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DISCUSSIONS ON TECHNOLOGY AND THE “OTHER MODERNITY” IN GERMANY:
BETWEEN CULTURAL CRITIQUE AND TECHNOCRACY

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INTRODUCTION

The systems-technocratic tendencies of the last third of the 20th century described by Hans Lenk, as well as the widespread dissemination of environmental discourse, prompt us to turn first of all to fundamental philosophical and sociological discussions in Germany around the transformation of the role of technology on the eve of World War I and during the 1920s–1930s. These discussions were caused by the contradictions of industrialism, the environmental crisis, the collapse of the ideals of humanism and progress, and not least by the emergence of new technologies generated or improved by the military industry. The issue of modern technology is considered in close connection with the criticism of modern civilization, which continued after World War II in the form of criticism of late industrial society. Until recently, statements about modernity as an age of unprecedented dynamism, accelerated historicity and bourgeois progress were commonplace in historical, philosophical and sociological literature. At the same time, very little attention is still paid to the phenomenon of “cultural critique” (*Kulturkritik*) at the turn of the century, to the “conservative revolutionary” or “reactionary modernist” visions in the Weimar Republic and the Third Reich, as well as to the active renewal of cultural critique in the “Era of Adenauer.” However, it is precisely these visible swings between modernism and tradition with their special concepts (“total mobilization”, “heroic realism”), figures (“worker”, “Caesar”, “technician-engineer”) and trains of thought (technology as “life tactics”) which allow us to more deeply understand the specifics and various transformations of modernity with its noticeable amalgam of rational and irrational elements.

Class struggle or social activism in support of universal equality and universal human rights is, although important, still only a part of modern culture, which, as we see it, does not at all exclude possible appeals to God and Tradition. To the remark of T. Rohkrämer, the expert in German intellectual history, that the core of civilization-critical and ecological beliefs does not fit well into the scheme of contrasting right and left, one can add a similar statement concerning the technocratic ideas in the Weimar Republic and the “four-year plan” of the Third Reich. In any case, Rohkrämer’s idea of a “different modernity” in Germany seems to be very heuristic, and therefore its clarification and development looks very promising. Along with the concepts of *Technik* elaborated by various German thinkers of a predominantly conservative orientation, the subject of

the inquiry should be projects of the “other modernity” on the eve of and between the two world wars, the post-war concepts of “complete modernity”, which anticipate the problems of the end of history (long before the liberal version of F. Fukuyama) and the issue of environmental catastrophe, and finally an alternative “*Geistesgeschichte der Technik*” that questions the classical dichotomy of matter and spirit.

There seems reason to hope that this would make it possible to significantly correct the position of social sciences, which until recently tried to reconstruct the process of European modernization as a single and monolithic one, covering all spheres of society — economics, politics, religion, technology etc. — and contrasting them with the natural environment, unlike the “traditional”, “pre-modern” society. Thus, we ask if we can really state such an unambiguous process at the intellectual-reflective level and continue to use the common oppositions of the “modern project” and “backward-looking anti-modernism”, “Enlightenment” and “Counter-Enlightenment”? A study of the exemplary and standard-setting discussion about technology in Germany should reveal a lot of self-interpretations to which the unequivocal labels of “modernism” and “anti-modernism” cannot be attached. Moreover, we argue that different projects of anti-modernism (which are essentially modern) are heterogeneous and should be lined up not only in a synchronous, but also in a diachronic order.

We recognize the complexity of using the concepts of “modernity” and “modernization” and therefore we will follow a terminological distinction consistent with the Theory of Compensation, proposed by Joachim Ritter, Hermann Lübke and Odo Marquard. In general, modernization at its various stages is a process by which artifacts of engineering are introduced in the society — railways and roads, industrial enterprises, communication systems, various technologies from military equipment to household appliances. Modernity (or in some cases modernism) as a complex socio-cultural and historical concept signifies political and cultural processes of change that arise with the advent of new ideas, new technologies, a new economic system or education in the society. It is a certain way of thinking, a way of existence in the modern world, which does not automatically mean some kind of average positive attitude towards change, but, on the contrary, always leaves open the possibility of alternatives, a reflexive attitude towards the processes of modernization. The “other modernity” (T. Rohkrämer) or “alternative modernity” (R.P. Sieferle) is an alternative model of development that does not deny the goal-oriented organization necessary for material production (i.e., at a minimum, does not put forward the

demand for radical deindustrialization), but strives to restore more natural and human ways of existence in modern conditions.

Relevance of the research topic

The word “Industrial civilization” refers to the technical civilization; effective scientific knowledge and technological know-how play a key role in it. The relevance of the issue of technology is caused by growing concern about the fate of modern civilization as a global one. The term late modernity is used when modern society becomes critically aware of the consequences of modernization, particularly the negative ones. The crises generated by “technotronic civilization” (we use the concept of P.P. Gaidenko), and not least the environmental crisis, cause widespread interest in the problem of technology.

The last century of the second millennium went down in history as the “short 20th century” (E. Hobsbawm), and the “technical era” as well. Human existence in modern society is connected with technology in a thousand threads, which gives grounds to consider technology the central sphere of late or developed modernity. The liberating effect of “technical progress” very quickly turns into its opposite — the effect of dependence on technology and the catastrophic thinking. Technical categories dominate the lifeworld of a developed industrial society. Technology that has become “perfect” no longer creates specific means for an end set by man. It produces “secondary systems” (H. Freyer) or “superstructure” (A. Gehlen), i.e. concentrated energies, high voltages, political and managerial ways of control that can be used for a variety of purposes; creates opportunities that transcend human natural abilities. The power of “technocratic tyranny” (R. Spaemann) is structured in such a way that direct attempts to control a system of scientific and technical civilization are meaningless and only lead to worsening danger. This gives rise to an anthropological need for compensation, which is expressed in a rational critique of technology, and leads to the periodic renewal of cultural critique discourse and the environmental agenda.

Scientific novelty of the research lies in the fact that this thesis represents the first systematic study of German discussions about technology and the dynamic order in their development over six decades — from the 1900s to the 1960s, — which include all significant stages in the formation of the German state in modern times — from the Wilhelmine Empire through the Weimar Republic and the Third Reich to the early Federal Republic. A more nuanced

consideration is achieved through the hermeneutical application of the category of intellectual (philosophical) generations, whose representatives use in different periods different ideological strategies regarding technological modernization.

The thesis analyzes in detail the views on the problem of modern technology or, more broadly, the problems of scientific and technical civilization, represented in the works of more than 20 German-speaking philosophers, scientists and engineers. Moreover, among the figures of the book, about half are “first-magnitude stars” like W. Sombart, O. Spengler, M. Heidegger, E. Jünger, and the other half are little-known and even undeservedly forgotten figures of the likes of T. Lessing, M. Holzer or M. Schröter. About fifty books by these and other authors were selected for the study, among which there are both real bestsellers (including those never translated into Russian) like *Cursed Culture* by T. Lessing or *Man in the Age of Technology* by A. Gehlen, as well as archival publications like Spengler’s *Urfragen* or H. Hardensett’s *Philosophy of Technology*.

For the first time, we have provided the most detailed analysis of *Technikkritik* as an important component of German philosophy of life on the eve of the First World War. To accomplish the task, we had to show the continuity of the main ideas of cultural critique from Rousseau, Marx and Nietzsche to Sombart, Simmel, Rathenau, Lessing, Klages and others.

For the first time, the German technocratic movement represented by H. Hardensett and M. Schröter has been comprehensively analyzed. To accomplish the task, we had to study the technocratic ideas within early (left-wing) National Socialism. We have also made a hypothesis about reciprocity of ideas of “genuine technique” of M. Heidegger and the “*völkisch* technocracy” of G. Feder. Finally, we have shown the development and ideological heterogeneity of National Socialist engineering thought about technology until 1942.

The conceptual framework of *pendulum of modernity* also claims theoretical novelty. It serves to describe the evolution of the discourse on technology as a significant element of reflexive modernity and explain it from the beginnings of ecological thinking within the cultural critique of the period of the Wilhelmine Reich to the heroic overcoming of technical alienation during the Weimar Republic, and from the specific German technocracy in the years of the Third Reich to the antinuclear movement and the renewal of cultural critique discourse in the early Federal Republic. These three periods correspond to the cyclic movement of a mathematical pendulum (oscillator). In accordance with the pendulum model, the cyclical structure of the German discourse on technology as a significant element of reflexive modernity is described and explained.

Chronologically, the era of the Weimar Republic occupies a central place, while thematic emphasis lies on the concept of *Technik* within the so-called “Conservative Revolution”. Questioning the unambiguous presentation of conservative-revolutionary ideas under the rubric of “reactionary criticism of civilization” (“reaktionäre Zivilisationskritik”) and “Counter-Enlightenment” (“Gegenaufklärung”), which is widespread primarily in German-language literature, the study at the same time interprets the conservative discourse about modern technology as paradigmatic and best clarifying the socio-cultural consequences of technical modernity.

We introduce new terminological designations for *two successive paradigms* – a “compensatory” and “proactive” one which correspond to two types of discourse – that of cultural critique and technocracy. The study hypothesized that with the help of this cyclic model it is possible to describe and analyze a number of significant modern phenomena in philosophy and culture, e.g. rationalism and irrationalism, secularism and anti-secularism, deindividuation and re-individualization. The *metahermeneutic methodology* that supports this optics pays attention to intellectual contexts to uncover the life world or generational experience as it is lived in changing historical conditions.

The extent to which the topic has been scientifically developed¹

While certain issues with technology notions by German conservative philosophers and sociologists are widely discussed in contemporary Western science, the problem of the relationship between two types of discourse about modern technology (“cultural critique” and “technocracy”) in its integrity and historical dynamics has never been considered by either Russian or Western researchers. In general, the entire array of publications that are significant for the study can be divided into two parts: *a) publications in history of philosophy and intellectual history regarding the German philosophy of technology and b) theoretical research that focuses on the projects of the “other modernity”*.

It should be noted that the division between these groups of publications is rather conditional: studies in history of philosophy often raise theoretical questions, and theoretical inquiry can’t do

¹ This text is translated from Russian being a result of research within the Russian-speaking academic tradition. Also, the titles of all Russian-language publications which are presented further are transliterated. The original Russian titles one can find in the bibliography in the text of the thesis.

without systematic study of texts written by the classics of the philosophy of technology and the historical context of their ideas as well.

As concerns the first group of publications, we cannot ignore the large-scale reviews of the history of German philosophy of technology: these are the collective monograph edited by K.-H. Delschen and J. Gieraths *Philosophy of Technology. Discussion about technology in the philosophy of the 20th century*, the companion *Reflections on technology: classics of the philosophy of technology* ed. by Ch. Hubig and the set of papers on the issue of technology within the Conservative Revolution *Titan Technik* edited by F. Strack². In this regard, two important Russian-language studies should be mentioned: G.M. Tavrizyan, *Philosophers of the 20th century about technology and "technical civilization"* and V.G. Gorokhov, *Technology and culture. The emergence of the philosophy of technology and the theory of technical creativity in Russia and Germany at the end of the 19th – beginning of the 20th century (comparative analysis)*³. The development of cultural critique and technocracy discourses, as well as the problem of the crisis of culture are considered by K. Bergmann, G. Bollenbeck, W. Klems, G. Merlio, R.P. Sieferle, Yu.N. Davydov, L.G. Ionin, T.Yu. Sidorina⁴; the studies by A. Bramwell, R. Dominick, T. Lekan,

² Delschen K.-H., Gieraths J. (Hrsg.). Philosophie der Technik. Die Technikdiskussion in der Philosophie des 20. Jahrhunderts. Frankfurt am Main; Berlin; München: Verlag Moritz Diesterweg, 1982; Hubig Ch. (Hrsg.). Nachdenken über Technik: die Klassiker der Technikphilosophie. 2., unveränd. Aufl., Berlin: Ed. Sigma, 2001; Titan Technik. Hrsg. von Friedrich Strack. Würzburg: Königshausen & Neumann, 2000.

³ Tavrizyan G. M. Filosofiy XX veka o tekhnike i "tekhnicheskoy tsivilizatsii". M.: ROSSPEN, 2009; Gorokhov V. G. Tekhnika i kul'tura. Vozniknoveniye filosofii tekhniki i teorii tekhnicheskogo tvorchestva v Rossii i Germanii v kontse XIX — nachale XX stoletiya (sravnitel'nyy analiz). M.: Logos, 2010.

⁴ Bergmann K. Agrarromantik und Großstadtfeindlichkeit. Meisenheim am Glan: Hein, 1970; Bollenbeck G. Eine Geschichte der Kulturkritik. Von J. J. Rousseau bis G. Anders. München: Beck, 2007; Klems W. Die unbewältigte Moderne. Geschichte und Kontinuität der Technikkritik. Frankfurt am Main: Gesellschaft zur Förderung arbeitsorientierter Forschung und Bildung, 1988; Merlio G., Raulet G. (Hrsg.). Linke und rechte Kulturkritik. Interdiskursivität als Krisenbewußtsein. Frankfurt am Main: Peter Lang, 2005; Sieferle R. P. Fortschrittsfeinde. Opposition gegen Technik und Industrie von der Romantik bis zur Gegenwart. München: Beck, 1984; Davydov Yu. N. Stabilizatsionnoye soznaniye v vek krizisa: yego osnovopolagayushchiye kategorii, in: Istoriya teoreticheskoy sotsiologii: V 4 t. T. 3. Ed. by Yu. N. Davydov. M.: Kanon+, Reabilitatsiya, 2002. S. 5–28; Ionin L. G. Sotsiologiya kul'tury: Ucheb. posobiye dlya vuzov. M.: Izd. dom GU VShE, 2004; Sidorina T.Yu. Paradoksy krizisnogo soznaniya. M.: RGGU, 2002; Sidorina T. Yu. Filosofiya krizisa. Uchebnoye posobiye. M.: Flinta-Nauka, 2003.

