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## RUSSIAN HUMAN GEOGRAPHY OF THE EARLY 21st CENTURY: STUDYING NEW PROCESSES AND USING NEW OPPORTUNITIES

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### New Data on Population Migration in Russia: a Challenge for Researchers?

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**Abstract**—The development of population migration studies in Russia’s social geography in 2010–2021 is analyzed. Publications on this topic in leading geographical journals are studied. The possibilities of studying Russia’s internal population migration using new data are considered. Dissertations defended in Russia in the specialty “Economic, Social, Political, and Recreational Geography” are summarized. Based on the results of the analysis, it is concluded that the period under review is characterized by an increased number and broadening of population migration research topics. After 2010, Russian geographers have intensified their study of migration in foreign countries. Among the new areas compared to the early 2000s, one can cite analysis of the settlement pattern of migrants at the intracity level based on cases, studies of foreign countries. New directions in the study of Russian migration are related to specification of the migration information base at the municipal level. The appearance of fundamentally new data—mobile network operators—makes it possible to study the time cycles of the population’s spatial mobility. Social network (e.g., VKontakte) data is used to analyze educational migration. The main problems are related to the formulation of research questions, the depth and complexity of study of the migration process, and the low popularity of the methods and approaches of other social sciences among geographers. Analysis of the publication activity of authors showed a rather low level of cooperation between Russian researchers and their foreign colleagues, as well as the virtual absence of scientific cooperation between geographers from different Russian regions in migration studies.

**Keywords:** internal migration, international migration, migration statistics, migration studies, literature review

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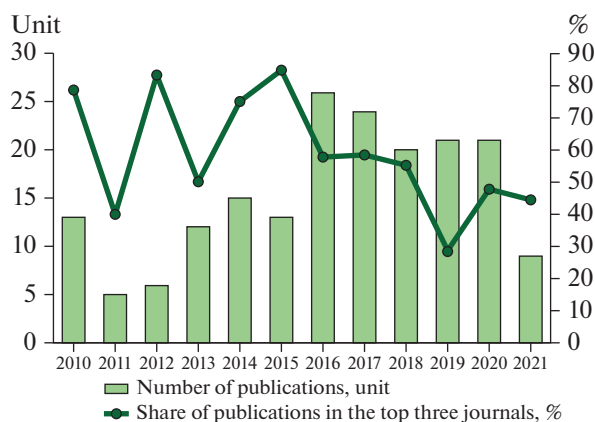
#### INTRODUCTION

The collapse of the USSR has become an important dividing line for the study of many social processes, including analysis of population migration. Earlier limitations on analyzing migration in some areas (e.g., emigration, ethnic migration, and related conflicts) were lifted. New types of migration for the country appeared, in which Russians hardly participated before. The general course of the urbanization process and migration ties with the republics of the former USSR have changed, while the variability of Russians’ migration behavior increased. A spike of interest in studying certain aspects of international migration in the 1990s, primarily forced migration, gave way to a decline in subsequent decades, while other areas, such as commuting, are experiencing a renaissance owing to big data.

The general research approach to population migration has changed. Earlier, migrants were most

often considered not as independent actors in the migration process, but as a resource and object at which controlling (on the part of the state) influence is directed. Hence the terminology often used in the USSR in relation to population migration involves the movement or redistribution of labor resources and mechanical movement of the population. In modern geographical studies, migrants are considered the subject of the migration process.

The parameters of statistical account for migration movement have changed; surveys of migrants have appeared, albeit unrepresentative, most often of a local nature; publication of statistical data on population migration and the structure of migration flows in open form and at different territorial levels has expanded. However, changes in population migration statistics are difficult to interpret only as positive. The quality of the data has changed, often deteriorated; in addition, hitherto nonexistent problems of the incom-



**Fig. 1.** Dynamics of publications on migration topics in the leading Russian journals indexed in RSCI by “Geography.”

Compiled by L.B. Karachurina according to the RSCI.

parability of data from the last decade with previous ones have appeared.

The intensifying cooperation with foreign colleagues and access to foreign literature made it possible to broaden the range of methodological and theoretical approaches to studying population migration. For example, as an additional method, many social geographers use mass surveys and in-depth interviews with migrants and experts in areas closely related to the decision to migrate. The ongoing transformations are reflected in the changing research topics.

Below, we trace how migration studies developed in Russian social geography in 2010–2021. To systematize the main trends, the article is divided into three sections:

- analysis of publications in leading geographical journals;
- an overview of the possibilities for studying the migration of the Russian population using new data with emphasis on changing the quality, completeness, spatial categorization, and availability of data on internal migration and spatial mobility of the population;
- consideration of dissertations on population migration defended in Russia in the specialty “Economic, Social, Political and Recreational Geography.”

## POPULATION MIGRATION IN LEADING GEOGRAPHICAL JOURNALS

At the end of 2021, the national bibliographic database of scientific citation on the platform eLIBRARY.RU (Russian Science Citation Index, RSCI) on the query “population migration(s)” (title, keyword, and abstract search) displays about 3500 articles in journals and books published beyond 2010–2021. This is only 1.5–2 times fewer than

according to such popular terms as “settlement pattern,” “urbanization,” “fertility.” However, the vast majority of works on migration are not related to geography and are featured in unrelated publications. However, this feature—publications on migration in geographic journals make up only a small portion of the total volume of literature on migration—has long been observed (Plane and Bitter, 1997).

For initial bibliometric analysis, 11 journals were selected, indexed in the RSCI by “geography”<sup>1</sup> with more than 400 articles in each of them (for 2010–2021) and relevant issues in their titles or headings (e.g., *Tver State University Bulletin, Series: Geography and Geoecology* was included in the analysis, but *Arid Ecosystems* was not). With such criteria, 187 articles on migration topics in titles, abstracts, and keywords are in the field of view of the Russian citation base. This is about 1.5% of the articles published in these journals during the analyzed period.

The leaders in the number and share of publications are two journals with a specialized socioeconomic orientation in geography: *Regionalnye Issledovaniya (Regional Research)* and *Baltic Region*, as well as the oldest journal of geographical issues, *Vestnik Moskovskogo Universiteta, Seriya 5: Geografiya (Bulletin of Moscow University, Series 5: Geography)* (Tables 1, 2). Their share in the total number of migration publications in these years is slightly less than 60%. In some years (2010, 2012, 2015), almost all published articles on population migration were in these three journals. Starting from 2016, a certain deconcentration of migration publications can be observed versus an overall increase in their number (Fig. 1).

