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Editorial introduction

The Language and Poetics of Machines

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Abstract
The intelligibility of mechanical processes lends a peculiar expressive power to the machine. It is manifested throughout the history of human culture from Heron of Alexandria to La Mettrie and contemporary conceptions of cellular machines. The machines of Karl Marx, Ernst Kapp, Eduard Jan Dijktserhuis, or Lewis Mumford reflect the development of Western thought, while the perpetuum mobile or the soft machines of nanotechnology represent unattainable dreams of reason. And then there are the machines of Jean Tinguely, Tomi Ungerer, or Rube Goldberg that whimsically undermine the notions that machines need to be useful. All of this may refer to a compositional grammar of mechanical elements which was proposed by Christopher Polhem in the 16th century and elaborated 300 years later, e.g., by Franz Reuleaux or Carl Bach, and subsequently reflected by Anson Rabinbach or Georges Canguilhem. However, the language of machines and machine language is never free of power relations, especially in the 20th century. Machine language partly reflects and stabilizes topographical and gendered differences. This special issue gathers several key works to explore the theme of "Machines and Language." We examine this topic through three dimensions: gender, capital, and culture. Our goal is to investigate the ongoing tension between technological discourse and humanistic thought. By viewing the machine through the prism of language, we reveal a complex spectrum of power, desire, and meaning.

Keywords: Language; Poetics; Machines; Gender; Capital; Culture

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Редакторская заметка

Язык и поэтика машин

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Аннотация
Понятность механических процессов придаёт машине особую выразительную силу. Она проявляется на протяжении всей истории человеческой культуры, от Герона Александрийского до Ламетри и современных концепций клеточных машин. Машины Карла Маркса, Эрнста Каппа, Эдуарда Яна Дейкстерхёйса или Льюиса Мамфорда отражают развитие западной мысли, в то время как вечный двигатель или “мягкие” машины нанотехнологий – недостижимые мечты разума. Кроме того, существуют машины Жана Тэнгли, Томи Унгерера или Руба Голдберга, которые причудливо подрывают представления о том, что машины должны быть полезными. Все это может относиться к композиционной грамматике механических элементов, которая была предложена Кристофером Полхемом в 16 веке и разработана 300 годами позже, например, Францем Рело и Карлом Бахом, и впоследствии отражена Энсоном Рабинбахом и Жоржем Кангилемом. Однако язык машин и машинный язык никогда не свободны от властных отношений, особенно в XX веке. Машинный язык частично отражает и стабилизирует топографические и гендерные различия. В этом специальном выпуске собраны несколько ключевых работ, раскрывающих тему “Машины и язык”. Мы рассматриваем эту тему в трёх измерениях: гендер, капитал и культура. Наша цель – исследовать продолжающееся напряжение между технологическим дискурсом и гуманистической мыслью. Рассматривая машину через призму языка, мы раскрываем сложный спектр власти, желания и смысла.

Ключевые слова: Язык; Поэтика; Машины; Гендер; Капитал; Культура

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The intelligibility of mechanical processes lends a peculiar expressive power to the machine. It is manifested throughout the history of human culture from Heron of Alexandria to La Mettrie and contemporary conceptions of cellular machines. The machines of Karl Marx, Ernst Kapp, Eduard Jan Dijktserhuis, or Lewis Mumford reflect the development of Western thought, while the perpetuum mobile or the soft machines of nanotechnology represent unattainable dreams of reason. And then there are the machines of Jean Tinguely, Tomi Ungerer, or Rube Goldberg that whimsically undermine the notions that machines need to be useful. All of this may refer to a compositional grammar of mechanical elements which was elaborated in the 19th century, e.g., by Franz Reuleaux or Carl Bach, and subsequently reflected by Anson Rabinbach or Georges Canguilhem. However, the language of machines and machine language is never free of power relations, especially in the 20th century. Machine language partly reflects and stabilizes topographical and gendered differences.

It should be noted that in the 20th century, machine thinking was mostly reduced to language and not physicality. Unlike the courtly automatons of the 18th century and the work machines of the 19th century, it is no longer a question of whether the machine looks human or moves like a human (performs work). Material form plays no role in modern large language models and AI applications.