T. Zeller, M. Chioc⁵ are devoted to environmental (ecological) discourse; historical studies of German technocracy during the Weimar Republic and the Third Reich are even rarer: these are the studies by S. Willeke, A. Bammé, H. Maier, J. Guse⁶. At the same time, many more works deal with the concepts of technology of different German philosophers and the comparison of these concepts: these are B. Babich (about Anders), B. Beier (about Heidegger and Gehlen), V. Blok (about E. Jünger and Heidegger), S. Vietta (about Heidegger), G. Merlio (about Spengler), G. Seubold (about Heidegger), K. Klagenfurt (about Günther), T. Meyer (about Sombart), D. Morat (about Heidegger, E. and F.G. Jünger), H. Poser (about Dessauer and Heidegger), G. Swer (about Spengler), P. Trawny (about Jünger and Heidegger) H. Hildebrandt (about Anders and Heidegger), U. Fröschle (about F.G. Jünger) , M. Frings (about Scheler), M. Zimmerman (about Heidegger), H.D. Hellige (about Rathenau), E. Jacob (about Heidegger and Jonas), as well as Russian scholars A.V. Loginov (about Gelen), I.V. Demin (about F.G. Jünger), A.Yu. Nesterov (about Dessauer), A.N. Pavlenko and E.V. Sereckina (about Dessauer and Heidegger), A.M. Rutkevich (about Spengler and Gehlen), N.S. Skipin (about Spengler), G.M. Tavrizyan (about Spengler and Schelsky) and E.M. Spirova (about Anders).

As for studies devoted to “anti-democratic thinking” and “cultural pessimism,” let us first point out the tendentious and outdated in many respects studies by G. Mosse, F. Stern and K. Sontheimer⁷. Nevertheless, they still set the discussion field and are a reference point for the larger

⁵ *Bramwell A.* Ecology in the twentieth century: a history. New Haven, CT: Yale University Press, 1989; *Dominick III R.* The environmental movement in Germany. Prophets & Pioneers, 1871–1971. Indianapolis: Indiana University Press, 1992; *How Green Were the Nazis? Nature, Environment, and Nation in the Third Reich.* Edited by Franz-Josef Brüggemeier, Marc Cioc, and Thomas Zeller. Athens: Ohio University Press, 2005; *Germany's Nature: Cultural Landscapes and Environmental History.* Ed. by Thomas Lekan and Thomas Zeller. New Brunswick, New Jersey: Rutgers University Press, 2005.

⁶ *Bammé A.* Alles hat seine Zeit und jede Zeit hat ihre Wirklichkeit, in: *Hardensett H.* Philosophie der Technik. Hrsg. und mit einem Nachwort von A. Bammé und einer Einführung von S. Willeke. Marburg: Metropolis-Verlag, 2017; *Willeke S.* Die Technokratiebewegung in Nordamerika und Deutschland zwischen den Weltkriegen: Eine Vergleichende Analyse. Frankfurt am Main u. a.: Lang, 1995; *Guse J. C.* Volksgemeinschaft Engineers: The Nazi «Voyages of Technology», in: *Central European History.* Vol. 44. No. 3 (September 2011). P. 447–477; *idem.* Nazi technical thought revisited, in: *History and Technology.* Vol. 26. No. 1. March 2010. P. 3–38; *Technische Intelligenz und «Kulturfaktor Technik».* Hrsg. von Helmut Maier, Burkhard Dietz, Michael Fessner. Münster: Waxmann, 1996.

⁷ *Stern F.* The Politics of Cultural Despair. The Study in the Rise of Germanic Ideology. Berkeley; Los Angeles; L.: University of California Press, 1961 (Germ. ed.: *Stern F.* Kulturpessimismus als politische Gefahr: eine Analyse

number of contemporary studies in intellectual history by J. Herf, L. Dupeux, R.P. Sieferle, M. Großheim and T. Rohkrämer⁸, who consider the Conservative Revolution as part of modernity and thereby offer a more comprehensive vision of the “dilemma of conservatism” (M. Greiffenhagen). On the one hand, the present study explores and clarifies the relationship between the concepts of “Conservative Revolution”, “reactionary modernism”, “other modernity” and “alternative modernity”. On the other hand, it discursively belongs to the Russian context, where “restitutive conservatism” or “enlightened conservatism” with its criticism of modernity in the form of liberalism, rationalism and capitalism, an apology for the state, faith, militarism, and finally, the theory of nation as a community superior to the atomized civil society, in the last 20 years has been considered as one of the most significant resources of modern social and philosophical thought (works of A.M. Rutkevich, A.F. Filippov, L.G. Ionin, B.V. Mezhuiev, M.V. Remizov⁹).

Finally, we develop the model of pendulum of modernity which describes the dynamics of the “other modernity” in Germany and which is not obvious without a comprehensive critique of the so-called “theory of modernization” carried out by German sociologists W. Knöbl and H.

nationaler Ideologie in Deutschland. Bern; Stuttgart; Wien: Scherz, 1963); *Mosse G. L.* The Crisis of German Ideology: Intellectual Origins of the Third Reich. N. Y.: Grosset & Dunlap, 1964; *Sontheimer K.* Antidemokratisches Denken in der Weimarer Republik. Die politischen Ideen des deutschen Nationalismus zwischen 1918 und 1933. München: Nymphenburger Verlagshandlung, 1962.

⁸ *Herf J.* Reactionary Modernism. Technology, culture and politics in Weimar and the Third Reich. Cambridge: Cambridge University Press, 1984; *Dupeux L.* “Kulturpessimismus”, Konservative Revolution und Modernität, in: *Gangl M., Raulet G. (Hrsg.)*. Intellektuellendiskurse in der Weimarer Republik. Zur politischen Kultur einer Gemengelage. Frankfurt a.M./New-York: Lang, 1994. S. 287–299; *Sieferle R. P.* Die Konservative Revolution: Fünf biographische Skizzen. Frankfurt am Main: Fischer Taschenbuch, 1995; *Großheim M.* Ökologie oder Technokratie? Der Konservatismus in der Moderne. Philosophische Schriften (PHS). B. 14. Berlin: Dunker & Humblot, 1995; *Rohkrämer T.* Eine andere Moderne? Zivilisationskritik, Natur und Technik in Deutschland 1880–1933. Paderborn; München: Schöningh, 1999; idem. Antimodernism, Reactionary Modernism, and National Socialism, in: *Contemporary European History* 8 (1999). Pp. 29–50.

⁹ *Ionin L. G.* Apdeyt konservatizma. M.: Izd. dom GU-VShE, 2010; *Mezhuyev B. V.* Dialektika Kontrprosveshcheniya, in: *Voprosy filosofii*. 2022. № 6. S. 45–57; *Remizov M.V.* Opyt konservativnoy kritiki. M.: Fond nauchnykh issledovaniy “Pragmatika kul’tury”, 2002; *Rutkevich A.M.* Konservatory XX veka: Monografiya. M.: Izd-vo RUDN, 2006; *Filippov A. F.* Hans Freyer: sotsiologiya radikal’nogo konservatizma, in: *Freyer H.* Revolyutsiya sprava. M.: Praxis, 2008. S. 99–143.

Joas¹⁰, as well as a number of macro-sociological theories that offer ways out of the aporia of linear modernity.

Conservatism's visions of technical modernity are a little studied subject. This occurs due to the lack of a single clear position of German conservatism concerning modernization. In particular, there is a deep ambivalence about the value of technology (scil. technological and industrial advancements), often among the same authors in different periods of their authorship. Over the past 30 years, international researchers have made several attempts to close this gap. Analyzing the literature of the Conservative Revolution, the French historian L. Dupeux simply stated a kind of hiatus between the optimistic supporters of modernism and the pessimistic adherents of the theories of decadence. True, his explication of this thesis turned out to be colorless and erroneous. Another attempt was made by M. Großheim. The German expert in intellectual history shows that, on the one hand, the tradition of cultural critique gave rise to a fundamental ecological philosophy, and on the other hand, new technocratic concepts were developed that integrated strong elements of modernity. Both positions have their outstanding representatives: L. Klages and F.G. Jünger act as radical critics of technology, while E. Jünger associates with "total mobilization" new exciting possibilities for both human experience and state building. Under the impression of the dystopia of *The Worker*, M. Heidegger's striking turn to criticism of technology occurs. The novelty of Großheim's approach lies in the fact that he took into account representatives of "critical theory" who help identify the "dilemma of conservatism." Großheim concludes that the real dilemma of conservatism lies in its inability to define a consistent and clear position in relation to technology.

However, this conclusion cannot be considered satisfactory, since it does not answer the main question: What is the reason for such an ambivalent attitude towards modern technology, if we recognize that cultural pessimism, on the one hand, and heroic realism, on the other, are two expressions of revolutionary conservatism? Indeed, they are not just genuine modern phenomena, but also correspond to the ambivalence of the current socio-political agenda ("love of the native land / imperial domination"; "the destructive impact of technology on culture and nature / maintaining economic growth and improving the quality of life", etc.).

¹⁰ Knöbl W. Spielräume der Modernisierung. Das Ende der Eindeutigkeit. Weilerswist: Velbrück Wissenschaft, 2001; Joas H., Knöbl W. Sotsial'naya teoriya. 20 vvodnykh lektsiy. Transl. from Germ. by K. G. Timofeyeva. Saint-Petersburg: Aleteyya, 2011.

The discursive situation with the concepts of “anti-modernism” and “reactionary modernism” was comprehensively analyzed in numerous studies of T. Rohkrämer. He criticizes perhaps the most influential book on engineering ideology during the Weimar Republic and the Third Reich which was published by J. Herf under the title *Reactionary Modernism* and still enjoy high prestige among experts in German intellectual history. Its main thesis is as follows: the radical right in the Weimar Republic and the ideologists of National Socialism that succeeded them achieved “a reconciliation between anti-modern, romantic and irrationalist ideas” and “modern technology”.

Firstly, the criticism of the concepts of “anti-modernism” and “reactionary modernism” by T. Rohkrämer is as follows: a conservative attitude towards technology is characteristic not only of the Weimar Republic, but also of the Wilhelmine Reich. Thus, even cultural critique before the First World War did not completely reject technology (=Luddism), but tried to find ways to use it in accordance with its vision of natural and cultural community. Secondly, an analysis of the views on technology of W. Rathenau and E. Jünger also allows Rohkrämer to argue that the Third Reich, with its pragmatic and often inconsistent use of technology, was much less technocratically oriented than the “modernism” of the Weimar Republic.

The contribution of Großheim and, in particular, Rohkrämer is valuable in developing the idea of a “different modernity”, namely, the understanding that the marker of modernity since imperial Germany is not so much the democratic or liberal concept of socio-cultural, economic and political processes, but a reflexive attitude towards technology and scientific and technical progress, which may at different times be associated with both threats to national existence (“ecological worldview”) and broad opportunities for the advanced development of the people (“technocratic worldview”).

The sources that served as the basis for the thesis research consist of several groups of works.

The first group includes cultural critique writings of German sociologists and philosophers from the fin de siècle to the First World War. The early example of cultural critique is the first volume of *Capital* (first edition 1867). After a brief overview of Marx’s social analysis of technology, we move on to consider Nietzsche’s statements on technology and the role of the worker in his oeuvres of the 1880s. Next, we focus primarily on authors whose cultural critique

shaped the philosophical landscape in Germany at the beginning of the 20th century: we turn to sources containing criticism of capitalism, technology and “mechanization.” These are the classic works of the German sociologist W. Sombart: *Modern Capitalism* in the first and second editions, *Bourgeois* (1913) and the military pamphlet *Traders and Heroes* (1915). Next are the essays by W. Rathenau *On the Criticism of the Epoch* (1912) and *On Things to Come* (1915) from the Collected Works (*Gesammelte Schriften*) of 1918. This group also includes the works of two congenial philosophers chosen to illustrate proto-ecological thinking: manifesto by L. Klages *Man and Earth* (1913), as well as essays by T. Lessing *Noise* (1908) and *Cursed Culture* (1921). We consider the representativeness of this selection of works and the weight of the “*Zeitdiagnose*” proposed by these authors in terms of criticism of technology.

The second group consists of an equally significant corpus of texts by the main protagonists of the Conservative Revolution, who wrote in detail about technology. These are the works of O. Spengler *Man and Technics* (1931) and archival fragments of his final work *Urfragen* published by M. Schröter. From the Collected works of E. Jünger (*Sämtliche Werke*, 1980–2002), volumes 7 and 8 were important for the study of Jünger’s concepts of technology, myth and history (“Total Mobilization”, *The Worker*, “On Pain”, “Across the Line”, *At the Wall of Time*, *Maxima-Minima*), as well as volumes 19 and 21 (*The Scissors*, *Gestalt Change. Forecast for the 21st Century*). The volume of *Political Journalism (Politische Publizistik*, 2001), illustrated books about the First World War and technical advancements in modern societies edited by E. Jünger, and some materials in my possession from DLA Marbach should be also mentioned. The oeuvres of this author are quoted, as a rule, from our commented translations into Russian. Adjacent to this group of sources are the works of H. Freyer: the programmatic article “On the Philosophy of Technology” (1929), published also in our translation, as well as the books *Revolution from the Right* (1931, transl. 2008) and two later works, not translated into Russian, the book *The Theory of the Modern Era* (1955) and a long article “On the Dominance of Technical Categories in the life-world of late industrial society” (1961).