The journal *Regionalnye Issledovaniya* has been regularly publishing migration studies almost since its inception (2002) and on a wide range of migration subjects: from theoretical foundations and mobility in a broad context, methodological foundations for studying commuting and migration links through social networks, to studying migration of individual ethnic groups or the impact of international migration on the development of world agriculture. As a rule, articles are of a research nature and use statistical data; however, relatively new for Russia, types of data for analyzing population migration (mobile operators, social networks, semi-structured interviews, GIS) are also being tested here. It was here that a series of articles was published on analyzing pulsation of the Moscow agglomeration’s settlement system under the influence of different types of population mobility (Makhrova and Babkin, 2018, 2020; Makhrova and Kirillov, 2016; Makhrova et al., 2017).<sup>2</sup>

<sup>1</sup> Heading of a journal on the upper level of the SRSTI (State Rubricator of Scientific and Technical Information). A journal can be classified under several different headings.

<sup>2</sup> These articles were subsequently published in English in the journal *Regional Research of Russia*.

**Table 1.** Publication activity of leading Russian journals indexed in RSCI by Geography, by migration publications, 2010–2021

Journal	Number of publications	Share of migration publications in total number of publications, %	Number of authors of migration publications, people	Including authors publishing migration papers in the given journal once, people	Average number of authors in one article, people	Average number of references per migration publication for 2010–2020	Number of references to most cited migration publication for 2010–2020
<i>Regionalnye Issledovaniya</i>	47	5.2	50	37	1.62	11.2	59
<i>Baltic Region</i>	30	5.5	45	35	2.03	5.7	19
<i>Vestnik Moskovskogo Universiteta, Seriya 5: Geografiya</i>	29	1.5	31	25	1.53	9.7	43
<i>Izvestiya Rossiiskoi Akademii Nauk: Seriya Geograficheskaya</i>	20	1.0	16	11	1.40	19.6	70
<i>Izvestiya Russkogo Geograficheskogo Obshchestva</i>	16	1.5	18	12	1.81	3.1	16
<i>Geograficheskii Vestnik</i>	10	1.1	12	11	1.40	2.2	6
<i>Geography and Natural Resources</i>	9	0.4	14	12	1.89	2.9	16
<i>Geopolitika i Ekogeo-dinamika Regionov</i>	9	1.1	13	12	1.56	1.2	4
<i>Vestnik Voronezhskogo Gosudarstvennogo Universiteta, Seriya: Geografiya. Geokologiya</i>	6	0.5	9	9	1.5	4.8	18
<i>Uchenye Zapiski Krymskogo Federal'nogo Universiteta. Geografiya. Geologiya</i>	6	1.3	8	8	1.33	0.8	2
<i>Vestnik Tverskogo Gosudarstvennogo Universiteta, Seriya: Geografiya. Geokologiya</i>	4	1.0	6	4	2.00	2.5	4

Compiled by L.B. Karachurina from RSCI data.

**Table 2.** Some characteristics of migration publications in leading Russian journals indexed in RSCI by Geography, 2010–2021

Indicator	Journal										
	<i>Regio- nalnye Issledo- vaniya</i>	<i>Baltic Region</i>	<i>Vestnik Moskov- skogo Universiteta, Seriya 5: Geografiya</i>	<i>Izvestiya Rossiiskoi Akademii Nauk: Seriya Geografi- cheskaya</i>	<i>Izvestiya, Russkogo Geografi- cheskogo obshches- tva</i>	<i>Geo- grafi- cheskii Vestnik</i>	<i>Geo- graphy and Natural Re- sources</i>	<i>Geo- politika i Eko- geodi- namika Regi- onov</i>	Three jour- nals*	Total, units	Total, %
Total number of articles	48	30	29	20	16	10	9	9	16	187	100
Affiliation of authors											
Moscow	35	9	27	13	—	3	—	2	1	90	48.2
St. Petersburg	1	6	1	—	13	—	—	—	—	21	11.2
Regional	11	7	—	4	1	7	8	5	14	57	30.5
Foreign	1	3	—	—	—	—	1	—	1	6	3.2
Coauthorship: Russian + foreign	—	4	—	3	—	—	—	—	—	7	3.7
Coauthorship: metropol- itan + regional	—	1	1	—	2	—	—	2	—	6	3.2
Spatial—hierarchical levels of research**											
World as a whole, associa- tions of countries (e.g., EU)	8	9	1	1	4	1	3	3	1	31	16.6
Selected countries	7	9	8	1	6	2	—	—	—	33	17.6
Russian Federation regions, foreign countries	13	9	9	4	3	4	—	3	6	51	27.3
Individual groups of regions (global cities, urban agglom- erations, districts, etc.)	14	2	5	7	1	1	4	1	4	39	20.8
Municipalities	6	1	4	6	2	2	2	2	3	28	15.0
Populated areas	—	—	2	1	—	—	—	—	2	5	2.7
Dominant methodology and research methods											
Overview	11	6	2	2	2	4	2	1	1	31	16.6
Statistical (mostly descriptive analysis)	30	17	17	16	13	5	5	5	12	120	64.2
Qualitative methods	5	1	5	1	1	—	1	2	—	16	8.6
Combination of methods (stated in text):											
— with GIS	—	1	1	—	—	1	1	1	2	7	3.7
— with qualitative methods	1	3	3	1	—	—	—	—	1	9	4.8
— with content analysis	1	2	1	—	—	—	—	—	—	4	2.1

\* *Vestnik Voronezhskogo Gosudarstvennogo Universiteta, Seriya: Geografiya. Geoekologiya; Uchenye Zapiski Krymskogo Federal'nogo Universiteta. Geografiya. Geologiya; Vestnik Tverskogo Gosudarstvennogo Universiteta, Seriya: Geografiya. Geoekologiya.*

\*\* In disputed cases, exhibited at largest level presented. *Compiled by L.B. Karachurina from RSCI data.*

*Baltic Region*, due to its political and economic orientation, published articles in the years under review mainly related to international migration, implementation of migration policy, and interaction with diasporas. The geography of these works is usually less pronounced, primarily associated with localization of the processes described in the Baltic countries and regions. Accordingly, research is mainly at the country level (60% of publications analyze the world, certain groups of countries, and individual countries, see Table 2) at the regional level, more often than others, there are works on Kaliningrad oblast. One of the recent issues of the journal (*Baltic Region*, 2020, vol. 12, no. 4) is a special issue dedicated to economic trends and migration regimes in the Baltic States affected by the COVID-19 pandemic. In 2018 (vol. 10, no. 3) and 2014 (no. 2 (20)), special issues were devoted to demographic, including migration, processes.

