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A PRACTICAL TURN IN SOCIOLOGY AT THE END OF THE 20TH AND BEGINNING OF THE 21ST CENTURY: MATERIAL CULTURE AND SOCIO-MATERIAL EXPERIMENT

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RESUME

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Relevance of the research

The dissertation is based on the debate between Popper[1] and Adorno[2] on the method of social sciences, which Frisby called "The Dispute over Positivism in German Sociology."[3] Adorno, Habermas, and their colleagues at the Frankfurt School describe Popper's position as positivist, although Popper himself positions himself as a critic of logical positivism. From the point of view of Adorno and Habermas, Popper's positivism differs from logical positivism in that it rejects the idea of universal science but insists on the possibility of a universal scientific method – falsificationism. For Popper, the existence of a universal scientific method is a prerequisite for the objectivity of research conclusions, and the only way to implement it is through experimental procedures.[4]

The anti-sceptical logic of critical sociology of Adorno and his colleagues at the Frankfurt School involves shifting the emphasis from the search for objective truths to communication aimed at achieving a just order by also drawing on subjective experience. However, this does not solve the problem of subjectivism in sociology, since it is unclear how justice and rationality of actions within the community relate to each other. If Popper is right and there is no objective method in the social sciences, then the observable world is illusory and there are no common grounds for social order. If critical sociologists are right and the foundations for social order are determined exclusively by morality and ethical principles, then it is unclear how norms derive their power and are not subject to falsification.

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[1] Popper, K. The Logic of Social Science // Questions of Philosophy. – 1992. – Vol. 10. – Pp. 65–75.

[2] Adorno T. W. On the Logic of the Social Sciences // Questions of Philosophy. – 1992. – Vol. 10. – Pp. 76–86.

[3] Frisby D. The Popper-Adorno controversy: The methodological dispute in German sociology //Philosophy of the Social Sciences. – 1972. – Vol. 2. – No. 1. – Pp. 105–119; Keuth H. (2015). *The positivist dispute in German sociology: A scientific or a political controversy? Journal of Classical Sociology, 15(2), 154–169.*

[4] Ray L. J. Critical theory and positivism: Popper and the Frankfurt School //Philosophy of the Social Sciences. – 1979. – Vol. 9. – No. 2. – Pp. 149–173.

Another version of anti-positivism is offered by the strong programme of the Edinburgh School of Sociology of Knowledge, primarily Blur[5] and the actor-network theory (ANT) that later separated from it. However, the strong programme of the sociology of knowledge relies heavily on the reception of Wittgenstein's ideas, but fails to answer the question of how these ideas apply to itself.[6] ANT researchers combine the working elements of the early Frankfurt School's argumentation, drawing on the works of Foucault and Benjamin, and the strong programme of the sociology of knowledge within the framework of material semiotics. This allows ANT to construct an alternative anti-positivist programme of the sociology of knowledge,[7] which affirms the multiplicity of scientific methods and rejects the monopoly of scientific (theoretical) rationality on the cognition of reality.[8]

The solution to the problem of the multiplicity and non-universality of the method of ANT researchers can be described as a socio-material experiment (SME) in order to distinguish it from natural science.[9] For Latour, the differences between description and experiment are minimal; both are aimed at public demonstration and persuasion of observers: the key characteristic of the experiment is its publicity.[10] SME is not guided by positivism in its goal of testing causal chains for truth, but tests the degree of distortion of the instruments used to describe situations. The outcome of SME is determined by the stability of the description, which depends on the limitations of the tools of description, i.e., the capabilities of optics, and the

[5] Bloor D. Essay Review: Popper's Mystification of Objective Knowledge: KR Popper, Objective Knowledge: an Evolutionary Approach. Oxford: Clarendon Press, 1972. //Science studies. – 1974. – Vol. 4. – No. 1. – pp. 65–76.

[6] Bloor D. Anti-Latour // Logos: Philosophical and Literary Journal. – 2017. – Vol. 27. – pp. 85–134; Latour B. To David Blur... and others: a response to David Blur's "Anti-Latour" // Logos: Philosophical and Literary Journal. – 2017. – Vol. 27. – pp. 135–162.

