the utility as a means to bring about both the community interests and its overtaking. The dilemma of pipe scheme implementation (sponsored by donors) lays in the contrast between the particularistic framework that shapes the conditions of its acquisition and the universalistic one that defines the conditions for it to remain the business of the community. This difference might hide some similarities in the actors’ positioning. Following their encounter, the donors and the beneficiaries make the same discovery about each other: each party brings to this meeting an array of relations, characters and categories that are mostly invisible to the other one at first. Community members have women to marry or elites to attract in mind when they move into action and try to secure water utilities. The same community members also realize that in accepting pipe schemes they have to accommodate new material and immaterial beings that are somewhat hidden within the structure of the utility itself and need to be incorporated at any rate: disembedding of water access from social relationships, imposing a supply monopoly, farmers having to become professional water managers, customers strongly advised to pay for their consumption, accounting books and customers’ forms to be produced and kept...However, asymmetries remain in the sense that developers discover hidden worlds that are mostly not scalable (the motivations of the beneficiaries are deeply contextual) while the pipe scheme’ beneficiaries find out that the duties of maintenance push them into a stronger entanglement with state frameworks and global norms.

### **P26 - Animating Epistemic Pluralisms: Colonial Expertise, Local Knowledge and Multispecies Health in Africa**

*Oluwaseun Otosedede Williams (The Graduate Institute of International and Development Studies, Geneva)*

### **Philosophical consequences of integrated approaches to health, called One Health**

*Jakob Zinsstag (Swiss Tropical and Public Health Institute)*

### **Towards Decolonizing Medicine and Healthcare: The Place of African Health and Healing Traditions**

*Geoffrey Nwaka (Abia State University, Uturu, Nigeria)*

Global health science needs to integrate the health traditions of local communities in Africa. Traditional medicine and therapeutic techniques have a long history in Africa for treating a wide variety of human and animal health conditions. This rich body of knowledge has for long been undervalued because of the dominance of Eurocentric mindsets and practices; but current research confirms that many of today's medicines are derived from tropical African medicinal plants, and that traditional medicine can provide a lead to scientific breakthrough in modern medicine and drug discovery.

With colonialism and modernization that emphasize sanitation, vaccination, drug use and other forms of biomedicine, traditional health medicine has been misrepresented as obsolete and irrelevant because it does not appear to conform with the scientific principles of modern medicine, especially the spiritual and cultural aspects of healing that sometimes involve divination, belief in witchcraft, and so on. Many scientists and government officials distrust traditional medicine, and insist on the need to validate, codify and standardize its practice for greater safety and efficacy. They hesitate to provide the necessary regulatory and legislative framework for integrating traditional medicine into the national health system. Unfortunately, modern medicine, with all its obvious merits, is still not readily accessible and affordable to most rural populations in Africa; and most city dwellers combine traditional and modern medicines, especially during epidemics like HIV/AIDS, EBOLA and COVID19, for which Western medicine has been unable to provide ready cure.

The paper underscores the value and continuing relevance of traditional medicine, the need to promote comparative medicine, as well as collaboration between scientists and practitioners of modern medicine, and those who hold and use traditional medical knowledge, so that the traditional and the modern will complement and enrich each other, and thus advance the prospect of attaining universal health coverage.

### **Tackling an 'Insidious' Contagion: Bovine Pleuro-Pneumonia and Veterinary Pluralism in Colonial Nigeria**

*Oluwaseun Ootosede Williams (The Graduate Institute of International and Development Studies, Geneva)*

### **P24 - Collaborating with Matter: Explorations of New Feminist Materialism in Multiple Lifeworlds**

*Marion Schulze (University of Basel)*

*Aylin Yildirim Tschoepe (University of Applied Sciences and Arts FHNW / Professor Dr)*