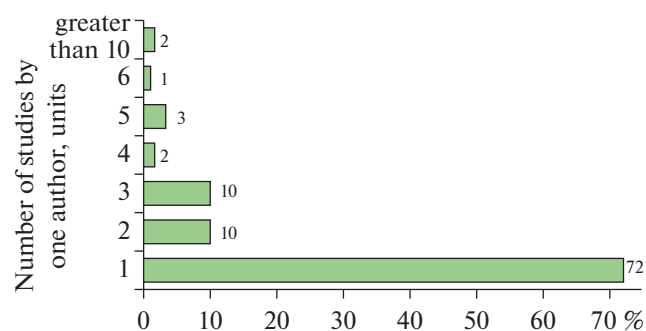
The migration agenda of *Vestnik Moskovskogo Universiteta, Seriya 5: Geografiya* is broad, just like in *Regionalnye Issledovaniya*. It is possible to single out a pool of works related to analyzing the settlement pattern and, in general, the integration of international migrants, including certain ethnic groups, in different types of territories (in the capitals of European countries, certain regions of Russia, federal states of Germany, etc.) (Shatilo, 2017; Savoskul, 2015, 2016b). There are also publications on *otkhodnichestvo* and internal labor migration from rural areas and small and medium-sized Russian cities (Antonov, 2016a, Nefedova, 2015a; Averkieva and Zemlyanskii, 2016). The vast majority of studies analyze the regional level or individual types of settlements. Of interest is a recent publication by a team of students supervised by N.Yu. Zamyatina and D.S. Elmanova, devoted to the factors of localization of migrants leaving the regions of the Far North and areas of Russia equal to them in Belgorod oblast (Zamyatina et al., 2019). In the absence of official statistics on individual migration trajectories of people, expert interviews and population surveys are used to study migration links between regions. Developing this topic, O.E. Vasil'eva and V.S. Udovenko (2018), with respect to individual rural settlements of Leningrad oblast, build a picture of spatial activity and mobility of residents with the help of their publications on VKontakte.

The journal *Izvestiya Rossiiskoi Akademii Nauk, Seriya Geograficheskaya (Proceedings of the Russian Academy of Sciences, Series: Geography)* contains mainly articles on internal Russian migration, and the vast majority of their translations are published in *Regional Research of Russia*. Nearly a third of the research concerns municipalities. Analysis of migration processes at this lowest statistically accessible level in Russia makes it possible to ascertain the intensifying polarization of the Russian space under the impact of migration: in the suburban mass development zones of Moscow oblast closest to the capital,

the population concentration is significantly increasing, and housing construction is the main mechanism for incentivizing migration inflow to the Moscow urban agglomeration, by easing the price barrier for housing (Kurichev, 2017; Kurichev and Kuricheva, 2018). Similar processes are taking place in most Russian regions: the population concentration in and around regional capitals is growing. However, the existing natural increase does not contribute even to stabilization of the population of the regions, and population growth in centers is accompanied by migration outflow and decline in the periphery. The spatial polarization between the largest cities and territories of the underdeveloped zone is increasing (Karachurina and Mkrtchyan, 2016, 2021a).

The results of large-scale research by some regional authors have been published in non-Moscow regional geographical publications. For example, L.P. Bogdanova and A.S. Shchukina (2016) show how, under the impact of migration during the post-Soviet period, the population changed in the village of Boncharovo in Tver oblast: "Under the impact of natural decrease, the local population was completely replaced" (p. 43) by well-grounded and active migrants. "They built comfortable houses and revived agricultural activity. The remoteness of Boncharovo provided some protection from administrative obstacles and pressure from competitors" (p. 43). At the same time, in Tver oblast, "much more frequently in field research one has to deal with the phenomenon of 'false' migration, when migrants from neighboring countries buy cheap housing or only register in rural settlements near the Moscow part of Tver oblast, but live and work in the capital region" (p. 43). Such scenarios are almost impossible in office analysis, and one may warmly greet the authors' opting for field observations and research, especially since there are few such examples.

**Publication activity of authors.** The circle of regular authors in geographical publications on migration topics is not large. In part, this can be attributed to inertia dating back to the Soviet era: the topic was semiclosed, geographers' interests were limited to rural–urban migration, and less often to resettlements between the Union republics and economic regions. The relevance of migration issues in connection with the collapse of the USSR stimulated new research subjects, but at the same time, attention to population migration as an interdisciplinary field, which is now actively studied by sociologists, economists, and ethnographers. In the 1990s–2000s, migration data were published with insufficient spatial detail, which in itself limited geographical research. Although the place of geographers here is determined by the very object of study, the logic of spatial movements, and the search for objective and subjective factors determining migration flows, so far geographers' activity in this field remains relatively low.



**Fig. 2.** The structure of publications in the leading Russian journals indexed in the RSCI by “Geography,” by authors, %.

Compiled by L.B. Karachurina according to the RSCI.

Another result of the Soviet period in developing migration studies is the prolonged remoteness and isolation from Western geographic studies, as a result of which the methods and approaches that became widespread there in the 1990s are only now beginning to promulgate in Russian research practice.

A significant constraint in modern migration research is the incompleteness and insufficient length of statistical data series, the lack of stable skills and active access to field research, and the skepticism towards using the methods of related sciences (primarily qualitative sociology, applied econometrics) that has not been completely overcome. It should also be noted here that the proximity and intersection with related research topics—primarily with the geography of settlement pattern, the geography of rural areas, geodemography—form their own analytical niches and narrow specializations of migration researchers. Together, this forms the problems of modern Russian geographical research and creates a limited pool of researchers. The total number of authors publishing articles on population migration in geographical journals in 2010–2021 amounted to 175 people, of which only 50 people published or participated in the publication at least two times (Fig. 2). An overwhelming number of authors published only one migration paper in almost 12 years.

