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Newspeak and Cyberspeak: The Haunting Ghosts of the Russian Past

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Abstract

Cyberspeak, the language of cybernetics, or its metalanguage to be more precise, consists of words that are both explaining and describing human/animal and machine forms of control and communication, while in newspeak, words were value-laden, which means they had strong positive or negative connotations connected to their use. For example, a 'spy' could only be a foreign agent, while a Russian one was a 'patriot'. First, it will be shown how there are still remnants of cyberspeak in modern science, pinpointing its cybernetic background and shaping our thoughts without us realizing they had any cybernetic origin whatsoever. Second, it will be investigated how newspeak, as its counterpart, can be analyzed from the theory of speech acts. Third, the current war in Ukraine allowed us a brief analysis of newspeak present in Russian public communication today (Putin's speeches), which will again be connected to their performative aspect.

Introduction to cyberspeak and newspeak

Cybernetics, as a wide field encompassing the study of circular causal systems had its first wave in the 1940s, led by American scientists such as Norbert Wiener, Arturo Rosenblueth and Julian Bigelow, and in the United Kingdom by the so-called Ratio Club, which included young psychiatrists, mathematicians, engineers, physiologists, psychologists and other scientists who discussed issues in cybernetics. In the Soviet Union, cybernetics was at first scrutinized and seen as an American reactionary pseudoscience but was soon rehabilitated to serve as an umbrella term for various scientific disciplines such as structural linguistics, control theory or genetics. The second wave became notable from the 1960s onwards, grounded in biology and works on self-organizing systems, especially in the works of Chilean biologists Francisco Varela and Humberto Maturana, while the third wave is a modern one connected with machine learning, and, as we can see, with mind engineering as well.

One of the best-known definitions of *cybernetics* comes from the classic work of Norbert Wiener (1961 [1948]), who defines its scope as “control and communication in the animal and the

machine.” That is, human behavior and communication are seen as analogous to machine behavior and communication: your mind could be seen as software, your brain as hardware, and there is a constant flux of information being sent. For cyberneticists, control is a form of communication and communication is a form of control: there is a purposeful action based on information exchange (Gerovitch 2002a: 2). So, what is cybernetics then? It is a way to study any system in a *general* way, and that system can be a machine or a biological organism. However, in order to do that, we need a *general* language to describe both machines and organism in the same way.

It is no wonder that *cyberspeak*, the language of cybernetics, or its *metalanguage* to be more precise, consists of words that are both explaining and describing human/animal and machine forms of control and communication. By metalanguage, we consider a language that describes another language. Since cybernetics studies control and communication, its terminology and vocabulary are diverse. Even though different terms are borrowed from different sciences, that does not mean they will retain the same meaning in cybernetics. To illustrate, consider the word or term *frame* outside cybernetics (denoting a reference frame in cybernetics). The term *frame* will denote different objects or concepts in different disciplines. In artificial intelligence, it is a formalization of concepts; in aircraft engineering, it refers to structural rings, while in film, it refers to a photographic image in a motion picture.

Cyberspeak has acquired a set of ideological connotations in the Soviet Union. Echoing Orwell, Gerovitch (2002a: 12) has named the ideologically-colored language of Soviet scientists *newspeak*. Newspeak was the “value-laden ideological language of official Soviet discourse” (Gerovitch 2002a: 13). Coined by George Orwell in his dystopian novel *Nineteen Eighty-Four* (1949), the term designates a controlled fictional language of a totalitarian superstate, in which both the grammar and the lexicon were limiting the ability of an individual to talk about possibly “dangerous” concepts such as *free will*. Any similar language might be dubbed Orwellian since it mirrors the use of newspeak in Orwell's novel. However, in Soviet Russia, the skillful use of newspeak allowed a person to manipulate ideology and define what was permitted in a Soviet context at that time: it provided mechanisms for negotiating the truth (Gerovitch 2002a: 12). So, if cyberspeak was aiming to be a universal language to describe both man and machine, what *is* actually this *newspeak*? In such a language, words were value-laden, which means they had strong positive or negative connotations connected to their use. For example, *Marxism* and *Leninism* always carried positive connotations, while *idealism*, *metaphysics*, or *formalism* were always labeled negatively (Gerovitch 2002a: 21).

The outline of this paper is as follows. First, it will be shown how there are still remnants of cyberspeak in modern science, pinpointing its cybernetic background and shaping our thoughts without us realizing they had any cybernetic origin whatsoever. The background description for cyberspeak and newspeak will be provided with Gerovitch (2002) as the basis since there is little

to none other research on this matter. Second, it will be investigated how *newspeak*, as its counterpart, can be analyzed from the theory of speech acts. Namely, it will be stated that their use is a *performative* one: by *using* the term, one is also *doing* something. Third, and a surprising outcome of this paper not originally planned, but the current war in Ukraine allowed us a brief analysis of newspeak present in Russian public communication today (instead of historical examples), which will again be connected to their performative aspect.

