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Editorial

## **Turning queries into questions. For a plurality of perspectives in the age of AI and other frameworks with limited (mind)sets**

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### **Abstract**

The editorial introduces issue 21.1 of *Technoetic Arts* via a critical reflection on the artificial intelligence hype (AI hype) that emerged in 2022 and gives an overview of each of the issue's ten articles. The first four articles engage with new technologies from different positions in art and architecture. These articles include an exploration of the indexical function of images as a means for revealing cultural premises governing public space during the pandemic in Hong Kong, a neuroarchitectural perspective on immersive architectural environments, and an investigation of the link between the popularity of immersive art installations and the emotions these installations generate. The 'Cryptoart' section features an ethnographic study of the DADA digital art collective, shedding light on the role of non-fungible tokens (NFTs) in community building. Guest-edited by Professor Tanu Gupta, the Special Section 'Perspectives from Chandigarh' constitutes the second part of the journal issue. Based on contributions to the national conference on Contemporary Perspectives in English Language, Literature, and Cultural Studies held on 15–16 July 2022, at Chandigarh University in Punjab, India, the six articles reflect a search for meaningful existence within colonial, patriarchal and biopolitical structures that frame everyday practices of exclusion and oppression. Discussing works of literature and cinema from the European, Japanese and the US American canon, the articles contribute a distinctive perspective to the critical analysis of contemporary societies that are shaped by the idea that progress is technological invention.

### **Keywords**

AI hype, art, new media, immersive installations, machine learning, NFT, biopolitics, post-colonial

Summer 2022 – perhaps you remember the days just before the autumn of artificial intelligence (AI) began. In July and August 2022, the beta releases of the text-to-image applications Midjourney, DALL-E 2 and Stable Diffusion were announced. The release of the chatbot ChatGPT followed in November. It was the beginning of an extended winter season of hype around AI. There was hardly a day without news on recent AI developments. By late February 2023, myriad articles had been published, warning about an AI invasion that will eventually eclipse humans. On 8 March 2023, the hype cycle had apparently run its course. The New York Times published an article co-authored by Noam Chomsky, Ian Roberts and Jeffrey Watumull titled ‘The false promise of ChatGPT’ emphasizing that ChatGPT and similar applications do not yet mark ‘the dawn’ of intelligent technology (Chomsky et al. 2023: n.pag.). The article further stressed that the current approach to machine learning incorporates into technology ‘a fundamentally flawed conception of language and knowledge’ (Chomsky et al. 2023: n.pag.). Two weeks later, on 22 March, the Future of Life Institute released an open letter calling for the temporary suspension of the training of ‘AI systems more powerful than GPT-4’ (Future of Life Institute 2023: n.pag.).

It is important to understand who the actors are. The institute authoring the open letter is ideologically inclined towards so-called longtermism, a set of ideas that provides justifications for people who build bunkers in their gardens and engage in preparations for colonizing Mars (Torres 2021; Conroy 2022; Xiang 2023). The open letter received the signatures of many figures considered important in the AI world; Elon Musk is among them. Within the setting of an attention economy, it is not necessarily a surprise that a star like Chomsky had to speak up before news media and big tech declared a return to reason, downplaying the fact that it was them who had been fuelling the AI hype for months on end with unfounded scenarios, ignoring all critique. It is worth noting, nevertheless, that there had been ample evidence of the significant problems underlying the AI systems that were being advertised in futuristic attire.

As important a thinker as Chomsky is, he was not the first to express concern. Joy Buolamwini made headlines in 2017 when her research at the MIT Media Lab revealed severe bias in algorithmic facial recognition systems, returning a much higher error rate on humans with dark skin (Buolamwini 2017). Likewise, Abeba Birhane’s research on racist and misogynistic bias in an ‘80 Million Tiny Images’ dataset used to train so-called AI systems was in the news (Prabhu and Birhane 2020; Weckler 2020). In 2021, Emily Bender, Timnit Gebru, Angelina McMillan-Major and Margaret Mitchell (as Shmargaret Shmitchell) published a paper that laid out critique of the Language Models that make today’s AI. The paper ‘On the dangers of stochastic parrots: Can language models be too big?’ to date, has been cited more than 350 times and downloaded more than 120 thousand times (Bender et al. 2021). The critique has been public. It is about the environmental costs (Bender et al. 2021: 610, 612–13) and the reproduction of ‘existing regimes of power’ through static data (Bender et al. 2021: 614). It is about the bias and racism inherent in the training data and their multiplication and normalization (Bender et al. 2021: 614–18). More recently, there were reports about the exploitation of workers and data theft at an enormous scale (Williams et al. 2022; Perrigo 2023; Vincent 2022). These issues must be addressed.

