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СОЦИАЛЬНАЯ ТОПОЛОГИЯ НАУКИ В НАЦИОНАЛЬНОМ И ТРАНСНАЦИОНАЛЬНОМ КОНТЕКСТАХ: СЛУЧАЙ СОЦИАЛЬНЫХ НАУК

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Описываются возможности применения социальной топологии П. Бурдьё для исследования неравенства в науке в национальном и транснациональном контекстах. Утверждается, что в условиях глобализации науки дискуссии об ее эгалитаризме, начавшиеся примерно в середине прошлого века, все активнее выходят за пределы национальных границ. Для изучения глобального неравенства в науке часто используются теоретические рамки мир-системного анализа, неоинституциализма, а также теории глобального говернментализма. Утверждается, что данные теории часто приводят к редукционизму, который игнорирует символическое измерение научной деятельности. Предлагается переоценить эвристические возможности социальной топологии П. Бурдьё, нивелирующей указанный недостаток других теорий. Исследование направлено на демонстрацию релевантности данной теоретической рамки для изучения неравенства в разных шкалах научной деятельности в связи с тем, что основной фокус внимания французского социолога находился на национальных академических системах. Определяются общие положения топологической концепции поля П. Бурдьё, а также единицы социального порядка поля науки. Продемонстрирована роль различных форм капитала в определении структуры социального пространства. На примере социальных наук рассматриваются особенности формирования научных полей, их взаимосвязь с другими полями, а также структура в разных шкалах. Структура научного поля в национальной шкале может быть обозначена в виде дихотомии *доминирующие – доминируемые* или *центр – периферия*. В транснациональной шкале данная дихотомия также сохраняется, но представлена национальными полями. Среди них доминирующее положение занимают США и Великобритания, которые обладают наибольшим объемом символической власти. Структура транснационального научного пространства, однако, является более сложной и включает в себя пересекающиеся поля национального,

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регионального и более глобального масштаба. Утверждается, что применение теоретической рамки поля к исследованию транснационального научного поля будет оставаться привязанным к установлению и объяснению особенностей взаимодействия национальных научных полей до тех пор, пока государства будут сохранять свои институциональные границы в научной деятельности.

Ключевые слова: социальная топология; теория поля; неравенство в науке; научный капитал; транснационализм; П. Бурдьё.

THE SOCIAL TOPOLOGY OF SCIENCE IN NATIONAL AND TRANSNATIONAL CONTEXTS: THE CASE OF SOCIAL SCIENCES

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The article explores the possibilities of application P. Bourdieu's social topology in the studying of inequality in science in national and transnational contexts. It is argued that in the conditions of globalising science, discussions about its egalitarianism, which began approximately in the middle of the last century, are moving beyond national borders. For the purposes of studying global inequality in science, scholars often apply the theoretical frameworks of world-systems analysis, neo-institutionalism, and the theory of global governance. However, these theories often lead to reductionism which ignores the symbolic dimension of scientific activity. The article suggests reassessing the heuristic potentiality of P. Bourdieu's social topology, which mitigates the mentioned drawback of other theories. The article aims to demonstrate the relevance of this theoretical framework for the study of inequality in different scales of scientific activity due to the fact that the French sociologist focused mainly on national academic systems. The article defines the general provisions of P. Bourdieu's topological concept of the field and the units of the social order of the scientific field. It also demonstrates the role of various forms of capital in determining the structure of social space. Based on the case of social sciences, the article explores the formation of scientific fields, their interaction with other fields, and their structure in different scales. The structure of the scientific field on the national scale can be defined as a dichotomy of *dominant – dominated* or *centre – periphery*. On the transnational scale, this dichotomy is also relevant but it is represented by national fields. Among them, the dominant position is occupied by the United States and Great Britain, which have the largest amount of symbolic power. The structure of the transnational scientific space, however, is more complex and includes overlapping fields of national, regional and more global dimensions. The article argued that applying the theoretical framework of the field to the study of the transnational scientific field will remain tied to the definition and explanation of the peculiarities and the interaction of national scientific fields as long as national states keep their institutional boundaries in scientific activity.