Cyberspeak vs. newspeak

This chapter will first rely on Gerovitch's (2002) differentiation between cyberspeak and newspeak, in order to then observe their remnants or application in modern science. Regarding a general language to describe different systems in cybernetics, various sources of scientific terminology were taken from different disciplines. Such a language has been named *cyberspeak* since it combines "diverse mathematical models, explanatory frameworks, and appealing metaphors from various disciplines by means of a common language" (Gerovitch 2002a: 2). For example, a cyberneticist will talk about *homeostasis* and *reflex*, borrowing terms from physiology, but also about *control* and *feedback*, or *entropy* and *order*, using terminology from control engineering and thermodynamics. Of course, there are also *behavior* and *goal* and similar terms from psychology, along with *information*, *signal*, and *noise* from communication engineering.

In newspeak, every term carried a philosophical and ideological load. A "spy" (*шпион*) is only an American or a foreign secret agent, while a Russian one is, of course, a "patriot" (*патриот*). The word "spy" is automatically devoid of positive connotations, and an American person could never be a "patriot" – such a word was reserved for *true* patriotism in their own lines. So, newspeak in this sense alters the meaning of a word itself by adding connotations. The process of addition is a social one: a connotation gets added to the meaning of a word by associating the word exclusively in positive or negative social situations, and the added connotations tend to spread like a disease among meanings of the words which are frequently found together.

According to Gerovitch (2002a: 155), scientists wanted to deal with "precisely described concepts and with notions defined through rigorously described operations" and not with vague terms and so-called ideologemes, words referring to not just ideas but ideas in an ideological sense. Newspeak reduced the explicit assertions such as "striving for peace in this situation is wrong" to the simple term *conciliatoriness*, which already had negative judgments associated with it (Gerovitch 2002a: 22). That is, such usage can be connected to Orwell's ideas of "words which had been deliberately constructed for political purposes" or "a sort of verbal shorthand,

often packing whole ranges of ideas into a few syllables, and at the same time more accurate and forcible than ordinary language” (Orwell 2003 [1949]: 212).

Science in the Soviet Russia was full of newspeak before the advent of cyberspeak. For example, Hilbert’s mathematical thought was known as *formalism* which was at first an objective scientific term that acquired a more ominous meaning during the debate over the interpretation of Marxist philosophy in 1930: the accusers were talking about “formalistic deviations” or “formalistic perversion.” This was a widespread phenomenon not dealing only with philosophy. For example, soon, editorials in *Pravda* condemned “formalist perversions” in Shostakovich’s music which was castigated for its anti-popular character (Gerovitch 2002a: 32). To analyze the phenomenon more thoroughly, one can start with *Muddle Instead of Music: On the Opera Lady Macbeth of the Mtsensk District* (Сумбур вместо музыки – Об опере «Леди Макбет Мценского уезда») appearing on January 27, 1936. In this editorial, Shostakovich's opera *Lady Macbeth* is accused of being contrary to “popular musical language accessible to all” along with calling it a “leftist confusion” (левацкий сумбур) that is created “instead of natural human music” (вместо естественной, человеческой музыки) and “formalist attempts” (формалистические потуги) to create originality through “cheap clowning” (*Pravda*, 1936). It is no wonder that the advent of the so-called Russian formalists in linguistics was basically waiting for ideological scrutiny, so their work was often referred to as “bourgeois phonology” or they were just being accused of “a general formalistic approach” (Gerovitch 2002a: 40), which, as we recall, is already a derogatory term.

Another term that was often denounced by the Soviet government was *idealism*, which was often marked as “reactionary and idealistic science.” The Russian translator Sofia Ivanovskaia faced ideological criticism for her role in the publication of the Russian translation of Hilbert and Ackermann’s *Principles of Theoretical Logic* and immediately published a repentant letter admitting to “idealistic confusion” (Gerovitch 2002a: 47). The idea of logic as “idealist” seemed to be rooted in a trivial Platonism, but this did not last since by imputing Platonism everything could be dubbed “idealist.” The need for concrete mathematics while at the same time avoiding “idealist” mathematics seemed to be grounded in the finite infinite divide. Everything finite was “material,” while any logical or mathematical theory dealing with infinity had a strong chance of being regarded as “idealist.”

How does this all tie to cyberspeak? Gerovitch (2002a: 166) illustrates a classical newspeak attitude with the Soviet Academy of Sciences in 1940, who published a paper titled *Is it possible to prove or disprove Mendelism by mathematical and statistical methods?*, where *Mendelism* was a part of the newspeak. The word itself was a derogatory label and the whole of classical genetics in the background was ridiculed by the usage of the term, contrasted to the Soviets backing Lysenkoist biology. Cybernetics was often the holder of similar derogatory labels such as “a reactionary pseudo-science” (Peters 2012: 150), similar to the mentioned etiquette of “formalism.” In 1955, the journal *Voprosy filosofii* (“Philosophical questions”) published a paper

Who does cybernetics serve? (Кому служит кибернетика?), which condemned cybernetics as a “misanthropic pseudo-theory” consisting of “mechanicism turning into idealism” (Holloway 1974: 150). The paper mentioned Marx who described the mathematical investigation of the most complex regularities: social and economic ones. Suddenly, mathematics became a powerful instrument and a methodological guide in the Khrushchev years. Russian cyberneticists such as Lyapunov, Sobolev, and Kitov actually had to “ideologically legitimize cybernetics” (Gerovitch 2002a: 179). It is intriguing how one can change the meaning of the term to be or be not ideologically colored and invoke or not various philosophical and political ideas, just depending on the common knowledge or the “official interpretation” of the term. This is what happened to cybernetics – from a “reactionary pseudo-science” to a legitimate discipline that maybe could be reconciliated with Marxism.

