

Workshop on Critical Theory of the Computational

16-17 October 2025 at the Weizenbaum Institute in Berlin

The two-day workshop engaged in critical theories (both in the tradition of the Frankfurt School *and* beyond) in order to examine how computational/digital constellations are shaping foundational dynamics in society and how these constellations are themselves embedded in ongoing planetary transformations (such as global heating). The international workshop with 40 participants explored how computational constellations not only introduce new actors—such as AI systems and human–machine hybrids—but also shape existing understandings of agency and its properties like autonomy and emancipation. The event was co-organized by the [Center for Critical Computational Studies](#) (C3S) in Frankfurt, [Center for Responsible AI Technologies](#) in Munich and the [Weizenbaum Institute](#) (WI) in Berlin.



F.l.t.r.: Program Committee with Christoph Burchard (C3S), Christoph Neuberger (WI), Juliane Engel (C3S), Thorsten Thiel (University Erfurt), Sebastian Berg (WI, WZB). Not on the photo: Benjamin Rathgeber (Center for Responsible AI Technologies)

The first day of the workshop started with a **welcome** by [Christoph Neuberger](#), Scientific Managing Director of the Weizenbaum Institute. The discussion kicked-off with a **conceptual framework for critical theory of the computational** by [Juliane Engel](#) and [Christoph Burchard](#) (Director and Speaker of C3S). In this introduction they focused on four theses: (1) positionality and the need of critique to address the condition of shifting temporalities, specialities, and materialities of computational; (2) the transformation as the computational rewrites the grammar of change and feedback loops metabolize critique itself; (3) critique coincides with praxis and re-form one another; (4) emancipating emancipation from inherited forms and emphasize the openness of the practice.



Participants listen to conceptual framework of Christoph Burchard and Juliane Engel

During the first panel [David Berry](#) (University of Sussex) and [Leonie Hunter](#) (Princeton University) discussed with [Thorsten Thiel](#) (University Erfurt) about the **dialectics of the digital: critique, co-construction, and the politics of computation**. Berry explained the political, economic and cultural implications of computation. He warned against computational romanticism and mystification of AI technologies, which serve the interest of the dominating big companies. He introduced the concept of inversion to understand current processes of AI (synthetic data, AI slop) as a new way of seeing and thinking epistemological uncertainties.

Hunter elaborated on the technologies of social abstraction, defined as a social practice of reification, which produces fetishes. She argued that neural networks work in formal equivalence to economic processes of social abstraction. She stated that this leads to an intensification of capitalist form of power and increases the risks of global fascisms.

The second panel moderated by [Sebastian Berg](#) (WI, WZB) discussed the **crises of reason: knowledge, expropriation and ideology in computational capitalism**. [Anna Verena Nosthoff](#) (University of Oldenburg) provided insights into Silicon Valley's technofascism and cybernetic authoritarianism. She examined the deeper continuities that link right-wing ideologies within the tech sector to the intellectual legacy of first- and second-order cybernetics. Nosthoff made the argument that technology is depicted as neutral or above ideology, while contemporary technofascists advancing their political and hierarchical agenda.

[Christine Gerber](#)¹ (WZB) elaborated on the relationship between work and rent IT-programming and journalism with regard to generative AI in knowledge work. The

¹Project in cooperation with Florian Butollo (WI), Marlene Kulla (WI), Ann Kathrin Katzinski (WZB)

study she presented showed that GenAI is not substituting work, but dialogical modes of co-creation are dominant. Human labour is still needed to process accumulated knowledge and operate GenAI systems.

The third expert, [Sebastian Seignani](#) (University Jena) focused on the computational in digital capitalism and the question, if information and data can be expropriated and exploited. He stated that critical diagnoses of digital capitalism ought to provide explanations why the happiness of the strong depends on the suffering of the weak. Seignani argued on how controlling the means of knowledge absorption, expropriation and exploitation leads to intellectual monopolization.

The third panel of the day focussed on **knowledge and GenAI: between truth and hallucination**. On the question of “whose personae”, [Jan Batzner](#) (WI) provided an input on the critical pathways to representativeness and transparency in LLM research. He gave recommendations for LLM “personas” to clearly define task of interest and specify use case, use empirically grounded data and representativeness should be discussed. For reproducibility the full dataset and code should be provided and the author context to be acknowledged.

