



Yayoi Kusama (2015):
Obsession Infinita
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A JAPANESE-GERMAN CONFERENCE

Artificial Intelligence and the Human Cross-Cultural Perspectives on Science and Fiction

Wednesday 11-Friday 13 May 2022

Current debates on artificial intelligence often conflate the realities of AI technologies with the fictional renditions of what they might one day become. They are said to be able to learn, make autonomous decisions or process information much faster than humans, which raises hopes and fears alike. What if these useful technologies will one day develop their own intentions that run contrary to those of humans?

The line between science and fiction is becoming increasingly blurry: what is already a fact, what is still only imagination; and is it even possible to make this clear-cut distinction? Innovation and development goals in the field of AI are inspired by popular culture, such as its portrayal in literature, comics, film or television. At the same time, images of these technologies drive discussions and set particular priorities in politics, business, journalism, religion, civil society, ethics or research. Fictions, potentials and scenarios inform a society about the hopes, risks, solutions and expectations associated with new technologies. But what is more, the discourses on AI, robots and intelligent, even sentient machines are nothing short of a mirror of the human condition: they renew fundamental questions on concepts such as consciousness, free will and autonomy or the ways we humans think, act and feel.

Imaginations about the human and technologies are far from universal, they are culturally specific. This is why a cross-cultural comparison is crucial for better understanding the relationship between AI and the human and how they are mutually constructed by uncovering those aspects that are regarded as natural, normal or given. Focusing on concepts, representations and narratives from different cultures, this conference aims to address two dimensions of comparison that help us make sense of the diverse realities of artificial intelligence and the ideas of what is human: *Science and fiction, East Asia and the West*.

AGENDA

Wednesday, 11 May 2022 · Location: Spreespeicher (030 Eventloft)

19:00–20:30 Keynote Address I: Kanta Dihal

20:30–21:30 Conference Reception

Thursday, 12 May 2022 · Location: Japanese-German Center Berlin (JDZB)

09:00–10:00 Registration and Coffee

10:00–10:30 Welcome Note and Introduction

10:30–12:00 Concurrent Panels

Imagining AI & the Human

Robot-Human Interaction

12:00–13:30 Lunch Break

13:30–15:00 Concurrent Panels

The Languages of AI

Bodies, Intimacies, Interactions

15:00–15:30 Coffee Break

15:30–17:00 Concurrent Panels

Brain & Mind

Industries

17:00–17:30 Coffee Break

17:30–18:30 Keynote Address II: Simone Natale

19:00 Performance + Reception

Friday, 13 May 2022 · Location: Japanese-German Center Berlin (JDZB)

8:45–9:15 Registration and Coffee

9:15–10:45 Concurrent Panels

Asian AI vs. European AI? Methodological Challenges of Cross-Cultural Research

Smart, Caring and Sensitive Environments

10:45–11:15 Coffee Break

11:15–12:45 Panel: Futures & Fictions

12:45–14:00 Lunch Break

14:00–15:15 Workshops and Networking Activities

15:15–15:45 Coffee break

15:45–16:45 Keynote address III: Yukie Nagai

16:45–17:45 Closing Discussion

18:00 Conference Closing & Snacks

CONFERENCE PROGRAMME

Wednesday, 11 May 2022 · Location: Spreespeicher (030 Eventloft)

19:00–20:30 **Keynote Address I: How the world sees intelligent machines**

Moderator: Tobi Müller

Kanta Dihal (Leverhulme Centre for the Future of Intelligence, University of Cambridge)

People have been imagining intelligent machines for millennia, in ways that vary greatly across cultures. Yet as artificial intelligence begins to fulfil its potential as a technology, spreading across the globe from one of its origins in 1950s America, many of these perspectives are marginalised. These stories, films, and visions matter: they are entangled in broader cultural attitudes and approaches to AI, reflecting or inspiring, embedding or disputing them. In her lecture, Kanta Dihal will introduce such visions from across the globe, and what they can tell us now that AI is becoming a technological reality. Her lecture will draw out three themes: real and apparent differences between 'Eastern' and 'Western' portrayals of AI; visions of AI in communist states; and narratives of AI that explicitly aim to reject colonialist views of the technology.