The presented data, however, should not be absolutized. Firstly, authors who regularly publish in geographical journals also publish their research in non-geographic publications meaningfully close to geographers (e.g., in the journals *Monitoring Obshchestvennogo Mneniya: Ekonomicheskie i Sotsial'nye Peremeny* (Public Opinion Monitoring: Economic and Social Changes); *Region: Ekonomika i Sotsiologiya* (Region: Economics and Sociology); *Sotsiologicheskie Issledovaniya* (Sociological Research); *Zhurnal Sotsiologii i Sotsial'noi Antropologii* (Journal of Sociology and Social Anthropology); *Demograficheskoe Obozrenie* (Demographic Review); *Naselenie i Ekonomika* (Population

and Economy); *Mir Rossii. Sotsiologiya. Etnologiya* (World of Russia. Sociology. Ethnology); etc.).

Second, we should not forget the certain conventionality of the established boundaries: inclusion in analyzing a certain pool of journals and articles that have migration-related words in the titles, keywords, or abstracts. As a result, a work that is in essence related to migration may not be included in the analyzed list. This happens particularly frequently with texts on related topics. For example, the article (Gunko and Glezer, 2015) does not mention migration not only in the above-listed variants, but not even in the introduction. Migration is “hardwired” in the article through formulation of the second research question (out of three) on population dynamics factors in regions (but also without direct mention of anything migration-related). The text of the article answers this question as follows: “Migration outflow played the main role in changing the population size in almost the entire territory of Central Russia; thus, the dynamics factors are, in essence, the factors of retaining population in the region and, less frequently, attracting population, reflecting the degree of attractiveness of the region and its center” (p. 72). This means that the text is inherently not only migration-related—it also interpretatively brings it to the fore.

Third, during these years, several monographs were published that are very significant for domestic migration studies, revealing the geographical aspects of migration. Primarily, we are talking about the collective monograph *Between Home and...Home: Return Spatial Mobility of the Russian Population* (2016). It examines spatial mobility in the broadest sense of the word, analyzes in detail labor return mobility (commuting, *otkhodnichestvo* with a weekly or longer cycle), and seasonal trips to dachas; it also analyzes the prerequisites for spatial mobility of the population associated with polarization of the Russian space, the dynamics of economic development, and employment of the population. Less pronounced, but migration scenarios are also present in a two-volume book by the authors of the Institute of Geography of the Russian Academy of Sciences *Journey from St. Petersburg to Moscow: 222 Years Later* (2015). In (Breslavskii, 2014), rural–urban migration enters into the dialogue with suburbanization and the settlement system of the population in the Republic of Buryatia. In a broad sense, migration processes are one of the central processes in the book of another Siberian researcher (Grigoriev, 2013). Several more monographs by regional authors also discuss the territorial specifics of migration (Fauzer et al., 2016; Solov'ev, 2017; Stas', 2018).

**Subjects of Publications.** In Soviet times, the main migration topics were the territorial redistribution of the population as a result of migration flows between the Union republics and economic regions of the USSR, as well as migration in the context of urbanization (transformation of the settlement system under

the influence of migration, and rural–urban migration). In the 1990s, migration studies tried to follow life; the main focus was the problems of forced migrants and the impact of armed conflicts, citizenship, and language institutions on migration; repatriation of the Russian-speaking population from the CIS and Baltic countries; and the general migration situation in republics of the former USSR. Many less opportunistic subjects have disappeared almost completely from researchers' field of view (Zaionchkovskaya and Karachurina, 2001).

Consideration of the topics of publications in the 2010s in broad strokes allows us to speak of a certain return in geographical research to the subjects of the 1970s–1980s, with significant attention to international migration, mainly in the context of the so-called far abroad countries and the Baltics. Analyses of the migration situation in the Soviet Union republics were supplanted by numerous reviews of the regional migration situation.<sup>3</sup>

Instead of infrequent publications on commuting and almost nonexistent studies on internal labor migration,<sup>4</sup> there was a serious stratum of studies related to *population mobility and pulsation of territorial systems*. From the standpoint of the time-geographic concept, the daily, weekly, and seasonal peculiarities of fluctuations in the population size of individual areas within the settlement system of the Moscow urban agglomeration are studied, depending on various zonal and azonal factors. General theoretical generalizations of the pulsation of the sociogeographical space are proposed in (Treivish, 2015).

The widespread growth in importance of the migration component in the overall dynamics of the size and structure of the population of territories and transformation of the settlement system under the influence of different types of migration contributed to the appearance of a series of publications at the intersection of *population migration and the settlement system* (Alekseev et al., 2021; Degusarova et al., 2018; Denisov, 2018; Egorov and Nikolaev, 2019; Karachurina and Mkrtchyan, 2016, 2021a).

*Youth migration* became a new topic of geographical studies. Young people in Russia, as well as in other countries, represent the most active migration group. Research in this area has been carried out in several designs and from different positions. In (Endryushko, 2018; Mkrtchyan, 2013), demographic and statistical methods demonstrated the impact of educational migration on the demographic development of territories. The migration of young people has a ubiquitous pronounced centripetal character; the loss of young

people from the periphery increases with distance from regional centers. N.K. Gabdrakhmanov (2020) considers educational migration as an indicator of the success of regions. Using sociological methods, it is shown how the migrational and educational intentions of young people correlate with their academic performance, the material well-being of families, the level of education of their parents (Karachurina and Florinskaya, 2019), as well as how the migration attitudes of young people are changing under the effect of the COVID-19 pandemic (Artemenkov and Sukhova, 2020). N.Yu. Zamyatina (2012), using the profiles of students of Tomsk State University on VKontakte, identified networks of cities participating in regular exchanges of applicants, students, and graduates. Special studies of migration of other age groups is still a rare subject in Russia, but at the same time one of the most common in foreign studies, linking the migration trajectories of people as they move along their life paths with different types of territories.

