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**SPATIAL TRANSFORMATION OF
CONTEMPORARY RUSSIAN CITY UNDER THE IMPACT OF
THE URBAN REGIMES**

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Introduction

The relevance of research

In recent years, many processes associated with new global changes – post-industrialism (Hutton, 2004; Neumann, 2016), globalization (Sassen, 2016; Smith, 2018), post-socialist and market transformation (Sykora & Bouzarovski, 2012; Sjöberg 2014; Müller, 2019), the entry of society into new technological paradigm (Glazyev, 2010; Makhotin, 2017). These changes are especially pronounced in large cities that determine the socioeconomic well-being of countries (Tolley, 1974; Razinsky, 2014). Such rapid transformations require new research approaches to their study. Understanding and comprehension of the internal nature of the processes of spatial changes allow to manage them more effectively, accurately predict further paths and prospects for the urban development.

Nowadays, global trends in the transformation of urban spaces are connected with the transformation of the “rust belts” and post-industrialism (Hobor, 2013; Neumann, 2016), including the commercial redevelopment of the industrial periphery (Axenov, Timoshina, 2020), reindustrialization (Forrest et al., 2004; Shaw, 2008), transformation of areas of mass residential development in post-socialist countries (Axenov, 2019), gentrification due to growth of social stratification (Yadov, 2001), shortage of territory for development (Chistobaev and Visleneva, 2013; Fedorova and Safina, 2016) and new public spaces based on public participation in urban processes (Vendina, 2009; Andersson, 2021). New functions and morphological features are beginning to emerge in cities, requiring contemporary spatial solutions. Rapid urbanization and the growth of the urban population contribute to increasing the importance of cities in the world, urban space in the life of states, which means the problem of transforming urban spaces is becoming the most important not only at the urban, but also at the national and even global level (Ilchenko, 2013).

Transformations are complex in nature and affect all spheres of life in which various actors operate – it is government, business and society. The interests of each actor change over time at different speeds and in different directions - models of cooperation between actors become more complex, and, as a result, the system of urban governance becomes more complex. For this reason, this paper uses a theory that structurally unifies the divergent actions and interests of actors in cities – Clarence Stone’s **theory of urban regimes**. **Regime** is a system of interactions, relationships, formal and informal rules, then **urban regime** is a set of agreements and relationships between actors forming a coalition (Stone, 1989; Ledyayev, 2008). The impact of regime interactions on the transformation of cities is a universal trend for all urban spaces, but it also has specific features characteristic only for Russia (Makhrova and Golubchikov, 2012;

Tykanova and Khokhlova, 2015). The results of such impacts are actually reflected on the cities (Papadopoulos, 1996), but have been little studied in Russian scientific discourse. The problem of transformation of urban space and related urban development trends under the impact of urban regimes is a new subject of research, so this research is intended to fill the lack of similar studies in modern geographical science.

The object of the study is the space of the Russian contemporary city in the process of transformation.

The subject of the research is the transformation of the Russian contemporary urban space under the impact of urban regimes.

The research purpose is to identify the principles and patterns of transformation of the Russian contemporary urban space under the impact of urban regimes.

To achieve this purpose it is necessary to solve the following **objectives**:

- identify the main theoretical and methodological approaches in the field of research on the transformation of contemporary Russian urban space;
- determine theoretical and methodological approaches to the study of urban regimes, their manifestation and impact on the transformation of the contemporary Russian city, formulate the conceptual framework of the study;
- justify the methodology for studying cases of the impact of urban regimes on the transformation of contemporary Russian urban space;
- create spatio-temporal models of the impact of the urban regime on the transformation of the space of contemporary Russian city;
- determine the types of transformation of the space of contemporary Russian city that may arise under the influence of urban regimes;
- identify general principles and patterns of changes in contemporary urban space in the Russian Federation under the impact of urban regimes.