The third group of works is to a certain extent heterogeneous, although it belongs to the period of the late Weimar Republic and early Third Reich. It is based on the works of representatives of the German technocratic movement and philosophizing engineers close to it, which have never been considered by Russian scholars: these are *Philosophy of Technology* by F. Dessauer (1927), *Capitalist Man and Technical Man* (1932) by H. Hardensett and his unfinished

work *Philosophy of Technology* as well, published from an archival manuscript by sociologist A. Bammé. This is also a companion by M. Schröter *Philosophy of Technology* (1934) and a number of articles by regular authors of the journal of the Union of German Engineers (VDI) *Technik und Kultur*. Adjacent to this group are M. Holzer's book *Technology and Capitalism* (1932) and his articles in the magazine *Die Tat*. As an example of National Socialist technocracy, we consider the writings of P. Schwerber, G. Feder and F. Todt, as well as the articles of these and other Nazi authors in the official publication of the KDAI *Deutsche Technik*.

The fourth group is formed by the philosophical works of M. Heidegger and F.G. Jünger, which are close in time (World War II and the post-war period) and in their mood of technopessimism. While the second one is represented here mainly by his essay *The Failure of Technology* (1939–1946), the reflections of the Freiburger philosopher on nihilism, technology, *Machenschaft* and *Gestell* are found in many volumes of the Complete Works (*Gesamtausgabe*) and are almost endless. We focused on the following works: speeches of the rector's period (GA 16, *Das Rektorat*), "On the Essence and Concept of *Physis*", "The Time of the Picture of the World", "On the Question of Being (On the "Line")" (Bd. 5, Bd. 9), "The Question concerning Technology" (Bd. 7), as well as the volumes from archival materials *On Ernst Jünger* (Bd. 90) and *Black Notebooks* (Bd. 94 ff.) edited by P. Trawny.

The backbone of *the fifth and the most heterogeneous group* of sources was formed by the works of G. Anders, *The Obsolescence of Man* in 2 volumes (1956 and 1980), A. Gehlen, *Man in the Technical Era* (1957), and H. Schelsky, "Man in the scientific civilization" (1961). These classic works on the philosophy of technology are discussed in single publications in Russian and never in the context of post-war conservative thought on technology. Finally, the key book of the representative of the second generation of cybernetics, the German-American philosopher G. Günther, *The Consciousness of Machines* (second edition 1963), has completely fallen out of the attention of Russian researchers, but is also practically unknown to Western historians of philosophy. The last chapter of the thesis is devoted to the study of these works (translations of which do not exist in Russian), revealing their historical and philosophical significance in the light of the debate about technocracy in Germany in the 1960s–1970s.

Object of the inquiry is the debate about technology in Germany among conservative sociologists and philosophers, as well as philosophizing technocratic engineers, in the period from the previous decades before the First World War to the 1960s.

Subject of the inquiry is the dynamics of the “other modernity,” which is examined using the model of the alternation of cultural critique and technocratic paradigms in reflecting the phenomenon of modern technology and its role in the life world of late industrial society.

The notion of *discussions about technology* is broader than the notion of philosophy of technology, but its use seems methodologically more appropriate. With the exception of chapters IV and V and sections devoted to thinkers of the likes of T. Lessing or G. Anders, the thesis describes and analyzes *grosso modo* conservative thought about technology in Germany. Marxist cultural criticism, including the criticism of instrumental reason in the Frankfurt School, is also invoked to illustrate the general patterns of reflective modernity in Germany, extending to both left-wing and right-wing thought. At the same time, the study does not pretend to be comprehensive and exhaustive of all concepts of technology and industrial development in Germany.

In this sense, special reservations should be made regarding the choice of the last division on the “time scale”. In the 60s of the 20th century, under the influence of scientific and technological revolution and cybernetics, fundamentally new views on technology appeared (H. Schelsky and G. Günther). This forms a certain divide with the so-called “classical theory”, which has conceived technology as a reality *sui generis* or reflected the essence of technology, understanding by *Technik* primarily the way of producing things or technical artifacts – in a word, “analog” technology. After the divide in the 1960s, philosophers and sociologist both focus on the “transclassical technology” or a special form of reason, i.e. technical rationality and specific technologies that cause the transformation of society in the direction of informatization and subsequent digitalization.

Goal and objectives

The goal of this study is to reconstruct the development of German discourses on technology, conventionally after 1900 and until the 1960s, and to analyze the historical dynamics of the “other modernity” reflected in them.

The first objective of the study is to demonstrate how the development of the discussion about technology in Germany over such a long time correlates with different phenomena of intellectual life, ideological and philosophical movements like environmental and youth movements, technocratic movement, anti-nuclear movement, philosophy of life, philosophical anthropology, engineering philosophy of technology. To accomplish the task, we consider it necessary, first of all, to identify the substantive and discursive originality of cultural critique and environmentalism and typologically distinguish them from the technocratic focus on heroically overcoming criticism of technology. It is also necessary to clearly state differences between the criticism of technology before the First World War, during the Interbellum period and after the Second World War.

The second objective is to give a value-free description of various socio-cultural logics within technical modernity and to isolate the framework of alternation of reflexive paradigms that explain cultural and historical relationships. The solution to this problem involves criticizing the macro-sociological theories of unilinear modernity (often defining the optics for researchers of intellectual history) and highlighting a whole palette of counter-projects within modernity, presented in reflection on modern technology mainly by German conservative thinkers of various generations.

The third objective of the thesis is to analyze and interpret the meaning of the technocratic movement and engineering philosophy of technology in Germany in the 1920s and 30s. To solve this problem, it is necessary to clarify the attitude of the main representatives to the concepts of technology of the “reactionary modernists”, on the one hand, and to the National Socialist project of *völkisch* technocracy, on the other.

The fourth objective is to explain the various ambivalences regarding technology, in particular the combination of “agrarian-romantic” attacks on urbanization, capitalism and bourgeois values with the glorification of “German technology” in the Nazi ideology; recognition of the “existential-historical” significance of technology for Germany and Europe with obvious environmentalist tendencies in Heidegger’s thought; finally, the duality in the relationship between rationalism and irrationalism (Enlightenment and Counter-Enlightenment) among the overwhelming majority of thinkers of both the left and right camps. This involves a comprehensive consideration of the relationships between reference points in the discussion about technology – “technology”, “nature”, “culture”, “economy”, “labor”, “freedom”, etc.

The fifth objective is to explain the evolution of post-war German conservative philosophy and sociology from pessimistic assessments of the prospects for the development of scientific and technological civilization to a more neutral and even apologetic description of the processes associated with automation and cybernetization.

Methodology and research methods

1) Involvement of extensive philosophical material implies the use of *the method of comparative historical and philosophical analysis*, necessary for comparing philosophical concepts, considering the evolution of authorship in the context of the intellectual trends of the epoch, reconstructing the discussion field and identifying discursive relationships between texts of various thinkers. In particular, this method proves its productivity where the objective is to demonstrate (on the philological and biographical level) the transformation of individual concepts and trains of thought over large periods of time, comparable to the duration of one or several philosophical generations.

2) A phenomenological-descriptive approach is important for working with sources because ready-made theoretical and/or ideological templates when reading and interpreting texts could destroy good effects of impartiality and value-freeness. This is especially true in the case of the legacy of the so-called “Conservative Revolution,” which some left-liberal historians of ideas fit into the ready-made template of “anti-democratic thinking.”

This method also implies the use of several languages of description: the study identifies a) the language of the first level, belonging to a specific historical period, b) its thematization in the language of recipients or critics, c) and the actual language of inquiry or metalanguage, which helps to see and isolate the features of the first two languages.

3) The first two approaches are combined with the hermeneutic method. It is based on philosophical hermeneutics and, more precisely, on the principle of application (*Anwendung*) developed by H.-G. Gadamer. It refers to the way an author involves himself with the item of his understanding and allows the text’s meaning to be intimately relevant and, in that sense, applied to his own situation. Here is also an opportunity to preserve a continuum of meaning and open up the practical relevance of classical thought in the philosophy of technology to current discussions.

For Gadamer application is fundamental to recovering the genuine phenomenon of individual hermeneutical experience in relation to understanding human condition. Therefore, we enrich the method of philosophical hermeneutics with a “generative” perspective, which allows us to understand the generational conditionality of hermeneutic experience.

4) Intellectuals have always played a prominent role in Germany. Not least for this reason, we are referring to *the intellectual history* which is methodologically more oriented to the study of intellectuals as historical subjects and representatives of different generations, as well as to the practice and reception of readings and discourses. When the focus of a researcher’s attention is not an armchair scientist or a university professor, but an intellectual, rich opportunities arise for creating a stereoscopic image of the spiritual and historical landscape, including attitudes towards socio-political movements, political parties and circles, influential media and institutions of power.

5) Finally, the methodological program of the “history of concepts” (*Begriffsgeschichte*) developed by R. Koselleck allows us to emphasize the dependence of semantic structures of historical concepts on the forms of experiencing historical time or historical temporality. Therefore, the analysis of historical concepts, which include the concepts of the philosophy of technology (“labor”, “work”, “progress”, etc.), and the concepts of cultural critique (“nature”, “civilization”, “culture”, “modernity”, etc.), allows you to “grasp” historical temporality, i.e. to get to the heart of intellectual history.

The statements made for the defense

1) There are two main types of reflection and discourse about technology – cultural critique and technocratic one, – which alternate after a certain interval of historical time both in the same and in different philosophical generations. Analysis of criticism of technology up to the First World War, presented by two generations of philosophers and sociologists W. Sombart, G. Simmel, M. Weber, W. Rathenau / L. Klages, T. Lessing, M. Scheler, makes it possible to construct an “ideal type” of criticism of technology. It is determined by the instrumental interpretation of technical means and starts from conviction that mechanization and massification of modern society, alienation of labor, psychological degradation, etc. are consequences of the inversion of the means-end relationship (“Zweck/Mittel”). This type of cultural critique is overcome in the various technocratic discourses of the Weimar Republic and the early years of the Third Reich, which are

generally characterized by an affirmative attitude towards technology and a positive assessment of its role in the development of *Volksgemeinschaft*. However, the civilizational criticism as a type of discourse returns in the last years of the Third Reich and in the first decade of the Federal Republic and, *mutatis mutandis*, is reproduced by representatives of basically two new philosophical generations born around the “year of the three Kaisers” (H. Freyer, M. Heidegger, C. Schmitt) resp. veterans of the First World War (E. Jünger, F.G. Jünger, H. Fischer) followed by younger ones (A. Gehlen, G. Anders).

2) Two diachronic paradigms of the “other modernity” in Germany are identified; their periods of alternation are described by the pendulum swing model: 1) the cultural-pessimistic paradigm of compensation (regarding crisis phenomena of modernity) and 2) the proactive paradigm in the sense of active and enthusiastic involvement, creating images of the future and setting new guidelines in understanding the very fundamental conditions of technical modernity. The first determines the boundaries for the cultural critique discourse in the philosophy of life of the Wilhelmian era, and then the criticism of modern technology (F. G. Jünger and M. Heidegger) in the last years of the Third Reich and after the Second World War, as well as conservative skepticism regarding late industrial society in sociology and philosophical anthropology in the “early Federal Republic” (H. Freyer, H. Fischer, A. Gehlen, G. Anders). The second determines the boundaries for the conservative-revolutionary and technocratic discourse in the Weimar Republic and in the early years of the Third Reich, and then the apologetic attitude towards technology among the second wave of cyberneticists (G. Günther), as well as the entire “Technocracy Debate” in the 1960s–1970s.

3) The “Technocracy Debate” forms the divide between classical theories of technology and the systems theory of technology in Germany; technology acquires a different function, no longer being a mediator between man and the environment, but a general theory of all systems, physical and spiritual. At the same time, there is a renewal of the proactive paradigm of reflexive modernity, followed by another return to the cultural critique and ecological (compensatory) agenda. Thus, the period of one pendulum swing in German intellectual history (within the period under consideration) is approximately 20 years; the full cycle of oscillations is approximately 40 years.

4) Several different intellectual generations in one period of time may have the same image of the world; the same generation in different periods of time can share different images of the world depending on changes in socio-historical contexts.

5) The change from one intellectual paradigm to another is not irreversible; the wave-like movement is explained by cultural and anthropological reasons, for example, activity and enthusiasm in creating a “second nature” using new technical inventions, as well as fatigue from activism, “pacifism in the fight against nature” (Spengler), a compensatory desire to preserve the environment, restoration of more humane forms of existence in modern conditions.

6) This certain regularity in the intellectual history of Germany means the likelihood of a connection between a number of reflexive socio-cultural characteristics of modernity like technopessimism, environmentalism, post-secularization, desubjectivization, psychologization, passeism, on the one hand, and techno-optimism, resecularization, resubjectivization, depsychologization, futurism, on the other.

Theoretical and practical relevance of the study

The present study in history of philosophy contributes to the periodization of German thought about technology and thereby to the problems of periodization of the historical and philosophical process in Germany as a whole. It also clarifies problematic issues in German intellectual history of the 20th century, clarifies and enriches the concept of “alternative modernity,” and provides various options for solving the aporias of civilization and culture, technology and culture, technology and nature, culture and nature. The thesis introduces a number of new sources into scientific circulation; thanks to this, in particular, the enduring significance of both cultural critique and the ideas of German technocratic movement for modern philosophy is revealed. Finally, the foundations are laid for the *metahermeneutic method*, an integral approach that uses the tools of philosophical hermeneutics, philosophical anthropology, intellectual history and history of concepts. The application of this approach helps to better understand the forms of experiencing historical temporality in the hermeneutic experience of intellectual generations in Germany in the 20th century and build a dynamic model of reflexive modernity with two basic paradigms for understanding socio-cultural reality – compensatory and proactive one¹¹.

