CYBERNETICS

IN LATE SOVIET CULTURE

WORKSHOP
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FU BERLIN
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ABSTRACTS & BIOS

Freie Universität Berlin

OSTEUROPA INSTITUT

The discourse on cybernetics is one of the most inspiring and thought-provoking intellectual currents in post-war science. As a truly interdisciplinary approach linking physics, psychology, computer science, sociology, philosophy and many disciplines more, its influence is topical in current epistemological understandings of "systemic" thinking. Although the history of cybernetics has been studied for the Western and Latin American context, cybernetics in the East European context has been brought to our fore only to some extent. Our workshop aims to address cybernetics from an interdisciplinary point of view, linking historical and philosophical approaches with insights from literary and cultural studies. It is centered on the period from the early 1950s to the late 1970s and wants to draw attention to the peculiarities of Soviet and Socialist cybernetic thinking.

Conception & Organization: Clemens Günther, Willi Reinecke, Georg Witte
(Eastern European Institute, Freie Universtität Berlin)

Maxim Waldstein, 13:30 – 14:15
Soviet Cybernetics and the Structuralist Sturm und Drang: 1955-1963

This presentation examines a remarkable episode in the history of Soviet science and academia, the initial phase of the structuralist and semiotic movement in Soviet humanities. A part of the larger drive for academic reform in the post-Stalinist Soviet Union, this movement joined forces with resurgent "cybernetics" in boldly challenging established ideological hegemonies and institutional hierarchies, and attempted to build the new centers of power in Soviet academia (the project of the Institute of Cybernetics and Semiotics at the Soviet Academy of Sciences). By skillfully employing the rhetoric of "scientific objectivity," "exactness" and "ideological neutrality", academic activists like the linguist Viacheslav V. Ivanov played both sides of the science vs. politics distinction, i.e. appealed to both the demands for more intellectual autonomy and the security-cum-recognition anxieties of the Cold War state.

This rhetoric relied for its effectiveness, in part, on the networks, which were spun by the leaders of the movement to include some the most influential "hard" scientists (e.g. Andrei Kolmogorov and Andrei Markov Jr.), the "military-industrial complex" (Axel Berg) and Western academia (Roman Jakobson and his international circle). This presentation explores the practical strategies employed by Soviet structuralists and cyberneticians to redraw symbolic and institutional boundaries in Soviet academia, build new alliances and establish (counter-)hegemonies in the unsure waters of the Thaw.

Maxim Waldstein studied Philosophy at the State University of Moscow and Sociology at Central-European University in Warsaw. He received his PhD in Sociology from the University of Illinois and taught as a Postdoc at the Helsinki Collegium for Advanced Studies and various Universities, such as Illinois, Pennsylvania, Helsinki, Leiden, and currently at the Amsterdam University College. He is author of *The Soviet Empire of Signs: A History of the Tartu School of Semiotics* (VDM, 2008).

Giulia Rispoli, 14:15 - 15:00

Cybernetics as a Universal Theory of Nature: The Work of Axel Berg

One of the many ways that scientists and philosophers have sought to define cybernetics has been as a "science of interactions". The multifaceted and versatile concept of interaction has at times been embraced as crucial to understanding cybernetics' rise and development as a transversal, systemic science across different disciplines and theoretical frameworks. This was particularly the case when in the 1960s Soviet Union, Axel I. Berg contributed to the birth of cybernetics in the service of communism.
In the Soviet Union, Cybernetics has been extensively applied to anthropology, ecology and the study of human-nature interaction in historical perspective. I will argue that the presence of a strong interdisciplinary matrix, as well as the interest in cybernetics as an epistemological tool to interpret historical processes as systemic processes is a crucial point of departure of Soviet cybernetics from western trajectories.

By discussing the work of the Soviet engineer who played a significant role in the establishment of cybernetics as an interdisciplinary, overarching discipline spanning the sciences and the humanities, this talk aims at outlining Soviet cybernetics' path towards a universal theory of nature.

Giulia Rispoli is Postdoc-Fellow at Max-Planck-Institut für Wissenschaftsgeschichte, Berlin (MPIWG, Dept. I). She studied Philosophy at the Faculty of Arts at the State University of Moscow and at the University of Rome "La Sapienza" where she received her PhD. She has been Visiting Scholar at the MPIWG (Dept. II), at the Centre for Complex Systems Analysis of the University of York, and at the National University of Science and Technology in Moscow. Her research covers cybernetics, system-theory and history of biosphere studies in the twentieth century.

Clemens Günther, 15:30 – 16:15

Engineers of the Society – Social Cybernetics in Proto-Dissident Culture

Throughout the 1960s, cybernetics became an important means for envisioning an alternative social order in Soviet culture. Drawing on the anti-establishment image of post-Stalinist cybernetics, the discipline became attractive for many dissenting voices in the Soviet Union. They adopted the rational language of cybernetics for envisioning an alternative model for governing the Soviet society beyond the ideological discourse. In difference to Foucauldian readings of cybernetics emphasizing its role as a part of state-controlled post-war governmentality – as envisioned and ridiculed in Alexander Zinoviev's famous *Yawning Heights* (1976) –, my presentation aims to present another, hitherto less explored current of late Soviet social cybernetics. Based on an analysis of Alexander Solzhenitsyn's play *Candle in the Wind* (1968) and theoretical writings by Alexey Esenin Vol'pin and Valentin Turchin, I want to show, how the vocabulary of cybernetics nurtured proto-dissident ideas of the Soviet society and contributed to alternative modellings of its basic structures.