The methodology and research methods

In the study author relied on wide range of **theoretical and methodological approaches**, such as the theory of urban regimes by Clarence Stone, the concept of “growth machines” by J. Logan and H. Molotch, the center-peripheral approach of the neo-Marxist school of I. Wallerstein, the approach of geographical multi-scale by A. Treivish, the ecological approach of the Chicago school of R. Park and R. Mackenzie, the approach of spatial diffusion of innovations of the Lund school of T. Hagerstrand, the institutional approach of R. Merton, “radical

geography” of D. Harvey, the positional approach of B. Rodoman. The general methodological foundations of the study stem from the fundamental works of theorists of the domestic school of socio-economic geography (V. Semenov-Tyan-Shansky, A. Treyvish, B. Rodoman, A. Chistobaev, etc.), as well as the largest foreign specialists in the field of geo-urban studies (D. Harvey, P. Huggett, D. Gold, K. Lynch, S. Sassen, etc.). The concept of urban regimes by C. Stone and the theoretical studies of post-socialist urban transformation by L. Sykora, S. Bouzarovski and K. Axenov were chosen as central for the purposes of the study. The base research site was Saint Petersburg and other large Russian cities (Moscow, Yekaterinburg, Vologda).

The degree of problem development in urban geography is insufficient. The most deeply studied are the problems of relationships between actors in urban governance (C. Stone, V. Ledyayev, S. Feinstein), the typology of urban regimes (B. Ferman, G. Stoker, K. Mossberger, Y. Pustovoit), the geography of regimes in different cities and geographical scales (A. Papadopoulos, K. Hankins), adaptation of the concept of urban regimes for European cities (K. Ward, M. De Socio, D. Imbrosio). Important contribution to the methodology for studying the transformation of urban space in Russia is the works of E. Pertsik, G. Lappo, A. Treivish, K. Axenov, A. Makhrova, N. Zubarevich, O. Vendina, T. Nefedova. The problem of the role of urban regimes in the development of Russian cities was touched upon only in particular aspects in the studies of sociologists and political scientists (D. Tev, V. Gelman, A. Khokhlova, L. Chernysheva). The author contributes to existing research on local regime interactions in Russian cities (V. Bederson, A. Zhelnina, I. Shevtsova, E. Tykanova), develops the geographical direction of research on urban regimes (E. Tretter, O. Golubchikov), connects the current urban agenda with the theoretical dimension of the problem.

The main **research methods** are:

- quantitative and qualitative methods of sociological research (expert survey, content analysis of the main urban cases of conflict between actors, case analysis);
- mathematical modeling (translation of data into quantitative indicators, calculation of a point system and compilation of spatio-temporal models);
- cartographic (creation of maps of spatio-temporal models and transformation of urban space);
- comparative-geographical (comparison of the results of transformation of urban space in cities and regions);

- typological method (creating of typology of urban space transformation; compiling a classification of criteria for publicly valuable projects for transforming the urban environment);
- method of visual observations.

The theoretical significance of the research is determined by the inclusion of the theory of urban regimes in the general context of socio-geographical and geo-urban studies of the Russian city of the 21st century. A distinctive feature of the study is the use of the urban regime concept to identify trends in the transformation of Russian urban space. The features and differences of the urban regime model of the Russian city are substantiated in comparison with American and European models. The author is the first who propose a new approach that combines geographical and sociological approaches to understanding the interaction of urban space and urban regimes. Despite the large number of studies on the dynamics of urban regimes and particular aspects of transformation in Russian cities, this study is the first to attempt to conceptualize the impact of urban regimes in geographical space. The author offers his own typology of transformation of urban space depending on the nature of the urban regime impact.

The scientific novelty of the study is:

1. Approaches to conceptualizing the urban regime impact on the urban space have been developed for the first time;
2. Spatio-temporal models of the urban regime impact on the transformation of the space of contemporary Russian city have been created, which can be repeated using any other example;
3. The author's typology of the transformation of urban space under the impact of urban regimes has been compiled;
4. Characteristic spatial trends, principles and patterns in changes in urban space arising as a result of the impact of urban regimes are revealed;
5. A new topical subject of geographical research has been identified – changes in urban space under the urban regime impact.