Keywords: social topology; field theory; inequality in science; scientific capital; transnationalism; P. Bourdieu.

Introduction

The entry of Belarus into the European higher education area (EHEA) and Bologna process intensified international academic communication in various forms, from participation in scientific events and projects to publishing scientific works in journals. On the one hand, these processes contribute to positive change. On the other hand, the national system faced growing institutional pressure based on various academic rankings. The issues of publication activity and academic rankings are often declared as a priority in science policy but at the same time they become challenging tasks for organisations and scholars.

A similar trend of globalising science is covering more and more countries. The growing number of researchers confronting the norms and requirements of the production and spreading of scientific knowledge in the international context fuels debate about the non-egalitarian nature of science [1, p. 72], replacing the focus from national onto global inequality.

Today, several approaches offer a theoretical framework for studying scientific production in the international space. The key ones include world-systems analysis, neo-institutionalism, a theory of global governance, and a field theory. Despite the differences between these approaches in theoretical principles, they all enable to use a vertical scale for differentiation of structure of the scientific space in the definitions of *dominant – dominated*. Authors referring to these theories suggest dividing the international scientific space into core and periphery representing the countries of the so-called global North and global South, respectively [2]. In most of the cases, the positions of dominance of various countries are explained by the inclusion of scientific production in broader social and ideological

structures. The arguments of this thesis can be considered rather fair, however, as some researchers note, they can also lead to reductionism, which ignores the symbolic component of the scientific production system [3, p. 195].

A broader theoretical framework in the form of a field concept was proposed by P. Bourdieu. This concept has remained outside the attention of scholars of science studies for a very long time, but now its heuristic strength is being reassessed. In this article, we also sought to contribute to this reassessment trying to demonstrate the applicability of this concept to the social science field in national and transnational contexts.

The topological notion of the scientific field

The notion of the field is a key notion in P. Bourdieu's topological conception of social space. According to his logic, the field is a relatively autonomous domain of activity with special rules for the functioning of institutions and agents relations. Each domain of activity can be considered a social field. For example, in his works, P. Bourdieu addressed the political and economic fields, as well as fields of religion, journalism, science, literature, and art. He also outlined other adjacent fields or subfields, as in the case of television.

The French sociologist identified some general properties of the field. Firstly, it is the conflicting nature of relations between agents, which reflects in the struggle for dominant positions (or the specific capital) in a given field; secondly, the irreducibility of the stakes of struggle and interests of one field to the stakes and interests of other fields; thirdly, the need for a habitus relevant to the field, which allows one to follow the rules and practices in a particular field; fourthly, the structure of the field is determined according to the structure of distribution of a specific type of capital in the field; finally, the unification of agents in a given field by a set of shared fundamental interests which are often not recognised and not reflected, forming the doxa of the field [4].

According to P. Bourdieu, the scientific field is a space of competitive struggle between positions (achieved in the previous struggle), where a specific stake is a monopoly on scientific authority, defined as technical ability and at the same time as social power, understood as the ability to speak and act on behalf of science legitimately [5, p. 474].

The relatively autonomous field of science emerged as a result of the differentiation of various fields and the growth of their autonomy due to the interaction of several factors. Some of them were associated with deepening the division of labour, while others – with some social, political, and economic processes accompanying the formation of national states. The latter played an important role in the formation of autonomous fields of cultural production, in which the activities of agents are focused on the production and distribution of symbolic goods, for example, in the form of works of art or scientific truths, because they stayed for a long time under the control of the church. The researchers admit that the problem of defining the precise chronology of the formation of social sciences as a field remains open for discussion today but note that their institutionalisation is associated with the formation of nation-states and their academic systems [6, p. 687].