Studies on *labor migration (otkhodnichestvo and commuting)* concentrate on recording the geographical pattern and determining the factors of its distribution (spatial position of settlements with respect to external labor markets and the potential income level on them; transport and geographical position; qualification level of workers; the tradition factor) (Antonov, 2016a), analysis of differences in the age structure of the mobile and nonmobile population in Russia; and labor migrants depending on the direction of departure for work (Mkrtchyan, 2018), comparison of the directions of labor and long-term migration in the 1990s and 2000s (Nefedova, 2015b). The attractiveness of the Moscow labor market for commuters from Moscow oblast is assessed as a function of distance from the capital. With the help of regression analysis, a zone of “effective” commuting was identified (an area about 50 km from the Moscow Ring Road, which functions as a bedroom suburb of the capital) and a line of “zero efficiency” (150 km, or 170 min of remoteness), which shows the limiting size of the area of labor pull of Moscow (Makhrova et al., 2017).

*Rural–urban migration* studies were read differently. In the 1980s, this type of migration was studied mainly through local surveys in terms of reasons for migration from villages lacking in infrastructure to growing and attractive cities. Now this type of migration is being studied more comprehensively, interdependently with position relative to centers of development of a territory, the presence of cities, spatial connectivity, employment conditions, and different combinations of migration factors for different socio-demographic groups. T.G. Nefedova and N.V. Mkrtchyan (2017) show that although spatial differences in the state of agriculture, in addition to natural conditions, and institutional and economic changes, are associated with the accumulated consequences of rural depopulation, the current outflow of the population from rural areas is not directly related to the state

<sup>3</sup> However, they have mainly been published not only in regional editions with a geographical orientation, but also in conference proceedings.

<sup>4</sup> In relation to the postwar Soviet period, here let us recall the rare studies of seasonal workers and odd jobbers by the sociologist N.A. Shabanova (1991).



of affairs in agriculture. *Otkhodnichestvo* plays an important role in cities. Together with commuting, which is expanding in the variation of its cycles (along with informal employment), these have become the predominant strategies for adapting rural residents to changes in the labor market (Averkieva, 2016; Averkieva and Zemlyanskii, 2016). There is still insufficient research on the migration of villagers in geographical studies, and there is no migration of urban dwellers to the countryside at all,<sup>5</sup> but rural–urban migration studies as a whole began to be integrated into the general framework of reasoning in theories of differential urbanization and mobility (Makhrova et al., 2017; Nefedova and Treivish, 2019).

An important publication scenario in the 2010s was *international migration*, and its main territorial object is countries of the so-called far abroad and Baltic States. I. Dezhina et al. (2020), analyzing and forecasting the brain drain from Russia, concluded that there will be no slowdown in decline in the number of researchers either in Russia as a whole or for St. Petersburg as a territorial object of analysis. M.S. Savoskul in a series of publications on this topic (2013, 2015, 2016b) identified the determinants of leaving the country and the factors determining the geography of emigrant departures, and formulated the concept of “territorial migration systems” (2015), which assumes the cyclical nature of international migration.

#### STUDYING INTERNAL MIGRATION USING NEW STATISTICS

As in the world at large (Newbold, 2012), the possibilities for studying population migration in Russia are determined to a large extent by the availability and accessibility of statistical data. In the 2010s, these possibilities expanded due to access to new government statistics, including internal migration. There are primarily the data of the 2010 All-Russian Population Census (VPN-2010), which became available at different territorial levels; as a result, it became possible to analyze a large number of statistical indicators.

Data on the population structure at the level of cities (urban districts) and municipal districts acquired in VPN-2010 and VPN-2002 made it possible to study population migration of certain age groups, primarily young people, during the intercensal period. Since the information on migration published by Federal State Statistics Service (Rosstat) on the basis of the current population count up to 2010 was not sufficiently reliable, comparing the data of two neighboring censuses using the so-called method of components of movement of ages made it possible to understand the scale of the flow of young population to large cities (regional centers) from the intraregional periphery. Calculations have shown that in some peripheral territories,

the most remote from regional centers, the outflow of young people after graduation could have reached 50–60% (Kashnitsky, 2020), and regional capitals, large centers for attracting educational migrants, could increase the number of young people by 70% or even double it (Mkrtchyan, 2013). Application of this method to census data also made it possible to assess the loss of youth in certain regions (Endryushko, 2018), to study the role of migration in the population dynamics of certain ages with case studies of Moscow, St. Petersburg, and their oblasts (Del’va, 2021; Doronina, 2019).

The VPN-2010 program contained a question about the place of residence a year before it was carried out, which made it possible to study migration flows for a given year. Based on these data, e.g., the regional features of migration of the elderly in Russia, the features of the migration of “young” and “old” elderly were analyzed (Karachurina and Ivanova, 2019). Data on individual flows of interregional migration ( $85 \times 85$  matrices), constructed from information about place of residence for the year before the VPN-2010, made it possible to identify individual migration flows with predominance of the population in young, middle, and old ages. The opposite direction of flows was revealed at different ages—students and young people (return migration after education), people of middle and older ages (Mkrtchyan and Vakulenko, 2019). Analysis of the factors of interregional migration in Russia based on the same data showed that economic variables (labor market, household income, housing market) influence middle age migrants, while other groups are influenced mainly noneconomic factors. For example, pensioners seek to minimize living costs by moving to less expensive regions with high unemployment, where the cost of living is cheaper, as well as to regions with a favorable climate. Students and young people in their migrations evince rationality in a different way: they are driven by the possibility of building up human capital and seeking opportunities to start a career; other factors are unimportant to them (Vakulenko and Mkrtchyan, 2020). Unfortunately, the detailed spatial databases of the 2002 and 2010 censuses are no longer available; they were closed, but researchers still retain hope for access to this information.