The author's personal contribution is the development of a new methodology for studying urban space, which makes it possible to detect the urban regime impact and changes as a result of this influence. For this purpose, the author collected and analyzed his own unique database of ecological and eco-cultural conflicts in St. Petersburg (n=94), verifying the data through an expert survey. Additionally, the author carried out a selection and detailed analysis of cases of publicly valuable projects for transforming the urban environment in different cities of Russia, and

graphically reflected the process of transformation of urban space. The author conducted his own research, which included an expert survey, content analysis, case analysis, creation of maps and geographic information systems (GIS). Map diagrams were built in CorelDraw X7 and CorelDraw 2017, tabular data was processed in Microsoft Excel and SPSS.

The practical significance of the study is in the introduction of a new research tool and the predictability of urban changes. The methodology allows to read conflict and crisis processes in urban space and determine the dynamics of the development of urban spaces. Problematic locations that require special attention from city authorities and society are identified, and the dynamics of changes in urban space are modeled. The application of the research results in the work of government authorities will help reduce the overall conflict potential of urban spaces and neutralize urban conflicts on the early stages of manifestation. The research materials can be used in developing conceptual directions for urban policy and preparing bills related to sustainable urban development, urban planning, investment projects and the protection of green spaces. The study can also be useful as educational material for urbanists, political scientists, geographers, sociologists, economists, and other representatives of the scientific community.

The following statements are submitted for defense:

1. Urban regimes as systems of interactions between actors' influence on the directions of transformation of the space of Russian cities, changing its urban content. The transformation of urban spaces has common geographical and chronological features of manifestation in large Russian cities, set by the framework and directions of behavior of authorities, business and society.

2. The transformation of urban space under the impact of urban regimes is expressed in the emergence of new functions and morphological features of urban development, the diffusion of conflict zones of interaction between actors from the center to the periphery, the emergence, change, transfer or cancellation of publicly valuable projects for changing the urban environment.

3. The impact of urban regimes on the transformation of the space of Russian cities is mainly associated with the gradual transition of Russian cities from a growth regime to a progressive middle class regime. This transition is accompanied by the growing role of social activism and the emergence of a new balance of interests of actors. During this process, the number of urban conflicts and publicly valuable projects for transforming the urban environment is increasing - examples of the clash of interests of the parties involved: society, business and government. As a result, there is noticeable process of transformation of the functional purpose of urban space from commercial and business to social and recreational.

4. The transformation of urban space has typological features depending on the nature of the impact of urban regimes, which can be applied to any Russian urban space. The transformation of space can differ in the predominance of interests of actors, location, the nature of changes in the

function of space, the number of changes in the direction of transformation, duration, scale of actors' impact and resonance in the media.

5. There are universal principles and patterns of transformation of contemporary Russian urban space under the impact of the urban regime, described in detail in this research. They reflect the most characteristic paths of urban development under different urban regimes, the main spatio-temporal features of the urban regime impact, the relationship of dynamically changing actor interests and the evolution of urban space.

Degree of reliability and approbation. The scientific principles and conclusions of the study were reflected in the author's speeches on scientific conferences at the international and all-Russian level, such as: XVII International conference "Russian regions in the focus of change" (Yekaterinburg, 2022), International conference dedicated to the 20th anniversary of the Department of Regional Politics and Political Geography of Saint-Petersburg University (Saint Petersburg, 2022), International conference of Saint-Petersburg University "Modern processes of globalization and regionalization: towards a new spatial organization of society" (Saint Petersburg, 2023), XIII and XIV International annual scientific conferences ARGO (Tyumen, 2022; Ulan-Ude – Ulaanbaatar, 2023), International Arctic Summit "The Arctic: prospects, innovations and regional development" (Saint Petersburg, 2023), International conference «XVII Big Geographical Festival» (Saint Petersburg, 2023), Scientific seminar of the Leibniz Institute for Regional Geography (Leipzig, 2021) and others.