Thus, our access to modern machines is also predominantly linguistic. We teach machines to communicate and think through language. With the help of the imperative and procedural programming language C, for example, universality, simplicity, and transferability (performance and portability) could be achieved to a new degree. Due to the easy compilability of the source code and the smooth and fast execution of the program code, the language was as popular with programmers of earlier personal computers as it is with the current "Internet of Things" or in robotics. To this day, the C programming language has made it possible to network devices and design a technical "environment" that extends into our living rooms. The language used today in smartphones, emails, chats, blogs, social media, and even scientific publications was generated by computer codes. Although today's computer language appears, in form and function, to be part of face-to-face communication or written on paper, invisible processes of encoding and decoding take place behind the anthropophilic interface. In the assignment of programming commands, letters, and compilations, humans as writers and readers are left out.

Machine language shapes therefore our actions and our world. But language is also always diverse, it can mechanically endorse but also criticize mechanized human models and world models (e.g. in the form of poetry).

In the technical discourse, literature offers the experimental possibility of showing, just how abstract and artificial assumed distinctions (man-machine, organism-technology, man-woman) are. Alongside a hard deconstruction of the sciences, the cultural narrative of mechanization in literature offers a conceptual and ontological subversion, whose reception can stimulate its readers to think further as well as to reflect critically on traditional concepts such as 'human, 'gender', 'life'. The fragile conditions of the human individual's identity are thus revealed. This discursive relationship can only be described in relations, as the scholar of communication, Vilem Flusser (1989), points

out: “we have to work out an anthropology that regards man as a knot, the point at which several fields traverse each other.” (p. 52). This knot should not only be seen in terms of neurological data, but also epistemologically. The human being stands between anthropological, human-scientific, biotechnological, and informational networks of knowledge that condition one another, constitute one another, provoke one another, and subvert one another.

So language themself can be understood as technologies and “machines”. So, for example, Deleuze and Guattari (1980/2005) treat books as “abstract machines” that can join with other books to produce “machinic assemblages” (p. 4). This notion of a technologization of books (bibliotechnics) as a medium in itself must remain a suggestion, and will not be further explored here.[1]

This special issue gathers several key works to explore the theme of “Machines and Language.” We examine this topic through three dimensions: gender, capital, and culture. Our goal is to investigate the ongoing tension between technological discourse and humanistic thought. By viewing the machine through the prism of language, we reveal a complex spectrum of power, desire, and meaning.

The first dimension is gender. Here, technology and its language are never neutral. In their contribution *The Gendered Language of Technology*, Kevin Liggieri and Laura Kurz reveal the hidden and profound power dynamics at play. Through a historical study of the education sector from the 1950s to the 1980s, they show that technical language itself is a gendered “apparatus” (dispositif). Concepts such as “the machine is a male domain” and the binary of “hard” versus “soft” sciences created social biases. These biases not only promoted the idea that "women are not good at technology" but also systematically excluded non-male subjects from the field through curriculum design and media discourse. Liggieri's and Kurz’s research warns us that the roots of the digital gender gap lie deep within language. Language does not just describe reality; it constructs it. When we discuss "machines," terms that seem objective are often already embedded with historical and social gender attributes. This process reinforces existing power structures. Therefore, promoting gender equality in technology requires a profound revolution in “language awareness.” We must deconstruct biased terms and create more inclusive narratives.

The second dimension is capital. If gendered language sets invisible boundaries for the user, then the logic of capital gives the machine itself a contradictory fate. In their paper *The Dialectics of Labour, Machinery and Capital*, Fugong Zhang and Yuanzhao Wang use Marx's insights to analyze the core conflict of the machine under capitalism. It begins with "Beckmann's dilemma": the paradox that machines can both liberate labor and harm workers' interests. The authors argue that the conflict between workers and machines does not come from the machine's technical nature. Instead, it is a result of its "capitalist application." Driven by capital, the machine is transformed from a tool of potential liberation into a means of exploitation. It becomes a "competitor" to the worker

[1] Donna Haraway (1991) also undertakes the mechanization of text and language, since, for her, cyborgs can represent “text, machine, body and metaphor” (p. 212). What humans have in common with writing is that they can be copied by means of modern biotechnology: in the beginning was the copy (see Haraway, 1999).

and creates a surplus population to drive down wages. The core contribution of this research is its strict separation of the "machine itself" from its "capitalist application." This challenges the myth of technological determinism. It proves that the "dual nature" of technology is not inherent to technology itself. Rather, it lies in the specific social relations behind it. Thus, any discussion of ethics in the age of AI will remain superficial if it ignores a critical examination of the logic of capital.