[7] Star S. L. Introduction: The sociology of science and technology //Social Problems. – 1988. – Vol. 35. – No. 3. – pp. 197-205.

[8] Law J. After Method: Disorder and Social Science. – Gaidar Institute Publishing House, 2015.

[9] Latour proposes the name collective or socio-technical experiment. We will use the concept of SME to maintain a connection with material semiotics and not limit ourselves exclusively to Latour's ideas. See: Callon M. Is science a public good? Fifth Mullins Lecture, Virginia Polytechnic Institute, 23 March 1993 //Science, Technology, & Human Values. – 1994. – Vol. 19. – No. 4. – pp. 395-424; Latour B. From the World of Science to the World of Research? //Science. – 1998. – Vol. 280. – No. 5361. – Pp. 208–209; Latour B. Which protocol for the new collective experiments //Kultur im Experiment. – 2004. – pp. 17–36.

[10] Latour B. The Force and the Reason of Experiment: For Françoise Bastide. In memoriam //Experimental inquiries: Historical, philosophical and social studies of experimentation in science. – Dordrecht : Springer Netherlands, 1990. – pp. 49–80.

limitations of the rationality of a given culture, which is embodied in the material organisation of social interactions.

Degree of development of the topic

Despite the fact that experiments are a key case for ANT research,[11] in ANT, the experimental nature of methods is conceptualised not so much as a rigid constraint describing an experimental situation in a laboratory or in the field,[12] but rather as an attribute of action – a property of its incompleteness, variability or fluidity, which Law and Moll describe as topology,[13] and Callon as performativity.[14] Thus, the experimental nature of the ANT method manifests itself as the variability of the mode of action due to the presence of hidden possibilities and the representation of this variability of action in descriptions.[15] An experiment in ANT has a clear core – an object or situation of change (a case) – but the boundaries of the experiment can be questioned and expanded, turning from a single case into a chain of cases.[16]

Law describes the multitude of experimental methods in ANT as different applications of the method of material semiotics, which considers the variability of objects and actors moving in social and material networks.[17] Law and his colleagues

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[11] Latour B., Salk J., Woolgar S. Laboratory life: The construction of scientific facts. – 2013.

[12] Marres N., Stark D. Put to the test: For a new sociology of testing // The British Journal of Sociology. – 2020. – Vol. 71. – No. 3. – Pp. 423–443.

[13] Law J., Mol A. Situating technoscience: an inquiry into spatialities //Environment and planning D: society and space. – 2001. – Vol. 19. – No. 5. – Pp. 609–621.

[14] Callon M. Markets in the making: Rethinking competition, goods, and innovation. – Princeton University Press, 2021.

[15] It can be argued that ANT researchers contrast positivist experimentalism with playful experimentalism, which was discussed in particular by Goffman, but limited to changing the frames of interaction and to a lesser extent affecting changes in the action itself or in the roles of participants, see: Goffman. I. Frame Analysis: An Essay on the Organisation of Everyday Experience. Moscow: Institute of Sociology of the Russian Academy of Sciences, 2003; Goffman, E. The Presentation of Self in Everyday Life: Notes on the Social Organisation of Gatherings. Moscow: Elementary Forms Publishing House, 2017.

[16] Law J. Actor-network theory and material semiotics // The new Blackwell companion to social theory / ed. by B. Turner. – Oxford : Blackwell, 2009. – P. 141–158.

[17] The quantitative formalization of the ANT experiment will not be considered in this paper, however, it can be presented as a "reverse" Rubin model (i.e., analysis not of a set of similar objects and comparison of effects between them, but analysis of the action of a single object in different social conditions) in combination with a factorial experiment to establish how and depending on what various outcomes are formed and how they depend on the conditions in which the object operates. This formalization is currently under development and will be further refined in the future.

also draw on the Frankfurt School for the foundations of material semiotics: from the works of Foucault and, in part, Benjamin.