¹¹ Olga Zhukova comes to similar results, although from a different perspective. In her recent monograph, the Moscow philosopher (*Zhukova O.A.* Creativity and religiosity in Russian culture. Philosophical studies. M.: Soglasie Publishing House LLC, 2022) proposed an original interpretive model of the dynamics of Russian culture as an intellectual history, personalized by the experiences of the religious, philosophical and artistic creativity. This dynamic

The results obtained can be used in further research on the history of modern Western philosophy and, more broadly, on modern intellectual history, as well as in interdisciplinary research conducted at the intersection of the history of philosophy, intellectual history and sociology.

The results of the dissertation can be used in teaching courses on the history of philosophy, philosophy of technology, social philosophy, as well as in developing educational programs in these disciplines.

Approbation of the results of research

The content and provisions of the thesis were fully or partially presented in the monograph *Pendulum of Modernity. Discussions about technology in Germany* (Moscow: Academic project, 2024), as well as in 17 articles indexed in WoS, Scopus or published in journals included in the HSE Journal Lists A, B, C or D, of which 10 articles in Q1–Q2 WoS, Scopus resp. in journals included in Lists of journals A and B. In total, the author published 40 articles on the topic of the dissertation, including 5 in English and German in peer-reviewed foreign publications.

Research results of the dissertation were presented at conferences: at the All-Russian conferences with international participation “III Gorokhov Readings. Trends in digital transformation: socio-humanitarian dimension” at INION RAS (2024), “VII Lem Readings” (2024) at Samara National Research University named after S.P. Korolev, at conferences with

model of secular culture of the modern type describes three forms of inheritance of traditions, which are: conservation (a regressive vector of archaization and routinization), reform (radical transformation and/or direct prohibition of old cultural practices, values and ideas) and creative continuity of rethinking tradition.

If O.A. Zhukova adheres to a three-part scheme, then Moscow film scholar D.V. Zakharov, in his dissertation *The evolution of the film western in line with cyclical processes: 1980s-2010s* (dissertation for the degree of Candidate of Sciences in History of Art, VGIK, 2018), based on American cinema, proves the effectiveness of the pendulum scheme. The author builds on the cyclical theory of American history by Schlesinger Jr., according to which the “round” of each cycle consists of two “phases” – “social anxiety” and “social calm.” After each period of relatively active participation in public life, private interest, the distinctly individual side of human existence, comes to the fore, but then the national energy is replenished and breaks through again.

In any case, in order to avoid Hegelian schematism, we consider it necessary to always specify the local status of explanatory models and introduce concrete sociocultural parameters.

international participation “Fifth Bibikhin Readings” (2024) and “Fourth Bibikhin Readings” (2023) in Bezhetsk; at the All-Russian conference “Action, Labor, Creativity” (2021) at the European University (St. Petersburg); at the international conference “*Heidegger und die Philosophie der planetarischen Technik*” (2019) organized by Martin Heidegger Society in Messkirch (Baden-Württemberg, Germany); at the X International Conference of the HSE School of Philosophy “Ways of Thought, Ways of Speaking” (2019); at the international symposium “*Technik und Medien bei den Brüdern Jünger*” (2018) organized by Jünger Society in Mon. Heiligkreuztal (Baden-Württemberg, Germany); at the conference “Man between culture and civilization: time and fate. To the centenary of the 20th century bestseller *The Decline of Europe* by O. Spengler” (2018) at IFRAS (Moscow); at the international congress “Boundaries of the norm: transformation of humanism in Russian and European culture of the New and New Modern times” (2018) at the State Institute of Art Studies (Moscow); at the international interdisciplinary conference “INTERBELLUM: a won war and a lost world (1918–1938)” (2018) at the Center for Fundamental Sociology of the National Research University Higher School of Economics; at the international conferences “Philosophy and sociology of technology in the 21st century. In memory of V.G. Gorokhov” (2017), “Martin Heidegger and modern philosophy” (2017) and “Revolutions in the modern world: science – culture – society” (2017) organized by the Faculty of Philosophy of Moscow State University named after M.V. Lomonosov; at the All-Russian conference “Philosophy in conditions of socio-cultural diversity: from expert knowledge to ideological guidelines” (2017) at SSU named after N.G. Chernyshevsky (Saratov); at the VII international conference “Ways of thought, ways of speaking” (2016) at the Higher School of Economics; at the XXIV conference with international participation “The Universe of Plato’s Thought: Plato and Modernity” (2016) at RKhGA (St. Petersburg); at the Second International Scientific and Practical Conference “The Image of the 21st Century Engineer: Social Assessment of Technology and Sustainable Development” (2016) organized at PNIPU (Perm); at the international interdisciplinary conference “At the extreme limit of centuries”: The First World War and Culture” (2014) at the State Institute of Art Studies (Moscow); at the XIV Jünger Symposium (2013) in Heiligkreuztal (Baden-Württemberg, Germany); at the All-Russian conference “Philosophical problems of scientific and technical creativity” (2013) at St. Petersburg State University; at the international conference “Martin Heidegger and the philosophical tradition: repetition vs dismantling” (2012) at the Faculty of Philosophy of Moscow State University; at the international

colloquium “*Aristote et son influence sur la culture philosophique à travers les siècles et jusqu’à nos jours*” (2012) at Sorbonne University Paris-IV and at the XIV conference “Science. Philosophy. Religion. Man in the technical world: challenges of the 21st century” (2011) in Dubna.

The hypothesis of “pendulum of modernity” was tested in the dissertation of Candidate of Sciences in Philosophy I.I. Pavlov *The impact of secular and anti-secular aspects of the “new religious consciousness” on the formation of metaphysics by N. A. Berdyaev* (Higher School of Economics, 2021).

Thesis structure

The dissertation consists of an Introduction, eight chapters, a Conclusion, two schematic appendices to the main text and a Bibliography.

THE CONTENTS

Introduction. — **Chapter I. Oscillations of the pendulum.** — 1. Between Enlightenment and Counter-Enlightenment. — 1.1. Modern experiences of time. — 1.2. The single-line of modernity. — 1.3. Unclassical types of modernity — 1.4. A German Sonderweg? — 2. The oscillating system of modernity. — 2.1. The “metaphysical” concept of modernity and the possibility of “another beginning”. — 2.2. “Compensation theory”. — 2.3. The “other modernity” and its historical dynamics. — 2.4. The thesis of “reactionary modernism” and the antithesis of the “other modernity”. — **Chapter II. Criticism of technical civilization and proto-ecological thinking in the Wilhelmine era.** — 1. Cultural critique qua critique of technology. — 1.1. Environmental movements. — 1.2. Intellectual and historical prerequisites for cultural critique. — 1.3. Criticism of rationalism, capitalism and technology. — 1.4. The ideal type of critique of technology. — 2. Critique of technology before the World War I. — 2.1. Critique of technology by Karl Marx and Marxist cultural critique. — 2.2. Werner Sombart and his critique of modern capitalism. — 2.3. Walther Rathenau and his *Kritik der Zeit*. — 2.3.1. “Mechanization”. — 2.3.2. Discourse on the problem of sustainability. — 2.4. Ludwig Klages: Man and Earth. — 2.5. Theodor Lessing: technical culture vs. vital anti-culture — **Chapter III. Heroic overcoming of critique of technology in the Weimar Republic.** — 1. “Crisis consciousness” and “stabilization

consciousness”? — 2. Proactive modernism. — 2.1. Oswald Spengler: technology as “life tactics”. — 2.2. Ernst Jünger on the technical revolution. — 2.2.1. Proactive modernism of *The Worker*. — 2.2.2. Freedom of technology. — 2.2.3. Media mobilization. — 2.3. Hans Freyer: technology as a weapon of the revolutionary people. — **Chapter IV. Capitalist and technical man.** — 1. German technocracy in the 1920s and 1930s and its relationship to philosophy. — 1.1. “Creed” of the frontline generation. — 1.2. German technocratic movement. — 1.3. The philosophy of “life forms” by Eduard Spranger and its significance for the technocratic discourse. — 2. The life form of the *Techniker* in the cultural system. — 2.1. *Philosophy of Technology* by Friedrich Dessauer. — 2.2. Heinrich Hardensett: “technical man” vs. “capitalist man”. — 2.3. *Philosophy of Technology* by Manfred Schröter. — 2.4. Martin Holzer: technology and capitalism. — **Chapter V. Engineers, intellectuals and the state. Discourses on technology and nature in the Third Reich.** — 1. Ambivalence of modernity and National Socialism. — 2. National Socialist techno-ideology before 1942. — 3. The beginnings of environmentalism in the Third Reich. — **Chapter VI. A return to the critique of technology during the years of the Third Reich and in the early Federal Republic.** 1. Martin Heidegger: from “*echte Technik*” to “*Machenschaft*”. — 1.1. Heidegger’s paradigm of cultural critique. — 1.2. The relationship between τέχνη and φύσις. “Genuine technique”. — 1.3. Heidegger reads *The Worker*. — 1.4. The Janus-faced technology. — 2. Friedrich Georg Jünger: from warrior to shepherd. — 2.1. Autonomy and demonism of technology. — 2.2. *The Failure of Technology* and the “Greens”. — **Chapter VII. Ernst Jünger on myth, history and technology.** — 1. Geohistorical turn. — 2. Freedom within the technical world. — **Chapter VIII. Criticism of industrial society and new signs of technocracy.** — 1. Günther Anders on “obsolescence of human beings”. — 1.1. “Negative anthropology” and apocalyptic phenomenology of technology. — 1.2. “Promethean shame”, or Who will be responsible for Hiroshima? — 2. Hans Freyer on the “dominance of technical categories”. — 3. Arnold Gehlen about man in the technical era. — 4. Helmut Schelsky and the “technocracy debate” in the 1960s and 1970s. — 5. Gotthard Günther on “machine consciousness”. — 5.1. “Transclassical cybernetics”. — 5.2. The “American cyborg”. — **Conclusion.** — **Appendices.** — **Bibliography.**

The **Introduction** conventionally substantiates the relevance of the dissertation topic, outlines its core arguments, hypotheses, and results.

Chapter I. Pendulum of modernity poses the problem of the “other modernity” in Germany in connection with reflection on the ambiguous role of technology in industrial society and introduces a model of the oscillatory system of modernity.

In **section 1. Between Enlightenment and Counter-Enlightenment** it is shown that the classical dichotomy between Tradition and Modernity does not stand up to criticism, and modernity itself can be productively conceptualized as a process that carries directly opposite tendencies (the so-called counter-modernity as part of modernity).

Section 1.1. The modern experience of time reveals the meaning of the experience of time in the historical conditions of modernity. The temporal character of modernity is determined both by self-negation or exaltation of traditional forms (passeism), and by openness to the future and the active creation of different images of the future (futurism). According to R. Koselleck, the precondition for the emergence of a new experience of time (*Zeiterfahrung*) is precisely “adaptation to the empirical data of an increasingly technical world.¹²”

Section 1.2. Unilinear modernity presents seven points of the classical theory of modernization in the version of W. Knöbl, and arguments against it as well. It is suggested that the difficulties that macrosociology encounters in describing the picture of modernity are due not so much to the complexity of the picture itself as to the setting of research optics (firstly, modernization is often equated with political modernization; secondly, sociologists are guided by Weber’s problematics of rationalization isolated from a specifically Western European context). An example of the popular, albeit controversial theory of “Kondratieff Waves” speaks of the productivity of reconfiguring optics from a linear to a cyclic model. Two options for the “third way” are considered (between the theories of modernization and Wallerstein’s world-system theory), the first of which is associated with the idea of “multiple modernities”, and the second option starts from the “theory of compensation” and proposes to develop it precisely on the empirical material of discourses about “technical modernity” in Germany. It is this that should serve as the basis for the oscillations of the “alternative modernity.”

Section 1.3. Non-classical types of modernity provides overviews of the theory of “multiple modernities” by S. Eisenstadt, the “anti-evolutionist program” of J.P. Arnason,

¹² Koselleck R. Geschichte, Geschichten und formale Zeitstrukturen, in: Koselleck R., Stempel W.-D. (Hrsg.). Geschichte — Ereignis und Erzählung. München: Fink, 1973. S. 221.

“coterminous modernities” by P. Chatterjee criticism of classical modernity by A. Touraine. These theories resist the idea that modernity has a single lineage or is a univocal practice. Finally, the theory of “reflexive modernity” by U. Beck and A. Giddens is valuable for its discovery of the “discontinuity” of modernity and the ability of secondary factors at some point to become key and determining, but it still does not go beyond the dichotomy between “simple modernity” and “high modernity,” remaining Hegelian in its essence.

Section 1.4. German *Sonderweg*? calls into question the theory of a “special path” of modernization in Germany, widespread among historians. The paragraph is based on the thesis of B.V. Mezhuev that the modern era is “a dialectical combination of the projects of Enlightenment and Counter-Enlightenment, and their collision largely determines the dynamics of the modern era.¹³” This conclusion about the combination of two projects within the framework of modernity seems to be very productive in relation to German material. However, Mezhuev does not problematize the concept of “dialectics,” which became popular in the context of critical theory of the Frankfurt School. M. Horkheimer and T. Adorno in their *Dialectics of Enlightenment* make the statement that such phenomena as fascism and anti-Semitism stem from the absolute dominance of reason, the unlimited power of the “system” over man, but this also means recognition of a certain destruction of the Enlightenment, its regression into mythology. This statement is not entirely objective. Moreover, we assume that the critique of instrumental rationality in the Frankfurt School clearly and unambiguously fits into the model we propose: it is involved in the compensatory swing of the pendulum of modernity and thereby turns out to be an integrative part of the post-war cultural critique discourse no more and no less than coterminous works from the conservative camp. At the end of the paragraph, a historical excursion into the “authoritarian” era of Bismarck is made and it is shown that in Germany we are observing not so much the “belated” formation of a nation, but the typical processes of the formation of modern institutions of state and society, which took place under the conditions of the “futuristic version of the Counter-Enlightenment.”