The economic and political fields can influence the fields of cultural production in different ways, depending on the specifics of their structure and the balance of power between them. For example, the market can weaken the restrictions imposed by the state, but at the same time introduce its own logic of profit, while the state, in turn, is able to counterbalance the effect of the market with cultural policy [7]. Concerning the scientific field, the effects of interaction with the economic and political field can reflect in the specifics of scientific policy, which determines the balance between the fundamental and applied science, the hierarchy of goals and priorities of scientific activity, and its censorship in a broad sense.

The social order of the scientific field, besides agents and relations between them, is also formed by the resources inherited from the past in objectified and incorporated forms, as well as by a number of institutions that provide the reproduction of the social order. P. Bourdieu defines objectified resources as materialised resources (for example, books, equipment, etc.) and institutions that provide the production of scientific knowledge, while he associates incorporated resources with scientific habitus, which is the system that generate patterns of perception, assessment and action and which enable the selection of particular objects, solutions and evaluation of those solutions [5, p. 491]. Moreover, in the scientific field, there are various types of institutions for the production and circulation of scientific goods, for (re)production of producers and consumers (in the form of educational systems that form a scientific habitus), instances of recognition (in the form of academies, awards, etc.) and instances and instrument for the dissemination of the results of scientific production. Among the latter the French sociologist places particular emphasis on scientific journals, «which, through selection implemented in accordance with prevailing criteria, ensure the recognition of products that meet the principles of official science, constantly giving an example of what deserves to be called science, and carry out actual censorship of heretical products either by open exclusion of them, or by determining what can be published, discouraging the desire to be published»[1] [5, p. 491].

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The structure of social space, including the social field, is determined by the distribution of the symbolic capital relevant to it. The category of capital is one of the cornerstones in P. Bourdieu's social topology. Generally, capital is resources of both tangible and intangible forms that allow one to legitimately exercise power in the social space. P. Bourdieu distinguishes four forms of capital: economic, cultural, social, and symbolic, which differ in liquidity, convertibility, and the potential for inflation.

Economic capital coincides with the general concept defined in the framework of economic theory. This type of capital is «immediately and directly convertible into money and may be institutionalised in the form of property rights» [8, p. 242]. Social capital refers to real or potential resources associated with «possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition – or in other words, to membership in a group» [8, p. 247]. Cultural capital is more multidimensional and includes three states: incorporated, objectified and institutionalised. The incorporated state is associated with differences in the abilities and competencies of agents, or with «dispositions of the mind and body» [8, p. 243]. The objectified state is associated with the possession of material objects and means, while institutionalised – with academic qualifications that have institutional recognition.

Transfigurations of cultural and social capital, which are perceived in accordance with classification schemes, determined by the very structure of capital distribution in a particular field, give rise to the fourth type which is symbolic capital. It is recognised «as legitimate competence, as authority exerting an effect of (mis)recognition» [9, p. 62]. It is the possession of symbolic capital that allows its owners to set the boundaries of legitimate norms and samples of culture in the broadest sense.

The distribution of various types of capital determines the structure of the social world and, through the establishment of restrictions, determines the chances of success for specific practices of agents. The general structure of the social world can be represented as a multidimensional space, the fundamental level of which is the level of social classes. The level of social classes, in turn, determines the structure of the field of power in various social fields, which are relatively autonomous spheres of human activity with special rules for the functioning of institutions and agent relations. According to P. Bourdieu, the field of power is «the space of power relations between agents and institutions possessing the capital necessary to take dominant positions in various fields (in particular, in the economic and cultural)» [10, p. 369]. Exactly in this field, there is a struggle between agents with different types of capital on the establishment of rules of determining the value of certain types of capital, their preservation, and transformation, i. e., for defining the foundations of power.