Foucault's main thesis is that the problem with Popper's approach to social science methods is that Popper reads Plato too literally, considering his model of the ideal state to be a guide to action. Unlike Popper, Foucault is not concerned with the technical instrumentalism of the state, but with the very structure of state control as such.[18] However, from the point of view of STS researchers, a limitation of Foucault's approach remains his idea that regulation is carried out through external boundaries, which represent the conditions of possibility and the goal of the social sciences in their expansion.[19] Turning to the idea of control, Law offers a different approach based on describing visible elements as part of hidden and invisible allegorical networks through which the function of control is exercised. These networks are no longer described through Foucault's idea of explicit control and power relations, but through Benjamin's concept of the allegorical object, where the latter acts as an instrument of implicit regulation and a form of hidden representation.[20]

Another important figure who demonstrates the distinction between STS and Popper is Alexander, as a representative of the strong programme of cultural sociology and one of the last great theorists of sociology. In Volume 4 of Theoretical Logic in Sociology, The Dispute over Popper and Adorno's Positivism, regardless of differences in interpretation and ways of opposing Popper or agreeing with him, most of the research refers to the metaphor of "science as culture" as fundamental and presents culture as a practical concept.[21] Alexander draws an analogy between Popper's pursuit of objective experimental knowledge and Parsons's commitment to the development of theoretical sociology as a way to avoid value judgements in the

[18] Foucault M. (2011). Discipline and Punish: Lectures given at the Collège de France in 1982–1983. – Moscow: Nauka. – pp. 261–267; Williams K. (1975). Facing reality – A critique of Karl Popper's empiricism. Economy and Society, 4(3), 309–358.
[19] Law J. Objects and spaces // Sociological Review. – 2006. – Vol. 5. – No. 1. – pp. 30–42.
[20] Law J. After the method: disorder and social science. – Gaidar Institute Publishing House, 2015.
[21] Law J. On sociology and STS // The sociological review. – 2008. – Vol. 56. – No. 4. – Pp. 623–649.

humanities.[22] For Alexander, this commitment required a return to the classical sources of sociology, primarily in the works of Durkheim and Weber,[23] and the establishment of a strong programme of cultural sociology, where culture is understood as an autonomous reality that can explain observable social processes.[24]

Unlike both Alexander and Popper, ANT defines culture not as an autonomous (ideal) reality or practice, but as the result of aesthetic judgements that produce material objects or are produced in connection with them. In describing material culture, Law and his colleagues use the Kantian interpretation of Walter Benjamin's early works, in particular his concept of allegory and the allegorical object.[25] In the social debates of the late 1990s and early 2000s, this line of thought was developed by Lash.

Lash develops the idea of a cultural ("bad") object and thereby provides grounds for a different, non-theoretical, material interpretation of culture. Since the early 1990s, this interpretation has formed the basis of the project of sociology as an experimental science that describes the world of images, not in the form of ideas, but in the form of their material representations.[26] Lash criticises Latour and partly continues the line associated with Adorno's anti-sceptical approach, but draws on the texts of his colleague Benjamin, showing that a material understanding of culture is based on the distinction between the allegorical as a composite, 'bad' material object and the symbolic or theoretical object. Benjamin's allegorical object in Lash not only opposes Alexander's ideal symbol, but also concretises and gives material embodiment to the idea of control developed by Foucault, while showing how control is related not to the external boundaries of the object, but to the way it is organised. Thus, although Lash does not directly belong to the circle of ANT

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[22] Alexander J. C. Theoretical Logic in Sociology: The modern reconstruction of classical thought: Talcott Parsons. – University of California Press, 1982. – Vol. 4. – P. 196.

[23] Alexander J. C., Smith P. The strong programme in cultural sociology: Meaning first // Routledge handbook of cultural sociology. – Routledge, 2018. – pp. 13–22.

[24] Kurakin D. The "strong programme" in cultural sociology: historical-sociological, theoretical and methodological comments. Afterword by the editor of the special issue // Sociological Review. – 2010. – Vol. 9. – No. 2. – pp. 155–178.

[25] Benjamin, W. The Origin of German Baroque Drama. Agraf, 2002.

[26] Law J. After the method: disorder and social science. – Gaidar Institute Publishing House, 2015.

researchers, his critiques are key to understanding and reconstructing the mode of operation of the central ANT method—the socio-material experiment (SME).