In addition to information on the duration of residence and former place of residence, census data contain information on the place of employment: in one’s own settlement, in other settlements of one’s region, and beyond its borders, with specification of a specific federal subject. Based on this, the spatial features of seasonal labor migration and mobility, participation of the population in labor trips, e.g., between the suburbs and the periphery (suburban residents are active on commuting), depending on the type of settlement, as well as labor spatial mobility factors (Antonov, 2016a). A very important (and illustrative) result is the identification of gravity zones for interregional labor migra-

<sup>5</sup> Although they are found in nongeographic journals.



tion as the largest attraction centers for migrants (Mezhdudomom ..., 2016). Unfortunately, the VPN-2010 data do not contain information on the frequency of trips, which, strictly speaking, prevents separation of commuters from seasonal labor migrants. This problem is included in the VPN-2020 program, which, we hope, will significantly improve the data obtained and expand the scope of their application.

Since 2010, questions on interregional seasonal labor migration have been included in the Population Employment Survey (since 2016, the Labor Force Sample Survey). For the first time, they presented the quantitative characteristics of this form of migration, according to which the number of labor migrants (excluding commuting) was estimated from 1 565 000 in 2012 to 1 846 000 in 2019. Detailed development of these data yield a portrait of a labor migrant (Florinskaya et al., 2015), the prevalence of labor migration and mobility in the largest urban agglomerations (Nefedova and Treivish, 2016), and the socioeconomic effects of modern *otkhodnichestvo* (Nefedova, 2015a, 2015b). However, the data are available only upon special request; in open publications, they are in a highly generalized form.

In 2011, the registration system for long-term migration in Russia underwent the most significant changes since the early 1990s (at that time, the residence permit was abolished). Prior to this, Rosstat's accounting of migration was based only on registration at place of residence, which excluded many de facto long-term resettlements, e.g., educational migration (Chudinovskikh, 2004). Since 2011, all those registered at place of stay for a period of 9 months or more have been counted as long-term migrants, which has led to a significant increase in the registered volumes of internal and international migration. However, the statistical accounting system has remained imperfect, allowing cases of double counting of migrants (Chudinovskikh, 2016; Chudinovskikh and Stepanova, 2020), as well as distortion of statistical information on the structural characteristics of flows.

Nevertheless, the migration data obtained by the new method gave impetus to studying its age characteristics and the confinement of migration events to individual stages one's life path. The age profile of migration was clearly manifested, with a distinct peak at the age of graduation from school and entry to university (Kashnitsky, 2017). Studies have appeared that analyze differences in age profiles of migration across Russian regions (Karachurina and Mkrtchyan, 2017).

Since 2012, data on long-term migration by individual municipalities in the context of individual flows (intraregional, interregional, and international migration) and age groups are available in the Database of Municipalities' Indicators hosted on Rosstat's website. This made it possible to study migration at the level of individual urban and municipal districts, and even at the level of rural settlements. Previously, on

the basis of the Multistat Database (Economics of Russian Cities) or passports of cities collected by the Computing Center of Rosstat, it was possible to study only migration in cities and only on the basis of information on the total migration growth of their populations. However, even this yielded information for analyzing the role of migration in the urbanization process in Russia (Karachurina, 2014; Makhrova and Kirillov, 2014) and stages thereof (Nefedova and Treivish, 2019).

The appearance of available data on migration at the level of cities and districts made it possible to identify a decrease in interregional territorial migration gradients and an increase in its intraregional disproportions (Denisov, 2018; Karachurina and Mkrtchyan, 2013). Quite well studied migration trends at the macrolevel were supplemented by studies at the mesolevel, highlighting population flow from peripheral territories to regional centers and its impact on the population of those and other territories (Egorov and Nikolaev, 2019). It became possible to assess the role of migration in the population concentration in major cities and their suburbs, which in the first half of the 2010s was about 0.5 mln people per year (Karachurina and Mkrtchyan, 2016). As shown by data for individual age groups, just like in other countries (Mu et al., 2021; Plane and Jurjevich, 2009), the most pronounced centripetal migration directions are also observed among young people of student age, while for people over 50, such trends are atypical (Karachurina and Mkrtchyan, 2021b). So far, though, there are no trends towards deconcentration, except for the occurring flow into densely (by Russian standards) populated suburbs. In this regard, Russia lags far behind the United States and European countries.

Data on migration at the level of municipalities made it possible to study the special role of the suburbs of large cities (regional capitals)—areas with the most intensive migration growth (Breslavskii, 2014; Mkrtchyan, 2019). Data on intraregional migration (in the form of matrices) are used to identify the flow of population from regional capitals to suburbs, the formation of gravity zones not only for regional capitals, but also for other large cities (Karachurina and Mkrtchyan, 2021a).

The role of migration in large cities and their suburbs was also studied using data on housing sales (based on information from Rosreestr and developers, which contains permanent registration addresses of buyers who made 37 800 transactions in the primary housing market in the Moscow metropolitan region in 2012–2014). Using the example of Moscow and Moscow oblast (Kurichev and Kuricheva, 2018), a model was proposed that links the demand for housing with the migration inflow into the Moscow urban agglomeration, which intensifies agglomeration effects (Kurichev, 2017). The data make it possible to identify the origin regions of home buyers (Muscovites and

residents of other regions, including those differentiated by cities of different sizes); this gives an idea of their ratio in the core of the agglomeration and its outer zone. Such studies significantly complement the understanding of long-term migration flows in the largest Russian urban agglomeration and the factors influencing them.

Materials from social networks have begun to be used to study migration. With the help of VKontakte data, educational migration and youth migration were studied (described in detail in (Zamyatina and Yashunskii, 2018)). For example, taking into account all the methodological limitations, analyzing the information contained in them made it possible, with a case study of Tomsk State University (Zamyatina, 2012), to identify not only the “collection zones” of applicants—this can be done with properly organized and, importantly, university statistics accessible to analysts, but also “sales zones,” about which university statistics know nothing (special monitoring organized by the Ministry of Education does little to help).

Important opportunities for studying migration are made possible by big data, e.g., from mobile operators. However, they are primarily needed to study various forms of population mobility (Chudinovskikh, 2018), and in this capacity, they apparently have no alternative. The data on daily trips obtained with their help, in addition to information on the scale and directions of these forms of mobility, makes it possible to study local labor markets within urban agglomerations (Makhrova et al., 2017), as well as seasonal, weekly, and daily rhythms of population mobility, and to discuss the delimitation of urban agglomerations (Makhrova and Babkin, 2020).