[Ben Potter](#) (University of Sussex) gave insights into his study on synthetic mediations. LLMs represent a new paradigm of communication and knowledge without thinking to generate meaning. Potter elaborated on the implications for critical theory’s assumption that mediation is grounded in human social relations and subjectivity. Challenges include the synthetic standardisation of communication with a language without subjectivity but still being active in society. This leads to the need to expand mediation theory to include computational synthesis of language.

[Paola Lopez](#)² (University Bremen) talked about LLMs and the phenomenon of hallucinations in the context of Hannah Arendt’s concept of truth. She focused on the questions how technically constructed and political understandings of truth relate to one another. Lopez referred to Arendt’s thoughts on the interplay between truth and political action, concluding that GenAI outputs are always discursive and iterative and the validity must be established through political communication.

Fourth of this panel discussion was [Niklas Egberts](#) (Dresden University of Technology). He talked about technological futurity and common sense. In his input he laid out how common sense as metaphor in AI engenders a logic of technological futurity, with prediction as a “skeleton key” to all social problems. Technological futurity is sold as a promise for an open future while manifesting closure through calculative control. The discussion was moderated by [Markus Maier](#) and [Raphael Ronge](#) (both from the Center for Responsible AI Technologies of the Hochschule für Philosophie in Munich).

²Project in cooperation with Ann-Kathrin Koster (WI)

The highlight of the first day was the **online keynote on “Model Collapse”** by [Kate Crawford](#) (University of Southern California), a leading scholar of artificial intelligence and its material impacts. She started her keynote revering to the new phenomenon of AI slop, which can also be used for AI generated campaigns and so called “slopaganda”. This poses the risk of simulation to replace reality. Crawford described how human culture has become a data resort and slop as its’ waste but also a fuel. She elaborated on the new theme of metabolic media including a metabolic rift and the systemic disruption of AI. The ingesting of data flattens culture into datasets and once these human data is used up, synthetic data is used to train AI. In this regard Crawford referred to the self-consuming aspect of AI including the use of synthetic data which can result in model collapse. The third part of metabolic media is the digestion of resources like minerals, energy and water. The fourth part is excreting of slop. In 2025 52% of online content was generated by AI and the slop economy is growing fast. The metabolic media competes with humans for energy, water and land, which can lead to the erosion of norms. The shift of power now concentrated on billionaire owners of a few companies leads to a monopoly of imagination and extraction, which can amplify lies and reconstructing historical realities without any democratic oversights. The keynote was followed by a discussion moderated by Juliane Engel with the workshop participants.



Participants of the workshop

The second day of the workshop started with the fourth panel discussion moderated by Juliane Engel (C3S) focusing on **grand challenges and planetary transformation: ecologies of power in a computational world**. [Angela Oels](#) (University of Augsburg) talked about the need to re-politicising of the debate about sustainability and digitalisation. She argued that without radical social and political changes, digitalisation is likely to reproduce unsustainable patterns of natural resources exploitation and data extractivism. But rather broad participation and social movements are needed to challenge vested interests.



Fourth panel with (f.l.t.r.): Dan Verständig, Angela Oels, Raphael Ronge, Jan-Philipp Kruse and Juliane Engel

[Raphael Ronge](#)³ (Center for Responsible AI Technologies) added insights from a study on the critique of artificial reasoning, focusing on the question if AI models are capable of giving reasons for their answer? He criticised the narrative of Large Reasoning Models being the next logical, inevitable step towards Artificial General Intelligence.

[Jan-Philipp Kruse](#) shed light on the new challenges for democratic futures with regard to digital transformations. He elaborated that the Anthropocene era brought intricate societal problems of new quality while digital transformations of democratic life and the public sphere are not sufficing deliberative standards. GenAI amplifies cultural reproduction but undermines creativity which is essential to deal with the far-reaching problems of Anthropocene.

[Dan Verständig](#)⁴ (TU Berlin) talked about the options for co-constructing and critique with computational technologies, which are explored in the „Sonderforschungsbereich Transregio 318 *Constructing Explainability*“. He stated that critics and scientists are part of the system and the difficulties of a neutral ground, which makes a reflective sociology necessary. He argued for critic through praxis and pedagogical intervention to see the hidden structures. Verständig called for challenging oneself to take part in the process of shaping the computational world.