The description of the material embodiment of culture allows ANT researchers to bridge the gap between the sceptical (strong programme of sociology of knowledge) and anti-sceptical (ethnomethodologists) camps in their interpretation of Wittgenstein's "following the rule."[27] If the sociological method is understood as Wittgenstein's "rule," then the experimental nature of the method involves testing two situations: the rules-methods themselves through their variability and possibilities for assumptions, and the social environment in which they are implemented through confrontation with material and organisational cultural constraints.[28] At the same time, cultural constraints, in the case of ANT, should be understood as constraints on rationality or its particular form, embodied in the modes of organisation characteristic of that culture.[29] Thus, the possibility of following the rule-method and its experimental nature are described by two constraints: the possibilities of deviation from action and the mode of organisation of action that is characteristic of a given culture and reflects its rationality.

Object and subject

The object of the study is the socio-material experiment as a method, the reconstruction of which allows us to show how objectivity is achieved in sociology and what determines the material boundaries of rationality. The action of the SME determines the boundaries of applicability of the approaches of "material semiotics" in ANT and is consistently reconstructed using theoretical and applied case studies.

The subject of the study is the empirical method of action using the example of Russian post-socialist culture. Its analysis reveals the limitations of the

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[27] Lynch M. Developing Wittgenstein: The Decisive Step from Epistemology to the Sociology of Science // Sociology of Power. – 2013. – No. 1-2. – Pp. 155–213.

[28] The question of different rationalities in connection with cultural differences is actively discussed in anthropology, see review: Volkova M. D. Critique of Anthropological Reason: Undoubted Truth and Cuban Predictors // Sociology of Power. – 2021. – Vol. 33. – No. 4. – Pp. 147–168.

[29] In this case, it is worth referring to the understanding of culture as a set of values and methods of evaluation, which Callon and his colleagues develop within the framework of new economic sociology, see: Çalışkan K., Callon M. Economisation, part 1: shifting attention from the economy towards processes of economisation //Economy and society. – 2009. – Vol. 38. – No. 3. – pp. 369-398.

applicability of the SMA, which may be related to both material aspects (aesthetics) and social norms (ethics). This allows us to understand the nature and applicability of the CMA depending on the specifics of the case and the nature of the experiment.

Research goal:

To describe how the socio-material experiment (hereinafter referred to as SME) method works and to identify the limits of its conceptual and practical applicability, based on a historical and theoretical reconstruction of the development of the approach in the sociology of science and technology (STS) and, in particular, in actor-network theory (ANT), as well as on empirical cases describing the action of SME in Russian post-socialist culture.

Research objectives:

1. To conduct a historical and theoretical reconstruction of the SME method as the basis of the experimental method in the ANT research version.

2. To show how the SME method forms the basis of the empirical approach in sociology: based on historical reconstruction in the formation of theory and on the analysis of practical cases in its testing.

3. To analyse how the ethical boundaries of experimentation in the social sciences are formed

4. To show how the aesthetic (material) boundaries of a particular culture describe the limitations of its rationality.

5. Show how the SME method makes the ethical and aesthetic boundaries of culture visible and allows their stable form to be identified.

6. Identify how the core of the method/culture is formed as a combination of ethical and aesthetic methods for describing their boundaries.

7. Present the interconnection between the social (ethical) and material (aesthetic) elements of the experiment, which allow it to be controlled and the SME method to be used in a simplified express form for practical purposes.

Scientific novelty

1.   Historiographical novelty: The study introduces a significant number of English-language sources (works by Stengers, Haraway, Law, Mol, Lynch, and Lash, which are little known in the Russian tradition) into Russian scientific circulation in ANT studies and related works that have not been described or analysed in Russian-language academic discourse. In addition, these sources are compared with the Russian-language tradition of research in the field of ANT, which allows for a more complete correlation with the Euro-American sociological tradition. Furthermore, the previously undiscussed reception of Benjamin's ideas in ANT is examined.

2.   Theoretical novelty: The study shows that the body of ANT research can be described as an alternative to the "grand theories" of the 20th century, such as those of Parsons or Tilly. ANT studies are united by the conceptual method of the socio-material experiment. At the same time, the SME operates at an intermediate level between macro- and micro-approaches, which allows sociology in the ANT version to retain its status as an experimental and empirical non-positivist science and requires a revision of existing methods as experimental.