This condition determines the presence of two opposing principles of hierarchisation and the corresponding spaces in the fields of cultural production: they are heteronomous and autonomous [11]. The heteronomous principle is associated with the subordination of the logic of the economic field and the field of power, according to which success is measured by such indicators as, for example, sales rating, circulation. On the contrary, the autonomous principle of hierarchisation reflects the logic of the field itself, within which the recognition of agents and the results of their work are determined by those who use recognition from their peers as the criterion of legitimacy (examples of this logic demonstrate the ideas of fundamental, or pure science as opposed to applied science). According to P. Bourdieu, the stronger the principle of autonomous hierarchisation is in a field, the more autonomous the field is, and vice versa.

In fields with a high degree of autonomy, the agents with the largest volume of symbolic capital wield power. As already noted, any types of capital can take the form of symbolic capital, which is perceived according to classification schemes determined by the structure of capital distribution in a particular field. Thus, symbolic capital, considered in the context of various social fields, is a specific capital relative to autonomous fields to which, among others, scientific capital belongs.

Scientific capital and field structure

P. Bourdieu defines scientific capital as «a special type of symbolic capital (which is known to be always based on acts of cognition and recognition), consisting in recognition (or trust), which is bestowed by a group of competing colleagues within the scientific field» [12, p. 56]. The condition for the accumulation of scientific capital is the demonstration of the «scientific contribution» of the agent (scientist) and the recognition of this contribution by other agents of the scientific field (scientists) P. Bourdieu writes that «to exist scientifically is to have a "plus" in terms of the categories of perception prevailing within the field, that is to say, for one's peers ("to have contributed something"), to have distinguished oneself (positively) by a distinctive contribution» [13, p. 55]. The French sociologist considers acts of public recognition to be visible signs of this contribution, which mainly include scientific citations, scientific awards, and translations of works into foreign languages. Scientific capital, thus, acts as a symbolic capital of recognition, that is valid, for the most part, but not completely (due to the possibility of conversion into other types of capital and in other fields), within the limits of the field of science [13, p. 55].

The volume of accumulated scientific capital, which is the basis of symbolic power in the scientific field, depends on the value and originality of the scientific

contribution made by a scientist. The volume of scientific capital and its distribution determine the social structure of the field of science. The more scientific capital agents possess, the more legitimacy they have to define the norms of the scientific field and the hierarchy of scientific practices, objects, and research methods, i. e., ultimately, to exercise power through determining what is considered a science and «scientific». Vice versa, scientific capital of less volume limits the agents' influence in this field.

The distribution of scientific capital forms the social structure of the field of science. According to P. Bourdieu, it is able to determine the strategies of agents' behaviour in the scientific field. Thus, the French sociologist classifies the groups of agents with the largest volume of scientific capital as dominant. They can be designated as the orthodoxy of the scientific field, whose strategies aim to preserve the established order. Groups of agents with less scientific capital are the dominated class. Depending on their position in the field and social trajectory, these agents can choose both succession strategies, which are to follow the established scientific ideal and create «moderate» innovations, and disruptive strategies, which are to focus on redefining the principles of scientific legitimacy of domination [5, p. 492]. The latter strategy leads to stigmatisation of the agents who adhere to it as «heretics» and attempts to exclude them from the field; however, depending on the state of social order in the field, they can lead to success, becoming scientific revolutions. At the same time, the strength of the dependence of the choice of strategies on dispositions in the field is directly proportional to the dependence of the scientific order on the broader social order.

Taking into account the law of the division of labour, the French sociologist also distinguishes two aspects of scientific capital corresponding to two types of power operating in the field of science. One of them is secular, or political, power (from the French *temporales*). According to P. Bourdieu, it is «institutional and institutionalised power, which is associated with the occupation of important positions in scientific institutions, the administration of laboratories or faculties, participation in committees, examination boards, and so on, as well as power over the means of production (contracts, loans, posts) and reproduction (the power to appoint and advance in their careers), which is given to them by high positions» [12, p. 64]. In his works, he often refers to this aspect of scientific capital as political scientific capital. The second type of power is a specific scientific power based on poorly objectified and institutionalised recognition by a group of peers [12, p. 64]. The French sociologist associates it with pure scientific capital.