However, according to Gerovitch (2002a: 179), the first Soviet cyberneticists did not try to reconcile cybernetics with Soviet dialectical materialism: they insisted that questions of philosophy and ideology were utterly irrelevant, attacking the foundations of the official philosophical discourse. That is, they refused to use the conventional terminology of newspeak and *insisted on the validity of cyberspeak*, the language of cybernetics (Gerovitch 2002a: 181). Gerovitch (2002b: 354) mentions that Sobolev claimed that “cybernetics is neither mechanistic, nor idealistic” since “it is first and foremost a science of facts” and “there can be no idealistic or materialistic facts: a fact is always a fact.” Sobolev (1963: 82) states that “in cybernetics, one calls a machine a system that is capable of performing actions leading to a specific goal. That means that living beings, man in particular, are in this sense machines”. He claims that since one of the main parts of cybernetics is information theory, which implies the existence of a material carrier, but the information itself is immaterial (Sobolev 1963: 86). By refusing to incorporate cyberspeak terms into newspeak connotations, the use of cyberspeak was here to refer only to scientific ideas in the background, and not ideologies.

Soon, the fight for cyberspeak was won, but at the cost of cyberspeak becoming politicized as well. Philosophers started adapting their discourse to incorporate cybernetic advancement, and cybernetics was tamed to go along with dialectic materialism (Gerovitch 2002a: 257-258). Such an attitude peaked with the 1961 symposium *Cybernetics—in the Service of Communism*, where cybernetics was described as “one of the major tools of the creation of a communist society” (Peters 2012: 164). In the proceedings (Berg 1962), one can see how various scientists see cybernetics as a general science applicable to various specialized fields. For example, Novik (Berg 1962: 43) sees it as “characterized by the most general and abstract approach to control.” Gnedenko (Berg 1962: 69) calls cybernetics “a particular scientific trend” that deals with “clarification of those regularities to which the processes of efficient control of complex systems are to be subordinated.” Dobrushin and Khurgin (Berg 1962: 93) see information as “one of the basic concepts of cybernetics” since “any controlling system deals with information.” While Arutyunov and Svecharnik (Berg 1962: 105) emphasize the application of cybernetics to biology, Sergeychuk (Berg 1962: 141) sees electrocommunication as “an inseparable component

of cybernetic technique and exerting a great influence upon the development of the automatic control theory and the cybernetic machine theory.” Belkin (Berg 1962: 256) concluded that “one of the most important and promising fields of application of cybernetics is economics,” which was also emphasized by Kitov (Berg 1962: 281), who saw cybernetics as “the science of the methods of optimum (the best) control and construction of controlling systems,” along with “development of methods of finding optimal solutions in complex situations and the study of similar phenomena in living nature” (Berg 1962: 282).

As seen above, cybernetics started to include more and more subdisciplines, such as information theory, information systems, bionics, chemistry, psychology, energy systems, transportation, and justice, along with semiotics and linguistics, followed by medicine uniting with biology (Peters 2012: 167) and soon grew out of the public mainstream view, giving rise to “informatics” and nowadays information science and computer science. Its terminology was not emphasized anymore, but we will now observe whether its remnants can be found in modern science and what consequences are there regarding the usage of such terms.

Cyberspeak then and now

The mentioned Wiener’s 1948 book drew upon parallels between digital computers and the nerve structures in organisms (chapter “Computing machines and the nervous system”). “A diverse set of man-machine metaphors” was used to describe living organisms, control and communication devices, and the whole of human society using the same terms: *information*, *feedback*, and *control* (Gerovitch 2002a: 53). Wiener (1961, xi-xvi and 11-13) argued that the task of cybernetics was to research the analogies of the processes in the animal and the computer and explore its philosophical ramifications. As Ashby (1956: 1) points out: cybernetics does not ask what something *is*, but what it does, that is, how it *behaves*. One might be tempted to correlate this to behaviorism, but there are two major problems here. First, behaviorism came later than cybernetics. Second, and more important, while behaviorism says that *methodologically* one should focus on behavior, cybernetics says that it wants to *ontologically* focus on behavior: to see what a thing is, and consider how it behaves. In this regard, it is similar to pragmatism, not behaviorism.

Ashby (1956: 4) pinpoints that cybernetics “offers a single vocabulary and a single set of concepts suitable for representing the most diverse types of system.” Let us illustrate this using Wiener’s (1961: 120) terminology regarding neurons, so we could then easily observe such remnants in modern scientific terminology. Wiener considers human and animal nervous systems known to be capable of the work of a computation system and states that neurons are ideally suited to act as *relays*. In a computer, Wiener describes that relays might be mechanical,

electromechanical, or electrical, while in animals, they have an active phase and an inactive phase, i.e., the neuron fires or is in repose. Human *memory* is described as the ability to preserve the results of past operations for use in the future. Notice how the human mind is now described using words such as *result* or *operation*. It is no surprise that Wiener (1961: 121) almost immediately states that memory is a *function* of the nervous system, “equally in demand for computing machines.” Cyberneticists would follow Wiener’s path: they are trying to describe analogous systems, a living one and an artificial one using a joint, unified set of terms. Memory is not just a psychological phenomenon anymore, it is a *function*, for both a human being and a computer. And if we have a function, we can talk about the *inputs* and *outputs* for that function.