In **section 2. The oscillatory system of modernity**, a model of pendulum modernity is constructed; its full cycle of oscillations consists of a “compensatory oscillation”, which corresponds to the techno-pessimistic agenda, and a “proactive oscillation”, which corresponds to the techno-optimistic agenda.

¹³ *Mezhuyev B. V.* Dialektika Kontrprosveshcheniya, in: *Voprosy filosofii*. 2022. № 6. P. 55

Section 2.1. The “metaphysical” concept of modernity and the possibility of “another beginning” states that M. Heidegger’s “metaphysical” concept of modernity is the older sister of sociological theories of a single line modernity. However, Heidegger’s significance for the critique of modernity is explained not only by his theory of technology as the completion of modern European metaphysics, but also by posing the question of overcoming modernity from non-metaphysical thinking. On the one hand, the German thinker follows the linear scheme in his idea of modernity, which began with the discovery of the “cogito” and reaches its apogee in the unbridled triumph of science technology that controls existing things, but on the other hand, he recognizes the discrete nature of the historical process in the alternation of eras or paradigms in “history of Being.”

Section 2.2. “Theory of compensation” sets out the liberal-conservative vision of modernity by O. Marquard and H. Lubbe; it defines one of two important parameters (“compensatory” parameter) of the oscillatory system of modernity. The representatives of the “Ritter school” describe modern practices that compensate for the negative anthropological consequences of “tachogenicity” and set a framework for orientation.

Section 2.3. The “other modernity” and its historical dynamics begins with terminological distinctions consistent with the theory of compensation. Modernization at its various stages is proposed to be understood as the implementation of artifacts of modern life into society. Modernity (or in some cases modernism) serves as a general term to denote the political and cultural processes that arise with the advent of new ideas, new technologies, a new economic system or education in society. A “different modernity” is an alternative development model that does not deny the goal-rational organization necessary for material production (i.e., at a minimum, does not put forward the demand for radical deindustrialization), but strives to restore more natural and humane forms of existence in modern conditions. Next, we present the criteria for a modernist worldview according to T. Rohkrämer and propose a reasonable complication of the picture of the “other modernity”: alternating periods of rationalism and irrationalism, secularization and desecularization, subjectivation and desubjectivation, etc. are proposed to be explained by the alternation of compensatory oscillation with his ecological agenda and proactive oscillation with the technocratic agenda of heroic overcoming of criticism of technology.

Section 2.4. The thesis of “reactionary modernism” and the antithesis of “another modernity” introduces the concept of “reactionary modernism” by J. Herf and represents its

criticism; next, five complaints about cultural criticism are examined. Three main types of civilizational criticism are identified: according to Rohkrämer, these are: 1) an attempt to put technology at the service of the bourgeois order through its subordination to ethical principles; 2) an attempt to reconcile technology with nature through the development of natural forms of life; 3) an attempt to overcome existing problems by improving technology. An adjustment to this scheme is proposed in accordance with the pendulum model. We correlate the 1st and 2nd types of criticism of civilization to the era of the Kaiser's Reich and the historical period during and after the Second World War (compensatory oscillations of the pendulum). Further, we correlate the 3rd type of criticism of technology, which in reality turns out to be a heroic overcoming of cultural criticism, to the period of the Weimar Republic and the first years of the Third Reich (a proactive swing of the pendulum). The final part of the paragraph shows the change in the semantic structures of concepts "*Technik*" and "*Natur*" during the transition from early to late modernity and suggests that the emphasis on nature is actually a modern phenomenon of compensation, which originates in sentimentalism and romanticism, and then within the "philosophy of life" is integrated into the scientific discourse of modernism in order to rehabilitate and justify the acceptability of the ideal of existing "in harmony with nature" for modern technical forms of social life.

Chapter II. Criticism of technical civilization and proto-ecological thinking in the Wilhelminian era, the most voluminous chapter of the dissertation, analyzes the criticism of technology among representatives of two intellectual generations in Germany before the First World War. Criticism of modern capitalism and the phenomenon of "mechanization" is examined as trendsetting in works of W. Sombart and W. Rathenau, as well as proto-ecological thinking as trendsetting in works of L. Klages and T. Lessing.

In the preparatory **section 1. Cultural critique qua critique of technology**, it is shown how do relate to each other critique of technology and cultural critique (=criticism of civilization), the ideal type of criticism of technology is constructed, references to relevant texts are identified, and the situational and generational conditions of critique of modern technology is revealed.

Sections 1.1. Environmental movements and **1.2. Intellectual and historical prerequisites for cultural critique** deal, on the one hand, with the reconstruction of the socio-cultural background of cultural critique formed by the diverse youth and environmental movements of the Wilhelmine period, and on the other hand, with the description of the cultural

critique in oeuvres by F. Nietzsche, who had a formative influence on two intellectual generations in Germany at the beginning of the 20th century which stand under the sign of “philosophy of life”.

Section 1.3. Criticism of rationalism, capitalism and technology comes to the conclusion that cultural critique (*Kulturkritik*) – if we consider it in accordance with sources before the First World War, i.e. before the formation of the ideological dichotomy between culture and civilization, – should be equated with the “criticism of civilization” (*Zivilisationskritik*) and can only refer to the situation or tendencies of a culture towards “a perfect and true formation, embracing all aspects of the inner and outer man.” Accordingly, “critique of technology” must refer to the role of technology in culture and/or civilization, viewed from a critical perspective. The paradigmatic nature of J.-J. Rousseau and K. Marx for German cultural critique is shown. Finally, a working definition of cultural critique is introduced. Cultural critique is a philosophical position that views culture as a form of distortion, simulation, alienation, degeneration and degradation of true ways of being. Criticism of culture arises as a theory for understanding the historical situation in which European society found itself at the beginning of the 20th century. Certain tendencies in bourgeois capitalist society like desire for the massization of life, contrary to the emphasis on preserving individuality, prompted German thinkers (from Simmel, Scheler, Klages, Spengler, Heidegger to representatives of modern liberal conservatism O. Marquard, H. Lubbe, R. Spaemann) to write about contemporary culture as a purely objectifying force, depriving a person of subjectivity and freedom, turning him from an end into a means. Critique of culture is deeply imbued with existential questions, trying to understand what is the place of man in the world of the dominance of objectivity, which finds its most vivid expression in technology.

In **section 1.4. The ideal type of criticism of technology**, based on M. Weber and W. Klems, an “ideal type of general criticism of technology” is distinguished, consisting of five argumentative components: 1) the idea of alienation of labor through technology; 2) ideas of psychological and socio-cultural degradation of humans due to technology; 3) ideas about the hostility of technology to life and nature; 4) the idea of technology’s independence from human will, combined with the “compulsion of autonomous rationality”; 5) ideas about the counterproductivity of technology and its transformation into a destructive force for culture.

Section 2. Critique of technology before the First World War occupies a central place in the chapter. **2.1. Karl Marx’s critique of technology and Marxist cultural critique** provides an

overview of the main tenets of Marxist cultural critique presented in the first volume of *Capital*. The paragraph comes to the conclusion that Marxist criticism is directed against the corresponding cultural stage of “capitalism”, within which all the negative components of the stereotype of critique of technology are attributed to modern industrial technology. At the same time, the idea of a dialectical transition to positive technology through the seizure of power by the working class as a result of the development of systemic contradictions clearly distinguishes Marx from other critics of technology, namely, Marxism demonstrates a systematic tendency to turn into a socio-political techno-utopia.

Section 2.2. W. Sombart and the criticism of modern capitalism demonstrates the way to overcome this utopian thinking by giving the criticism of technology a conservative character through the analysis of *homo capitalisticus* and historical styles of technology. At the beginning of the paragraph, the common idea of neutrality of technology is revealed among all representatives of early cultural critique from Sombart and Simmel to Scheler. Criticism of technology (*Technikkritik*) appears for them as an element of the general historical analysis of society and culture; at the same time, the negative consequences of technization are explained by the inversion of the means-end relationship (servant-master). In the second edition of *Modern Capitalism*, Sombart proposes to conceptualize technology not as a “necessary evil”, but as a neutral tool that, if properly treated (ethical control and management), could bring even greater benefits in all areas of human existence. Accordingly, he reduces the “other modernity” to a compensatory interest, since it does not reject industrialization as such, but points to defects in the development of late capitalist society that require correction. The paradigm for understanding technology begins to change during the First World War. In particular, in *Traders and Heroes* elements of heroic overcoming of criticism of technology appear. 20 years later, Sombart, at that time the leading author of the Conservative Revolution, the ideological inspirer of *Die Tat* magazine, publishes his book *German Socialism*, where he adjusts his program of a different modernity. He advocates a conservative state with a planned economy and technology controlled in the interests of the common good. This shift from critique of technology in the form of critique of capitalism to technocracy fits into the proactive pendulum swing represented by most of the protagonists of the Conservative Revolution.

Section 2.3. Walter Rathenau and his *Kritik der Zeit* is the first study in Russian of the *Zeitkritik* (it means literally “criticism of contemporary issues”) in the philosophical oeuvre of the

German industrialist, politician and essayist W. Rathenau. **Section 2.3.1.** deals with the concept of “mechanization” as presented in his books *On the Criticism of the Modern Era* and *On Things to Come*, and **section 2.3.2. The discourse on the problem of sustainability within the framework of modernity** reconstructs another component of the cultural critique discourse in addition to the criticism of capitalism and rationalization. Philosophy of life, culture, fashion etc., including criticism of the “plutocratic” model of economics, receives its final form in Rathenau’s concept of sustainability, which is based on the theorem of “mechanization”. The decisive impetus here obviously came from the discussions about modernization at the turn of the century, which were determined by the works of representatives of the same intellectual generation born before the founding of the German Reich (Simmel’s *Philosophy of Money*, Sombart’s *Modern Capitalism*, Weber’s *Protestant Ethic and the Spirit of Capitalism* and *Critique of the Modern Age* by Rathenau himself). According to Rathenau’s diagnosis, during the processes of alienation and massification, accompanied by new forms of organization, a crisis occurs in bourgeois society as a whole. At the same time, within bourgeois society there is an emancipation of a certain layer of people, which Rathenau calls “*die Interessenten*”. And it is precisely here that the author’s ambivalent attitude towards the masses in the era of mechanization is revealed – the moment when Rathenau begins to include more and more technocratic elements in his cultural critical discourse. Namely, in 1917, he notes that mechanization is accompanied by a “spiritual revolution,” which is understood as a process of intellectualization, similar to the growth of productive forces, only leading to the expansion of mental abilities. The intelligence of these new people, although a “lower order” intelligence, is nevertheless “sharp, purposeful, multitasking and mobilized.” It is inferior to the intellect of the former ruling stratum in that it is aimed exclusively at the world of sensory phenomena. Rathenau does not yet call this type of person a *Techniker*, but in fact anticipates its appearance. This entails, among other things, a weakening of “mental powers” in three respects: 1) value criteria for actions, 2) creative and artistic abilities, 3) a religious sense of the absolute are lost. By analogy with the tendency of capitalist competition to capture markets, it is permissible here to talk about a kind of colonization of the internal regions of human existence. Thus, during the First World War, Rathenau's views undergo a similar change as Sombart’s. Rathenau considers the construction of a centrally controlled economy with maximum state participation in business not just a special wartime measure, but also the beginning of fundamental changes designed to overthrow “those gods that the world worshiped before August 1914.”

Sections 2.4. Ludwig Klages: Man and Earth and **2.5. Theodor Lessing: technical culture and vital anticulture** examine the environmentalist tendencies common to two representatives of the next philosophical generation. They share Nietzsche's socio-cultural diagnosis and develop the dichotomy of culture and life that is typical of the philosophy of life. For these authors, cultural critique discourse is also enriched with historiosophical optics. **Klages** considers the cause of the catastrophic phenomena of modernity not so much the legacy of Judeo-Christianity, but rather the confrontation between Spirit and Soul, intellect and life. Humanity, from the point of view of Klages, has come to its apocalyptic finale, which was preceded by a gradual degradation that lasted more than two millennia. History as such is conceived by him as a persistent appeal to the forces of the Spirit opposing the Soul; on the eve of decline, the world can expect salvation only from the Soul, subject to its liberation from the fetters of the Spirit. He contrasts the modern era of "progress" with traditional culture, within which "human creations" were still in symbiosis with nature. The technical civilization of our time breaks the "connection between human creations and the Earth" and destroys historical and natural landscapes. **Lessing** also contrasts his project with a voluntarist philosophy of history against historical optimism. He finds a universal explanation for all the misfortunes caused by scientific and technological progress in the "hominist-evolutionist" worldview of two Christian millennia. The ideological image of history as the reckless movement of European humanity towards its utopian goal is contrasted with an alternative picture of the process, drawn as if from the perspective of other species inhabiting the Earth – plants, animals, colored peoples. Lessing's (as later Heidegger's) pessimistic diagnosis of the epoch is based on a basic Nietzschean intuition: only the completion, the bringing of nihilism to its final limit, will allow it to be overcome (*Verwindung*), which means that Europe must perish from the Spirit in order for new life forms to arise. The paragraph ends with the conclusion that the typologization of cultural critique discourse in German intellectual history allows us to observe the reproduction of its main elements after a certain period of time (in this case, after approximately 20 years of the dominance of the technocratic paradigm in the 1920s–1930s).

Chapter III. The heroic overcoming of critique of technology in the Weimar Republic describes the reverse movement of the pendulum of modernity, which is associated with a change in the vector of the intellectual process and is determined by the capture of the event of the First World War; it also forms conditions for hermeneutic experience and sets the horizon of the life world for several intellectual generations simultaneously.