The third dimension is culture. Beyond the shaping of gender identity and the logic of capital, what role does the machine play in the broader cultural landscape? How does it change our artistic perception, philosophical thought, and even our understanding of meaning itself?

Alexander V. Markov and Anna M. Sosnovskaya, in *The Language of Machines from Baroque Automata to Digital Hybrids: The Poetics of Technological Evolution*, provide a grand theoretical framework for understanding the machine's cultural attributes. They define the machine as a non-neutral "dark object," a node forming "alliances" with other things, a "hyperobject" that embodies the spirit of an era, and a system with its own internal logic and "language." Their foundational article argues that machines do not simply reflect our psychology; they have become "accomplices" in producing new systems of knowledge (Markov & Sosnovskaya, 2025).

This "accomplice" relationship is evident in history and the present. The research by Pavel Kotelnikov and Sergei Kurakov on the scientific restoration of Franz Reuleaux's collection of mechanisms is more than an act of heritage preservation; it is a dialogue with history. Reuleaux pioneered the description of mechanical elements in an abstract language of "geometric constraints." These century-old models are a solid epic of "machine linguistics." Repairing them allows this pre-digital technical language of order, motion, and logic to resonate again today (Kotelnikov & Kurakov, 2025).

Turning to the arts of the early 20th century, Victoria Lobatyuk's (2025) *Avantgarde Machines: On the Integration of Technology and Art* describes how Russian avant-garde artists worshipped technology. For the Constructivists and Futurists, the gears and sounds of machines were not cold industrial noise. They were inspiring notes for a new era's symphony. Technology became a new artistic language–a sacred force for reorganizing society and creating a new aesthetic, giving the material world a unique theatricality and a poetic soul.

And so we must face the ultimate question: When machines create on their own, where does the meaning of their "language" come from? In his paper *Electronic Fuji and Artificial Intelligence Creation – How is the study of machine poetics possible?* Liang Shi offers an insightful analogy (Shi, 2025). He compares AI creations to ancient Chinese "spirit writing" (扶乩, fú jī). Fú jī is a traditional Chinese and East Asian divination practice where participants summon spirits or deities through rituals. The spirits then "possess" the participants to write messages. So AI creation and Fuji produce text without a conscious creator. Yet both require external forces (a temple or a tech platform) for interpretation and are given a kind of transcendent authority. This comparison reveals a profound point: the meaning in machine creation may not come from the machine's own mind. Instead, it is constructed through human interpretation and interaction. The

"poetics" of the machine is essentially a projection of human fears about losing subjectivity and our deep desire for meaning.

A poetic text completes this special issue. Lars Gustafsson's *The Machines – Poem and Comment* (Gustafsson, 2025). The poem offers a philosophical provocation by intimating a mechanistic worldview that appears to involve four core theses: first, that grammar itself is a machine; second, that humans and machines jointly participate in a mechanical existence that simulates life; third, that this symbiotic relationship does not keep any secrets; and fourth, that this "secretless" community offers a peculiar consolation. One might say that all the papers in this special issue revolve around these theses. Three contemporary philosophical interpretations explore the poem in different ways. One traces the evolution and reconstructs Gustafsson's implicit argument (Gammel, 2025). Another challenges his views from the perspective of critical hermeneutics (Liu, 2025). The third provides a historical echo, using it to examine the crisis we currently face with Artificial Intelligence (AI) (Vida, 2025).

All three critical essays first acknowledge the common foundation of Gustafsson's thought. This foundation is his mechanistic definition of the nature of language. Gustafsson drew on the theories of Noam Chomsky. He defines grammar as a machine that selects communication's strings of words from countless possible combinations. This definition gives language an impersonal, objective, and independent aura. In this view, it is as if language itself thinks inside the human body, while the human individual is merely an instrument that gives voice to this vast and formless mechanical process. Consequently, humans are depicted as mechanical puppets or cybernetic devices, programmed by their own language and logic. This perspective ultimately leads to a radical conclusion: it rejects the core modernist concept of a "language wall." In Gustafsson's view, language is entirely transparent. It can exhaust our entire being and completely express our thoughts. This process leaves behind no unreachable, private remnants of meaning (Gustafsson, 2025).