It will be worth a closer look as well in this context at how those involved in creating the AI hype managed to either ignore or dismiss the critique for such a long time. Ironically, the ‘stochastic parrots’ paper by Bender, Gebru, MacMillan-Major and Mitchell is the first cited in the open letter which calls for a pause in training AI systems. Yet, the citation is set to support a claim related to ‘AI systems with human-competitive intelligence’, which constitutes a distortion as the ‘stochastic parrots’ paper does not suggest that Language

Models incorporate intelligence of any kind (Future of Life Institute 2023: n.pag.; Bender 2023). The authors of the ‘stochastic parrots’ paper and others pointed out that the open letter distracts from the issues that should be addressed, and essentially fuels the hype while pretending to calm it (Bender 2023; Kapoor and Narayanan 2023; Gebru et al. 2023). Commenting on the open letter’s call for a ‘moratorium on the development of AI systems’ in The Guardian, Evgeny Morozov suggested the time would be better spent if people used it to suspend the term Artificial Intelligence (Morozov 2023: n.pag.). Not only is the term a residue of the Cold War Era, but in its allusion to artificiality and intelligence, it obfuscates the fact that Language Models are trained on content that humans have created (Morozov 2023).

Based on pattern recognition, applications like ChatGPT generate what is the ‘most likely’ or ‘most probable’ response to a question or prompt (Chomsky et al. 2023: n.pag.). Chomsky et al. liken the process of pattern recognition to ‘brute correlation’, which differs significantly from the human ability ‘to create explanations’ (Chomsky et al. 2023: n.pag.). It might look somewhat basic at first glance, yet ‘to create explanations’ relates to a particular form of reasoning that is neither deductive nor inductive. Charles Sanders Peirce created the term abduction for this kind of explanatory or presumptive reasoning.

Abduction is the process of forming an explanatory hypothesis. It is the only logical operation which introduces any new idea; for induction does nothing but determine a value, and deduction merely evolves the necessary consequences of a pure hypothesis.

Deduction proves that something must be; Induction shows that something actually is operative; Abduction merely suggests that something may be. (Peirce [1934] 1960: 106 §171)

Abductive reasoning is the basis for creativity, and thus not unsurprisingly, it features prominently in the design research literature (Cross 2006: 19-20). Designers anticipate, but this form of anticipation, as Peirce highlights, is not predictive; it is suggestive. There is always more than one possible outcome. Abductive reasoning addresses situations that cannot be fully determined. The literature refers to these as ‘wicked’ situations, emphasizing that they cannot be ‘tamed’ without eliminating something that is important (Rittel 1972). In life, we frequently encounter such situations. They require creativity to be addressed. Abductive reasoning, of course, is also inherent in processes involving the creation of art. Already in the late 18th century, Immanuel Kant related experiencing a work of art to an encounter with a possible order (Westermann 2019: 240-1). The term that is introduced by Kant in this context is purposiveness. In its purposiveness art appears to us ‘free from all constraint of chosen rules’ (Kant [1790] 1987: §45). Purposiveness, according to Kant, is indeterminate, unlike purpose, which is determinate. The Kantian conception of art resonates with Peircian abduction, and yet there is an important shift of focus from the object to the person who conceives.

There is a general shift of focus from static Being to approaches that encompass processes and relations in 20<sup>th</sup>-century western views and philosophy. It does not take much, however, to realize that ontological thinking, despite the change of views in the 20<sup>th</sup>-century, is often, if not typically, given primacy in western contexts – a situation that is difficult to overcome. The reports of Robin Kimmerer, who published several books on Native American ecologies, are revealing in this context. Learning the language of her ancestors, the Potawatomi, for example, required her to bracket out western entitative bias (Kimmerer 2017). Reflecting in its ‘grammar of animacy’ a living world, the Potawatomi language does not describe nature in

nouns but solely in verbs – *wiikwegama* means 'to be a bay' (: 131). Yet, there is no reason to assume that due to this orientation towards process, an application like ChatGPT could not be trained in Potawatomi. While it might be difficult to find enough data in Potawatomi, if it was available, the application could be trained to replicate the language's patterns. An understanding of concepts is not required in this case, as ChatGPT is not trained to think in a language.

Roger T. Ames, one of the leading scholars in comparative Chinese and western philosophy, has suggested that abductive reasoning gains in importance when a culture's philosophical view is not ontological but process-oriented (Ames 2020). According to Ames, deductive and inductive reasoning are a 'source of security' in western thinking, used to justify given hypotheses (2020: 32; 2022: min. 26). This desire for justification, however, is not primary in ancient Chinese philosophy, which is grounded in a generative logic, not in a logic of identity. The ancient Chinese, thus, required abductive reasoning to produce new meaning (2020: 32; 2022: min. 26).