3.   Methodological novelty: The study offers a description of the experimental method not in a positivist version, but as a conceptual model, where the object of experimentation is the stability of description or representation. The conceptual model of SSE makes it possible to identify the reconstruction of hidden connections and relationships between phenomena, as well as to analyse long-term historical and institutional transformations.

4.   Practical novelty: The study proposes the operationalisation of the "material boundaries" of culture, which are associated with the limitations of rational action in accordance with the limitations of objectivity of descriptions within a given culture.

Theoretical significance

The historical and theoretical reconstruction of the SME method and the definition of the boundaries of the experimental method in sociology show a possible response to Popper's criticism of sociology as a science that, in his view, belongs to the world of culture and ideas rather than to the world of experience and experimental science. However, ANT researchers fundamentally change the very method of scientific dispute (controversy): they do not enter into direct confrontation with Popper, but in fact offer an alternative model of the experimental method.

The implicit nature of the ANT experiment in the social sciences explains the choice of the method of historical-theoretical reconstruction, which combines two approaches to historical cases that existed in sociology in the 1970s–1990s. In the article "Developing Wittgenstein," Lynch presents them as Blur's method of historical cases, which examines macrohistorical phenomena, and the microanalysis of ethnomethodological theory-making, where the case of "discovery" is constructed post factum.[30] Based on Shapin and Schaffer's description of how experiments work,31[31] it can be said that experiments at the macro level arise in disputes between theorists, but they can remain hidden and invisible, while only individual cases considered by theorists are visible. Thus, this study shows how the experimental method works and how it bridges the gap between the macro and micro levels in social and historical descriptions.

The emphasis on the metaphor of "science as culture" in ANT allows us, within the framework of the reconstruction of the socio-material experiment method, to show how the boundary between culture as an ideal concept and material practice is constructed. At the same time, this method of distinguishing between ideal structures and practical elements in a concept and the ways in which they can be differentiated can also be applied to other concepts, allowing us to show what unites

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[30] Lynch M. Developing Wittgenstein: the decisive step from epistemology to the sociology of science // Sociology of power. – 2013. – No. 1-2. – P. 155–213.

[31] Shapin S., Schaffer S. Leviathan and the air-pump: Hobbes, Boyle, and the experimental life. – Princeton University Press, 2011.

and how differences between ideal constructs (rules) and practical actions are formed.

Practical significance

The analysis of the material and ideal boundaries of post-socialist culture presented in the second chapter of the dissertation shows the extent to which this concept is a concept that allows us to talk about a special type of social order that has formed in the territory of the former USSR, which determines the characteristic features of the institutional import of regulatory practices and documents.

The work considers two versions of the socio-material experiment – the full detailed method and the logic of the express method.[32] This allows the socio-material experiment method to be used quite flexibly in applied research, varying its application from more complete and saturated forms to faster and more formal ones. In addition, Section 2.3 shows how, at the intersection of two mobile techniques borrowed from Euro-American practice, a new canon of post-socialist culture is being formed in the format of "urban studies." This allows us to consider the SME analysis method not only as analytical, but also as engineering, which shows the possibilities of constructing new techniques and methods of regulation based on existing ones.

The SME method, focused on working with mobile techniques, shows the features of their adaptation and scenarios for the development of changes, as well as the possibilities for testing and managing them. This allows for more informed predictions in the field of regulation, the creation of new organisational forms and institutional design.

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[32] For details on how express methods work, see: Kartavtsev V. V. Rapid Ethnography (REAPFQI+): Towards the Pragmatics of Field Surveys // Sociology of Power. – 2021. – Vol. 33. – No. 3. – Pp. 52–77.

Methodology

Structure of case description and selection

The historical and theoretical reconstruction of the SME method is based on the established ANT concept of the two-part nature of the experiment – laboratory (theoretical) and field (empirical).[33] The general structure of the work and the structure of individual chapters are based on this principle: the dissertation contains two chapters, one historical-theoretical and the other empirical. The first chapter examines the genealogy of concepts and, on this basis, identifies the main elements of conceptualisation, while the second chapter shows how the SME method works depending on the specifics of the situation and the nature of the mobility of a given technical object.

