Like cybernetics itself this book is about something very specific, and it is also about everything and nothing in particular. Specifically it is about how scientists and scientific organisations came to take control of the language through which they negotiated their relationship with the Soviet state, and how the Soviet state then co–opted it. This subject is very important because it significantly influenced the degree of autonomy of Soviet science and scientists in their research activities. The book is about everything because it must cover the complex evolution of philosophy, physics, mathematics, statistics, computing, linguistics, military science, biology, sociology, and economics in their changing historical context, and it succeeds in this to a surprising extent. Still there will be at least one annoyed reader for every word *not* in the index: "What: no mention of global warming?" It is also about nothing in particular because that might perhaps be what cybernetics was all about.

Specifically, cybernetics was the brainchild of Norbert Wiener, who published his seminal *Cybernetics, or Control and Communication in the Animal and the Machine* in 1948. He derived "cybernetics", with the same root as the word "governor", from the Greek word for a steersman. Although we learn that cybernetics may not reduced to a single concept, at its core was the idea of self–correcting action achieved through the exchange of information by an agent with its environment. Another core idea was that of negative feedback, associated with the ideas of automatic stabilisation and equilibrium. Cyberneticians applied the idea of self–correction to agents of all kinds, conscious and unconscious, animate and inanimate: thus a society, a government, an airline, an aircraft pilot, a beehive, a bee, a chromosome, a servo-assisted machine, and a computer could all be seen as operating on cybernetic lines. For this reason they were also keen on man–machine analogies and the idea of artificial intelligence.

The emergence of cybernetics in the West came at an awkward time for Soviet science. In 1948 Stalin was reimposing political controls on cultural expression and East–West scientific channels of communication were being closed down. Artificial rewards were being invented for scientific endeavour in home–grown variants that would substantiate Soviet claims to priority at the frontier of progress, most notoriously in plant biology. Slava Gerovitch describes this as a dialectic between two alternative paradigms of Soviet science policy: "overtake and surpass" versus "criticise and destroy". While the balance between these two varied through time and across fields, "criticise and destroy" was the instinctive official reaction to cybernetics.

Gerovitch explains this in terms of an opposition between "cyberspeak" and "newspeak". The latter was the Orwellian official language of the era of prewar and wartime mobilisation. Intransigence in the face of society was a defining feature of official policy in this era; Stalinist decision makers whose word was law did not want to become cogs in a self–correcting mechanism that responded smoothly to new information from society; these *rukovoditeli* (literally: "governors") feared that cybernetics would take away their freedom of action and turn them into passive agents of their environment.

From a cybernetics perspective the story of the book is about the correction of the Stalinist over–reaction. Cybernetics did not subvert Soviet society in any fundamental way, and eventually cyberspeak became seamlessly integrated into Soviet official discourse. This process, as Gerovitch describes it, had two phases. At first scientists struggling for greater autonomy within the Soviet system used cybernetics to challenge newspeak and assert control over the language in which they negotiated with politicians over priorities, funding, and institutions. Later, as cybernetics became respectable, scientists converted it to support their rent–seeking strategy of lobbying for new projects and organisations with funding streams attached. Cyberspeak became the language of the moderate reform–minded consensus. One imagines

Kosygin and Ustinov musing over a glass of cognac: "We are all cyberneticians now!"

Slava Gerovitch has compiled a fascinating study with a huge range of reference to the contemporary literature in English and Russian, East and West, and to published and private memoirs, and institutional and scientific archives. He writes well; everyone will find something entertaining, something instructive, and something unsettling. It is hard to tell who will constitute his core readers, but he deserves to be widely read.

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