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Editorial Introduction

The Construction of the Robot in Language and Culture, "Intercultural Robotics" and the "Third Robot Culture"

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Abstract

Robots are not only technological artifacts, but also elements of human culture. They play important roles such as being the double, replica, tool and companion of humans. The anthropomorphic characteristics of robots lead to philosophical thinking, linguistic and (inter-) cultural phenomena. Inspiration can be drawn from exploring how robots are imagined, defined, described, comprehended, constructed or misunderstood, and from observing the changing relationships between humans and robots from an intercultural and interdisciplinary perspective. For instance, "intercultural robotics" and the "third robot culture" deserve more attention.

Keywords: Robot; Robot culture; Intercultural robotics; Sobject; Island hypothesis

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Редакторская заметка

Конструирование робота в языке и культуре, “межкультурная робототехника” и “третья робототехническая культура”

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Аннотация
Роботы – это не только технологические артефакты, но также и компоненты человеческих культур. Они играют важные роли, такие как двойник, копия, инструмент и компаньон человека. Антропоморфные характеристики роботов приводят к философскому мышлению, языковым и (меж)культурным явлениям. Вдохновение можно черпать из изучения того, как роботы представляются, определяются, описываются, понимаются, конструируются или неправильно понимаются, а также из наблюдения (изменяющихся) отношений между людьми и роботами с межкультурной и междисциплинарной точки зрения. Например, большего внимания заслуживают “межкультурная робототехника” и “третья робототехническая культура”.

Ключевые слова: Робот; Культура роботов; Межкультурная робототехника; Собъект

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The robot is by no means only a technological artifact and concept. Robots play important roles such as being the double, replica, tool and companion of humans. There is no doubt that robots are elements of human culture. The anthropomorphic characteristics of robots lead to philosophical thinking, linguistic and (inter-) cultural phenomena. The word "robot" is a Czech invention in Karel Čapek's (1920) play *R.U.R.* As the word traveled to other languages and cultures, did it become something else? And how does it relate to other concepts of an automaton that imitates humans, such as android, cyborg, or "Maschinenmensch"? How do we perceive and understand robots through their linguistic construction and in their intercultural context? These are topics of this special issue on "The Construction of the Robot in Language and Culture," that is, on explorations of how they are imagined, defined, described, comprehended, constructed or misunderstood.

"Robot" has a very interesting family tree. Taras Romanenko and Polina Shcherbinina examine in their paper *Robot vs Worker* very closely the reception and metamorphosis of "robot" (*R.U.R.*) in Russian literature of the 1920s, especially in Alexei Tolstoy's (1924) adaptation *Riot of the Machines*, only four years after the birth of the "robot" in Čapek's play. They also show us the historical context of its reception in Soviet times (Romanenko & Shcherbinina, 2022). In many cases, the historical and etymological study of the concept should be the very beginning of the discussion about robots. In *The Intellectual Turn and Cultural Transfer of "Humanoid Automata" from the Ancient World to the Enlightenment Era*, Shijueshan Wu (2022) explores the early stories of "robots", that is, the origin and development of the "android" in the Western world, from the ancient world to the Enlightenment era, involving cultural transfers in different civilizations. Kevin Liggieri and Marco Tamborini return to Descartes as a starting point for a reinterpretation and redefinition of the concept of robot in the contemporary world in their paper *The Body, The Soul, The Robot: 21st-Century Monism*. They point out "two linguistic-cultural turning points in the concept of robot" and show "how Cartesian dualism (in the description of humans) becomes a (material) monism in the development and construction of robots" (Liggieri & Tamborini, 2022).

In the American Sci-Fi novel *Tik-Tok* by John Sladek (1985), Dr Riley says to the robot Tik-Tok: "In my opinion the very concept of an automaton or robot is a philosophical concept, giving rise to questions about life, thought, and language – and much more. Yes, I sometimes wonder whether robots were invented to answer philosophers' questions" (p. 72). In this issue, philosophical thinking and linguistic analysis are another focus. Mark Coeckelbergh (2011) published a notable paper "You, Robot: On the linguistic construction of artificial others", arguing that "the appearance of robots in human consciousness is mediated by language: how we use words interprets and co-shapes our relation to others – human others or artificial others" (p. 62). Here, Larissa Ullmann (2022) (*The Quasi-other as a Sobject*), Cheryce von Xylander (2022) (*Quipping Equipment. Apropos of Robots and Kantian Chatbots*), Leon Pezzica (2022) (*On Talkwithability – Communicative Affordances and Robotic Deception*), Daria

Bylieva (2022) (*Language of AI*), Cathrin Hasse (2022) (*Language and Robots: From Relations to Processes of Relations*), and Yue Li (2022) (*Affirming and Denying the Hybrid Character of Robots*) respond to this article from their own perspectives, which spark new concepts and thoughts, such as "sobject" in Larissa Ullmann's response: It "describes a kind of technical objects to which humans can have deeper relations than to conventional objects" (Ullmann, 2022). Obviously, the new era of technologies welcomes new understandings of human-robot relationship. Accordingly, Coeckelbergh (2022) responds in turn to each of these discussions.