In terms of structure, each chapter follows the logic of three types of justifications. These are identified as the framework of the experiment by Shapin and Sheffer, describing Boyle's experiment: material or technical justifications, literary and social justifications.[34] Each justification is built around a specific mobile technology. The transfer of each technique to a new network of relationships is a separate case and is considered as a case study. Three cases in each chapter constitute a minimum series, which characterises the formation of the SME method in the first chapter and the formation of the concept of post-socialist culture in the second.

The main methodological core of the work is the family of methods of material semiotics,[35] which can be focused on the analysis of the material aspect (the object and its ontological characteristics) or on the analysis of the socio-semiotic aspect (epistemology and its variability). The first chapter examines the object as a "black box" and various epistemological issues related to it. In the second chapter,

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[33] Recent works on this topic include: Marres N., Stark D. Put to the test: For a new sociology of testing // The British Journal of Sociology. – 2020. – Vol. 71. – No. 3. – Pp. 423–443.

[34] Shapin S., Schaffer S. Leviathan and the air-pump: Hobbes, Boyle, and the experimental life. – Princeton University Press, 2011.

[35] Law J. Actor network theory and material semiotics // The new Blackwell companion to social theory. – 2008. – Pp. 141–158.

on the contrary, the subject of analysis is epistemologies, which take different forms but work with objects that are similar in structure.

Following the method of material semiotics, the case descriptions are not only illustrative but also conceptual in nature: the use of different languages of description for a single case allows us to experiment with ways of representing it. Since the cases are based on technical objects and ideas embodied in them materially, reconstructing the way they work allows us to trace the boundaries between the material action of objects and the action of concepts-ideas.

Case analysis: historical-theoretical and empirical

The key unit of analysis is the case. In the first chapter, historical-theoretical cases are represented by various objects – the "black box", various types of its trajectories and material representations. In the second chapter, practical cases include regulatory instruments and the networks they form – land use and development rules, elementary classics of fundamental sociology, and technical specifications as a canonical form for urban studies.

The analysis of historical and theoretical cases follows the logic of the genealogy of metaphors, i.e., it offers an analysis of the general logic of case descriptions among different theorists and their reinterpretations in order to form a more detailed and developed case structure and the limits of its variability. At the same time, this genealogy is based not only on Foucault's tools of discursive analysis, but also on questions of the organisation of descriptions, which Law examines in detail within the framework of the material semiotics approach.

Empirical case analysis focuses more on the logic of analysing historical cases, ranging from Blur to Latour and Law. However, unlike the first two, the analysis emphasises not so much social subjects as objects-instruments and techniques for their application. The analysis of these cases is also related to reconstruction, but in this case it is not the genealogy of metaphors, but the genealogy of methods, that is, a representation of how the ways of describing

empirical reality and the techniques for systematising these descriptions change and transform.

Case selection

The cases in the first chapter were limited to three main themes, which are united by the reception in sociology of the concept of culture and experimentalism based on Benjamin's early works and his distinction between symbol and allegory, as well as his description of the camera. The first theme is related to the concept of the black box – Benjamin's camera.[36] The second analyses the trajectories of the "black box" object in the works of Scott Lash, based on Benjamin's text "The Storyteller".[37]The third story includes an analysis of explicit and hidden representations in the works of Law and his colleagues, where Law uses a concept borrowed from Benjamin – allegory as a way of describing hidden representations.[38]

The case studies in the second chapter unfold in the post-socialist space of Russia and, in part, Kazakhstan, and focus on ways of describing the city and fundamental sociology as hidden allegorical objects. At the intersection of these ways of describing, a new object appears – the canon of 'urban studies', which already clearly represents the characteristics of the material culture of post-socialist Russia and Kazakhstan.

Empirical material

The materials for the first chapter were collected as part of the preparation of a master's thesis in sociology devoted to the reception of Walter Benjamin's concept of allegory in actor-network theory. These materials were subsequently expanded and supplemented for a more detailed analysis as part of the reconstruction of the socio-material experiment method.

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[36] Benjamin W. The Work of Art in the Age of Mechanical Reproduction. – Moscow: Medium, 1996.