### **Getting Angry With Environmental Chemicals**

*Lenka Veselá (Brno University of Technology, Faculty of Fine Arts)*

Industrially manufactured chemicals are everywhere. What do these chemicals bring to our lives and how can we live well with them despite their potential for harm? With the focus on a particular group of environmentally ubiquitous chemicals called endocrine-disrupting chemicals, my inquiry into how we can address the exigencies of our chemically altered lives and construct responsive care relations draws upon the ways in which chemicals can influence our emotions. Using the Endocrine Disruption Tracker Tool (EDTT)—a speculative instrument for a collective investigative practice that I have created—I examine the likely influence of chemicals on our emotions and the possible role of these emotions in opposing the chemical violence that systematically impairs life in all its forms. What are the potential consequences of feeling angry, frustrated, and sad with endocrine-disrupting chemicals as they continue to exert their influence on us? What possibilities could the collective and public expressions of these feelings open up? I have developed the tool to help me, my research participants, and a broader community of interested people to confront the uncertainties and ambiguities of our lives affected by involuntary chemical exposures. The EDTT is modelled on a tool for diagnosing premenstrual syndrome

and premenstrual dysphoric disorder, using the same set of emotional symptoms but adapting the original design by expanding the functional range to cover emotional symptoms that are caused by the production and interplay of both hormones and hormone-disrupting chemicals. Drawing on the insights and stories shared by the workshop participants, my paper considers the possibility of our emotions being impacted by environmental chemicals, including the prospect of tracking and affirming these emotions, as they are affected by chemical exposures.

### **The escaping voices of cocoa**

*Amanda Jousset (Université de Neuchâtel)*

The relations between human and their environment and lifeworld has been studied in different approaches, by phenomenological approaches (Schütz, 1971); feminist approaches – for example with the concept of *cuerpo-territorio* (Zaragoza & Caretta 2021) – or transfeminist approaches, for example with the concept *gore capitalism* by questioning how the international markets and political settings affect our ways of acting in the world and performing gender (Valencia, 2018)

I would like to focus on the use of sensory ethnography (Pink, 2015) to reveal the different perceptions of the environment of women involved in the cocoa production in the Upper Amazon of Peru, in the department of San Martín. This presentation will be based on data of four different fieldworks conducted since 2018 during my PhD in anthropology on cocoa agroforestry systems.

During my fieldwork, I was surprised how women were escaping from interviews. Even if it was not my goal, I had mainly men interlocutors. However, these escaping voices, by their ability to escape from dominant settings of agrarian development strategies and morality, are worth focusing on. They can help reveal dominant discourses linked to productivity in the case of cocoa plantation management, forest conservation, and knowledge transfer.

These voices, however, are not unified. These women are cacao producers, are working for a chocolate factory or are agronomists. They experiment different connections to the regional and transnational market of cocoa. They are of different age and ethnic origins, are from urban or rural settings. They all have a different story of mobility that differ from each other, but that illustrates some of the possibilities of contemporary Peru. This presentation will focus on their point of view to reveal social, economic and political tensions around cocoa production in Peru.

### **Experiences of Agency, Vitality, Generativity and Recalcitrance – Neo-materialist Concepts of Matter**

*Jasmin Schmidlin (University of Basel)*

Neo-materialist texts populate the world with vital (Bennett, 2010), agentic (Coole, 2005), generative (Coole, 2010) and trans-corporeal (Alaimo, 2008) beings that reveal the intra-activity (Barad, 2017) of all matter. The impressive array of literature that has been put forth in the past decades, termed “new materialisms”, has particularly been shaped by feminist thinkers (Alaimo & Hekman, 2008). These works try to grasp the material world differently and thus reformulate the “material-discursive” (Barad, 2017) relationship and interdependence of the latter. Thus, their efforts cannot solely be understood as a new way to (re-)think materiality and matter itself. Rather, their endeavor is to be understood as a way to come to terms with the entanglement of the “material-discursive” world. Therefore, especially feminist neo-materialist perspectives seek to highlight the interdependence of the world and all (in-)organic matter which exposes their different response-abilities. By rethinking matter, new ethical and political obligations are called upon which are, I want to argue, related in many ways to contemporary experiences of and with the world.

Experiencing the world, is a fundamental aspect of thinking “material-discursive” relations and knowledge (production) in general. So far neo-materialist concepts, trying to grasp matter as recalcitrant, have not been connected to how lifeworlds are experienced. Even though experiences are fundamental

to feminist practices and theorizing. I want to suggest that highlighting the experience of recalcitrant matter not only allows for a more responsible connection to and with the world but also accentuates different modes of knowledge and their transgressions that are central to new materialisms. Hence, this endeavor is twofold: Firstly, I will take a systematic look at neo-materialist conceptualization of matter and thus expand on theoretical explorations. Secondly, I will elaborate on, what I call the experience of recalcitrance, as fundamental to neo-materialist conceptualization of matter.