In section 1. “**Crisis consciousness**” and “**stabilization consciousness**”?, the theory of the “other modernity”, considered in this study exploring discussions about technology, is compared with Yu.N. Davydov’ typologization based on the distinction between “crisis” and “stabilization consciousness” in sociology. Crisis and stabilization consciousness are considered as “two poles” of the modern social condition and the social consciousness that accompanies it¹⁴. The response to the crisis is an attempt to restore “social and psychological stability.” This distinction cannot be considered theoretically successful. Firstly, the attraction of “crisis consciousness” to irrationalism is nothing more than an illusion. If we consider cultural critique to be a manifestation of a crisis consciousness, then it is characterized rather by a tendency to revise the new European concept of culture, including the problem of the relationship between reason and faith, subject-object opposition, etc. The task of restoring the damaged image of reason and man thus fits within the broad boundaries of the traditional European model rationality. Secondly, the “irrationalistic” opposition of “Soul” and “Spirit”, the rehabilitation of religious consciousness, the identification of technology and capitalism and the demand to come to terms with nature – all of this is as much a sign of a crisis consciousness as it is an expression of the compensatory need of a consciousness experiencing a crisis. Thirdly, “stabilization consciousness” cannot be attributed to the faith in reason, to one or another form of rationalism or scientism. A number of reactionary modernism projects that openly stand in opposition to the Enlightenment and Progress make the paradigm of “stabilization consciousness” too loose and deprive it of cognitive value. The contradictions associated with the distinction between “crisis” and “stabilization” consciousness are eliminated within the framework of the oscillatory model of modernity. The proto-ecological trend is followed by a technocratic one, from the extensive use of the environment there is a transition to its intensive use, accusations of technology in the mechanization of the spirit are followed by a demand to free technology from capitalism, cultural critique is replaced by its heroic overcoming.

Section 2. Proactive modernism describes the turn from techno-pessimism to techno-optimism using the examples of the philosophy of technology of O. Spengler, H. Freyer and E. Jünger and focuses on the conservative-revolutionary strategies regarding technical modernization among the bright scale of two new intellectual generations (the divide here may lie around the “year of the three kaisers” regarding the date of birth).

¹⁴ See: *Davydov Yu. N. Stabilizatsionnoye soznaniye v vek krizisa: yego osnovopolagayushchiye kategorii.* S. 5.

Section 2.1. Oswald Spengler: Technology as “life tactics” challenges the simplistic view of Spengler as a supporter of “culture” and an opponent of “civilization.” From the point of view of the “morphology of culture,” even the forces of reason that destroy culture themselves remain reflections of an *Ursymbol* of culture and continue to implement the basic cultural imperative. For this reason, the essay *Man and Technics* (1931), which is part of a larger, but unpublished work *Urfragen*, reaches its climax in the question of the future and completion of Faustian civilization. Spengler believes that life is born from a metaphysical “flame,” and the technical fire of Prometheus is nothing more than the source of culture, the entire history of mankind. In technology lies the “greatness and curse” of a person who dares to “Revolt of Prometheus,” an act of disobedience and liberation from the yoke of his own species nature. Freedom goes hand in hand with creativity, that is, the creation of its own “life tactics.” “Culture” and “technology” will subsequently receive their own performers – enterprises, organizations, states. These associations of people will ensure the implementation of “technology” and the formation of “culture” up to the notorious transformation into “civilization”. The conclusions of the paragraph are consistent with the conclusions of G. Swer, who also believes that “for Spengler, the real problem of technological civilization lies in its alienation from its own technology.¹⁵” Spengler’s *Kulturphilosophie* reaches its apogee in the apology of technology and swears allegiance to the “other modernity.” The “Faustian man” of the period of civilization returns to his original mission – to become the master of the Earth and control the forces of nature, again demonstrating his power instinct, albeit at the level of engineering creativity.

Section 2.2. Ernst Jünger on the technical revolution consists of three subsections, which should underline the importance of E. Jünger as one of the central figures of this study. It allows us to demonstrate the dependence of the evolution of the philosopher’s work on a paradigm shift in understanding technical modernity. In particular, **subsection 2.2.1. The proactive modernism of *The Worker*** examines the substantive moments of the technocratic turn after the First World War – *The Worker* (1932) by E. Jünger as his “heroic-realist” manifesto. The title of the paragraph contains an implicit polemic not so much with the concept of “reactionary modernism”, but with the very idea of “reaction”, meaning action directed backwards. The “pro-active” character of

¹⁵ Swer G. The Revolt against Reason: Oswald Spengler and Violence as Cultural Preservative // The Philosophical Journal of Conflict and Violence. Vol. III, Issue 2/2019. P. 132.

Jünger's worldview, on the contrary, is expressed in the active process of shaping the work-world, during which purposeful and strong-willed people must triumph over the passive mass. As they become more determined and achieve their goals, they will realize their vision of a functional society – but only through the creative mastery of technology on a planetary scale. The heroic-realist attitude means the will of the new anthropological type in Jünger's description to accept the reality of the future world insofar as the principle of functionality dominates in this *Arbeitswelt*, and all events in it – both human and non-human – are interpreted as an work act. Jünger defines technology as the “total mobilization of the world, carried out by the gestalt of the Worker”. Jünger himself referred to Nietzsche's figure of the “active nihilist,” and Heidegger was one of the first to see in the idea of “total mobilization” a kind of derivative of the “will to power.” A person who has placed himself in the service of anonymous “work,” that is, who has subordinated himself to the dictates of technology, is located within the nihilistic “landscape of the workshop” and welcomes the death of the old bourgeois world. **Subsection 2.2.2. Freedom of Technology** is a reconstruction of the metaphysics of *The Worker* in the light of the Spinozist notion of freedom as “recognized necessity”. Freedom is associated with the “representation” of the gestalt of the Worker and the perfect mastery of the language of technology within the work-world. In addition to the positive freedom that says “Yes” to the technical revolution, here we find a second stage of freedom, which is finding one's own. To the extent that an individual (*der Einzelne*) recognizes himself in the type of the Worker, he simultaneously finds his own language in technology. The habitual use of modern technology means that an individual adapts to the nature of the power that is hidden behind technical symbols. The new language corresponding to them is no longer a “neutral means of communication,” but a “new language of orders.” **Subparagraph 2.2.3. Media mobilization** shows the nature and degree of mastery of technical language through the example of the use of modern photography and cinematography. Jünger's media theory is compared with the views of leftist theorists S. Kracauer and W. Benjamin, who also represent the same intellectual generation.

The final section of the chapter **2.3. Hans Freyer: Technology as a weapon of the revolutionary people** outlines a radically conservative philosophy of technology that consciously overcomes the cultural pessimism in attitude towards technology. In his programmatic article “Towards a Philosophy of Technology” (1929), Hans Freyer emphasizes the “historical significance of modern technology from a world history perspective.” It differs from the structural

view of the philosophy of culture that considers technology as a value-neutral system of means in the service of other cultural values. Another object of criticism here is the theory of “life forms” by E. Spranger; there is no place for the figure of *Techniker* among “life forms”. According to Freyer, it is not philosophy and criticism of culture, but only a political-sociological approach to technology that is able to see in it the determining force of the modern industrial era. He wants to place technology in the cultural system of society and find its systematic application in the political organization of domination as well. Since the choice of means itself is determined by culture, then the development of technology is not the arbitrary invention of new tools, but the objectification of the value attitude and ends of a particular society. In *Revolution from the Right* (1931), technology is conceptualized as a means of political power. Politics precedes technology, since the plan towards which technology is oriented presupposes domination. Thus, both Jünger’s futuristic vision and Freyer’s political concept represent a technocratic idea adjusted in a national-revolutionary key. The political success and prosperity of the people depend on the mastery of technology, and the latter in turn depends on the extent to which the individuals and communities in control of it will represent the gestalt of the Worker, or on the extent to which the “revolutionary people” are aware of their true needs.

Chapter IV. Capitalist and technical man is devoted to the German technocratic movement, which was internationalist and pacifist one and ideologically differed from conservative notions of technology. The chapter also analyzes the most significant contributions of *Technokratiebewegung* to the German philosophy of technology. It is for the first time in Russian and Western scientific literature that four key texts that set the field for discussion about technocracy during the Weimar Republic are considered: *Philosophy of Technology* (1927) by F. Dessauer, *Capitalist and Technical Man* (1932) by H. Hardensett, *Technology and Capitalism* (1932) by M. Holzer and *Philosophy of Technology* (1934) by M. Schröter.

Section 1. German Technocracy in the 1920s and 1930s and its relation to philosophy engages with the reconstruction of the philosophical and intellectual context in which the German technocratic movement was formed.

Section 1.1. “Creed” of the frontline generation provides evidence that E. Jünger’s texts on technology were paradigmatic not only for right-wing circles, but also for protagonists of the Technocratic movement in Germany, who belonged to the same frontline generation. Jünger’s awareness of the new significance of technology and new role of technical man was highly

representative of the groups of philosophizing engineers of the Weimar Republic. Associated with the understanding of technology as “total mobilization” and the gestalt of the Worker is the idea of a new anthropological type, which is termed as a new “life form of the technician.”

Section 1.2 The German technocratic movement compares American technocracy and German *Technokratiebewegung* based on the research of S. Willeke, A. Bammé and V.G. Gorokhov. A distinctive feature of the technocratic movement in Germany can be considered its social impulse. Technocracy *au sens propre* considers autonomous self-propulsion and self-improvement of technology as a fundamentally positive process, however, inhibited by capitalist interests. Despite similar trends in Soviet Russia, the protest of individual engineers against capitalist relations of domination differed from the ideas of Marxist socialism. The technocratic movement sees the future “lords of technology” not in the proletariat, but in the class of engineers. German technocrats not only consciously distanced themselves from the American “technocrats”, but also tried to present technocracy as an original invention of the German spirit. They emphasized that they did not want the dominance of technicians in the political sense, but the mastery of technology by technicians (*Beherrschung der Technik durch den Techniker*), i.e. they hoped to build an economic system that would correspond to the creative and humanistic spirit of technical progress and would serve the achievement of the highest (ethical) goals. An important role in the technocratic discussion was played by the *Reichsbund Deutscher Technik* and its journal *Technik voran*, as well as the *Verband deutscher Diplom-Ingenieure* and its journal *Technik und Kultur*.

Section 1.3. The philosophy of “forms of life” by Eduard Spranger and its significance for technocratic discourse focuses on the significance of the theory of forms of life by E. Spranger, the leading Berlin philosopher of the interwar era, for social philosophy and philosophy of engineering. Thus, all the works of philosophizing engineers were firmly united by one common program for the study of technology as a cultural factor, which involved considering the philosophy of technology as part of the philosophy of culture.

Section 2. The life form of the *Techniker* in the cultural system shows how the figure of the engineer was conceptualized within the structural diagram of ideal types (which was close to Spranger’s forms of life), and describes “pure types” of “technical” and “capitalist man” and the corresponding images of technology (“technical creativity” vs “industrialism”, “mammonism”) as

well. Definitions of technology that are still of great importance for the engineering philosophy of technology in Germany are also given.

Section 2.1. *Philosophy of Technology* by Friedrich Dessauer examines mainly two of Dessauer's early works on technology – *Philosophy of Technology* (1927) and *The Liberation of Technology* (1931, co-authored with K.A. Meissinger), developing the concept of technology as “a continuation of Divine creation” (*Weiterschöpfung*) and the theory of the “fourth kingdom” (*das vierte Reich*). At the heart of the “essential definition of technology” that Dessauer arrived at in his final work, *The Controversy on Technology* (1956) and which summarizes his earlier definitions, lies the understanding of technology as “a real being from ideas, [passed] through final formation and processing from natural ingredients (*Bestände*)”. The definition from the *Philosophy of Technology* is distinguished by the fact that at its center is the heroic figure of the “technical man”, which is blurred in the post-war authorship of Dessauer: “The technical man embodies the potential existence of pre-given forms (*Gestalten*) into the actual reality of the empirical world.” The immediate goal of inventors and designers is the creation of a technical object, an artifact that meets its purpose (*Zweck*), behind which lies the highest goal in the form of the common good. As a Christian technocratic Platonist and Platonic technocrat, Dessauer accepts the utopian ideal of “the actualization of the Augustinian idea of the *Civitas Dei* through technology.”

Section 2.2. Heinrich Hardensett. “Technical man” vs. “capitalist man”, for the first time in Russia, analyzes the only book by Hardensett published during his lifetime – the dissertation of the leader of the German technocratic movement (1932), and also turns to the manuscript *Philosophy of Technology* (1936), published by A. Bammé from Hardensett's archive. Technology is defined as “the cultural sphere of making things: designing, planning, organizing, arranging, executing, directing, and controlling the process of making artifacts out of natural materials, forms, and energies.” Hardensett paradoxically contrasts the irrational type of capitalist man with technician as a “rationalist in his worldview.” Hardensett calls an “engineer” a “developed technical type” in the sense of the theory of ideal types and puts forward a demand to change the training program for engineers, supplementing one-sided technical education with a humanitarian education. Without sharing Jünger's “militarism” and “functionalism,” he agrees with his objections regarding the idea of the value-neutrality of technology, and also interprets the gestalt

of the Worker as a perfect type of a technical person, from whom the entire objective world of technology originates.