Stefan Gammel's *The Machines and Beyond* focuses on Gustafsson's own eventual overcoming of his radical interpretation (Gammel, 2025). Gammel points out that in his subsequent poetry, Gustafsson fundamentally transformed the "secretless consolation" he had sought. This transformation first appears as a "moral rupture." In his poem 'The Wright Brothers Visit Kitty Hawk,' the poet introduces a moral dimension. The emergence of concepts like guilt and responsibility becomes a "critical bridge" that shatters the purely mechanical unity. These emotions separate humanity from an amoral mechanical theater, allowing humans to re-emerge as subjects capable of moral judgment. Gammel also notes that Gustafsson himself confirmed in private correspondence that he later changed his view of humans as machines. Ultimately, this transformation culminates in the poem 'Polhem's Ore Hoist.' In this poem, a purely mechanistic philosophy gives way to the triumph of organic life and nature's instinctual knowledge. The remains of the machine, such as the old hoist, eventually decay into dust. Meanwhile, humanity completes a profound transition from a mechanical community to an organic one by "participating in natural knowledge."

Unlike Gammel's approach of tracing this intellectual evolution from within, Arthur Wei-Kang Liu's *Remarks on Gustafsson's 'The Machines' – Hermeneutics of*

Machines adopts the external stance of critical hermeneutics. He challenges the limitations of Gustafsson's mechanistic worldview (Liu, 2025). Liu argues that while this perspective can inspire deep self-reflection, it risks falling into a mode of ideological narrowing, or *Engführung*. He identifies the limitation of syntactic reductionism in Gustafsson's theory. Gustafsson gives absolute priority to syntax (grammar), which leads to an oversimplified understanding of both machines and language. To argue this point, Liu cites Chomsky's famous example: "Colorless green ideas sleep furiously." This sentence is syntactically perfect, yet it is semantically meaningless. This powerfully demonstrates that syntactic correctness alone does not guarantee comprehensibility; semantic correctness is equally essential. Therefore, Liu firmly argues that understanding language – and by extension, machines – is fundamentally a hermeneutic practice. This practice must simultaneously integrate three dimensions: syntax, semantics, and pragmatics. If any one dimension is missing, misunderstanding is inevitable.

Karina Vida's *Language After the Human –A Distant Echo to Lars Gustafsson's 'The Machines'* brings this discussion into the contemporary context. She views Gustafsson's discourse on "external language" as a profound echo to the current linguistic crisis sparked by generative AI (Vida, 2025). Vida's analysis begins with the evolution of the concept of the "machine" itself. Gustafsson was concerned with obsolete, massive, and even "homeless" industrial machines. These machines possessed a kind of honest mechanical nature. In contrast, our machines today are small, anthropomorphic interfaces, such as Alexa or Siri on our phones. They are, as she notes, "in keeping with our age" because of how human-like they are. Vida's core argument is that Gustafsson's grammar machine was "secretless," whereas modern AI is a "pretender." The text generated by AI is based on probability; it does not originate from a human intentional act. This means that although a machine can "speak," it lacks authentic experience, internal needs, active will, and a physical body. This ability to "pretend" has triggered a deep existential crisis. The capacity of machines to fluently generate language threatens to diminish the value, weight, and emotional resonance of human writing. Facing this linguistic flood caused by AI, Vida concludes with a call to action: human authors must re-establish the unique value of human writing by adhering to authorial intent, exercising critical judgment, and upholding ethical responsibility.

In conclusion, the articles in this special issue all point to one core insight: The "machine" is always entangled with "language," whether it is shaping gender identity, executing the logic of capital, or generating cultural meaning. Every innovation in technological discourse challenges, reshapes, and ultimately enriches our humanistic thought. In the future symphony composed by humans and machines, we are listeners, critics, and indispensable co-creators. We therefore would like to conclude with Goethe's famous words on poetry:

> Poetic content, however, is the content of one's own life; no one can give it to us. They may obscure it, but they cannot cause it to wither. Everything that is vanity, that is, self-satisfaction without foundation, will be treated more harshly than ever before. (Goethe, 1963, p. 361)

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