[37] Benjamin, W. The Storyteller: Reflections on the Works of Nikolai Leskov // Benjamin, W. Masks of Time: Essays on Culture and Literature / trans. A. Belobratova. – St. Petersburg: Symposium, 2004. – pp. 383–418.

[38] Benjamin, W. The Origin of German Baroque Drama. – Agraf, 2002.

The materials for the second chapter were collected during the fieldwork stage in 2020–2021 in two regional Russian cities, and also include observations made while working at the Russian Housing Construction Fund (2014–2015) in the urban planning department and work with concepts from the field of urban theory as part of the preparation of courses on Urbanism in 2018–2022 as part of the master's programme at the Moscow Architectural School (MARCH).

Materials on the development of fundamental sociology and analytical reading techniques were collected between 2019 and 2024, including as part of a series of analytical readings at MARCH (more than 30 meetings held), which she led together with architect Marat Nevlyutov.

Materials on the formation of technical tasks within the framework of urban studies were collected between 2014 and 2020 during the preparation of a study on the development of urban discourse in Russia using the example of international architectural competitions (Zaryadye, Serp & Molot, Derbent master plan), which were later supplemented by technical specifications for the annual All-Russian competition for the best projects for creating a comfortable urban environment in small towns and historical settlements (held since 2018).

Materials on urban planning in Kazakhstan were collected between 2023 and 2024 as part of the work of the Almatygenplan Research Institute (Almaty, Kazakhstan) on urban development and planning documentation.

Provisions for protection

1. The ANT experiment shows that sociology, as an empirical discipline, offers an experimental approach to assembling various methods in order to identify the material foundations and boundaries of culture.

2. A complete description of the socio-material experiment (SME) requires a combination of two approaches: historical and theoretical reconstruction of the principles of the SME and empirical verification of its operation.

3. The ethical boundaries of the application of SME are determined by the normative framework of the culture under study, while the aesthetic boundaries of SME are conditioned by the material aspects of cultural practices and artefacts.

4. SME is carried out through the aesthetic and ethical integration of various methods of analysis. These methods are aimed at studying the mobility of experimental objects and their interaction with the explicit and implicit material boundaries of culture.

5. The area within which the results of SME remain valid delineates the boundaries of the material embodiment of culture. Beyond these boundaries, culture exists only in an ideal, immaterial form.

Reliability/validation

The research materials were discussed at seminars, including a seminar at Nazarbayev University, Astana, in January 2023. In addition, the technique of "analytical reading" was tested in seminars on urban sociology at the Moscow Architectural School (MARCH) in collaboration with architect Marat Nevlyutov (more than 30 meetings since autumn 2020).

Four publications were prepared in journals indexed in WOS/SCOPUS, including one publication in a first-quartile journal, as well as seven articles in HAC journals, including two reviews and one translation, and two RSCI publications, including an introductory article for a thematic issue, where the author of this study acted as guest editor. Another issue of the RSCI journal, where the author of this study acted as guest co-editor, is scheduled for release in the fourth quarter of 2025.

In addition, three public lectures on the topics of the dissertation were given. The author of this study participated in three international scientific conferences with presentations in English.

The theoretical provisions were tested and discussed in the preparation of the following courses:

- 2024–2025 – course "Contemporary Social Theory" for bachelor's degree students, 3rd year, programme "Contemporary Social Theory", ION RANEPA.

- 2020–2022 – course "Sociology of the City", bachelor's degree, 2nd year, V.L. Glazychev Department of Territorial Development, RANEPA.

- 2020, 2023 – Course "Sociology of the City", Bachelor's degree, 4th year, programme "Contemporary Social Theory", ION, RANEPA.

- 2020–2021 – History of Urbanism, Territorial Development Management programme, MARCH-RANEPA.

- 2018–2020, 2022 – Urbanism, Master's programme, 1st year, MARCH.

- 2018–2019 – Urban Planning Analysis, UTRO programme, MARCH-RANEPA.

- 2017–2019 – Cultural & Contextual Studies, Urban Planning, Bachelor's Degree, 2nd year, MARCH.

The results of the research became the methodological basis for the development of a master plan for the polycentric development of the city of Almaty, Kazakhstan (2023, in the process of approval), and also serve as the basis for work in the field of commercial sociology, including research on socio-economic topics.