Section 2.3. *Philosophy of Technology* by Manfred Schröter sets out the systematic philosophy of technology of M. Schröter, a follower of O. Spengler and co-author of A. Bäumler. Schröter sets the task of systematic analysis and determination of the place of technology as a creative activity in the totality of culture. From his point of view, technology should not be understood either as an applied natural science or as a partial field of application of economics, but as a “special kingdom” between science and economics. The cultural value of technology lies not only in the transformation of free human will into external reality, but also in the release of “cultural forces.” Schröter’s technocratic idea finds its completion in a concept close to Freyer’s vision of the socio-ethical mission of “technicians”: they are called upon to contribute to the formation of national integrity and the implementation of the idea of a national community within the “cultural state.”

The last section of the chapter **2.4. Martin Holzer: Technology and capitalism** analyzes the book of the same name by the economist J. Bader (pseud. Holzer) – totally neglected subject in philosophical research, except for a couple of pages in J. Herf’s study *Reactionary Modernism*. Nevertheless, he is an important author who continued the critique of modern capitalism and developed the ideas of Sombart, Möller van den Bruck and Spengler in a technocratic vein. Holzer moves in the same discussion field with E. Jünger, C. Schmitt and H. Hardensett. He also rejects the idea of the value-neutrality of technology and, using a number of economic examples, proves that it was the use of technology, and not the needs of the population, that was the driving force of industrialization. At a certain stage in the development of the “technology-industrialism” link, technology ceases to be a tool for achieving given goals and itself begins to produce pure potentials that can be used for a variety of purposes, including creating new needs and further profiting from consumer satisfaction. Technology paired with industrialism poses a threat not only to the society, but also to the environment. The condition for changing the existing order of things is a change in the attitude towards technology as a neutral means and the attitude towards engineers as technicians in the service of private capital. Holzer proposes a program of “transformation of technology” and demands its inclusion in the work program for the reconstruction of the people and the state, “which will be oriented towards the values of living space, life goods and life form.”

The image of “national and responsible technology” anticipates the environmentalist trend that will be discussed in the next two chapters of the study.

Many studies of the origins of National Socialism claim that the majority of the leading National Socialist ideologists were without any doubt more or less inclined to “agrarian romanticism” and anti-urbanism and convinced of the need for a relative re-agrarianization. The question remains, however: To what extent did the Nazis actually implement environmental policies during the twelve-year Reich? **Chapter V. Engineers, intellectuals and the state. Discourses on technology and nature in the Third Reich** tries to highlight a controversial and ambiguous period in German intellectual history, in which there was a place for “agrarian romanticism” and the German technique as well.

Section 1. Ambivalence of modernity and National Socialism begins with a review of the first issue of the *Deutsche Technik* magazine (September 1933), which was published under the editorship of G. Feder and was the official publication of the Main technical directorate of the imperial leadership of the NSDAP and the imperial administration of the National Socialist Union of Germans technicians (*Nationalsozialistischer Bund deutscher Techniker, NSBDT*). The starting point for analyzing the question of the relationship of National Socialism to modern technology is Herf’s statement¹⁶ that the National Socialists adopted the main tenets of “reactionary-modernist” thought and thereby made an attempt to integrate engineers into the *Volksgemeinschaft*. At the same time, we question the researcher’s opinion that the “irrational elements” of reactionary modernism allegedly had a restraining effect on the technical progress of Germany during the World War II. Refuting this opinion involves suspending the uncritical belief that National Socialism represents a holistic system of views (the “distinctive National Socialist view of technology”). Rohkrämer’s criticism addressed to Herf (the attempt to reduce National Socialism to a single tradition of “reactionary modernism” is unsuccessful and unconvincing)¹⁷ receives here additional arguments: National Socialism was not only eclectic and relied on many different traditions, but also responded to fluctuations in the socio-cultural agenda, which was gradually disappearing from technocracy and utopianism. Thus, the paragraph shows that 1) the original views of National Socialist ideologists on technology are inextricably linked not only with the

¹⁶ Herf J. Reactionary Modernism. Ch. 8 “Reactionary modernism in the Third Reich.” P. 189–216.

¹⁷ Rohkrämer T. Antimodernism, Reactionary Modernism, and National Socialism. P. 45–47.

views on technology of right-wing radical theorists, but also with the technocratic thought of the Weimar Republic as a whole and 2) should be chronologically limited only to the first decade of the Third Reich. The noted similarities and differences speak not so much of some influence and continuity of views, but of different ideological refractions of the same attitude towards the approval of instrumental reason and technologies, which are suitable for achieving many different goals, not always humane and enlightened. In the last years of the existence of the Hitlerite state, the technocratic ideas of the National Socialist think-tanks tend to zero, and they are replaced by the pragmatism of the politicians who unleashed the Second World War.

The central place in the chapter is occupied by **section 2. National Socialist techno-ideology before 1942**, which examines two directions of technocratic ideology associated with the names of engineers and intellectuals G. Feder and F. Todt. The left-wing National Socialist Feder developed a program of “*völkisch*” technocracy: according to this program, politically committed engineers had to oversee the process of radical industrial decentralization of German society through modern technology. Anti-capitalist projects for the transformation of German society come under suspicion since Feder left. All that remains is the ideological emphasis on the “spiritual revolution.” Under F. Todt, “people’s technocracy turns into Nazi technology”¹⁸. According to Todt, the realization of a true “people’s community” will happen when the engineer stands on a par with the peasant and soldier, and the German public recognizes the importance of modern technology for its well-being. Engineers must become not just narrow technical specialists, but educated “technopoliticians”, whose “personal qualities”, enhanced by technopolitical training, will lead to increased efficiency in carrying out the tasks of the Führer. F. Todt identified two important elements of National Socialist techno-ideology: 1) the desire for harmony of man, nature and technology and 2) the desire to unite technology and art. Both of these ideas reflect the collectivist impulse of the National Socialist ideology, aimed at integrating all parts of society into the *Volksgemeinschaft* community – a community of a people in harmony with its natural environment. Todt’s death in early 1942 was both a major watershed in the regime’s commitment to National Socialist techno-ideology and marked the end of technocratic tendencies in German society.

Section 3. The beginnings of environmentalism in the Third Reich, like the previous paragraph, provides another argument in favour of the synthesis of various strands of social

¹⁸ Guse J. C. Nazi technical thought revisited. P. 9.

thought which build the core of National Socialist ideology. Based on the collective monograph *How Green Were the Nazis*, ed. by F.-J. Brüggemeier, M. Chioc and T. Zeller, the paragraph offers an overview of ideological programs in the field of environmental policy (a combination of “brown” and “green”) and indicates the presence in the politics and ideology of the Third Reich of other programs and measures that do not fit entirely into the technocratic paradigm of proactive modernism.

Chapter VI. A return to the critique of technology during the years of the Third Reich and in the early Federal Republic is devoted to the large-scale return of the cultural critique and environmentalist agenda in German intellectual history from the late 1930s to the 1950s. It examines the main works on technology by M. Heidegger and F.G. Jünger, which best represent the compensatory paradigm of the “other modernity”.

Section 1. Martin Heidegger: From “*echte Technik*” to “*Machenschaft*” demonstrates the continuities and discontinuities in Heidegger’s thought on technology from the early 1930s to the 1950s and consists of four subsections. The first one is **1.1. Heidegger’s cultural critique paradigm** is based on the article of D. Meyer¹⁹, but proposes to shift the study of Heidegger’s cultural criticism to the period after 1932 and connect it with the assessment of *Technik*. The 1930s in Heidegger’s thought are not only the time of the famous “Turn”: from *Dasein* to *Sein*, from *Being and Time* to lectures on Hölderlin and Nietzsche, but also a change of mind in relation to technical modernity: from the intuition of a certain “genuine technique” to debunking the technocratic imperative of “machinization”. The analysis continues in subsection **1.2. The relationship between τέχνη and φύσις. “Genuine technique”**, which examines Heidegger’s notion of a “genuine technique” from the speeches of the Rector’s period in the light of his interpretation of the Aristotelian distinction between *physis* and *techne*. The existential-historical development of the issue “technology” in Heidegger goes hand in hand with the development of the issue “nature”, while the *völkisch* concepts of technocrats from National Socialism discussed above also inevitably encountered practical difficulties arising from the aporia of technology and nature. The idea of a “genuine technique” expressed by Heidegger, which stands on a par with such “essential forces” as nature, state and economy and determines the fate of the German people,

¹⁹ Meyer D. Kulturkritische Aspekte bei Martin Heidegger, 1918–1932, in: Jahrbuch zur Kultur und Literatur der Weimarer Republik. Bd.15. 2011/12. Hrsg. v. S. Becker in Zusammenarbeit mit R. Krause, R. Marx. Munich: Ed. text+kritik, 2013. S. 47–69.

is extremely close to the projects of “*völkisch* technocracy”, which promoted an organic and harmonious fusion of man, technology and nature. At the same time, the paragraph notes environmentalist sympathies of the Freiburg philosopher, which paved the way for a detailed critique of technology starting from the second half of the 1930s. Thus, the complex relationship between *techne* and *physis*, built in the treatise *On the Being and Concept of φύσις* (1939), forms the starting point of Heidegger’s later theory of technology, which defines the essence of technology as “*Ge-stell*”.

The understanding of technology as the nihilistic completion of metaphysics was facilitated through reading *The Worker* by E. Jünger (**1.3. Heidegger reads *The Worker***), whose influence on Heidegger was comprehensively covered in our candidate’s dissertation (2002). However, the last subsection **1.4. Two-faced Janus of technology** presents a novel claim. The ontological rapprochement of *techne* and *physis* leads to the fact that the idea of the ambivalence of technology as a danger and a source of salvation (*Wo aber Gefahr ist, wächst / Das Rettende auch*) became a “trademark” of the philosophy of the late Heidegger and a guarantee of future openness towards environmentalist discourse. The connection between Heidegger’s thought and radical environmentalism has been the subject of debate in Western literature since the first half of the 1980s. The paragraph draws a line with the interpretation of Heidegger as a “deep ecologist” by M. Zimmerman²⁰, consistent with relatively recent objections of V. Blok²¹. The latter uses Gibson’s “theory of affordances” to interpret Heidegger’s concept of the technical era (the challenge of modern humanity in relation to nature is followed by an “answer” in the form of an affordance from nature; in this light, the imaginary contradiction is resolved – namely, the contradiction between Heidegger’s call for “another beginning” and his insight that there is no limit to the technological disclosure of being in the age of technology). However, this convergence of the concepts of “another beginning” and “affordances of nature” does not fit well with Heidegger’s leaning towards overt anti-technicism in the 1950s and 1960s, which places emphasis on the poetry and preparation for coming of the “last god”. At the end of the paragraph, the main positions of

²⁰ Zimmerman M. Toward a Heideggerian Ethos for Radical Environmentalism, in: *Environmental Ethics*, 1983, vol. 5, no. 2. P. 99–131; *idem*. Rethinking the Heidegger-Deep Ecology Relationship, in: *Environmental Ethics*, 1993, vol. 15, no. 3. P. 195–224.

²¹ Blok V. Reconnecting with Nature in the Age of Technology. The Heidegger and Radical Environmentalism Debate Revisited, in: *Environmental Philosophy*. 11 (2). January 2014. P. 307–332.

Heidegger's criticism of the modern era (*Zeitkritik*) / critique of technology (*Technikkritik*) ("The Time of the World Picture" and "The Question concerning Technology") are fixed and comprehended as an integral part of the cultural critique discourse that is actively resuming in Germany after the Second World War.

Section 2. Friedrich Georg Jünger: from warrior to shepherd shows how the change of socio-cultural paradigms determines the evolution of Jünger's notion of technology from revolutionary and techno-optimistic to the conservationist one. At the same time, we note that against the backdrop of a change in worldview, original intuitions are preserved and his genuine idea of **2.1 Autonomy and demonism of technology** is consistently developed. This view is further compared with Jaspers's demonization of technology and distinguished from Heidegger's ontological approach. Interim upshot: in the German intellectual tradition of socio-philosophical understanding of technology, it was in F. G. Jünger's *The Failure of Technology* that the machine was first considered not as an instrument of the will of some subject (class, engineers or nation), but as an order *sui generis*. Technology itself becomes a subject – a perfect system of means, a lifeless automaton, entering into an insoluble contradiction with human freedom. The final **subsection 2.2. The Failure of Technology and the "Greens"** stands out for its innovative conclusions regarding the continuity between the "green" discourse of the Federal Republic of Germany (H. Gruhl, M. Maren-Griesbach) and post-war conservative thought, which was the first to "work out" the environmental agenda in the 1940s and returned to criticizing technology again in the 1970s (e.g. *Scheidewege* magazine).

Chapter VII. Myth, history and technology in the late oeuvre of E. Jünger consists of two **sections 1. Geohistorical turn** and **2. Freedom within the technical world**. The first of them analyzes changes in the post-war cultural critique discourse using the example of Jünger's large essay *At the Wall of Time* (1959), which has not been translated into Russian. Jünger introduces a post-historical perspective and describes the present "eon" as a caesura, or "interim", in which the contours of the new emerge. He is convinced that a new "turn of Being" (*Zuwendung des Seins*) or the call of "another beginning" (according to Heidegger) can be heard in poetry and other alternative ways of understanding the world. The end of history and the beginning of a "new large time period" (*Zeitgrossraum*) are recognized by symptoms that no longer fit into the model of historical explanation, but have a "telluric" character that completely changes the face of the Earth. Interim upshot: motives of cultural critique in the writings of German conservative thinkers

are not reduced to passeism, but offer images of the future and new types of orientation. The latter are caused by the need to stabilize social and psychological experience in the face of the anthropological crisis, the destruction of traditional institutions and the collapse of relationships. **The second section** ties back to the definition of technological freedom in Chap. III, par. 2.2.2. and argues that with the departure from the proactive modernism of the Weimar period, the Nietzschean-Spenglerian notion of *amor fati* concerning technology also loses its relevance. Jünger thinks through multiple scenarios for the completion of technical modernity, and this overcoming of the titanic “eternal return”, as well as the transcendence of history, presupposes strategies of myth, theology and poetic creativity free from the techno-deterministic perspective.