## **THE FOREST AS A CYBORG**

*Rahel Kesselring (Humboldt-Universität zu Berlin)*

Forests as a topos in western culture can be seen as the reverse of culture: as pristine, paradisiac nature, as a dangerous place of chaos and disorder or as an economical and material resource that has to be managed 'sustainably'. Seen through the lense of feminist and new materialist theory as well as through the newly emerging field of plant studies, however, plants, trees and forests appear as hybrid beings, always already entangled within realms of nature-culture. Especially in the context of contemporary art, which often has a pioneering role in articulating new paradigms, plants are presented as "agentic and active participants in socioecological systems" (Ryan, p.110, quoted in Stobbe, p.97), they appear as autonomous counterparts, as sentient objects of investigation or as essential part of plant-human co-becomings.

This presentation asks how contemporary aesthetics, usages of media and material politics express and shape our concepts of our more-than-human environment. Artistic works like "Atmospheric Forest" (Rasa Smite, Raitis Smits, 2020), "Silva", "Perimeter Phynwald" (Marcus Maeder, 2021, 2019) or "Variants" (Pierre Huyghe, 2022) conceptualize the "forest as cyborg" or as an "autopoietic machine" (Volkart), merging forest ecosystems and plant bodies with a technological apparatus. By drawing on techno-vegetal hybrids, data is generated, which interlinks the vegetal and human sensorium with the aim to enhance "[...] our human perception into the more-than-human realms" (ibid.). The forest is either acted upon "as a patient in intensive care" (Volkart on "Atmospheric Forest"), its sensorial apparatus rendered comprehensible for human senses through technical-aesthetic mediation ("Silva", "Perimeter Phynwald") or transformed into a utopian, digitally enhanced space in which 'natural' and virtual worlds merge ("Variants"). Looking at different contemporary art works and against the background of concepts of feminist theory and new materialism, I am proposing a theory of plants, trees and forests as hybrid natural-technical assemblages.

## **Plant Entanglement in the Metaverse: Extending from Physical to Digital Space**

*Qingyi Ren*

This paper investigates the metaverse as an exemplary space that integrates plants merely as decorative in the leftover spaces of human-made digital artefacts. In this research, I focus on digital and digitized spaces and their physical interfaces and infrastructure to build a critique of their anthropocentric representation. Thereby, I grapple with the question of self-generating digital natures that learn from with physical counterparts (Schulze&Tschoepe 2023).

A fabulation of moss entanglement in the digital space of the metaverse enables the audience to experience a new situation, a practice that hybridizes physical and digital spaces and reflects on the role of plants in viable, more-than-human lifeworlds. It concurrently demonstrates post-anthropocentric alternatives as it critiques normative expectations of race, heterosexuality, gender, and patriarchy. The project ultimately challenges power structures that have already been embedded in digital technology, black-boxed and invisible, and opens new opportunities for thinking of physical futures alongside queering digital landscape and ecology.

## **P04 - Algorithms' Agencies**

*Olivier Glassey (University of Lausanne)*

## **Project New Urban Habit**

*Raymond Dettwiler (University of Applied Sciences and Arts FHNW)*

Studies have shown that inner-city centers are continuously decreasing in general activity and popularity among their citizens. Digital technology could provide valuable insights into behavioral changes among the population. Digitalization poses new challenges and opportunities. This pilot study focuses on the foundation and future of data privacy and data protection of activity tracking to research the implications of transparent and conscious user data management.

In the experiments, we conducted walking tours with focus groups (N=15) on the 8th and 18th of December in Basel city center to generate an overview of the opinions, inputs, and requirements. The experiment consisted of three parts. The “pre-experiment” questionnaire took place in the beginning. The goal was to understand how participants feel about the subject matter, how interested and knowledgeable they are, and how comfortable they feel with the current situation regarding the processing of personal data. The experiment continued walking through Basel’s city center in groups accompanied by a team member while tracked by the activity tracking app installed on the participants’ own mobiles. The app is called “Adidas Runtastic,” and it is mainly used for fitness-oriented physical activity tracking. Participants were given no restrictions on where to go. The scope was first to gather input regarding the participants’ usual shopping habits and their general opinions on the city center, such as favorite shops. Secondly, questions regarding potential gratifications posed such as coupons, free drinks, etc. Lastly, questions were asked regarding the data tracking, such as the comfort level of being tracked while showing participants the gathered data and whether they would feel comfortable sharing data with third parties. The last part was a “post-experiment” questionnaire conducted directly at the end of the experiment. The questions were focused on participants’ willingness and level of comfort to share their personal data with third parties.