Thus, research on internal migration and mobility in the 2010s was significantly influenced by:

- improvement of the program, detail of development, and the availability of data from VPN-2010;
- the change in methodology for recording long-term migration in Russia, which made it possible to study previously latent forms of migration and reduced its underestimation;
- availability of data on migration not only at the regional, but also at the municipal level;
- the emergence of new types of data obtained from social networks and mobile operators.

#### STUDYING POPULATION MIGRATION IN DISSERTATIONS BY GEOGRAPHERS

In Russia, consolidation of research traditions in the scientific direction occurs through the institution of candidate and doctoral dissertation defenses. That is why their analysis is of particular interest. Most dissertations in social geography cannot be imagined without their own large-scale empirical research, the creation of original maps, and the author's contribution to the development of science.

Analysis of PhD theses makes it possible, on the one hand, to identify already established and often generally accepted approaches to the phenomenon under study and, on the other hand, to spot new trends and methodological approaches.

An electronic library of dissertations and abstracts was used as a source of information,<sup>6</sup> as well as the official website of the Higher Attestation Commission (HAC)<sup>7</sup> and electronic catalog of the Russian State Library.<sup>8</sup> Among similar studies, it is possible to mention publications by A.A. Aguirrechú (2014) on the structure and dynamics of dissertation defenses in socioeconomic geography, and by M.S. Savoskul (2014) on dissertations on population migration defended in 1993–2013.

Dissertations were selected according to the following keywords in the titles and tables of contents of works: migration, migratory, migrants, emigration, emigratory, emigrants, immigration, immigratory, immigrants, resettlement, population movement. Doctoral dissertations were not considered individual, since for the period from 2010 to 2021, only one doctoral dissertation on migration was defended in the specialty “Economic, Social, Political and Recreational Geography” (Savoskul, 2016a).

#### *Dynamics of defenses and topics of dissertations.*

From 2010 to 2021, 19 PhD dissertations were defended in the analyzed specialty, in which population migration is the main object of the entire dissertation or the focus of one of the key parts of the study.

Among the dissertations of social geographers submitted for defense in 2010–2021, migration topics are not the most popular, although there is a steady interest (Fig. 3). With a general decrease in the number of dissertations submitted for defense, the number of papers on migration topics is from zero to four per year.

Four dissertations touch upon issues of population migration within the framework of integrated research in social geography; they use a variety of research methods. In (Sheludkov, 2020) author points at changing of the rural settlement pattern in Tyumen oblast after 1991 including as a result of population migration. The labor market in cities of the Urals, Siberia, and the Far East in the 1990s–2010s based on population census data was analyzed by E.V. Antonov (2016b); accordingly, one of the important aspects of the study is labor migration. In a dissertation devoted to seasonal rhythms in the socioeconomic life of Rus-

<sup>6</sup> Website of electronic library of dissertations and extended abstracts. <http://www.dissercat.com>. Accessed November 11, 2021.

<sup>7</sup> Official website of the Higher Attestation Commission (HAC) under the Ministry of Education and Science of the Russian Federation. <http://vak.minobrnauki.gov.ru>. Accessed October 15, 2021.

<sup>8</sup> Official website of the Russian State Library. <http://www.rsl.ru>. Accessed October 25, 2021.

sian regions (Zemlyanskii, 2011), a nonstandard indicative method was used to determine the scale of seasonal migration of the population. The author examines fluctuations in the production of bread and bakery products in regions of Russia, which depend on the demand of buyers, and, accordingly, seasonal fluctuations of the actual population. A new type of data (from mobile network operators) was used by R.A. Babkin (2020).

Compared to 2001–2009, there was a geographical shift in studies on migration topics: at that time, out of 13 PhD theses defended by geographers, 8 studied population migration in certain regions of Russia; 5, population migration in Western Europe and the USA.

In 2010–2021, out of 15 papers directly related to population migration, 10 were devoted to studying Western Europe and the USA; 3, to near abroad (neighboring) countries<sup>9</sup> (Ukraine and Tajikistan); and only 2, internal Russian migration exclusively (Chuklova, 2011; Lyalina, 2018). D.P. Shatilo in her dissertation (2018) considered issues of the settlement pattern of migrants in Moscow, along with other European capitals (London, Paris, Madrid, and Berlin).

The change in the geographical span of research apparently has several reasons:

- Foreign statistics data were available through Internet sources, replete with have a high level of detail and allowing research at different territorial levels without leaving Russia; earlier, these data could only be obtained during field works abroad.

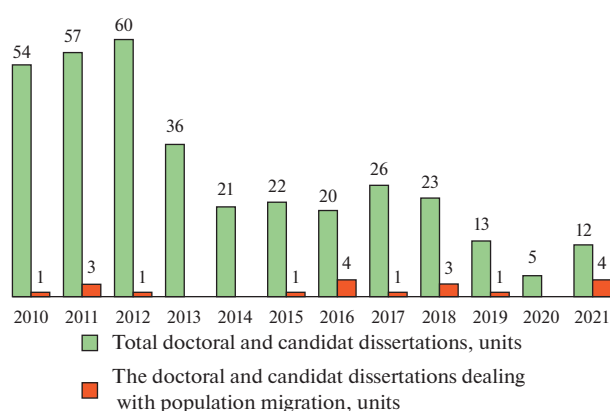
- Russian data in the decade under review were also at the disposal of researchers, but working with these data is often more difficult and painstaking.

We assume that the lack of an accessible statistical base on labor migrants from neighboring countries explains why such a relevant topic for Russia is virtually untouched in dissertations by geographers.

The direction of research has also changed. At the present stage, a significant number of dissertations address the adaptation of migrants and their settlement pattern in large cities (Arakcheeva, 2012; Kel'man, 2016; Shatilo, 2018; etc.), i.e., indirectly studying the geography of migration flows between countries and regions, but already the next stages of migration process—the results and consequences of migration.

Some dissertations lie at the intersection of the geography of population migration, on the one hand, and geourban studies and spatial segregation, on the other. Such, e.g., is the study by I.N. Alov (2021), which analyzes spatial differentiation of the settlement pattern for African Americans in the urban agglomerations in the USA.

<sup>9</sup> Here and below, the term “near abroad” means countries previously part of the USSR (except for Russia).