Chapter VIII. Criticism of industrial society and new signs of technocracy, the last chapter of the thesis, examines mainly social philosopher’s and philosophical anthropologists’ concepts, which are focused on the negative consequences of technization (automation, robotization, nuclear technologies, etc.) for the structure of late industrial society and set a theoretical framework for *Technokratiedebatte* in the 1960s. **Section 1. Günther Anders on “obsolescence of human beings”** consists of two subsections: **1.1. “Negative anthropology” and apocalyptic phenomenology of technology** and **1.2. “Promethean shame.”** The subject of analysis is *The Obsolescence of Man* (1956, 1980), the untranslated two-volume work of the German phenomenologist and social theorist G. Anders, little-known in Russia. Anders belonged to the generation of those who began an active social life after the end of the First World War (as A. Gehlen or T.W. Adorno). The paragraph begins with an attempt to categorize Anders’s “negative anthropology”²², to correlate his views with Husserl and Heidegger, with philosophical anthropology and Marxism. Anders’s discourse is classified as cultural critique, and his institutional affiliation with the Frankfurt School is an *a fortiori* argument in favor of classifying social criticism of bourgeois culture as fitting in the compensatory paradigm of reflexive modernity. Next, the key concepts of the “Promethean gradient” or “Promethean shame” are discussed, intended to indicate that 1) a person no longer meets the level of his technical capabilities; 2) the technical production of reality through media leads to the fact that our perception becomes dependent on technology; 3) the subject no longer uses the means, but simply

²² The same characteristic is used in research: *Spirova E.M.* “Negative anthropology” by Günther Anders, or the crisis of the Promethean project. In: *Bulletin of Kalmyk University*. 2020. No. 4 (48). Pp. 134–143; *Babich B.* Günther Anders’s Philosophy of Technology: from Phenomenology to Critical Theory. L.: Bloomsbury, 2022.

reacts to the existence of certain technical artifacts. Finally, the paragraph examines the correspondence between G. Anders and the American pilot C. Eatherly, who participated in the bombing of Hiroshima. On the one hand, in his letters Anders reveals himself as an active participant in the anti-nuclear movement. On the other hand, he shows a deeper and more interesting solution to the paradox of the “banality of evil.” The process of mass destruction of humanity, according to Anders, is becoming more and more similar to industrial production based on the division of labor: no one does anything bad, everyone just does the work they can. The horror of the situation is only emphasized by scientific jargon, technical terms, acronyms, inappropriate comparisons and jokes. People are no longer able to adequately perceive danger and respond appropriately cognitively and emotionally. A person feels like a stranger in the world of technology, since the products he produces open up possibilities that exceed his physical and spiritual constitution.

The basis for considering the criticism of industrial society in section 2. **Hans Freyer on the “dominance of technical categories”** is two works by the founder of the Leipzig school of sociology – the book *Theory of the Modern Era* (1955) and the programmatic article “On the dominance of technical categories in the life world of late industrial society” (1960, translated and published by the author of the thesis in 2011), also considered a classic of German philosophy of technology. Compared to the early project of the “philosophy of the history of technology,” there is a tendency here to build a large-scale “cultural philosophy” of technology, in which technology is conceptualized as the constitutive authority of modernity. Freyer continues to focus on the relationship between technology and domination, but if in the *Revolution from the Right* he pins his hope on the establishment of national technocratic domination, now he emphasizes the monopoly of abstract technical categories, behind which stands the “impersonality” and “objectivity” of technical means (“secondary systems”). Elements of cultural critique discourse (combination of historical, social and psychological perspectives, relation between technology and culture, post-historical optics) are clearly visible in A. Gehlen’s essay *The Soul in a Technical Era* (1957), which is the issue of section 3. **Arnold Gehlen about man in a technical age.** The similarities and differences between the hypotheses of the emergence of scientific and technological civilization by Gehlen and Scheler are revealed. The concept of “superstructure” is analyzed, which is a peculiar combination of technology, politics and industry and is transformed into a certain separate reality opposite to man as an “insufficient being”. The high level of

abstraction of technical systems changes people and their psyche – here Gehlen’s diagnosis coincides with the diagnosis of his academic teacher Freyer. Gehlen contains typical elements of Nietzschean criticism of culture, which is explained by the specific configuration of the socio-cultural horizon that determines the hermeneutic experience of the generation to which Gehlen belonged. Gehlen’s theory of institutions²³ (like Heidegger’s criticism of metaphysics) fits into the post-war discussion about technology due to the problematization of human freedom and subjectivity. He sees the only possible way of resistance to the scientific and technological civilization which challenges traditional institutions in the rehabilitation of the institution of personality in the sense of a kind of advocate of the ideal world. In the mode of abstinence and asceticism, the individual takes on the original function of all institutions in order to put limits to coercion from technical circumstances and provide a reliable framework for orientation in technical everyday life.

The views of H. Schelsky, classified as “technocratic conservatism,” are discussed in detail in the following section **4. Helmut Schelsky and the “technocracy debate” in the 1960s and 1970s**. Here we prove the hypothesis that the period of the 1960s in German conservatism was marked by a number of attempts to develop a neutral or positive attitude towards the social and technological changes that took place in European societies after the second industrial revolution. Indeed, Schelsky forms one line with F. Pollock, G. Friedmann²⁴, actively refers to the works of his French peer J. Ellul. The author of the report “Man in Scientific Civilization” (1961), which served as a trigger for the *Technokratiedebatte* in Germany, develops the idea of objective constraint (*Sachzwang*), which underlies the modern model of the state. Political will-formation and freedom of decision-making are dying out, and values and political norms are being replaced by scientific and technical needs. However, Schelsky’s labeling as a “technical determinist” is questioned, but arguments are made to see his views as an expression of technocracy 2.0. in the sense of expertocracy.

The last paragraph of the chapter and the entire book **5. Gotthard Günther on the “consciousness of machines”** is dedicated to the practically unknown in Russia (and little studied abroad) philosopher, logician and cybernetics Gotthard Günther, who not only represents, together with Schelsky, the same intellectual generation, but also marks the beginning of a new “proactive

²³ See: *Rutkevich A. M.* A. Gehlen's Theory of Institutions, in: *Sociological Review*. 2001. Vol. 1. No. 2. pp. 3–25.

²⁴ Cf.: *Tavrizyan G. M.* Philosophers of the 20th century on technology and “technical civilization.” P. 186.

swing” of the pendulum of modernity. **Subsection 5.1. “Transclassical cybernetics”** sets out the content of Günther’s main philosophical work *Consciousness of Machines* (it is the 2nd ed. 1963 that is taken as paradigmatic for the new technocratic turn). Günther develops the project of an “intellectual history of technology” proposed by H. Freyer in order to establish the creative role of technology in the cultural system of society. As a “transclassical cyberneticist,” Günther hopes to overcome the dichotomy of matter and spirit within the framework of polysemantic logic, since the inclusion in scientific reflection of not only non-reflexive objects, but also reflexive processes requires a different metaphysics and a different logic. The focus is on the distinction between “classical” and “transclassical technology” (“second machine”). If the classical (Archimedean) machine produces work, then the second (cybernetic machine) produces information, which in turn forms the third ontological level along with the objective transcendence of material things and the “subjective introscedence” of self-consciousness. A cybernetic machine (the prototype of AI) means that technology is no longer a part of man as his tool, but man to a certain extent becomes part of technology, because only through it he can form his own image. **Subsection 5.2. The “American cyborg”** summarizes Günther’s ideas in the eschatological perspective of his letter to E. Jünger dated December 3, 1951 (from E. Jünger’s archive at DLA Marbach) on the issue of the metaphysics of history after the end of history, and the manuscript of the book *American Apocalypse*. Günther foresees a technical and mental expansion into hitherto untapped subatomic regions of genetics and cybernetics, the protagonist of which is America as a global pragmatic player. In conclusion, Günther’s primacy in the development of an object-oriented ontology of the cybernetic type is stated, as well as his precedence in the theory of the clash of civilizations or “fierce cultural wars” in the arena of planetary-technical civilization.

The **Conclusion** summarizes the work and recapitulates the main ideas of the thesis.

The main content of the thesis is presented in the following publications:

Monograph

Mikhailovsky Alexander. Mayatnik moderna. Diskussii o tekhnike v Germanii [*Pendulum of Modernity. Discussions about Technology in Germany*]. Moscow: Akademicheskiiy project, 2024.

**Publications indexed in WoS, Scopus or published in publications included in the HSE
Journal Lists A, B, C or D**

		Scopus	Список ВШЭ
1	<i>Mikhaylovskiy A.V. Verner Zombart kak kritik tekhniki [Werner Sombart as a critic of technology], in: The Russian Sociological Review. 2024. Vol 23. No. 2. Pp. 260–282.</i>	Q1	B
2	<i>Mikhaylovskiy A.V. Teodor Lessing, filosofskiye pokoleniya i tsikly kul'turkritiki v Germanii [Theodor Lessing, philosophical generations and cycles of cultural criticism in Germany], in: Questions of Philosophy. 2024. No. 11 (accepted for publication).</i>	Q2	B
3	<i>Mikhaylovskiy A.V. Kritika “tekhnotronnoy tsivilizatsii” u P.P. Gaydenko v aspekte nemetskoy kul'turkritiki [Criticism of the “technotronic civilization” by P.P. Gaidenko in the aspect of German cultural critique], in: Voprosy filosofii. 2023. No. 7. Pp. 6–12.</i>	Q2	B
4	<i>Mikhaylovskiy A.V. Chetyre osnovnykh voprosa filosofii tekhniki [Four fundamental questions in the philosophy of technology], in: Epistemology and philosophy of science. 2019. Vol. 56. No. 3. Pp. 225–233.</i>	Q1	B
5	<i>Mikhaylovskiy A.V. Filosofiya tekhniki Khansa Frayera (s perevodom stat'i H. Frayera “K filosofii tekhniki” [with the Russian translation of H. Freyer’s article “Towards the Philosophy of Technology”], in: Voprosy filosofii. 2011. No. 3. Pp. 62–79.</i>	Q2	B
6	<i>Mikhailovsky A.V. Na puti k “dukhovnoy istorii tekhniki”: fragment odnogo proyekta Khansa Blyumenberga [On the way to the “intellectual history of technology”: a fragment of one of Hans Blumenberg’s projects], in: Philosophy. Journal of the Higher School of Economics. 2022. Vol. 6. No. 3. Pp. 315–333.</i>	Q2	D
7	<i>Mikhailovsky Aleksandr V. Some Features of Russian Reception of Martin Heidegger in Relation to Debates Over His Black Notebooks, in: Russian Studies in Philosophy, 2021, 59:3. Pp. 183–204.</i>	Q4	C
8	<i>Mikhaylovskiy A.V. Inzhenernaya deyatel'nost' i tekhnicheskaya forma zhizni [Engineering activity and technical form of life], in: Philosophy of Science and Technology. 2018. Vol. 23. No. 1. Pp. 29–42.</i>	-	D

9	<i>Mikhaylovskiy A.V. Khaydegger budushchego i budushcheye Khaydeggera [Heidegger of the future and the future of Heidegger]</i> , in: <i>Horizon. Studies on Phenomenology</i> . Vol. 7. No. 2. 2018. Pp. 337–364.	Q4	C
10	<i>Mikhaylovskiy A.V. Kontsept [Concept]</i> , in: <i>Epistemology and Philosophy of Science</i> . 2009. Vol. XXII. No. 4. Pp. 162–166.	-	B
11	<i>Mikhaylovskiy A.V. “Metodika vmesto teorii poznaniya i naukoucheniya” Gugo Dinglera. Predisloviye k publikatsi [“Methodology instead of the theory of knowledge and science” by Hugo Dingler. Preface to the Russian publication]</i> , in: <i>Epistemology and Philosophy of Science</i> . 2006. Vol. X. No. 4. Pp. 184–192.	-	B
12	<i>Mikhaylovskiy A.V. Bor’ba za Karla Shmitta. O retseptsii i aktual’nosti ponyatiya politicheskogo [The struggle for Carl Schmitt. On the reception and relevance of the concept of the political]</i> , in: <i>Voprosy filosofii</i> . 2008. No. 9. Pp. 158–171.	Q4	B
13	<i>Mikhaylovskiy A.V. O “politicheskoy teologii” v krughe George [On the “political theology” in the George circle]</i> , in: <i>Voprosy filosofii</i> . 2012. No. 2. Pp. 163–167.	Q2	B
14	<i>Mikhaylovskiy A.V. Tri printsipa “politicheskoy teologii” v krughe Shtefana George [Three principles of “political theology” in the George circle]</i> , in: <i>Voprosy filosofii</i> . 2013. No. 5. Pp. 149–160.	Q2	B
15	<i>Mikhailovsky A.V. Dva literaturnykh svidetel’sstva o Velikoy voyne [Two literary evidences about the Great War]</i> , in: <i>Voprosy filosofii</i> . 2015. No. 10. Pp. 106–111.	Q2	B
16	<i>Mikhaylovskiy A.V. Nachalo “Chernykh tetradey”: ezotericheskaya initsiativa Martina Khaydeggera [The beginning of the “Black Notebooks”: the esoteric initiative of Martin Heidegger]</i> , in: <i>The Russian Sociological Review</i> . 2018. Vol. 17. No. 2. Pp. 62–86.	Q2	B
17	<i>Mikhailovsky A. Fjodor Stepun and Ernst Jünger: intellectuals at war</i> , in: <i>Studies in East European Thought: Volume 66. Issue 1 (2014)</i> . Pp. 77–87.	Q4	C

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A. Chapters in academic publications

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