Following the traditional cyberspeak, Warren McCulloch and Walter Pitts (1943) were the first ones to suggest that something resembling the Turing machine might describe the human mind, and mental processes such as reasoning, decision-making, or problem-solving are *computations* analogous to computations executed by a Turing machine (Rescorla 2020). McCulloch was a cyberneticist and a neurophysiologist, while Pitts was a philosopher and psychologist, and their idea was to provide a mathematical description of a neuron. The goal itself has a cybernetic background: *find a common language to describe both the animal and the machine*. Not only that we were now describing the mind with notions such as *computation*, but we were also describing both the biological and artificial neurons using the same language involving terms such as *function* or *computability*. So, one is describing the human mind using terms related to machines, but one is also describing the machines using biological or psychological terms such as *neuron* or *memory*, which leads us to the modern usage of cybernetic terms.

Moving away from theories of the mind, even today one can easily observe how such terminology is present in modern-day computing. For example, we are talking about machine *learning*, applying a psychological term reserved for humans and animals to machines. Machine learning is used to improve a computer’s performance in certain tasks (Skansi, 2018). In machine learning, we are also talking about *neural networks* mimicking the way the human neural network computes and gives rise to mental states. Computer science also uses terms such as mentioned *memory*, which is used analogously: we are using the term since we believe (or once did believe) they are referring to the same kind of a process. A cyberneticist would be happy with such a definition since both memory as a neurophysiological and psychological process and memory as a computer’s way to “remember” past states could be described using the same language of terms such as *function* or *state*. Neural networks can be *feed-forward*, with elements passing *signals* forward, again terms borrowed from control theory, one of the richest sources of cybernetic terminology.

Taking the cybernetic stance of process analogies (Skansi and Šekrst 2022), a cyberneticist would use the same language to talk about essentially the same process. Namely, the study of the human mind and machine mind is talking about the same thing since we are using the word *mind*

in both cases. Wiener (1961 [1948]) himself talks about control and communication in both the animal and the machine, using the same terms to describe analogous processes. Today, using terms such as *machine learning* or *artificial intelligence* is not just an empty usage of the word. Namely, it states that *machine learning* is a type of *learning* and that *artificial intelligence* is a type of *intelligence*. The question of whether the animal mind can be described in computationalist terms or whether the computation can be described in neurophysiological terms is an irrelevant one: we can always use *cyberspeak* to find a common language, often the one talking about inputs, outputs, communication, and information.

Nowadays we often use scientific terms devoid of any meaning, but it seems that quite a number of terms in computer science, cognitive science, philosophy, mathematics, biology, etc. have either their roots in early cybernetics and control theory (exemplified by the mentioned *Cybernetics—in the Service of Communism* conference) or can be seen as connected to such research. One could argue that this does not suffice for a notion of mind engineering since we might be using the term without knowing its background. However, from a philosophical standpoint, using the term, even in a metaphorical way, pinpoints a certain *analogy*. And if there is an analogy, no matter how big or small might be, between two systems, then it has repercussions on ontology. Our concepts and entities in scientific disciplines will be influenced by the use of words. For example, there are a number of misconceptions regarding *machine learning* and *artificial intelligence* (Emmert-Streib, Yli-Harja, and Dehmer 2020), thinking that we are already dealing with a certain kind of powerful machine intelligence, leading to various problems of explainability. People are often thinking that artificial intelligence is explaining the brain, i.e., they think that “AI aims to explain how the brain works” (Emmert-Streib, Yli-Harja and Dehmer 2020). We consider such misconceptions easy to explain using language: we are, after all, using the term *intelligence*, finding an analogy between two processes. It is no wonder that a layman will use the term to create her own idea about a certain concept or a term if the scientific community is using a remnant of a cybernetic language that highlights the likeness of different concepts. A cyberneticist would see AI as a type of *intelligence* overall that could be applied both to animals and machines. The ignorance regarding the background of such terms leads to surprising misconceptions about what artificial intelligence really is and common misuses of this and similar terms.

The same is valid for terms such as *machine learning*. Laurent (2018) has shown common misconceptions regarding the terms, including one that AI can *learn*. According to Laurent (2018), most advanced AI models nowadays all seem to use *machine learning*, but the term “machine learning,” according to him, is misleading since iteratively approximating the best parameters for a model can hardly be considered *learning* in the classical sense.

We have focused here on computer-science terms that may lead to misconceptions. However, we will not take that road: we believe that the advent of terms such as *artificial intelligence*, *neural network*, or *machine learning* only leads to a misconception if the cybernetic background is not

known. A cyberneticist would not see any contradiction between machine learning as an interactive process or human learning: namely, in cybernetics, they are both described as the same process using the same vocabulary. That is the main reason why the usage of such terms engineers people to actually see it as *a type* of learning, intelligence, or a network.

