12 JUNE 2025 14.00 - 17.00

Panel 62. Technoscience and the Self: Emotions, Identities, and Self-knowledge

Convenors:

Jacopo Domenicucci, Dartmouth College

Serena Ciranna, Institut Jean Nicod

Keywords: Epistemic injustice, Identity, Machine empathy, Self-expression, Self-knowledge

By capturing and analyzing actions, behaviors, facial expressions, and vocal inflections, computing technologies and computational sciences are increasingly used to explore and invest the domain of the personal. Machines, in their practical applications and scientific uses, infer moods, emotions, intentions, and identity traits about us. In this way, they enter the sphere of self-knowledge and self-expression, which is par excellence an epistemic and moral competence of the individual. How do we know ourselves and how do weconstruct and express our identities in this context? How might the entry of machines into the exploration of our inner life challenge the preservation of our epistemic authority over who we are and what we can know about ourselves? Can we think of us as agents capable of self- reflection, selfconstruction, and self-regulation?

Spanning philosophy and STS, this panel will explore the epistemic and ethical issues of self- knowledge, self-expression, and identity construction from the perspective of increasingly close cooperation between machines and human individuals.

We are particularly interested in papers that:

- explore how our self-knowledge increasingly integrates machine perception;
- explore how information from digital technologies can be internalized by our selfunderstanding, or, in contrast, how it can be refused and opposed;
- investigate how our personal narratives and our computational identities might compete or work together;
- interrogate the risks of a distinctive form of epistemic injustice emerging from these technological possibilities;
- bring to the fore the specificity of diverse identities in this context (namely, along the lines of sex, gender, race, age, abilities, and intersectionality);
- study the contribution of computational sciences and computing technologies to how we think about the self;
- interrogate how "Artificial Intelligence" can support or hinder emotional intelligence;
- focus on specific "AI companions" ("AI friends", "AI partners", and other bots) from the perspective of their contribution to our sense of self and emotional life.

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ID 192 - Decoding Gender: Addressing Algorithmic Misgendering in Face Recognition

Camilla Quaresmini, Politecnico di Milano

Giacomo Zanotti, Politecnico di Milano

Keywords: Algorithmic Gender Recognition, Gender Identity, Algorithmic Fairness, Misgendering, Self-determination

Automatic Gender Recognition (AGR) systems are an increasingly widespread application in the Machine Learning landscape [1]. Their use goes from general identity verification to behaviours and preference pre-

diction for content recommendations, up to person categorisation for surveillance purposes. While these systems are typically supposed to detect gender, as the very label suggests, they often classify data points based on observable features such as the individual's gender expression and/or physical characteristics correlated at best with either male of female sex. In addition to questionable binary assumptions, from an epistemological point of view this is problematic for two reasons. First, there exists a gap between the categories the system is meant to predict – e.g., man versus woman – and those onto which their outputs reasonably map – e.g., male versus female (expression). What is more, gender cannot be inferred on the basis of such observable features [2]. This makes AGR systems often unreliable, especially in the case of non-binary and gender nonconforming people [3,4].

Far from representing a mere accuracy problem, AGR systems' errors come with relevant ethical repercussions. After providing a taxonomy clarifying the dimensions which constitute sexual identity as well as their interaction, this work suggests a theoretical and practical rethinking of AGR systems and their contexts of application. To begin, distinctions will be made between sex (biological and/or attributed at birth), gender, and gender expression, insisting on the independence between these components of sexual identity, and its implication for AGR. Then, we build upon the observation that, unlike algorithmic misgendering, human-human misgendering is open to the possibility of a re-evaluation and correction. We suggest that analogous dynamics should be recreated in AGR, giving users the possibility to correct the system's output, also considering that AGR systems should account for the situation in which the correct classification changes over time [5]. While implementing such a feedback mechanism could be regarded as diminishing the systems' autonomy, it represents a way to significantly increase fairness levels in AGR. This is consistent with the conceptual change of paradigm that we advocate for AGR systems, that should be understood as tools respecting individuals' rights and capabilities of self-expression and determination.