In addition to the differences in the foundations of power, P. Bourdieu also highlights other differences between political scientific capital and pure scientific capital. Firstly, there are differences in exposure to criticism. Since the latter is directly related to scientific innovation, which carries a break with the current prerequisites, it is more susceptible to criticism and refutation than the political scientific capital characterised by greater institutionalisation. Secondly, these types of capital differ in acquisition strategies: if pure scientific capital is acquired and accumulated through the contribution of scientific discovery, political is accumulated through the concentration of time on administrative processes. Thirdly, there are differences in the way of translation. The pure type is incorporated in the agents' personality, and in this regard the process of its transmission, which can be expressed in the process of training, cooperation and consecration of followers, is complicated. The political type in its mechanisms is similar to the bureaucratic one, when «the definition of an official position is in some way adjusted to the applicant» [12, p. 66]. Fourthly, these types of capital differ in their ability to scale. While political scientific capital is almost completely limited by the national framework, pure scientific capital is able to go beyond them to the international level. Finally, they differ in the degree of convertibility. According to P. Bourdieu, political scientific capital is more easily converted into pure scientific capital due to the effect of a quasi-charismatic halo, when signs of academic recognition are given to agents for the very fact of their positions in the institutional scientific hierarchy [12, p. 68].

The two identified types of capital or power coexist in the space of the field of science. At the same time, depending on the structure of their distribution, the coexistence of these types of power can be more or less conflicting. In the first case, agents with various types of scientific capital can enter into cooperation to distribute administrative resources (in the form of personnel, equipment, etc.) required for research; in the second case, agents with political type of scientific capital may seek to exclude «heretics» from the institutional framework of scientific activity. However, according to P. Bourdieu, in any case, the actions of agents with political scientific capital are focused on maintaining the existing order in the scientific field.

The distribution of the two types of scientific capital determines the structure of power relations in the field and, accordingly, the structure of the positions of various agents. The agents' positions, through the influence of habitus and the perception of other agents of the field, determine the boundaries of possible practices for the production of scientific knowledge and relations between agents. Thus, having established the positions of agents in the structure of the scientific field, according to P. Bourdieu, one can determine the chances of success of certain practices of agents, as well as predict their possible behaviour in relation to the production and dissemination of scientific knowledge, which is manifested, for example, in hierarchisation of important and unimportant, interesting and uninteresting for research, as well as in the choice of places for publishing research results.

Within the framework of national borders, P. Bourdieu tried to record the spatial structure of the field of social and human sciences in France with the help of statistical analysis of various indicators, among which were citation rates, membership in juries, examination and other commissions, as well as editorial boards membership [14, p. 146]. As for the study of strategies or position-takings of agents in the field of science, during his period of work P. Bourdieu only managed to outline the directions of such analysis, which today social scientists are only beginning to explore.

It is also worth noting that P. Bourdieu did not operate with such categories as core or periphery; however, these spatial categories quite easily entered as analogies of dominant and dominated in the discourse of researchers using P. Bourdieu's optics as a theoretical framework. For example, centre-peripheral relationships were illustrated by researchers of the literary field [15]. Unfortunately, we have not succeeded in finding studies that illustrate such relationships within national boundaries, but some studies vividly demonstrate the patterns of such a dichotomy at the international level [16].

National scientific fields in transnational context

As noted earlier, social sciences differentiated as a relatively autonomous field during the period of nation-state building. This period shaped the differences of national academic fields not only in relation to language but also intellectual traditions (as in the case of German hermeneutic method as an alternative to British empiricism and French positivism) [6, p. 689]. Nevertheless, the boundaries of the national fields of science have always been susceptible to international interaction to one degree or another.