Perhaps the most interesting reading of Peircian abduction is that it is the unbounded process of making productive correlations, generating new meaning, taking as its only boundaries the limit of our imagination. (Ames 2022: min. 27)

Clearly, if the limits are the limits of imagination, this form of 'making productive correlations' has nothing to do with the 'brute correlation' that Chomsky et al. associate with the Language Models at the basis of applications such as ChatGPT. Abductive reasoning is a creative process.

Years ago, when I was working on my thesis, searching for a way to describe a particular form of creative practice that I referred to as poetic, I suggested the following definition:

a performative process that creates borders rather than borderlines, limits rather than limitations [...] a discipline of radical communication that always seeks to extend itself towards an Other – the unknown – addressing it without previously quantifying it to render it provable. (Westermann 2011: ii, 108)

Poetic practice, in this sense, is always critical of its rules – which are never fixed – and it always aims at inclusion. Looking at my definition so many years later, today, I would want to replace the expression 'a discipline of radical communication.' The term 'a critical practice' instead would take into account that poetic practice is a way of thinking and doing that does not exclusively, not even primarily, aim at communication. Abduction relates to this kind of practice that is always critical and inclusive, generating questions as part of a critical inquiry and a hypothesis to be explored.

It is clear that the pattern recognition processes of today's so-called AI systems incorporate a very limited, technical idea of language that differs significantly from conceptualizations of language at the heart of critical poetic practice. The fact that current versions of the technology violate basic ethical standards cannot be tolerated. These issues must be addressed to ensure presents and futures in which agents with a plurality of perspectives may act to make this world an inclusive one.

### **A plurality of perspectives in issue 21.1**

With regard to the above-mentioned, I am happy to introduce the articles of this issue of *Technoetic Arts*. In the spirit of this editorial, we have included perspectives from a variety of

disciplinary and cultural backgrounds, and of course, they deal with questions of the exploratory and critical kind. The first four articles engage with new technologies from different positions in art and architecture.

Hin Nam Fong's article '*The Last Recreational Land* VR experience: A non-naturalistic artistic visualisation (NNAVi) practice with emerging technologies' outlines the possibilities of indexical images as a means to visualise critical data. Fong's interest is in public space and in visualising the underlying premises, beliefs and ideologies that lead to physical changes in public space. Developed during the pandemic in Hong Kong, the VR artwork *The Last Recreational Land* presents a case study of this new methodology of artistic research (Fong 2023).

The article, 'A neuroarchitectural perspective to immersive architectural environments,' by Esen Gökçe Özdamar discusses digital installations that operate at the threshold of art and architecture and challenge known spatial experiences and expectations. By conceptualising these installations from the viewpoint of neuroaesthetics Özdamar provides insights into the embodied nature of human spatial experience. Yet, she also uncovers new digital dimensions and boundaries, some of which have already become part of our everyday environments, however, largely unnoticed (Özdamar 2023).

Architecture has a tendency to pretend political neutrality, but space, whether physical or digital, can never be neutral. There are many questions that need to be addressed that deal with new digital thresholds that have been and will be created. People(s) will need the right to set, explore, critique and delete digital boundaries and dimensions.

The third article in this issue's collection takes a rather pragmatic approach to the analysis of new media environments. 'Applying machine learning methods to quantify emotional experience in installation art' focuses on room-sized immersive installations by well-known artists Yayoi Kusama and Peter Kogler. To investigate how particular emotions influence the popularity of these installations, Sofia Vlachou and Michail Panagopoulos analyse Twitter data, employing a machine-learning method (Vlachou and Panagopoulos 2023). The investigation will be of particular interest to museologists and curators.

The fourth article in the collection leads us away again from curatorial concerns. In the contribution to *Technoetic Arts*' ongoing 'Cryptoart' section, Tara Merk critiques the market focus in discussions on artwork NFTs. The ethnographic study of the Dada digital art collective entitled 'Beyond markets: the Dada case for NFTs in art' reflects on the role of NFTs in community building and highlights performative aspects of the NFT technology that have so far been overlooked. As one of the interviewees' remarks, the ritual of minting an NFT is like 'bringing into existence a work of art' (Merk 2023). The aspects that relate to art's function of social communication and are affected by ritualistic performance could also be further explored in the context of a philosophy of art.

Guest-edited by Professor Tanu Gupta, the special section 'Perspectives from Chandigarh' constitutes part two of the journal issue. The articles were solicited via a call for papers with a focus on protest and postcolonial literature, gender, Indian writing, new media, popular culture and linguistics in English language, literature and cultural studies. The six articles selected for *Technoetic Arts* reflect a search for meaningful existence within colonial, patriarchal and biopolitical structures that frame everyday practices of exclusion and oppression. Discussing well-known works of literature and cinema of the European, Japanese, and US American canon, the articles contribute a distinctive perspective to the

critical analysis of contemporary societies shaped by the idea that progress is technological invention, regardless of the impact of any such invention on society.