References:

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ID 372 - Mind, and Machine, and Me: Mental Health Chatbots and Techno-selfhood

Briana Vecchione, Data & Society
Livia Garofalo, Data & Society

Keywords: mental health, AI, subjectivity, chatbots

As artificial intelligence integrations become more present in mental health care, many people have turned to using mental health chatbots and other generative AI tools like ChatGPT for emotional support and therapeutic relief. With the promise of "solving the mental health crisis" and the perennial shortage of professionals, companies like Woebot and Wysa, among others, have sought to provide "mental healthy allies," a perennially available conversational agent and companion that can give mental health advice and support. Some users in dialogue with these agents are employing them in conjunction with professional psychotherapy, while others are relying on them as their primary means of mental health support.

The presence of automated psychotherapy, along with the fears and hopes it elicits, is both an emerging

phenomenon and one that has its roots in the history of computation. ELIZA, the first chatbot developed in the 1960s, was named after the literary character Eliza Doolittle from Pygmalion. ELIZA's creator, Joseph Weizenbaum, modelled its conversational patterns on a Rogerian psychotherapist.

In this paper, we present some preliminary findings from qualitative and media research focused on users of mental health chatbots in the United States. Drawing on focus groups, interviews, and diary studies with these users, we examine how these participants relate to the chatbots, but also how they are configuring and reconfiguring their relationship to self via these tools. How do users perceive the presence of mental health LLMs in their daily lives and routines? What are the technological possibilities of these tools, and how might they be generating new and old forms of "auto-intimacy" (Zeavin 2021)? Focusing on understanding how users themselves perceive, make sense, and deploy these AI therapy agents, we seek to provide a grounded perspective on the inter-subjective effects of this emerging "techno-selfhood" (Luppiccini 2013; Brubaker 2020). We explore how algorithmic mediation and algorithmic therapies aid and impede the desire for self-knowledge, further examining histories, futures, politics, and lived experiences of how we know ourselves by talking through chatbots.

As an interdisciplinary research duo – a medical anthropologist and a computer scientist – we also reflect on the epistemic, methodological, and theoretical convergences and divergences of collaboration. We chart ways forward to potentially ethical development, implementation, and governance of mental health AI systems.

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ID 455 - Generic Listening to Generative Listener: Vocal emotion detection and simulation in GenAI

Jessica Feldman, The American University of Paris

Keywords: emotional AI, affective computing, voice, machine empathy, self-expression

How does AI (attempt to) describe and intervene in our emotional life? What claims does it make about its emotional sensitivities, and what is it actually doing? What might be the moral, political, and psychological consequences of emotional AI? To begin to address this question, this talk draws on my research on the genesis of the design of AI for emotion detection in the voice, and subsequent vocal genAI tools which mimic these emotional templates in voice synthesis. An analysis of open-source code, patents, and marketing language traces the attempt to quantify and categorize "genres" of affects (joyful, sad, depressed, angry) and to connect them with patterns of vocal inflection.

Vocal emotion-detection AI, which began in the early 2010s, has proliferated recently, used in call centres, job hiring, and security screenings, among other cases. It has also developed into GenAI tools (such as speechify or IRCAM's DAVID project), which experiment with inflecting the voice with emotions according to these limited rubrics of affect, in close-to-real-time with a human speaker, or in completely synthetic AI-generated text-to-speech. Most of these tools claim to detect or invoke something affective, what Massumi would call a "non-conscious, pre-personal intensity" (1995). They claim, thereby, to reveal an understanding of the speaker (in the case of detection), or to incite in the listener (in the case of synthesis), something that operates prior to consciousness and therefore beyond their control. Further, they assume that the effects are universally expressed across all human cultures and fit into discrete, codable rubrics.

In most cases, the training data used for these tools draws on libraries of recordings of actors performing a small number of generalized emotions. A values-in-design analysis of these AIs and their training data reveals, therefore, that they rely on a language of emotional expression which is culturally coded and performative. Pattern recognition tools like neural networks only further amplify dominant habits of expression. This presentation then asks questions about the ethics and political implications of the use of these tools, as they present us to ourselves: what are the effects and implications of (mis)understanding emotional expression in these terms? How will this change (or not) in the future, as emotional AI becomes more "finely tuned" with individual training data?