Of course, there are various other terms and definitions that might seem innocent at first but carry a huge ontological commitment. For example, in linguistics, Jakobson's (1960) functions of language include *sender, receiver, message, channel, code, and context*. This can describe human communication, but there is nothing stopping us to apply it to communication between two computers, and Jakobson himself was under a big influence of cybernetic ideas. For example, consider NASA's (*Astrobiology at NASA 2022*) definition of life as a "self-sustaining chemical system capable of Darwinian evolution." Such a definition could be applied to a robot (everything is a chemical!) that might use machine learning to modify its development to follow the path of fitness, that is, we might picture a scenario where such a definition would lead to a machine being encompassed by it. Even using the most basic terms such as *life* and accepting definitions as the mentioned one carries with itself a cybernetic background of the term.

Newspeak as speech acts

It is easy to see how using newspeak, one commits oneself to a certain ideological background. We have also argued that by using cyberspeak today, one is actually talking about certain philosophical ideas that might not be in style anymore but are visible in certain terms or definitions. Talking about *machine learning* commits us that it is a type of *learning*, compared to *human learning* the same way using an ideologically colored word commits us to a certain interpretation of our addressees. A cynic might comment that all language is newspeak, and that the only difference from true newspeak is that it was fabricated by more sophisticated minds, but the underlying non-neutrality is an essential property of any language, not an accident.

From aspects of the philosophy of language and pragmatics, such usage is actually invoking a certain response in the target audience and it is not only used to transmit a message, it actually *does* something else: it establishes a background idea. Austin's (1962) theory of speech acts refers to the fact that when something is expressed by a speaker, he or she might not only present some information but perform some action as well. For example, if I say to my friend "it's cold," and he's standing next to an open window, I'm also *implying* a request to have the window closed. Speech acts can be *performative* as well meaning that by *saying* something, we are actually *doing* something. For example, when one says *I do* in a marriage ceremony, the utterance of these words actually performs the act of marriage and *I name this ship Queen Elizabeth* establishes the name of the ship immediately (Austin 1962: 5). Similar examples may

be found in promises, curses, commands, wills, and similar occasions, where the sentence uttered does not describe one's doing and does not describe that one is doing it: it is actually doing it (Austin 1962: 6). For Austin (1962: 6), such sentences are *performative sentences* or *performatives*.

Let us observe what happens if someone utters *Spy!* in the Soviet era. We have mentioned that the word was inapplicable to Russian spies: in newspeak used by the government texts and public addresses and papers, they are *patriots*. It is no wonder that the official newspaper of the Volunteer Society for Cooperation with the Army, Aviation, and Navy was *Soviet Patriot* (*Советский патриот*). All those ideologemes are having a certain conventional procedure in the background since there is nothing inherent to the word *spy* that makes it refer to an American or a Russian agent. If you are an appropriate person under appropriate circumstances, the performative will work. For example, if you utter *Spy!* today in Croatia, there is not the same effect present as if you had uttered it in Soviet Russia 70 years ago. However, if your target audience is acknowledged with the circumstances and ideology behind it, then the performative fulfills both conditions. You are being declared a spy, but being declared “a spy” also does something else: *it establishes an additional ideological narrative*. You are not a Russian patriot, you are someone else, most probably an American. You are not a part of materialist dialecticism, and you are against the ideas that are guidelines in the (then) current society. Wierzbński (2012: 40) observes that enemies were called *deviators, traitors, kulaks, wreckers, saboteurs, spies, agents, diversionists*, etc. (*уклонисты, предатели, кулаки, вредители, саботажники, шпионы, агенты, диверсанты*). For example, in his speech in 1961, Khrushchev (1961: 100, emphasis added) mentions that “they want us, like traffic police, to safeguard the uninterrupted transportation to West Berlin of their military freights, **spies and saboteurs** for subversive acts against ourselves and our allies” and that “they were ‘persuaded,’ persuaded by the use of certain methods, that they were either **German, or British, or some other spies.**”

Unlike Austin’s speech acts that mostly deal with utterances on a sentential level, we believe that *words themselves can function as speech acts in newspeak and cyberspeak*. If you were using the term *cybernetics* before it was reconciled with the past regime’s ideas, you were also adding an extra layer of ideological meaning. You were not only saying *cybernetics*, but you were also influencing your speaker by stating an additional layer of utterance, namely, the one that states that it is a reactionary pseudo-science. In that way, it also functions as a so-called *perlocutionary* act, which references the effect of an utterance for an interlocutor. By using that term and agreeing with the usage, you are also performing an action of agreeing with the ideological background of the word and passing the ideologeme to your target audience. In other words, we are seeing words as *shortened utterances*: the use of connotative terms is actually a *shortened propositional attitude, establishing the speaker’s valuation and/or background ideology of such a term*.

Cyberspeak as speech acts

A performative, of course, does not have to be negatively or politically value-laden, it can also carry a positive or neutral connotation. By using cyberspeak, one is committing oneself to a certain ontological obligation. And this stands in stark contrast to the sociological and political obligations you are committed to by using newspeak. By using newspeak, you are committing to a political position, or in the case of the Soviet times, to a sociological group. And this in fact holds true even today, in e.g., abortion debates in modern Russia: one can use the terms “women's reproductive rights” or “rights of an unborn baby” to denote not just the same issue in this debate, but also ascertain one's adherence to a political position and even belonging to a certain social group. But the ontological obligations stay the same. There is no difference in the underlying ontology depending on the choice between “women's reproductive rights” or “rights of an unborn baby.” But cyberspeak, as a scientific language, is fundamentally different. In cyberspeak, one does not use word differentiation for political belonging, but the same word for two different phenomena while considering them to be the same fundamental process. If you are using a term like *input* and *output* while describing human communication or language, then you are pinpointing the background philosophical idea of a common language or a mathematical description that describes both human and machine communication. If you are using a term such as *artificial intelligence*, you are committing yourself to the idea that it *is* a type of intelligence, even though it might differentiate from human intelligence, no matter what the meaning of the term *intelligence* is.