It is a great honour to have these contributions to the journal. With this being said, I am happy to hand the editorial over to Professor Gupta, who provides a more detailed introduction to the second part of this issue in the paragraphs below.

### **Perspectives from Chandigarh**

I am delighted to introduce the special section, which comprises a collection of carefully chosen research papers that were presented at the second National Conference on 'Contemporary Perspectives in English Language, Literature, and Cultural Studies' held on 15th -16th July, 2022, at Chandigarh University in Punjab, India, in collaboration with *Technoetic Arts*. The event was attended by approximately 400 delegates, dignitaries, and scholars from various states across the country. During the conference, a total of 178 articles were presented, which were evaluated and scrutinized by distinguished professors and academics from several universities, including the University of Allahabad, Indian Institute of Technology, Jai Narayan Vyas University, Palamuru University, University of Delhi, Shiksha O Anusandhan University, Banaras Hindu University, and O.P Jindal University. After a double-blind peer review process, the authors received a detailed review. Following a thorough and strict review process, six articles were chosen for this issue.

The first article by Angadbir Singh Kakkar entitled 'More than human: Analysing Edward Weyland as a post-human self-humanising vehicle in Suzy McKee Charnas' *The Vampire Tapestry*' analyses the meaning of the word 'human' beyond a fixed definition, recognizing it as a term that is always in flux, and explores how the idea of bio-politics is immanent to the concept of human (Kakkar 2023; Charnas 1980). The second paper, 'Disability and silver screening: Comparative analyses of deaf culture in *Sound of Metal* and *CODA*' written by Astha Singh, provides an in-depth examination of deaf culture as a significant topic depicted in the movies *Sound of Metal* and *CODA* and elucidates the most common misunderstandings about disability present in these films (Singh 2023; Marder 2019; Heder 2021). 'Shadowy objects in test tubes': A biopolitical critique of Kazuo Ishiguro's *Never Let Me Go*' by Dona George aims to use the Foucauldian theoretical framework to examine the complex biopolitical themes present in Kazuo Ishiguro's novel *Never Let Me Go* (George 2023; Ishiguro 2005). The fourth article, 'Disgusting desire: *The Windup Girl* as both object of desire and abject body' by Mahesh Krishna and Nagendra Kumar, looks at how the posthuman body in Paolo Bacigalupi's dystopian novel *The Windup Girl*, set in a world where geographical, political, social, economic, and religious norms and boundaries are erased and reconfigured, can in no way simply remain a mere body, but transmutes into a highly complex political and social site from whence multiple relations of power originate, travel, and culminate in (Krishna and Kumar 2023; Bacigalupi 2009). The aim of the article 'Negotiating Patriarchal Hegemony: Female agency in Christina Dalcher's *Vox*' by Sana Altaf is to examine *Vox* by Christina Dalcher within the framework of feminist dystopia to highlight the unbridled nature of violence used against women (Altaf 2023; Dalcher 2018). The main aim of the next article, 'Re-conceptualizing the villain: Todd Phillips' Joker through the lens of Vedic hermeneutics' written by Lalit Aditya Kaushal and Nipun Kalia, is to examine Arthur Fleck's behavioural tendencies and draw connections to *Satyarth Prakash*, a text by Dayanand Saraswati that delves into various forms of Avidya which is a central idea in Indian philosophy that refers to ignorance or lack of wisdom and is believed to be a root cause of pain (Kaushal and Kalia 2023; Phillips 2019; Saraswati [1875] 1908).

The 'Perspectives from Chandigarh' special section offers a diverse range of interdisciplinary engagement that is sure to capture the attention of the researchers. It will be of particular interest to those who want to delve into discourse analysis to gain a deeper understanding of the various aspects of human challenges.

## CONTRIBUTOR DETAILS

Dr Claudia Westermann is an artist and architect, licensed with the German Chamber of Architects, and a senior associate professor in architecture at Xi'an Jiaotong-Liverpool University in Suzhou, China. Her works are concerned with the ecologies, poetics and philosophies of art and architectural design. They have been widely published and exhibited, including at the Venice Biennale (Architecture), the Moscow International Film Festival, ISEA Symposium for the Electronic Arts, the Center for Art and Media (ZKM) in Karlsruhe, Germany, and the Michigan State University Museum. She is an editor of the journal *Technoetic Arts*, sits on the executive committee of the American Society for Cybernetics and is a member of the CRAC Collective.

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