13 scientific papers on the topic of the dissertation have been published in two languages (Russian and English), including 3 articles in journals included in the Web of Science RSCI list, the core of the RSCI, the Higher Attestation Commission of Russia and the White List of the RFBR, 2 articles in the Scopus journals and 1 article in Web of Science Core Collection journal.

Structure and volume. The thesis consists of the introduction, three chapters, a conclusion, a list of references and appendices. The bibliography includes 305 titles, 133 of which are in foreign languages. The research is presented on 180 pages, contains 16 illustrations, 27 tables and 9 applications.

Chapter 1 describes theoretical and methodological approaches to the study of the urban spatial transformation, urban regimes and their impact on the urban change.

Chapter 2 substantiates the methodology for studying cases of the urban regime impact on the transformation of urban space, examines examples of the urban regime impact in different Russian cities, compiles spatio-temporal models of such impact, maps of the transformation of urban space under the impact of the urban regime.

In **Chapter 3**, based on a study of the impact of urban regimes, a typology of transformation of urban space is developed and the principles and patterns of this process are identified.

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Chapter 1. Main theoretical and methodological approaches to the research of spatial transformation of contemporary Russian city under the impact of the urban regimes

1.1. Main theoretical and methodological approaches to the research of spatial transformation of contemporary Russian city

Urban space as an object of study has existed as a basic unit of geographical science from the very beginning of its formation (Strabon (trans.), 1879; Tardieu Amédée, 1886). It is believed that the contemporary city embodies the most developed existing form of spatial organization of life (Karpov, 2008). According to Andrey Treyvish, the city is the “focus” of countries and regions, the center of concentration of activities and contacts, the “global switchboard” (Treyvish, 2009). The city concentrates the main social processes, examples of culture, architecture, engineering thought (Gutnov and Glazychev, 1990). The problem of studying contemporary urban space lies in the field of economy-geographical research (Semenov-Tyan-Shansky, 1928; Haggett et al., 1977; Nefedova et al., 2001; Treyvish, 2009; Chistobaev and Visleneva, 2013, 2014; Savoskul et al., 2014, etc.), political geography (Kolosov and Borodulina, 2004; Pacione, 2009; Axenov, 2011, 2012; Koskin et al., 2021), behavioral geography (Listengurt, 1975; Goodey & Gold, 1987), sociology (Lefebvre, 1991; Zelenov, 2000; Zhelnina, 2011; Tykanova, 2013), social geography (Harvey, 1996, 2003; Vendina, 2008), political science (Logan & Molotch, 1987; Stone, 1989), economics (Sassen, 1991; Sanoff, 2015; Grossi & Pianezzi, 2017), architecture (Lynch, 1960; Rossi, 1984), geourbanistics studies (Lappo, 1987, 1997; Polyani, 2014; Pertsik, 2018) and other related branches of scientific knowledge. The author studied the problems of urban conflicts and protests (Galustov, 2016, 2022, 2023), the ideologization of urban space (Galustov, 2013), urban publicly valuable projects (Axenov and Galustov, 2022, 2023), the practice of public participation in cities (Galustov et al., 2021a, 2021b), development of urban public spaces (Andreev and Galustov, 2021).

At the first stage of this study, we determine the main theoretical and methodological approaches to the transformation of contemporary Russian urban space, since in the study we proceed from the premise that the impact of urban regimes involves not just the appearance of individual spatial features, but also change in the essential content of the city (Axenov, 2014). In modern scientific research, this issue was only touched upon in particular aspects and did not form significant geographical generalizations (Tev, 2006; Gelman and Ryzhenkov, 2010; Tykanova, 2013; Tykanova and Khokhlova, 2015, 2017, 2019, 2020; Chernysheva and Khokhlova, 2021; Koskin et al., 2021).