Kanta Dihal is a Senior Research Fellow at the Leverhulme Centre for the Future of Intelligence, University of Cambridge. Her research focuses on science narratives, particularly those that emerge from conflict. She currently manages the Cambridge branch of 'Desirable Digitalisation', an international research collaboration that investigates intercultural perspectives on AI and fundamental rights and values. She is co-editor of the books *AI Narratives: A History of Imaginative Thinking About Intelligent Machines* (2020) and *Imagining AI: How the World Sees Intelligent Machines* (2022) and has advised the World Economic Forum, the UK House of Lords, and the United Nations. She obtained her DPhil on the communication of quantum physics at Oxford in 2018.

20:30–21:30 Conference Reception

Thursday, 12 May 2022 · Location: Japanese-German Center Berlin (JDZB)

9:00–10:00 Registration and Coffee

10:00–10:30 **Welcome Note and Introduction @hall**

Julia Münch (JDZB, Berlin)

Katsumi Watanabe (Waseda University, Tokyo)

Thomas Christian Bächle (HIIG, Berlin)

10:30–12:00 – **Concurrent Panels** –

Imagining AI & the Human @hall

Chair: Thomas Christian Bächle

- Christian Katzenbach, Vanessa Richter (University of Bremen), Anna Jobin, Laura Liebig, (Alexander von Humboldt Institute for Internet und Society, Berlin)
Shaping AI – Imaginaries and Controversies of AI in Media and Policy
- Ophelia Deroy (Ludwig Maximilian University of Munich)
'Ghosts in the machine': What shapes folk conceptions of artificial intelligence, and why should they differ?
- Simone Shu-Yeng Chung (National University of Singapore)
Seeing through AI's eyes, vividly

Robot-Human Interaction @room1

Chair: Elena Knox

- Eileen Roesler (Technische Universität Berlin)
Form follows function: Challenging the effectiveness of anthropomorphism in human-robot interaction
- Friederike Eyssel (Bielefeld University)
Measuring attitudes towards social robots – A social psychological perspective
- Matthias Sommer, Sabrina Tietz (Chemnitz University of Technology)
Accountable AI: (Ro-)Bots in algorithmic situations
- Katsumi Watanabe (Waseda University, Tokyo)
Perceiving and understanding faces, animacy, and existence

12:00–13:30 Lunch Break

13:30–15:00 – **Concurrent Panels** –

The Languages of AI @hall

Chair: Christian Katzenbach

- Maurice Jones (Concordia University, Montreal)
Intelligent machines in a fluid world: Deconstructing metaphors in Japanese AI policy
- Nicole Marion Mueller (Martin Luther University Halle-Wittenberg)
Artificial Intelligence and the Literary Scholar - Epistemic potentials of NLP-based retranslation analysis with regards to (fictional) oversimplification
- Rachel Hill (University College London)
"this insatiable earth of a planet, Earth": Literacy in AI poetics

Bodies, Intimacies, Interactions @room1

Chair: Friederike Eyssel

- Elena Knox (Waseda University, Tokyo)
Funeral rites for obsolete robots in the temple of technology
- Hiromi Tanaka (Meiji University, Tokyo/University of Amsterdam), Michelle H. S. Ho (National University of Singapore)
Romancing AI: Gender and new digital intimacies in contemporary Japan
- Jurgis Karpus (Ludwig Maximilian University of Munich)
Do people in Japan cooperate more with artificial agents? Lessons from game theory and psychology

15:00–15:30 Coffee Break

15:30–17:00 – **Concurrent Panels** –

Brain & Mind @hall

Chair: Thomas Christian Bächle

- Tetsuya Ogata (Waseda University, Tokyo)
Neurorobotics model studies based on the policy of prediction error minimization
- Angélica Cabrera Torrecilla (Universidad Nacional Autónoma de México, Mexico City)
The psychopolitics of brain-computer interfaces: a critical study from a fictional text
- Dagmar Gesmann-Nuissl, Stefanie Meyer, Robert Ziola (Chemnitz University of Technology)
I act (consciously), therefore I am.