Cultural and intercultural dimension should not be absent in the discussion about robots. Robot cultures are different across cultural communities such as Japan and Western countries because of their different religious beliefs, ethical backgrounds and different understandings of the relationship between human and "machinery/artificial other." "Robot culture" can refer to all cultural phenomena that are in a broad sense related to robots – there are also discussions about robots as "creators of culture" (Dunstan et al., 2016). Since the 1980s, media and academic circles have paid attention to the uniqueness of Japanese robot culture and the differences of robot cultures between East and West. Apart from the historical exploration by Wu, there are two interviews in this issue discussing perceptions of robots and human-robot relationships in East and West. In 2008, when the German philosopher Markus Gabriel visited Japan, he had a dialogue with the Japanese engineer Hiroshi Ishiguro (Gabriel et al., 2018). Their dialogue reflected not only the differences of robot perception between a philosopher and an engineer, but also the divergence between East and West in terms of robot cultures, the reception of robots and the prospect of human-robot relationship. In this issue, Hui Jiang, Lin Cheng and Yue Li interview Hiroshi Ishiguro and Markus Gabriel. These two interviews, conducted in 2021 and 2022, are extensions of their dialogue in 2008 – some views remain the same, while others appear to be changing (Li & Gabriel, 2022; Jiang et al., 2022). Robot cultures are still seen to be different in different societies especially in light of the "island hypothesis" of Ishiguro who maintains that "the blurring of the boundaries between humans and robots is a good thing and a new species would be born." These reflect the differences regarding the self-understanding of humans, the human-"other" relationships and the human-technologies prospects in Germany and Japan.

In order to have a better and closer discussion of robot issues such as roboethics, an intercultural perspective is indispensable. It is necessary to explore "intercultural robotics" (Cheng, 2020a, p. 99), that is, in short, on the premise of the cultural phenomena related to robots, to "study the similarities, differences, interactions, mixtures and influences of robot cultures in different cultural communities, with the aim of explaining questions and resolving problems in HRI due to the differences in robot cultures," and at the same time, to "seek common ground in response to the current and future challenges of robotics in the coming era of human-robot coexistence" (Cheng, 2020b, p. 4) – as Gabriel reminds us of an important point in his interview *Diverse*

Cultures, Universal Capacities: "the construction of cultural difference has the goal of finding something we share rather than something that separates us." Obviously, we should also keep in mind the exceptions and variations in robot cultures.

Meanwhile, Thomas Ramge (2019), a German journalist and writer, observed that "robots are enemies in Europe, servants in America, colleagues in China, and friends in Japan" (p. 18). A third kind of robot culture in addition to the robot cultures in Japan and in the West will emerge in China which has its own mode of perception and application of the human-like robots, as we experienced during the Covid-19 pandemic (Jiang and Cheng, 2021) and the Olympic Winter Games 2022 (Ke and Cheng, 2022)? Compared to Western or Japanese society, China does not have a long tradition of robot imaginations and discussions about the relationship between human and artificial beings. There is also no absolute anthropocentrism or impressive dystopian pictures in contemporary Chinese sci-fi works. Both China and Japan show an open and positive attitude towards robots. The Chinese society welcomes robots as a symbol of new and useful technology, but the Chinese do not have "robot dreams" and do not stick to visions of Astro Boy or Doraemon, nor do they think there is "Buddha nature in the robot" (Mori, 1985). The wide applications of humanoid robots and the long traditional Chinese culture are the premise of the emergence of a robot culture in Chinese style. In view of the practical social needs and cultural backgrounds, there is a considerable likelihood that a practically-oriented robot culture will emerge in China. This would be "the third robot culture", unlike the skeptical robot culture in the West and the future-oriented and somehow idealized robot culture in Japan – in accordance with the traditional "Zhong Yong (moderate principle)" of Chinese culture. The application of various robots during the Covid-19 pandemic is an important example of the emerging robot culture in China. An empirical study shows that Chinese people generally held positive attitudes towards "anti-pandemic robots" and appreciated their contributions to reducing the burden of medical care and virus transmission (Jiang and Cheng, 2021). At the same time, roboethics is a topic of great concern to Chinese academia and society. Initiated by the Institute of Philosophy of the Chinese Academy of Social Sciences, the results of a survey were released during the 2nd World Science and Technology Development Forum on November 8, 2020 (World Engineering Day, 2020). This survey of the most concerning ethical issues of technology among Chinese scholars found that roboethics (concerning care robots, social robots, robots for emotional exchange, unmanned drone, human-robot relations, etc.) ranks second among 20 significant ethical issues (such as genetic engineering, euthanasia, human enhancement, AI, brain science, assisted reproductive technology), following the ethical issues of genetic engineering. Moreover, scholars have begun to discuss the Chinese solutions to ease the possible tension between humans and robots, and draw inspirations from Chinese traditional culture such as Confucianism and Taoism. The robot culture is a complicated phenomenon. Diverse perspectives and methods, also the sociological ones,

could also be adopted to explain the discrepancies of robot perceptions and applications in different cultural communities.

There are many research projects about robots in the Humanities and in the social sciences, such as the projects "Cultural and Intercultural Dimension of Robots," "Research on Anti-pandemic Intelligent Technology in Cross-cultural Perspective," and "The Early Imaginations and Novels about Robots in German Literature" of my team. In recent years, the research on robots is expanding and is entering into new fields. There is much more to be studied and discussed in the realm of robots. More questions are waiting for answers, for instance, what does our customary way of naming robots mean? Are the new robot forms still suitable for our traditional perceptions of robots? How could the Chinese translation of "robot" ("machine-man") influence the perception of robots in Chinese society? How could robotics engineers and sci-fi writers find the "same language" in the discussion of robots? To what extent can sci-fi works influence us in the imaginations and perceptions of robots? The in-depth and systematical explorations of researchers with intercultural and interdisciplinary backgrounds and understandings about these topics are still needed. As this special issue on "The Construction of the Robot in Language and Culture" shows, we value such idea exchanges, dialogues and further discussions, and we look forward to a continuous discussion of related topics in the near future.

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