**Fig. 3.** Dynamics of defending doctoral and candidat dissertations in the specialty “Economic, Social, Political and Recreational Geography” in 2010–2021.

Compiled by M.S. Savoskul according to the website of the electronic library of dissertations and extended abstracts (<http://www.dissercat.com>), website of the Higher Attestation Commission under the Ministry of Education and Science of the Russian Federation (<http://vak.minedu.gov.ru>), the Russian State Library website (<http://www.rsl.ru>).

**Object of research.** Population migration studies are closest to social geography in terms of economics, demography, sociology, and ethnography: a common theoretical base, methodological approaches, and methods are used. There are differences in the object of study.

In *sociology*, the object of study is the migrants themselves, the processes of adaptation of migrants in the host society, as well as the social consequences of migration and their impact on the host society. In *economics*, the object of research is the labor market and sectoral features of migrant employment. In *demographics*, the object of study is usually the impact of migration on the structural characteristics of the population or the age and gender characteristics of migration flows. In *ethnography*, the object of study is various ethnosocial groups of migrants, both external and internal, the ethnic features of the adaptation of migrants, and the attitude of society towards ethnic migrants. Thus, these sciences, in contrast to social geography, most often consider certain aspects of the migration process.

In *social geography*, the object of study, as a rule, is a region, country, or territorial community (Table 3). In the predominant number of geographical studies, an integrated approach to the migration process in a particular territory is implemented.

## CONCLUSIONS

As in the world at large, population migration studies in Russia in the 2010s developed, increasing the number of studies and expanding their subject area. However, this can be said in relation to many scientific

areas in these years in Russia, not only to social geography. Most of the other features characteristic of world migration studies (their internationalization, broadening of thematic focus, strengthening of the relationship between migration topics, and deepening of analysis using various methods (Pisarevskaya et al., 2021)), in our opinion, have not yet been as obviously manifested in Russian geographical studies. Progress in many of these positions is primarily associated with the introduction into circulation of new statistical data, as well as a certain increase in publications on related topics (e.g., migration is considered in the context of the settlement pattern and urban development); similar trends are noted in world studies (Newbold, 2012).

However, researchers actively involved in migration studies in social geography are few in number. Perhaps this is due to the lack of young specialists entering into science (not only migration issues), which began in the 1990s; a small number of institutes involved in sociogeographical, including migration, research; the small number of special projects, funds interested in such research; etc.

Analysis of publications on migration topics in leading Russian geographical journals revealed not only a small number of regularly published authors, but also weak representation of regional authors in Moscow and St. Petersburg journals and, conversely, metropolitan authors in regional ones. Nor, obviously, is such parochiality a feature of migration research alone; it, like weak international publishing cooperation, cannot promote the development of scientific cooperation among social geographers. Whereas already in 2008, 35% of articles in international scientific journals were prepared by coauthors from different countries (Knowledge ..., 2011), in Russian migration publications, the share of joint studies with foreign authors is now only 3.8%. Cooperation is not facilitated even by proximity to the republics of the USSR and former ties. However, the situation with domestic Russian cooperation is even worse: only 3.2% of all analyzed publications are written by coauthors with different territorial affiliations.

There is still a large proportion of studies describing the processes of interregional and international migration based on current statistics, while geographers' studies of the regional migration situation often lack scenarios devoted to intraregional differentiation and the specifics of migration processes. Earlier, this was explained by the lack of access to detailed spatial data, but in the 2010s, this problem is no longer as acute.

There are few studies that raise specific research questions and solve narrow problems, but in detailed study. It is still difficult to imagine Russian studies analyzing, e.g., the role of siblings in youth migration (as applied to Sweden (Mulder et al., 2020)) or the influence of individual characteristics of older people

on their migration behavior, revealed through their preferences in the housing market (as applied to the Netherlands (De Jong and Brouwer, 2012)).

The basis of many modern studies is an almost stamped set of literary sources that came from the Soviet era. In some cases and scenarios, this may be a commendable example of continuity and scrupulousness, in particular, in studies on the historical aspects of population migration and the development of migration science. However, in most cases, such a superficial attitude to constructing a theoretical concept and framework of one's own research, without in-depth analysis of the existing background, is hardly justified or acceptable.

There are still very few geographic migration studies that attempt to combine different methodologies. At the same time, qualitative and quantitative approaches appear in related research fields, e.g., in studies of rural areas of the Tver geographical school of A.A. Tkachenko and colleagues, which gives grounds to hope for their active appearance in other sociogeographical topics. In rural–urban migration studies, this is present in studies by K.V. Averkieva (2016). There are almost no studies comparing certain aspects of migration processes in any location (be it status and structure of employment of migrants, antimigrant sentiment, second-generation migrants, etc.), which are now popular among European researchers and published in journals such as *Comparative Migration Studies*.

Due to the availability of foreign statistical portals and detail of data hosted on them, the number of Russian studies with detailed analysis of international population migration in individual countries and foreign cities has increased. However, the first dissertations and articles on this topic have not yet structurally and qualitatively changed the overall picture of research on the spatial analysis of migration in individual countries of the world and international migration flows.

At the same time, account for foreign experience and approaches to analyzing population migration based on big data, simultaneously with access to statistical data not previously collected or published in Russia, contributed to the emergence of studies on analyzing migration at the level of municipalities. Whereas, earlier, such a detailed analysis was possible only for the Moscow and St. Petersburg urban agglomerations, now it has become possible to analyze migration not only in cities of different sizes, but also in the suburbs, rural hinterland, etc., closely related to them. It became possible to study the relationship between migration and local labor markets, housing, etc.

In addition, fundamentally new data has appeared in researchers' arsenal—from social networks and mobile operators. This made it possible to tune the research optics to analyze the migration situation using case studies of individual universities and micro-

districts, to create migration portraits of individual social groups, and to speak more reasonably about the motivation for migration. These data also initiated or revived nearly forgotten lines of research, such as commuting and other forms of spatial mobility.

However, the absence in Russia of population registries similar to those in Nordic countries, detailed data on various types of spatial mobility collected and published in Germany (Starikova, 2016; Starikova, Treivish, 2017), and surveys that making it possible to study migration in microdata, hinders migration research in Russia.

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#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

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