## **Interpretive Social Simulation and the Construction of Plausible Futures**

*Vanessa Dirksen (Open University of the Netherlands)*

*Martin Neumann (University of Southern Denmark)*

Interpretive social simulation is the novel methodology stitching together ethnography, the computational method of agent-based modelling (ABM) and objective hermeneutics. ABM allows for the ex-ante investigation of alternative future scenarios by way of “what-if” questions. It ‘conditionalizes’ social phenomena as it were and asks what would happen if conditions were changed so as to explore alternative futures with. Interpretive agent based modelling is a qualitative form of ABM, combining ethnography on the input side and objective hermeneutics on the output side of the simulation model.

This paper reflects on how the different methodologies applied throughout the research procedure of interpretive ABM work together to generate the larger, novel, knowledge claim, which is not simply the sum of its constitutive parts. First, we characterize the different stages of the research procedure in order to reveal how in each phase knowledge of social phenomena is established. Next, we delve deeper into the processes of meaning-making in both ethnography and objective hermeneutics and how the counterfactual reasoning of ABM allows for theorizing the social, that is, how it enables the move from the evidential realm of social phenomena to the theoretical realm, from the idiographic to the nomothetic. This, together with reflections on the input and output validation of interpretive ABM, paves the way for the characterization of the knowledge claim of interpretive ABM in terms of the generation of plausible futures.

## **Memories in social media as part of collective intergenerational transmission: the case of the Fête des Vignerons**

*Tatiana Smirnova (University of Lausanne, STS Lab)*

How does social media participate in the production of the memory of a unique intergenerational cultural event, the Fête des Vignerons? Included in UNESCO's list of intangible cultural heritage, Fête des Vignerons takes place every 20-25 years in Switzerland (Vevey, canton Vaud). Each version of the festival reflects the socio-cultural background of different generations, which plays a central role in its continuity. Collective transmission in this case intertwines a collective memory reflecting on the past, with future making where traditions are instilled on to the next generation.

In 2019, the festival was celebrated in two different but closely related spaces: the circumscribed town of Vevey and the reticular territory of the Internet dominated by social media platforms. The study of the latter is particularly interesting for us because it is the first time that social media has been used for this festival that has run since 1797. Drawing on an onsite and online observation, we study the role of digital technologies in the shaping of memory and of collective transmission in this event at the occasion of the 2019 edition. Before, during and after the Fête digital memories are stored on individual online spaces, both closed and open. The material, including photos, videos, audio, texts, comics, links, comments, hashtags, and reactions, was produced by a variety of players (e.g., organizers, actors, spectators, tourists, and visitors). It covers very disparate aspects of the event (e.g., construction of the arena, impressions about the spectacle, high ticket prices or the installation of ashtrays with eco-calls). By observing the emergence, fading, and finally disappearance of digital memories across spaces, we question how these memories contribute to shaping the collective transmission about this intangible cultural heritage.

### **Racism through User Experience (UX) design: A case study of Zillow and GreatSchools**

*PRATYUSHA KIRAN (Virginia Tech)*

**Abstract:** According to Don Norman, "User Experience" encompasses all aspects of end users' interaction with the company, its services, and its products. User experience (UX) refers to the user's impression of interacting with a product or a system. A user experience cannot be designed as it occurs internally in a user. UX design is mainly the process of developing products that are practical and usable. It refers to designing for the user experience that can lead to a favorable product impression. In this quest to improve user experience in digital products, companies are designing experiences that allow users to quickly and intuitively accomplish their goals on a digital platform. However, literature shows that eliminating friction can enable conditions for racial bias in the users. This study explores how frictionless design can induce racial bias in users. Using the case study of digital platforms Zillow and GreatSchools, this paper investigates how ease of use can fortify racial bias among users from a social perspective. This paper investigates how the ease of access to racial data linked to a home-buying platform and a school rating platform can cause potential bias in the users' decision-making.