One might argue that terms are just terms and just *denote* things. We argue differently: even the usage of scientific terms, as we have seen, might lead to “misconceptions.” But those misconceptions were happening because we were using the terms in a cyberspeak way, accepting the ideas in the background, such as those related to machine learning which is a type of learning, common to both men and machines. The pragmatic use of words has a performative aspect to invoke an idea in the addressee's mind about the peculiarities and consequences of such terms.

There are examples of negatively-connotated terms in various scientific disciplines. For example, the use of the word *materialism* might often be negatively pictured in various discourse communities, even though it might be a philosophical stance with no connection to dialectic materialism whatsoever. A recent widespread discussion in computer science was dealing with commonly used terms such as *master* and *slave*, for example, *master disk* and *slave disk*. Eglash (2022) has recently investigated that usage of such metaphors is fairly recent, dating to the beginning of the twentieth century, and the most controversial technical setting is in computing.

Newspeak today: performativity

We have established that both cyberspeak and newspeak terms might have an extra performative layer connected to them, either a neutral/positive or a negative one, whereas the latter is most often the case with newspeak. It is no wonder that we can find examples like this not only in Soviet Russia but in political propaganda today as well, regardless of nationality or ethnicity. One is not going to find a complete language such as newspeak, but some phrases might hint upon similar properties even in the United States or similar western countries as a part of rhetoric devices used in various political speeches and discourses. However, the current situation in the Russian war against Ukraine seems to mimic the pragmatic context and conditions of those in the Cold War area and might serve as a starting point in our analysis.

Newspeak has often used a rhetoric device of *euphemism*, which refers to an expression or another term that replaces a word or a phrase that might be seen as offensive or not suitable in the current context. Euphemisms are often used in bureaucracies, for example, the United States Central Intelligence Agency used the term “enhanced interrogation” to refer to systematic torture (McCoy 2007: 16). Berdy (2022) mentions how in oldspeak, meaning the regular language (use) without background ideology, one might use the word “war” (Rus. *война*), but today, a Russian politician would use a certain euphemism like “special military operation” (*специальная военная операция*) or a “special op” (*спецоперация*). For example, For example, Kremlin (Putin 2022d) published a federal law on November 11, 2022 regarding "the course of special military operation in the territories of the Ukraine" (*в ходе специальной военной операции на территориях Украины*)

From a performative aspect, when one is using the term “war,” one is also bringing the whole background knowledge of what war is. By using the term *спецоперация* or a “special op,” one is diminishing the current situation. You are not just using the term, you are doing something else: adding an extra pragmatic layer of attitude or stance toward the fact it is referring to.

Euphemisms and metaphors such as “special military operation” were not seen here for the first time, it is a part of historical political propaganda continuing to this very day. For example, the term *Lebensraum* (“living space”) was coined prior to the advent of Nazism, whose proponents were eager to provide more living space for Aryan Germans. In the holocaust, gas chambers were “showers” and “The Final Solution” or *Endlösung* is the world’s strongest euphemism referring to genocide (*Yad Vashem*, 2022).

In 1947, Nachman Blumental, who survived the Holocaust, published *Slowa niewinne* or “Innocent Words” covering Nazi euphemisms, which might be viewed as the first analysis of newspeak. In his 1947 book, Victor Klemperer (2013) analyzed the Nazi language which might be connected to newspeak in its strong positive or negative connotations. For example, *fanatisch*, “fanatical” or *Fanatismus*, “fanaticism” denotes a threatening or repulsive quality (Klemperer

2013: 61), which became a compliment similar to “courageous” or “devoted” when applied to Nazis (Klemperer 2013: 62).

Michael and Doerr (2002: viii) state that “the same newspeak was an indispensable accessory to the persecution and murder of the European Jews.” They give an example of *Abbeförderung* meaning “dispatching” or “removal,” a euphemism for “killing,” while *abdirigieren*, “to direct away” was a bureaucratic euphemism for killing a person or sending them off to a concentration camp because of their inability to work (Michael and Doerr 2002: 49). Doerr (2002: 33) mentions that code words (*Tarnwörter*) were used to conceal actions or facts, and when the murderous connotation of a euphemism had become too well-known, sometimes an official would request another word to be used instead, making the old word a dysphemism. For example, both *Evakuierung*, “evacuation” and *Auswanderung*, “emigration” were used for forced transportation of Jews, along with *Sonderbehandlung*, “funneled,” used as a euphemism for “killed in a death camp.” *Sonderkost* (Michael and Doerr 2002: 378), “a special diet” referred to starvation experiments in the camps, while *durchgeschleust* (Michael and Doerr 2002: 134) was a new euphemism used on Himmler’s orders to replace other euphemisms for “murdered.”