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ID 510 - From Generic Listening to Generative Listener: Music Recommendation Algorithms, Generative AI, and the Shaping of Musical Identity

Stéphan-eloïse Gras, Conservatoire national des arts et métiers

Keywords: emotional AI, music, taste-making, algorithms, self-expression

For Western culture, music has long been a medium for self-expression, a way to construct and communicate identity, and a tool for emotional exploration. Since the modal music of ancient Greece and throughout the history of classical music to contemporary popular and electronic genres, different musical tones have been thought to express unique feelings innately. Over centuries, composers and musicians have shaped the emotional lexicon of music, embedding cultural and personal narratives into sound. Today, artificial intelligence artefacts intervene in this tradition – not just as a tool for access or production, but as a system that captures, predicts, and shapes musical emotions and identities. Drawing on my research on music recommendation algorithms through an analysis of the Echonest API, which was acquired by Spotify in 2014, and subsequent contemporary music generation platforms such as Suno launched 10 years later, this presentation explores how AI affects not only what we listen to but also how we may or may not understand ourselves through sound.

Recommendation algorithms have transformed individual taste-making in music, using complex data analysis to infer listeners' moods and preferences. By analysing behavioural patterns, streaming platforms curate personalized experiences, reinforcing familiar sonic environments rather than encouraging sheer difference or discovery. Over time, listeners are subtly guided into sonic bubbles – algorithmically optimized musical landscapes that reinforce their existing preferences and act as what I call "taste-maker machines." Now, generative AI music artefacts extend this logic of mechanical taste-making further – not merely recommending but actively producing music that fits within learned aesthetic and emotional patterns. This marks a significant shift: rather than selecting from an existing corpus, AI systems generate the most statistically probable tunes in response to a user's self-expression.

By recommending and generating music that is statistically probable, these AI systems reinforce established patterns of musical consumption and aesthetic expectation. The result is a form of automated musical self-expression that is less about genuine individuality and more about reproducing normative, data-driven sonic templates. This dual role of AI in music – both as an enabler of sheer personalisation and as a force of standardisation – raises key epistemic and ethical questions. On one hand, generative AI offers new opportunities for musical creativity, allowing individuals without formal training to engage in composition, externalize emotions through sound, and experience musical textures. On the other hand, by operating on the principle of probabilistic optimisation, these systems reinforce dominant sonic norms, subtly shaping users' self-perception through algorithmic predictability.

From a Science and Technology Studies (STS) and philosophical perspective, this presentation critically examines how generative AI functions as a continuation of recommendation systems in shaping musical identity. Rather than simply reflecting or shaping personal taste, these systems actively construct and constrain the way we listen to and experience music, forming a new kind of epistemic authority over self-expression.

12 JUNE 2025 14.00 - 17.00

ID 524 - Touching the Self: STS and Psychoanalysis

Stephen Hughes, University College London

Keywords: Affect, Psychoanalysis, Touch, Responsible Innovation, Emotion

STS has a poor concept of the self including associated notions like subjectivity, intention, feeling, interiority, belief, meaning, and suffering. Drawing from empirical research conducted with engineers developing

"touchless" mid-air haptics technologies, I would like to make the case for drawing from psychoanalytic psychosocial studies to help STS conceptualise the affective technopolitics of the self. To do this, I will explore the psychosocial dynamics of fantasy, emotional defendedness, and reparation that are implicated when engineers are asked to consider the potential harms and risks of novel haptic technologies. The paper aims to support the panel in exploring how "information from digital technologies can be internalized by our self-understanding, or, in contrast, how it can be refused and opposed". It will do this by tracing the emotional investments and (inter)subjective understanding involved in innovation and the affective work required to develop responsible haptics technologies - up to and including saying "no" to them.

This paper draws on my work with the EU-funded Touchless project, which aimed to develop mid-air haptic technologies using "novel neurocognitive models and AI frameworks" to "affect and enrich our online social interactions" through "agency, bonding, and attachment". As the project's resident social scientist, my role was to advise on responsible innovation (Cornelio et al. 2023). I focused on the political implications of the Touchless project, particularly the accumulation of power embedded in the development of a "touch dictionary" and the potential risks of digital touch substituting for physical touch in contexts such as "distant relatives, hospital patients, and prisoners". I also drew attention to a view amongst haptics engineers that human emotions were reducible to and encodable by a computational language, memorably described by one researcher as "Chat-GPT for touch". Through this research, I came to see responsible innovation not just as a matter of guiding development but also as one of considering refusal or opposition to certain technologies.