The nature of international interaction has changed throughout the history of the social science field. As some researchers note, transnational relations of various kinds in the field of social sciences became organised in 19th century through two main institutions of the international scientific conference and the international scientific association [6, p. 689]. In the interwar period at the beginning of the 20th century, these processes were suspended and resumed after the World War II in the format of various associations and international organisations, which contributed to more regular transnational connections, as well as to the formation of an international disciplinary canon and an international hierarchy, dominated by scholars and scholarship from the United States [6, p. 690]. The collapse of the Eastern bloc and the development of the South Asian countries led to more active involvement of these countries in international interaction, and new information and communication technologies made it possible to cover the maximum number of agents around the world. Today, however, the interaction of national academic systems is becoming more and more transnational, or global, in nature. There is evidence from various studies, according to which social sciences are practiced in almost all regions and countries of the world, publication activity experiences increase simultaneously with the decrease in self-citations, and international cooperation and academic exchanges are intensifying [6, p. 691].

The structure of this emerging transnational scientific field can be represented as a multi-level space where national, regional, and transnational fields overlapping each other. At the same time, based on the degree of accumulation of scientific (symbolic) capital, or power, in the structure of the transnational field, it is possible to identify its core, semi-periphery and periphery. The core is represented by the United States and Great Britain. It is the national fields of these countries, in particular America, that are the hegemons in the transnational field of social sciences and, at the same time, the most independent from other national fields. This is evidenced by the results of various studies on the analysis of citations [17], editorial boards [16], faculty stuff education [18], as well as translation of scientific works into foreign languages [6]. These studies refer to the dominant position of researchers from the United States and Great Britain which determine the boundaries of the legitimacy of the production of scientific knowledge in the social sciences. According to the same indicators, the semi-periphery is formed by the scientific fields of Western European countries. The fields of other countries belong to the periphery. Research attention to these countries is drawn mainly from the side of scholars, whose academic interest is somehow related to these countries.

Scientists from national fields, whose borders are open for international interaction, have a choice of two key strategies (with the exception, perhaps, of hegemons, since they already dominate on a global scale): to exist only nationally or also globally. Some studies demonstrate a clear division of scientists into two such camps, which at the same time may not be familiar with each other's work [19]. Both may follow strategies of orthodoxy or heterodoxy in the national or transnational field which will be stigmatised as such depending on the social order in those fields.

Today, however, the division of scholars within national boundaries into globalisers and nationalisers in many national fields is blurring. One of the reasons for this blurring is the expansion of scientific policy based on the assessment of publication activity in peer-reviewed international journals, which encourages it to increase [20, p. 569]. In addition, some authors argue that the continuing dynamics of specialisation and disciplinary differentiation move scientific communication beyond national boundaries to explore problems arising in new disciplines and subdisciplines [20, p. 571]. In this regard, an increasing number of scientists are

faced with the alien normality of both other national scientific field and the transnational field.

Following the logic of social topology, different national fields of science may have similar positions, clustering in social space with different distances from each other according to the volume of symbolic capital. That means their social orders with the criteria of legitimacy and the hierarchy of agents' scientific practices are similar. Moreover, their geographical distance does not equate to the distance in the global social space. For example, despite the geographical distance, we can expect that the social order of the hegemons of global science represented by the United States and Great Britain are highly similar, as the social order of some scientific fields of the former colonial states have more similarities with their metropolises than with the post-Soviet countries. In the same way, we can find more similarities in the social order of the fields of Russia and Belarus than of Russia and Finland.

The differences in the position of national fields are based on factors external and internal in relation to fields. External factors are associated with the peculiarities of the interaction of the scientific field with other fields, including in retrospect. As noted earlier, at a certain period of history, the economic and political fields became two key fields, striving to dominate in many regions of the planet. Particular national fields can interact with these fields in different ways, staying more autonomous or heteronomous. This interaction can differ in the degree of its mediation. For example, in the countries of the Soviet Union, the field of social sciences was extremely heteronomous and obeyed the logic of the political conjuncture. In the 1920s, sociology was recognised as a bourgeois science and was banned until the late 1950s. However, even after its revival in the 1960s, it was practiced more as an applied science with a high degree of censorship and self-censorship of scientists. Thus, in such conditions, the scientific fields of the Soviet countries formed social orders with their own priorities, objects and methods of scientific research, as well as their institutions.