**Research Question:** How can frictionless UX design cause racial bias?

**Methodology:** The paper will review the conceptual framework of the UX design process and design justice to understand the consequences of providing easy access to the racial composition of schools on a home-buying and school-rating platform. For the case study, the user journey and information architecture of Zillow and GreatSchools will be mapped to see how easily a user can get to the demographic compositions and ratings of the schools.

### **P25.2 - Knowing Microbes. Ferments, Homes, and the Industry (Session 2/2)**

*Elise Tancoigne (University of Lausanne)*

*Henri Boullier (CNRS)*

### **The Disappearing Microbiota The Coloniality of a Narrative/Anti-Colonial Proposals**

*Alexis Zimmer (Université de Strasbourg)*



Research on human microbiota points to a previously overlooked disaster: many of the microbes with which our bodies had symbiotic relationships have disappeared or are in the process of disappearing. It argues that the collapse of biodiversity that characterizes our era is also at work in our bodies. This account of disappearing microbiota invokes biomedical reasons and major socio-ecological transformations. It is the basis for two global collection and conservation initiatives: the Global Microbiome Conservancy and the Microbiota Vault. This article shows that this narrative, which is referred to as “the theory of the disappearing microbiota”, confers a discursive base and a historical imaginary to colonial logics that infuses strands of research on microbiota. It relies on interviews with biologists, some of whom are involved in the two initiatives mentioned, as well as on an analysis of the scientific literature in which this narrative has been developed and discussed. Drawing on critical, anthropological, historical, and postcolonial theories, this essay characterizes the long duration of colonial patterns that unfold, as well as some of their consequences for understanding the diversity of human communities, their histories, and the historical mechanisms of the alteration of gut microbiota. This article concludes with a series of proposals aimed at determining the conditions necessary for the elaboration of other, less dangerous narratives that would lead scientists to pursue different, anti-colonial practices and use the samples from these collections in others, yet to be invented ways.

### **antibiotics, phages and bacteria : 2 configurations of human/microbes hybrid labour**

*Charlotte Brives (CNRS)*

Using the skills of microorganisms is inseparable from the history of human societies. Whether we are talking about fermented food, biofuel, plastic-eating or pollution-removing bacteria, or healing viruses, many projects involve putting microbes to work and are based on what I propose to think of in this presentation as human/microbe hybrid labour. These labours are not without consequences. Antibiotics are a paradigmatic example of this, with the rise of antibiotic resistance revealing the flaws, limits and unthinking that constitute the use of these biological beings: microbes (and more generally living beings involved in human projects) act and react.

In this presentation, I will briefly revisit the production of antibiotics, and in particular the relationship between humans and microbes that underlies their production and use. I will then develop a second example, that of phage therapy, namely the use of bacteriophage viruses to treat bacterial infections. While both projects have the same goals, namely to produce anti-infective entities, each is built on a different conceptualisation of the relationships between microbes, and between humans and microbes, but also on different conceptions of infection and healing. I will show how the development of these projects depends on the state of knowledge, the materiality/agentivity of microbes and the materiality of societies and infrastructures that exist. Contrasting these two examples will lead me to two concluding remarks: 1) it is not so much a question of inventing new types of relationships with microbes as of making visible and developing those that already exist in many places, which involves, among other things, developing or at least adapting existing regulations and infrastructures; 2) taking into consideration the specificities of microbes, and in particular their incredible evolutionary capacities, obliges us to systematically take into account the fact that any project based on them will necessarily have some consequences.

### **Cleaning and sanitizing with microbes : the regulation of the microbial-based cleaning products market**

*Paul Coeurquétin (Toulouse Jean Jaures University)*

Microbial-based cleaning products (MBCPs) contain living micro-organisms and are claimed to be alternatives to conventional chemical detergents. Manufacturers advertise two modes of action of their probiotic cleaning solutions: the capacity of certain bacteria to break down dirt and the ability of “friendly microbes” to populate the environment to prevent pathogens from developing.

This paper proposes to outline the European Commission's recent involvement in this market through its eco-labelling scheme. Eco-labelling of cleaning products has become a recognized area of application for consumers and requires regular review of the established criteria to take account of scientific developments and market trends.

These micro-organisms are living bio-ingredients and are used in the formulation of products that are usually designed to dislodge and prevent them. Little studied by academic microbiologists, the microbes that have become cleaning allies raise questions.