Drawing from concepts spanning psychoanalysis and STS, the paper will explore the relational emotional dynamics that are involved when innovators are asked to confront the potential harms of their work. It will trace psychosocial relationships between engineers and their technologies and how uncomfortable feelings are managed and defended against during the practice of responsible innovation. It will outline the affective requirements for an integrated and reparative approach to responsibility.

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ID 784 - Novel technologies with ancient gazes? FemTech and menstrual tracking devices

Giorgia Burzio, Politecnico di Milano
Venere Ferraro, Politecnico di Milano

Keywords: Data, Datafication, FemTech, Surveillance, Optimisation

In the digital age, personal data has become a highly valuable commodity, critically compared to oil due to its vast economic and political implications. The rise of self-tracking as both a socio-technical and cultural phenomenon has led to an increasing reliance on Information and Communication Technologies to monitor biological traits (Hendl, 2022). This process, often referred to as "datafication," transforms bodies, habits, and behaviors into digital forms (Lupton, 2020; Zuboff, 2015). Within this context, FemTech - a rapidly growing sector that applies technology to women's health - has emerged as a key industry, with a projected worth of $50 billion by 2025 (McMillan, 2024).

This contribution explores the intersection of digital self-tracking, reproductive health, and the FemTech industry. FemTech products, such as menstrual tracking apps and smart menstrual cups, shape contemporary understandings of the female body. While positioned by many as an empowering tool for women's health, FemTech raises ethical concerns regarding inclusivity, privacy, and the reinforcement of gendered surveillance.

Overviewing the historical and social implications of technology's role in reproductive health, shows how past medical advancements, from the birth control pill to contemporary tracking apps, have often been shaped by male-dominated industries and power structures (Tripaldi, 2023). Although the current FemTech landscape is increasingly led by women, this does not automatically guarantee equity or inclusivity. Studies and data show that many FemTech solutions primarily refer to middle- and upper-class white

women, often excluding the needs of marginalized communities, non-binary, and trans individuals who also menstruate (Lee Mathiason, 2023).

Analyzing the content of the interaction with several FemTech tracking devices reveals the double-edged, controversial action of self-tracking. While menstrual tracking apps promise personalized insights and control over reproductive health, they subtly reinforce neoliberal ideals of self-optimisation. Users are encouraged to monitor and manage their symptoms not simply for well-being, but for performance enhancement, particularly in the context of relationships, reproduction, and productivity. The language used within these apps prioritizes sexual desirability and partner satisfaction over individual health. Moreover, several apps have faced serious privacy concerns, with allegations of sharing users' intimate health data with third parties without explicit consent.

An emergent product category is the smart menstrual cups, which integrate biosensors to track menstrual flow and provide real-time health data. While this innovation offers potential medical benefits, and independence, they might represent a new form of bodily surveillance, since they embed technology directly within the body. Drawing on feminist theories of digital embodiment, particularly those of Donna Haraway and Deborah Lupton, the study argues that these technologies blur the line between self-awareness and corporate control, raising questions about consent, data ownership, and optimized interpretation of oneself. A call for a more intersectional approach to FemTech is pressing – one that prioritizes genuine bodily autonomy and well-being over corporate profit, fostering a model of reproductive health that is ethical, and beneficial to all.