Industries @room1

Chair: Phoebe Stella Holdgrün

- Colin Porlezza (Università della Svizzera italiana, Lugano), Laura Pranteddu (Università della Svizzera italiana, Lugano), Tomo Komatsu (ExperienceLab, London)
'Robots in the Newsroom': A cross-cultural comparison of the implications of AI-driven technology in journalism
- Ulrike Schaede (University of California San Diego), Carsten Schaede (Misumi Europe GmbH, Frankfurt am Main)
Perception and reality of AI in industrial production: Differences between Germany, Japan and the U.S. in factory automation and the future of work
- Tomoki Sakata (Otto-Friedrich-University Bamberg)
Philosophical reflection on ideas of smart city: Human-centered Europe and nature-centered Japan

17:00–17:30 Coffee Break

17:30–18:30 **Keynote Address II: Projecting life onto machines @hall**

Moderator: Julia Münch

Simone Natale (University of Turin/Loughborough University)

Public discussions and imaginaries about AI often center around the idea that technologies such as neural networks might one day lead to the emergence of machines that think or even feel like humans. Drawing on histories of how people project life onto talking things, from spiritualist seances in the Victorian era to contemporary advances in robotics, this talk argues that the “lives” of AI have more to do with how humans perceive and relate to machines exhibiting communicative behaviour, than with the functioning of computing technologies in itself. Taking up this point of view helps acknowledge and further interrogate how perceptions and representations across different cultures inform the very outcome of technologies that are programmed to interact and communicate with human users.

Simone Natale is Associate Professor at the University of Turin, Italy, and a Visiting Fellow at Loughborough University, UK, where he taught and researched from 2015 to 2020. He is the author of two monographs, *Deceitful Media: Artificial Intelligence and Social Life after the Turing Test* (Oxford University Press, 2021) and *Supernatural Entertainments: Victorian Spiritualism and the Rise of Modern Media Culture* (Penn State University Press, 2016), as well as articles published in journals including *New Media and Society*, *Communication Theory*, the *Journal of Communication*, *Media, Culture & Society* and *Convergence*. Since 2019, he is Assistant Editor of *Media, Culture & Society*.

19:00

Performance + Reception

Robodemic – So Kanno (Tokyo/Berlin) & Florian Meyer (Don't DJ) @library

Robodemic is a semi-autonomous robot-aided installation/performance simulating an epidemic spread scenario with multiple dynamic parameters in a recursive setting. The 60 laser mice robots, which received the Award of Excellence from the Japan Media Arts Festival in 2019, were developed by So Kanno to simulate and study swarm behaviour of semi-autonomous agents in controlled settings. Each laser mouse is able to move about independently and shoot lasers of different colours. On the receiving end each mouse is equipped with multiple sensors for light and physical impact, which also provide the base for their communications among each other.

In this installation/performance, especially developed for the conference “Artificial Intelligence and the Human”, the parameters of the sensory input of the mice is designed to simulate infection spread events, while spatial and acoustic settings aim at enhancing the aesthetic experience.

So Kanno is a media artist who graduated from Musashino Art University and the Institute of Advanced Media Arts and Sciences (IAMAS). His works are mainly based on robotics, such as *Lasermice*, a swarming robot that refers to the swarm behaviour of small animals, and *Senseless Drawing Bot*, a drawing machine that uses a double pendulum. Rather than the perfect control of industrial robotics, he is interested in the unpredictability, organic behaviour, emergence and errors that systems can have and develops systems that utilise and induce these elements. His wide-ranging activities include installations using self-made robots, performances and workshops.

Florian Meyer is an artist active at the junction of music and arts. He released works in various formats, most prominently vinyl records with labels such as *Honest jons* (UK), *Em Records* (jP), *Marriage* (US), *Berceuse Heroique* (UK) and his own DISK imprint. He collaborated with many groups and individual artists and worked with institutions such as STEIM, yCAM, MUDAM, ZKM, SESC Pompéia, Kyushu University and the Amsterdam Conservatory.

Friday, 13 May 2022 · Location: Japanese-German Center Berlin (JDZB)

8:45–9:15 Registration and Coffee

9:15–10:45 – **Concurrent Panels** –

Discussion: Asian AI vs. European AI? Methodological Challenges of Cross-Cultural Research @hall
Chair: Christian Katzenbach

- Kanta Dihal (University of Cambridge)
- Elena Knox (Waseda University, Tokyo)
- Colin Porlezza (Università della Svizzera italiana, Lugano)
- Jing Zeng (University of Zurich)