What are these issues? What is the view of stakeholders (industry, researchers, NGOs, and consumer associations) on the eco-labelling of these products? What were their arguments and support? What was the outcome of the process of creating a "micro-organism" criterion ex nihilo?

This research is based on the analysis of a set of documents produced during the 2018 Europe-wide revision of the criteria and a series of interviews with users and resellers of a distinct category of MBCPs: EM (for Efficient Micro-organisms), a biotechnology that originated in the laboratory of a Japanese researcher in the 1980s.

If several factors combine to explain the current state of this market (e.g., technical uncertainties, user concerns), regulatory aspects are an interesting entry point to understand the limited generalization of these products as well as the existence of small communities of practice that use them in a discretionary way and whose shared knowledge ensures a form of autonomous regulation at the margins of legal and scientific discussion.

## **P32.2 - Governing Conflictive Sociotechnical Transitions (Session 2/2)**

*Nicolas Baya-Laffite (University of Geneva)*

*Basil Bornemann (University of Basel, Department of Social Sciences, Sustainability Research)*

### **Societal conflicts and strategic governance of sustainability transitions**

*Basil Bornemann (University of Basel, Department of Social Sciences, Sustainability Research)*

Sustainability transformations - whether driven by the state or emerging from within society - are often accompanied by social conflicts. Conflicts over the use and distribution of resources, the application of technologies, but also over power, identity and knowledge are typical examples. In times of escalating crises in increasingly stressed societies, the potential for conflict increases, especially with regard to comprehensive transition strategies that challenge established normalities comprehensively and seek to realize deep change within a short period of time. This concept paper examines the implications of societal conflicts for sustainability transformations and ways to strategically navigate and shape them. On the one hand, it discusses the causes, manifestations and effects of conflicts that arise in the context of sustainable transformations. On the other hand, it explores ways to take complex conflicts into account when shaping sustainability transitions. By integrating insights from sociology, political science and sustainability transition research, key strategies for dealing with conflicts in transition phases will be identified. What do governance approaches look like that take into account and address the conflicts arising from different values, interests, power dynamics and knowledge systems involved in sustainability transitions? This paper contributes to a better understanding of strategic governance of sustainability transitions by shedding light on the complex relationship between conflict and sustainability-oriented social change processes. It provides conceptual cornerstones for a deeper consideration of conflict in the analysis and design of sustainability transitions.

### **Governing on-farm biogas plants: the confrontation of socio-ecological transition models**

*Antoine Bouzin (Centre Emile Durkheim)*

This paper aims to understand the conflicting dynamics of the deployment in France of a socio-ecological transition technology: the on-farm biogas plants. Indeed, since the 2010s, the public authorities have encouraged farmers to develop on-farm biogas plant projects through the implementation of specific feed-in tariffs. Nevertheless, while the number of on-farm biogas plant projects has soared, local opposition from residents has also developed and become more organized (Camguilhem, 2018). My research is based on a qualitative method. I conducted 70 interviews with stakeholders in the on-farm biogas sector, including 20 with project leaders, opponents and local elected officials at controversial sites. I present two results in this paper. On the one hand, I highlight the diversity of arguments expressed by the defenders and opponents of on-farm biogas plant. These arguments refer to different worlds (Boltanski & Thévenot, 2006), in other words to distinct and incompatible spaces of justification – the domestic world, the market world, the civic world, the industrial world and the environmental world. On the other hand, I outline the politics of risk management in relation to on-farm biogas plants. With a view to reducing costs and disengaging the state, the administrations are entrusting risk assessment and management to the professional sector (Borraz, 2008), which is itself very recent and dependent on other sectors, notably energy. I will then discuss the possibilities for policy orientation of on-farm biogas plants as an issue in the socio-ecological transition. In reality, on-farm biogas technology is not determined and several models exist and reflect different political scenarios of socio-ecological transition (Lovins, 1977): on the one hand, a hard energy path centred on supply, a centralisation of production and a monopolistic sectoral organisation; on the other hand, a soft energy path centred on demand, a decentralisation of production and a pluralist sectoral organisation.