12 JUNE 2025 14.00 - 17.00

ID 786 - Remembering with generative AI: from technical to ethical challenges

Serena Ciranna, Università di Napoli Federico II

Keywords: #memory #generativeAI #identity #narratives #ethics

The increasing integration of generative artificial intelligence into everyday life is reshaping how individuals recall and construct their personal memories. Conversational AI systems equipped with long-term memory capabilities, such as OpenAI's ChatGPT or Google's Memory Assistant, introduce new ways of engaging with autobiographical recollections. These technologies personalize interactions by retrieving and synthesising past exchanges, creating a more intimate and emotionally engaging experience. This paper explores the implications of AI-assisted memory on the construction of personal identity, drawing on theories of narrative identity, digital memory, and algorithmic agency. Memory plays a fundamental role in shaping identity through a selective and reconstructive process, as has been discussed in the context of narrative identity theories (Ricoeur, 1990; Schechtman, 1994). Human autobiographical memory is inherently approximate (Conway, 2005) and filtered through individual interpretation, allowing for a coherent self-narrative over time. Digital technologies, however, challenge this model by storing and presenting memories algorithmically, often externalising the process of recollection and altering the individual's relationship with their past. Algorithmic memories – such as those generated by social media platforms or AI-driven memory assistants – curate and present past experiences based on statistical relevance rather than subjective meaning, raising concerns about the loss of agency in self-definition. This paper examines how conversational AI may alter autobiographical memory by synthesising data into interactive narratives. This possibility introduces new challenges, including the risk of epistemic harm, where individuals may feel that AI-mediated narratives override their own authority over personal history. The phenomenon of "alternative identities," in which AI-generated recollections conflict with an individual's self-perception, can lead to cognitive dissonance or alienation from one's past. Moreover, this discussion addresses the emotional and ethical dimensions of AI-assisted memory. AI systems that retrieve and articulate personal memories simulate human-like intimacy, fostering emotional connections between users and virtual assistants. This raises questions about vulnerability and manipulation, particularly in cases where AI-generated recollections reinforce selective or distorted narratives. Additionally, the emergence of "deadbots" and digital

afterlife applications, which reconstruct the identities of deceased individuals through conversational AI, underscores the need for ethical considerations regarding consent, memory ownership, and posthumous identity reconstruction. Through an interdisciplinary approach combining philosophy, social sciences, and STS perspectives, this paper critically assesses the broader implications of AI-mediated memory. It questions whether the fundamental nature of memory is shifting from a subjective, interpretative process to an externally curated and algorithmically synthesized construct. This presentation aims to foster discussion on the following key questions: How does AI's role in memory retrieval influence the user's sense of self? What are the risks of errors or biases in AI-assisted recollections? Does AI-generated memory undermine the epistemic authority of individuals over their own narratives? Finally, how should ethical frameworks address the emotional and psychological impact of AI-mediated autobiographical memory? By examining these critical intersections of AI, memory, and identity, this paper contributes to ongoing STS debates on the socio-technical transformations of personal memory in the digital age.

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ID 820 - Rethinking Attention in the Digital Age: A Cultural and Regulatory Approach

Stefana Broadbent, Politecnico di Milano

Keywords: attention, regulation, culture

Attention is often analyzed as an individual cognitive resource, yet it is also a crucial element of relational competencies. In developmental, and social psychology, shared and joint attention are recognized as fundamental mechanisms for cooperation, collaboration, discussion, and decision-making. A democratic society relies on the ability, cultivated from childhood, to regulate attention and balance individual focus with shared attentional engagement. However, contemporary digital environments exploit attention as a commodity, driven by business models designed to maximize user engagement. This phenomenon, known as the attention economy, monopolizes attentional resources, posing both individual risks – by undermining agency – and democratic risks – by impeding collective action.

The growing awareness of these risks has led to various initiatives aimed at regulating the design and deployment of attention-capturing digital systems. However, relying solely on restrictive legal measures is proving insufficient as social media companies are increasingly deploying new technologies that aim at maintaining users on their platforms. Addressing the challenges of attentional capture requires a broader, ecosystemic transformation. We propose an expanded framework that treats digital interfaces as part of the common space, necessitating a cultural policy that better defines and supports individual and collective attention. This approach integrates economic considerations, cognitive science insights, pluralistic conceptions of attention, and legal perspectives to establish a set of guiding principles that (a) regulate exploitative practices, (b) enhance transparency, and (c) empower users to leverage digital tools for collaboration and democratic engagement.

In this presentation, we will explore strategies to support this transformation, including:

- Measures to curtail manipulative practices, particularly through the prohibition of dark patterns – design strategies that deliberately undermine user autonomy.
- Strategies to enhance user agency by granting key rights, such as interface configurability, interoperability, collective action, and recourse mechanisms. These measures aim to restore attentional control and strengthen individuals' and groups' power to act.
- The development of reflexive design principles and user-centric tools that promote informed engagement and equitable access to information.

By integrating regulatory, cultural, and technological perspectives, we outline a pathway toward a more equitable digital ecosystem that fosters constructive democratic debate and collective agency.