To emphasize again, by selecting different words, we are also doing something: expressing our implicit propositional attitude towards a certain proposition. You can emphasize something, diminish it, agree with it, disagree, or bring a whole spectrum of associated beliefs and ideas just by using a single word. For example, Berdy (2022) mentions how the enemy troops in Ukraine are named “neo-Nazis” (*неонацисты*) or “Nazis” (*нацисты*), and the enemies of the special operation in Russia are called “extremists” (*экстремисты*), “even though no one has ever figured out what they are extreme about.” One can easily see how this mimics the newspeak terms used in Soviet Russia: today, a foreign agent or an enemy is not called a *spy* (*шпион*), but an *extremist*, and the Russians do not *conquer* (*покорять*) the territory anymore, but *liberate* (*освободить*) it.

Some words, marks Berdy (2022), are not used, such as “death” (*смерть*) since the Russian soldiers are not killed, but “missing in action” (*пропавший без вести*). This is interesting from a performative perspective since even *not using* a word does something, that is, the act of avoiding a word has pragmatic consequences: again, the enemy’s strengths are diminished and there is a layer of persuasiveness towards the target audience. This encompasses a certain Sapir-Whorfian hypothesis of shaping our knowledge of the world by using language, but in this case, we believe that others shape our world as well by incorporating a pragmatic layer in word usage.

Newspeak today: Russian political speeches

Let us now move on to concrete examples. In his speech delivered on February 21, 2022 (Putin 2022a), in Moscow, Putin starts by saying that the parts of the Ukrainian territory were “united” (*всоединились*) with the Russian territory, referring to a devastating 30-year war for control of the Cossack Hetmanate. Stalin was also “incorporating” (*присоединил*) territory that previously belonged to Poland, Romania, and Hungary. Putin was repeating that we are dealing with a “historical fact” (*исторический факт*), even though the recounting of the events was severely language-engineered. In his speeches, *nationalism* is a pure example of newspeak since the word itself cannot have a positive connotation whatsoever when used to refer to the western nationalism, he refers to it as “infected by the virus of nationalism” (*поражена вирусом национализма*) or calls “against the contagion of nationalism” (*против заразы национализма*), and the word itself comes only with derogatory adjectives, cf. “to the side of *cavemen* and *aggressive nationalism*” (*в сторону нещерного и агрессивного национализма*) or “*far-right nationalism*” (*крайний национализм*), and, there is a “national, aggressive character” (*агрессивный, националистический характер*) as well.

The mobilization was announced on September 21, 2022 (Putin 2022b). In the speech, there is no talk about the ongoing war, but instead of the mentioned “special military operation” (“the course of the special military operation,” *ход специальной военной операции*). In this “special military operation,” the portions of the territory were “liberated” (*освобожденные*), including Donbas (“liberation of the whole territory of Donbas,” *освобождение всей территории Донбасса*). One can notice that territory is not taken or conquered, the usage of the verb “to liberate” adds an extra ideological layer that the territory was Russian to begin with. Russian soldiers are referred to as “Russian military personnel” (*кадровы военнослужащих российской армии*), “volunteers” (*добровольцы*) and therefore “patriots” (*патриоты*), while enemy soldiers are “neo-Nazi militants” (“by the Neo-nazi militants,” *со стороны неонацистских боевиков*), “nationalists” and “mercenaries” (“new gangs of foreign mercenaries and nationalists,” *новые банды иностранных наёмников и националистов*). These examples mirror the mentioned usage (cf. Wierzbński 2012: 40) from the Soviet Russia, where enemy soldiers were “spies” (*шпионы*) or “saboteurs” (*диверсанты*), while this could not be said about the Russians themselves.

On September 30, 2022 (Putin 2022c), Putin delivered a speech on the annexation of Ukrainian territories, calling the current war “a liberating mission for our people” (*освободительная миссия нашего народа*), again using a euphemism similar to the mentioned Nazi propaganda. Soldiers are still not fighting in a war, but “in a special military operation” (*в специальной военной операции*), while the west is fighting “a war” against Russia (“reasons for this hybrid war,” *причины той гибридной войны*). It is interesting to note how the word “war” seems to be reserved only for the perceived conflict between the West and Russia, but not for the current ongoing war between Russia and Ukraine.

In the same speech, the annexation itself is referred to as “the choice” (*выбор*), but one would not say that there was much of a choice for the Ukrainian people. “The West” is by itself full of negative connotations, it is “colonial” (cf. *неоколониальная модель*, “neo-colonial model”) or it is said that the West “has their colonial politics” (*свою колониальную политику*). It is often followed by the epithet “elite” (“western elite” or *западные элиты*) or “hegemony” (“the collapse of the Western hegemony,” *слом западной гегемонии*). All of these terms create an ideological layer of depicting the West as the real usurpator. Namely, such usage adds an additional pragmatic layer: one cannot say that Russia is the conquerer since the West is the real usurpator.