### **Digitalizing Resilience: Information Technology and Flood Infrastructures in the Megacity of Jakarta**

*Sulfikar Amir (Nanyang Technological University)*

Spearheaded by Revolution 4.0, cities are becoming more digitalised through the fundamental transformation towards relying more on information technology and digital platforms to provide essential services to residents. Many countries have been heavily investing in the construction of smart cities that incorporate digital technologies into everyday urban life to bring about more responsive and reliable government services, enhanced productivity and efficiency in business, and better quality of life. Cities are complex systems that are dynamically adapting to fluctuating circumstances. The ability to withstand sudden shocks, avoid the collapses of physical and social systems and maintain the well-being of citizens while continuing the delivery of essential services define city resilience. Resilience is viewed as an outcome or process, intrinsic or relational capability, and as a system structure or functional characteristic. This paper is situated at the intersection between digitalisation and resilience in the urban context. More specifically, it unpacks the processes in which resilience is materialised through the transformation of physical urban infrastructures into digital platforms. Focusing on a megacity in the emerging region, this paper seeks to understand: How does flood infrastructure become digitalised in coastal megacities of developing nations? It takes the capital city of Jakarta, Indonesia as a case study due to the city's advances in the implementation of digital technologies for flood defense. Going further, this paper also questions the extent to which such digitalisation of flood resilience is socially accepted at the grassroots level. As Jakarta is no stranger to floods, it is safe to assume that the city's citizens have developed their own mechanisms of flood resilience, and so it is important to question how the government's efforts

### **Recalcitrant maize: conserving agrobiodiversity in the era of GMOs**

*Marianna Fenzi (UNIL)*

*Jean Foyer (CNRS)*

*Valérie Boisvert (UNIL)*

In 2001, an alert on the contamination of transgenic maize in Mexico, the center of origin of this crop, led the state to organize new actions to conserve the world's biggest reservoir of maize genetic diversity. We analyze how these actions, from organizing the largest effort to collect maize genetic resources in Mexican history to defining specific conservation procedures, involved or marginalized different and competing approaches to this environmental problem. We show how different epistemological traditions have made the risk of GM maize contamination (in)visible, and thereby generated normative choices. We illustrate how the GMO controversy brought the theme of native maize and its conservation back onto the Mexican political and scientific agenda. The normativity that shaped the controversy in the 2000s influenced current knowledge and how the problem of GM maize introgression is still addressed today. The entanglements between biotechnology, native landraces, and farmers' practices are too dense for these elements to be 'scientized' and kept separate in order to manage them as areas of purely technical 'risk'. The result is a geography of maize infused with all sorts of temporalities, legacies, and materiality, which escapes technoscientific framings. It is an intricate environment-making process – one that calls for new collaborations among epistemic cultures to tackle the possible consequences of GMOs for agrobiodiversity, seed systems, and their resilience.

## **P17.2 - Capitalization: Critical Perspectives on Innovation, Entrepreneurship, and the Start-Up Economy (Session 2/2)**

*Loïc Riom (University of Lausanne)*

*Tanja Schneider (University of St. Gallen)*

### **On the socio-technical embeddedness of “Weibo florists”: digital economy ideology and conventions of simplicity prototyping and standard production**

*Chongyun XIE (École normale supérieure Paris-Saclay)*

In late 2011, a Shanghai-based flower amateur, offering luxury bespoke bouquets, sparked an entrepreneurial wave of florists on the Chinese microblogging site Weibo. Some business experts have attributed her success to Weibo marketing and storytelling, establishing her as a model for e-commerce startups. However, based on more than 10,000 articles collected from the trade journal *China Flower & Gardening News* (1992-2012) and the industry magazine *China Flower & Horticulture* (2001-2012), from the perspective of the sociology of entrepreneurship, articulating the actor-network theory and the economics of convention, we find that these marketing strategies were effective because Weibo florists were embedded in the online flower field, where the ideology of digital economy based on the commercial practice of distant flower delivery set the rules of the game. Faced with exponential competition at the time, online florists focused on efficient economies of scale, at the expense of personal interaction with clients. On the other hand, they tended to simplify the prototyping of bouquets to reduce the uncertainty of their quality during floral delivery, while standardising the production of local florists with whom they collaborated. These management conventions and ideology have unexpectedly provided the institutional resources for the entrepreneurialiat of Weibo florists.