Clemens Günther is Scientific Assistant at Osteuropa-Institut of the Freie Universität Berlin. He studied Ethnology and Philosophy at the Ludwig-Maximilians-Universität Munich and East European Studies in Berlin and at Columbia University New York. Currently he is working on his PhD on *Metahistoriographical Fictions in Late- and Post-Soviet Russia*.

Diana Kurkovsky West, 16:15 – 17:00
'Analog Cybernetics': Did Second-Order Thinking Exist in the Soviet Union?

During the 1950s and 60s, the Soviet and American planners shared the belief that cybernetics will help them design and managing large, complex urban systems. The directions that this research took by the 1970s, however, followed divergent paths: while in the US, the star of large-scale urban modeling using information was dimming by the 1970s, it was only growing in strength in the Soviet Union, where planners continued to envision comprehensive systems that would be both determined and governed algorithmically. Conversely, while the major Soviet project for the creation of a countrywide, cybernetic system for economic governance called the All-State Automated System, or OGAS, was losing support and funding by the 1970s, the American ARPANET was rapidly connecting universities across the nation. Finally, while western cybernetic theory evolved to consider the role of the observer inside feedback systems, thereby creating what came to be known as second-order cybernetics, this significant conceptual modification never made its way to the USSR. These three elements set the stage for very different afterlives of cybernetic planning. The US saw a rise in AI and human-machine interaction, and a waning of large, overarching, comprehensive models. The opposite trend occurred in the Soviet Union. In the context of socialist governance, cybernetics continued to be upheld as the megalith on which hinged the aspirations of the entire geopolitical complex of Soviet central planning, even as socialist ideology was running out of steam.

This paper will investigate some of the reasons for the Soviet planners' dogmatic adherence to what I call an "analog cybernetics": namely, a totalizing and positivistic approach to data and information heavily built on mathematical logic. By using comparative examples from the Soviet and American urban planning programs, I will explore the implications and limits of this "analog" approach for urban governance. Finally, I will consider the peculiar place that technology occupied in Soviet ontology, arguing that the clear ontological boundaries between humans and technological objects, central to the labor-centric rhetoric of conquest of control, were ultimately unable to accommodate the hybridity necessitated by second-order thinking in cybernetic systems.

Diana Kurkovsky West is Postdoctoral Fellow at Northwestern University, Illinois. She studied Philosophy at Middlebury College and Williams College. Afterwards she received her PhD at Princeton University with the Dissertation *CyberSovietica: Planning, Design, and the Cybernetics of Soviet Space, 1954- 1986*. Kurkovsky West taught as a Lecturer at Drexel University and European University at St. Petersburg. Currently she is working on her book *CyberSovetica: Planning for Big Data in the Soviet Union*.

Benjamin Peters, 17:15 – 18:00
The Soviet Internet: Beyond the Book

In this presentation, Peters distills the narrative behind his most recent book, *How Not to Network a Nation: The Uneasy History of the Soviet Internet* (The MIT Press, 2016). The first book in any language to tell the other side of the cold war origins of computer networking, this history covers thirty years of leading Soviet attempts to construct national computer networks and argues that the internet first took shape thanks to cooperative capitalists, not competitive socialists.

Benjamin Peters works as author, editor, and media scholar. He studied at Brigham University, Stanford University and received his PhD at Columbia University. Besides his book *How to Not Network a Nation* (The MIT Press, 2016) he edited *Digital Keywords: A Vocabulary of Information Society and Culture* (Princeton University Press, 2016) and published several articles on Cybernetics, Media, Literature and History. Right now he teaches at The University of Tulsa, Oklahoma.

Matthias Senkel, 18:30 – 20:00
Dark Numbers, Reading (in KL 29/208)

Moscow 1985: The international programmers-spartakiad is chasing the academic elites. Mathematicians of all around the world competing in futures techniques which only seems to be a keypress away. Just before start of the championship the National team of Cuba disappears. Translator Mireya picks up the trail and embarks on a breathless search through the foreign capital. On her search she meets architects and agents, poet machines and even Stalin's corporal shadow in a city which hums and flickers as if being electrostatically charged. A dazzling mosaic of the Soviet Union shortly before the world's momentous networking. A novel, unpredictable as history itself.

Matthias Senkel is a German author and poet. He read at the Ingeborg-Bachmann-Preis in 2012 and published his first novel *Frühe Vögel* in 2012 (Aufbau, Berlin). *Dunkle Zahlen*, his second novel, was published in 2018 (Matthes & Seitz Berlin) and was nominated for *Preis der Leipziger Buchmesse* as well as for the longlist for *Deutscher Buchpreis* 2018.