In a speech from February 21, 2023 (Putin 2023), it is not surprising that there is still talk about a “special military operation” instead of “war” (“a decision to conduct a special military operation,” *решение о проведении специальной военной операции*). However, the closest to the word “war” itself was the phrase of “terrible conflict” (“out of this most difficult conflict,” *из этого тяжелейшего конфликта*), which is again a euphemism. It is interesting to compare this to Biden’s (2023) speech that was given on the same day. In it, there is no mention of any euphemisms like “special military operation,” the war is referred to as “the war” and even as “the largest land war in Europe since World War II had begun,” along with talking about the “Russian onslaught” and “Russian aggression.” By not using euphemisms, a speaker is presumably taking an opposite or a neutral stance towards the conflict in question.

Let us move back to the most recent Putin’s (2023) speech. Dombas is illustrated as believing and waiting for Russia to come to the rescue (*верил и ждал, что Россия придёт на помощь*). One can see the repetition of previous ideological discourse: Russia is not occupying or conquering territories, it is liberating what is presumably theirs. The usage of such phrases constructs an ideological background that offers a perlocutionary layer of influencing the listeners to react to such euphemisms with approval.

To continue, “Western elites,” a euphemistic phrase itself, were the ones that “unleashed the war” (*это они развязали войну*). Now, one can see that again, the word “war” (*война*) is reserved for the West only. This was repeated explicitly by stating that “we are not fighting a war with the people of Ukraine [...]. The people of Ukraine themselves are the victims of the Kiev regime [...].” This is an interesting justification of previously seemingly concealed word and phrase usages where they once again blame the “Western elites,” along with the “Kiev regime.” “Regime” (*режим*) itself is a strongly connotated word, referring only to enemy modes of rule. On the other hand, the notion of “real patriotism” (*настоящий патриотизм*) is, of course, only applied to the Russian civilians or even soldiers (“say thank you to [...] patriots, who fight in the lines of Combat Army Reserve of the Country BARS”). The enemies are “neo-Nazis” and “punishers” (“at the hands of neo-Nazis and punishers,” *от рук неонацистов и карателей*), where the term “punisher” in Russian denotes a member of occupation forces that carries out repression against the population in a certain occupied territory.

Pragmatic and philosophical issues

We have observed how both cyberspeak and newspeak developed in Soviet Russia, but we have found their remnants today in modern Russia as well. Cyberspeak, as a technical language, aimed to describe the control, feedback, and mechanisms in both animals, including humans, and computers. Such a language then developed into an all-unifying meta-language of various scientific disciplines, treating analogous processes in various scientific disciplines as analogous. We have shown that remnants of such terminology are still present today and that their use may pinpoint to some either ontological obligations or possible confusions regarding their usage.

In Soviet Russia, cyberspeak was attacked at first but then was highly politicized as well. Another form of language, Orwellian newspeak, was used to describe highly connotated terms. For example, *Marxism* was always positively regarded, while *formalism* or *idealism* was not. A *spy* could be only a foreign agent, but a Russian one was a *patriot*. Such language was not typical for Russia since it is a part of standard political propaganda, so we have also observed similar euphemisms and semantic changes in the language of Nazi Germany. Political newspeak is still actively used today, which we have illustrated using recent political speeches by Vladimir Putin regarding the current war in Ukraine, or, in the language of modern-day newspeak, a “special military operation.”

Finally, we have viewed both newspeak and cyberspeak examples as carriers of extra information. We have used the pragmatic context of speech acts to extend its behavior not only to utterances but to newspeak or cyberspeak words themselves, which we considered shortened utterances as well. That way, the use of terms is also establishing an extra layer of discourse. For example, by using a newspeak euphemism such as a “special military operation,” you are also bringing an additional implied utterance that you do not consider to be a “war.” If one is using the word “spy” in Soviet Russia, there is an extra utterance implied meaning “this person is not a good Russian citizen” or a similar negatively-laden proposition.

But there is a real danger here. Newspeak in essence is, pragmatically speaking, a divisive language style, used to separate groups by allowing the groups forming the language to add semantic differentiation to seeming synonyms. As such it might be an instrument of separation and even an instrument of implicit fake news and distortion. But cyberspeak is a different beast. As a language of science, it provides the means of communicating the equivalence of underlying processes by claiming that two seemingly different words define the same entity. Intrinsically, it reduces the ontology from a canonical semantic ontological universe where each word and each new word has a meaning of its own to a reality in which language minimizes itself to clearly

capture the ontology of reality, which is by definition a substantially reduced ontology from the canonical semantic ontology. As such, the transition from newspeak to cyberspeak in science is one of the best things that can happen to a scientific language. Namely such change removes layers of hidden meaning dependent on the context and the time in question, and uses a neutral language that is not subject to background circumstances that change both with time and space. But the same process is a deadly force in politics, since there the (biased and non-objective) plurality present in newspeak is reduced to a parsimonious language of cyberspeak. There is no plurality of words anymore, just one way to speak of many phenomena, and, if controlled by a social group, this will inevitably degenerate the language into a language that will not be able to express subtlety and true dissent. In that regard, should Russian as used today evolve to cyberspeak, it would actually mark one more crucial step away from any real possibility to even ontologically understand and define dissent or opposition to the current position using cyberspeak. In that case, a new newspeak should emerge to redifferentiate meanings to allow any opposition to gain coherence in Russia.

Cyberspeak and newspeak may seem like two extreme opposites, but the development of cyberspeak into a politicized language weapon, as it was the case in Soviet Russia, shows us that views can change and that language can be a powerful weapon to *do* things with words.

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