³ Project in cooperation with Markus Maier and David Gierscher (Hochschule für Philosophie)

⁴Project in cooperation with Katharina Rohlfing and Ingrid Scharlau (both University Paderborn)

The aesthetic, the algorithmic, and the end(s) of law: critical counterpoints to computational jurisprudence was the topic of the fifth panel which was moderated by Christoph Burchard (C3S). [Jessica Eaglin](#) (Cornell University) joined the panel online with her insights on the legal construction of race in the United States via the algorithmic fairness debates. She raised the question how the equal protection act goes in line with biased AI tools. Those can only be as good as the data they are trained with. Equal protection should prevent proxies at race or gender to not be taken into consideration. This makes the tool less accurate and there are no laws to regulate this yet. Eaglin elaborated that race is not a fixed fact but social construct, but AI tools can legitimate unequal treatment and put law into the business of making race. She recommended to use algorithms to unpack race in criminal law instead.

[Katrin Becker](#) (University of Luxembourg) placed particular emphasis on the quest for autonomy in the age of blockchains and LLMs raising questions about coded law and computed justice. She concluded that blockchain technology and LLMs eliminate or occupy space of anthropological function of law. Instead of the promised autonomy new heteronomies are created. This is driven by an “algorithmic ideology” of technological progress and AI’s permeation of law and society as “natural necessity” which should be criticized.

[Barton Beebe](#) (New York University) took a look into the history of law being challenged by technological changes and if the current AI trend could be the death of law. He gave a historical perspective on the debates about technology-induced legal extinction. Anxiety as well as euphoria are parts of the discourse on legal extinction by technology. The anxiety is a reaction to the ideology of technological rationality and expresses the fear of losing autonomy of law. It can also be seen as an aesthetic reaction towards the concept of “Rechtsgefühl”. While the legal extinction euphoria is driven by the dream of the closure of law.

After the lunch break the final panel discussion was opened by Christoph Neuberger (WI) on **challenges and opportunities for the future of liberal democracy**. [Annette Zimmermann](#) (University of Wisconsin-Madison) provided insights into new ways to democratize AI. The increased deployment pace of recent GenAI innovations and lack of regulation led to an asymmetrical dispersion of risk and a concentration of power. She saw a current window of opportunity for democratization of AI deployment and to create counterpower against big tech oligarchs, especially in ways of agenda-setting.

[Markus Patberg](#) (University Hamburg) also focused on oligarchic power and its’ capture of the public sphere. He posed the questions of how the digital structural transformation – especially the rise of social media – changes the overall constellation of practices, sites, and agents in the deliberative system. He took a closer look into the ownership model, the concept of “built environment” and legal framework. Oligarchs of tech companies have control over key infrastructures of the public sphere and lobby for deregulation, which undermines the capacity of civil society to initiate collective decisions and hold those in power accountable.

[David Leslie](#) (Alan Turing Institute) gave his talk on AI and the heritage of democratic equity. Generative AI unequivocally lowers barriers for disinformation campaigns and automating mass production of targeted propaganda. The onset of agentic AI applications could increase this exponentially. Leslie elaborated on the technologically-spurred ethical peril at individual, social, and societal levels. This shows us that the heritage of democratic equity is under relentless assault now and might be lost if we do not intervene effectively.

Last in this round was [Frederik Heinz](#) (University Hildesheim) who shared his expertise on AI digital era governance and the postliberal state. He provided a historical perspective that the era of “new public management”, which started in 1985, has been succeeded from the early 2000s on by the “Digital Era Governance”. Later being more centralized and state-oriented than before. These developments underline the thesis of the “Dataist State.” The new technocratic potential increased the state capacity and created new governance logic.

The event closed with the **final remarks** from Thorsten Thiel (University Erfurt), who focused on three main points as take-aways from the workshop. First: We need critical theories of the computational—not just “Critical Theory” with a capital C, but theories in the plural. Second: Metaphors matter—and we must take them seriously: they are crucial not only for understanding computational processes but also for countering them. Third: Critical practice needs to be enacted to determine what works, and we should not dismiss efforts prematurely, even if they appear ineffective or risk being co-opted.



Workshop Participants