Smart, Caring and Sensitive Environments @room1

Chair: Phoebe Stella Holdgrün

- Celia Spoden (German Institute for Japanese Studies, Tokyo)
Cybernetic avatars and the vision of an inclusive society
- Richard Paluch (University of Siegen)
Robotic systems for the aging society
- Marie-Julie Catoir-Brisson, Julien Pierre (Audencia Business School, Nantes)
Who will populate Sensitive Home? Opening new cultural trajectories in the design of emotional interactions: Analysis of an AI bestiary

10:45–11:15 Coffee Break

11:15–12:45 – **Panel** –

Futures & Fictions @hall

Chair: Katsumi Watanabe

- Hirotaka Osawa (Keio University, Kanagawa)
How does science fiction influence AI research?
- Michel Hohendanner (Munich University of Applied Sciences), Chiara Ullstein (Technical University of Munich), Yosuke Buchmeier (Ludwig Maximilian University of Munich)
Cross-cultural perspectives on technology-driven future societies through the lens of collaborative speculative design

- Jiré Emine Gözen (University of Europe for Applied Sciences, Hamburg)
Visions of the future in cyberpunk literature and their impact on the present: Neuralink's interface, the Matrix and Elon Musk

12:45–14:00 Lunch Break

14:00–15:15 – **Workshops and Networking Activities** –

Exchange about Methodological Challenges

Chair: Christian Katzenbach

This workshop offers a space to exchange and discuss about methodological challenges in studying AI and the human with a specific focus on cross-cultural research. It is following up on the panel discussion in the morning.

PhD Exchange and Networking

Chair: Maurice Jones

This workshop gives you the opportunity to meet other PhD students.

Haiku

Chair: Sabrina Wägerle, Phoebe Stella Holdgrün

Haiku is one of the most famous classical Japanese poetry forms, consisting of three lines only. In this workshop we want to introduce and co-create Haiku poems together in several practical exercises.

15:15–15:45 Coffee break

15:45–16:45 **Keynote address III: How to build developing minds @hall**

Moderator: Thomas Christian Bächle

Yukie Nagai (Cognitive Developmental Robotics Lab, The University of Tokyo)

A grand challenge in the design of artificial intelligence (AI) is to endow it with the developmental capacity humans have. Human development is open-ended. Humans acquire multiple cognitive abilities continuously whereas AI systems are often designed for specific tasks. Humans also exhibit individual diversity. Unlike stereotypical AI, humans perceive and interact with the world in different ways, which allows them to help and cooperate with each other. The goals of Cognitive Developmental Robotics include to elucidate the underlying neural mechanisms of human development and to build artificial developing minds. The presentation will hypothesise that the neuroscience theory called predictive coding provides a unified account for cognitive development and investigate the potentials of the theory using neural networks. It will show how the continuity and diversity in human development can be replicated in artificial developing minds.

Yukie Nagai is a Project Professor at the International Research Center for Neurointelligence at the University of Tokyo. She received her Ph.D. in Engineering from Osaka University in 2004 and worked at the National Institute of Information and Communications Technology, Bielefeld University, and then Osaka University. Since 2019, she has led the Cognitive Developmental Robotics Lab at the University of Tokyo. Her research interests include cognitive developmental robotics, computational neuroscience and assistive technologies for developmental disorders. Her research achievements have been widely reported in the media as novel techniques to understand and assist human cognitive development. She was elected to “30 women in robotics you need to know about” in 2019 and “World’s 50 Most Renowned Women in Robotics” in 2020. She has served as the principal investigator of CREST “Cognitive Mirroring” and CREST “Cognitive Feeling” since 2016 and 2021, respectively.

16:45–17:45 **Closing Discussion @hall**
Chair: Thomas Christian Bächle

- Yukie Nagai (Cognitive Developmental Robotics Lab, The University of Tokyo)
- Simone Natale (University of Turin/Loughborough University)
- Ulrike Schaede (University of California San Diego)
- Hiromi Tanaka (Meiji University, Tokyo/University of Amsterdam)

18:00 Conference Closing & Snacks

CONFERENCE WEBSITE

To access the digital version of the conference programme, please visit hiig.de/events/ai21. Here, you will also find further information on the conference, documentation and updates regarding the publication of selected conference contributions.

ORGANISERS AND PARTNERS

The conference is jointly organised by Alexander von Humboldt Institute for Internet and Society (HIIG), Berlin, Japanese-German Center Berlin (JDZB) and Waseda University, Tokyo. The event is kindly supported by Deutsche Forschungsgemeinschaft (DFG).