The political field or economic field can impact more or less directly the scientific field through financial providing of its resources that are the primary economic capital functioning in the scientific field. This factor also influences the position of national fields in the transnational space. Here, two key areas can be distinguished: resource support for the research and resource support for the educational activity. Resource providing of the number of research positions, salaries, equipment, access to databases, the library fund, participation in international scientific events affects the possibilities of choosing certain research objects and methods as well as the symbolic value of scientific contributions which can be made by agents from a particular field. For example, in the context of limited funding, we can expect that agent practices focus more on applied rather than fundamental studies. Their results, however, differ in the potential for the accumulation of symbolic capital in the international space: according to some researchers, scientific knowledge focused on local socio-economic needs (especially in peripheral countries) may be secondary in world science [21, p. 27].

The resource providing of educational activity, which is closely associated with research activity, has a similar effect. Here, however, the time factor has a more important stress. We can assume that university teachers with different classroom load and (or) schemes of material incentives tend to choose different strategies for producing and spreading scientific knowledge in the national and transnational scientific fields. These strategies differ in their potential to accumulate symbolic capital both within and outside the national scientific field.

Factors internal to the fields, which underlie the differences in their position in the transnational scientific space, are associated with the specifics of the social order of national fields. The foundations of the social order of the scientific field within national boundaries is outlined in the second part of the article, so here we only recall that the structure of the power positions of various agents is determined through the distribution of two types of scientific capital – pure scientific and political. Based on their positions, agents have more or less power to determine the boundaries of practices for the production and spreading of scientific knowledge, as well as the hierarchy of objects and methods of research and institutions, which also determine the features of the interaction of the national scientific field with other national scientific fields.

Thus, the peculiarities of the interaction of the national field with the economic and political fields determine the degree of field autonomy today. The field autonomy, in turn, determines the social order with its own rules for converting various types of capital into symbolic one (and vice versa), criteria for the legitimacy of practices, the hierarchy of agents, institutions, and scientific practices. As a result, one can observe how similar national fields occupy similar positions in the global centre-peripheral scale.

Conclusion

In this article, based on the example of the social sciences, we tried to assess the possibilities of applying the topological concept of the social field, proposed by P. Bourdieu, in studying the scientific sphere of activity at national and transnational levels. As a result of the analysis, we can formulate the following conclusions.

1. The key provisions of the field concept, which the French sociologist developed and applied to national scientific fields, retain their relevance for application in

a transnational context. This is mainly possible due to the fact that science throughout its history has been susceptible to international interaction, which today is intensifying under the influence of globalisation processes.

2. The fields of science on various scales differ in their structure. At the national level, the interaction of dominant and dominated agents and institutions is primary, while at the transnational level – the interaction of dominant and dominated national fields, which agents and institutions represent. This circumstance is due to preserving the borders of national states as the institutional boundaries of scientific activity. As a result, the emerging transnational scientific field can be represented as a multilevel social space, where national, regional, and transnational fields occupy different positions and at the same time overlap each other.

3. Differences in the structure of scientific fields of various scales require the adaptation of the methodological principles of the field concept during its application. Firstly, it concerns the determination of the degree of autonomy of the scientific field. Within national boundaries, it is based on dominating heteronomous or autonomous principles of hierarchisation, while at the transnational level it is determined based on the degree of the independence of national scientific fields relative to each other since transnational fields are at the emerging stage. Secondly, it is necessary to highlight the differences in the reconstituting of the structure of the field. In the case of the national level, the structure can be determined based on two types of symbolic capital – pure scientific and political. At the transnational level, the symbolic structure can be determined only according to the pure scientific capital. Thirdly, the determination of the fields' social order, their hierarchy, and criteria for the legitimacy of practices should be carried out at each level since the social order of the transnational field is not identical to the social order of national fields.

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