### **Monetization of Food (Waste) in the Platform Economy**

*Aline Stehrenberger (University of St. Gallen)*

Start-ups that aim to reduce food waste with a platform solution commonly accessed through a mobile phone application (app) interface are increasingly attracting investments: In January 2021 TooGoodToGo raised \$31 million, and OLIO received \$43 million in venture capital (TechCrunch, 2021). In this paper, I explore apps that focus on household food waste reduction, and I ask how different monetization practices shape practices of food waste redistribution; by monetization practices, I refer to ways of how something is turned into revenue. I first provide a short overview of current research on food waste apps and the platform economy (e.g., Kenney & Zysman, 2016; Scniczek, 2017; Fuentes &

Sörum, 2019). I then introduce the two cases I build my paper on (1) TooGoodToGo, which connects restaurants/supermarkets and consumers to distribute surplus menus, and (2) OLIO, a community-based sharing platform for food and other consumer goods that redistributes private household surpluses for free. To study them, I have taken an (online) ethnographical approach, including the app walkthrough method, document analysis, and semi-structured interviews (Hine, 2015; Light et al., 2018; Leer & Strøm Krogager, 2021; Asdal & Reinertsen, 2022). In my analysis, I first show what is monetized through the introduction of the app. Then I elaborate on how monetization practices around the apps are changing food waste redistribution. My analysis shows how TooGoodToGo and OLIO turn food (waste) into a (new) resource by redistributing rather than reducing food waste. I thereby add to existing research on the platform economy with two cases of how the platform economy and related promises of “doing good” (Asdal et al., 2021) are used to turn food waste into a resource for the platform-enabled sharing economy.

### **How did Sofar Sounds become a start-up? Secret show, capitalization, and the rise of Music Tech**

*Loic Riom (University of Lausanne)*

Sofar Sounds was founded in 2009 in London by three friends who wanted to “bring back magic to live music.” They started to organize “secret concerts” in “intimate and unexpected” spaces. In 2023, Sofar Sounds is now an ambitious start-up valued at several dozen million pounds. What has happened during these fifteen years? How did an informal organization built by three friends become a start-up capable of raising capital on private markets and buying other companies? While, in the discourse of the company, this trajectory appears as obvious, I will try to account for the choices and steps that shaped the evolution of Sofar Sounds as a start-up. For this purpose, I will rely on various documents, press articles and interviews with Sofar Sounds employees to conduct an accounting history of the company. I will look at how Sofar Sounds created new capital through successive round of funding and by enrolling new investors, in particular venture capitalists. I will highlight the different discourses, practices and demonstrations that have enabled such a capitalization of Sofar Sounds. In conclusion, drawing on recent discussions on financialization and assetization, I will outline some characteristics of what seems to me to be the modalities of a becoming-start-up and how it contributes to something like “the music economy” to exist.

### **Justlers: Kenyan justice innovators and entrepreneurs’ hustle to create and scale access to justice solutions for ‘just’ development**

*Nicole Ahoya*

Justice innovation and entrepreneurship are increasingly proclaimed as “game-changers” within global development discourses coalescing around “sustainability.” While entrepreneurial solutions have been widely and interdisciplinary discussed in fields such as healthcare or education, they are a yet emerging phenomenon in the justice sector. Entrepreneurial solutions in public sectors have in common that they are proposed to offer viable alternatives to donor and institutional restraints and disrupt dysfunctional systems by providing innovative and scalable solutions to close gaps in social service provision. Entrepreneurial solutions to justice have gained momentum, particularly in the Global South, with the adoption of equal access to justice as a sustainable development goal in 2015. The goal has not only framed justice as a broad goal beyond the legal understanding of access to justice but also as a collective responsibility allowing private actors to come to the fore. Drawing on ongoing ethnographic and anthropological research on and with justice entrepreneurs in urban Kenya, this paper critically explores the dynamic and elusive terrain of justice entrepreneurship and innovation in Kenya being entangled into complex and cross-jurisdictional networks of actors such as local entrepreneurs, impact investors, civil society organizations and the government. The paper analyses how and why the justice sector increasingly becomes financialized, with justice as a marketable and profitable commodity and entrepreneurs as experts in understanding local justice needs. It describes the Kenyan justice

entrepreneurs' hustle for making justice solutions profitable within precarious economic terrains, but also how they juggle financial considerations with their moral imperatives for justice.