In relation to the subject of research, along with the theory of urban regimes, the key element of the theoretical base of the work is the **theory of urban transformation** (for example, Treivish et al., 1999; Rudolph, 2001; Sykora and Bouzarovski, 2012). The very concept of “**transformation**” (from the late Latin *transformatio* – “metamorphosis”) means “change, transformation”¹. Therefore, when we talk about the transformation of space, we mean change in its characteristics. In Marxism, the word "formation" means a stage of social and economic evolution (Marx, 2004; Ilyushechkin, 2006), the change of this stage is a transformation. Since in our study we are talking about a Russian city, it is important to take into account the fact that the Russian Federation, from a socio-economic point of view, is at the stage of post-socialist transformation (Axenov, 2011), which means that any city belonging to its space is post-socialist (also "Post-Soviet"). This concept includes the cities of all countries that found themselves at the stage of "transit" from the socialist to the capitalist socio-economic formation, starting from the late 1980s. The phenomenon of the post-socialist city is actively discussed in modern sociological and geographical science (Schweitzer & Stephenson, 2007; Axenov, 2012; Zubarevich and Safronov, 2013; Hirt, 2013; Gelman, 2015; Ferenčuhová and Gentile, 2016; Kronenberg et al., 2020, etc.).

There are also more private studies: in terms of the analysis of urban transformations - in the field of geo-urban theories (Axenov, 2012; Pertsik, 2018); urban conflicts – political conflictology (Shmeleva, 2008; Tykanova and Khokhlova, 2014); coalition building - the sociology of social movements (Zald et al., 1980; Zdravomyslova, 1990; Byron, 2000; Goldstone, 2004; Goodwin and Jasper, 2004; McAdam, 2004; Della Porta and Diani, 2006; Tarrow, 2011; Sanoff, 2015); their interactions – political sociology, sociology of the city (Shchipanov, 1999; Zelenov, 2000; Artemov, 2002; Park, 2002) and law (Parchomovsky, 2006; Medvedev, 2016; Klyukanova, 2019; Akkermans, 2020a; Capri and Mattei, 2021) . The issues of symbolic and toponymic transformation of the city are raised in the studies of V. Tkhakakhov (2017, 2021).

For the purposes of our study, we based on the Mills approach, which emphasizes that in order to study the transformation of urban space, it is necessary to combine the geographical and sociological perception of space (Mills, 1998; Wilkinson, 2012). According to Harvey (2018), the sociological view does not take into account the specifics of the world and space where society develops. Geographers have to take into account the sociological aspect for creation of spaces suitable for human life (Harvey, 2018). For the geographer, in exploring the city, it is important to break free from the doctrine of simple maps and explore more deeply the complex social

¹ Academic explanatory dictionary of the Russian language // Russian Academy of Sciences, Institute of the Russian Language. V. V. Vinogradova; edited by L.P. Krysin. M.: YaSK, 2016. 668 p. Internet resource: <https://sanstv.ru/dict/%D1%82%D1%80%D0%B0%D0%BD%D1%81%D1%84%D0%BE%D1%80%D0%BC%D0%B0%D1%86%D0%B8%D1%8F> (Date of access: 1.02.2023).

organization (Webber, 1963, p. 54). Therefore, our approach proceeds from a combination of geographical and sociological research methods. Based on the ideas of Mills (1998) and Harvey (2018), we link together spatial consciousness (perception of space and place, attitude to the surrounding space) and sociological (people's interests and social phenomena). In our study, we analyze the space outside of the social processes that take place in it. Urban space is an integral element of the life of society, and its activities are carried out within the framework of space.

According to V.P. Semyonov-Tyan-Shansky (1928) "space" is a set of places of action of physical or mental phenomena. Its size (scale) is not limited, any restrictions are lost both in infinitely small spaces and in infinitely large ones. E. Soja believes that space consists of the real and the imaginary. "Real" space is physical space, including buildings, roads and other material objects, "imaginary" space conceived by man and constructed in consciousness, images and history, as well as "real-and-imaginary" space, lived space of representations or "third space" (Soja, 1989). A. Lefebvre draws attention to the fact that new knowledge about space simultaneously takes into account the past and looks to the future, helping to understand exactly how societies generate space. Lefebvre believes that the properties of space are only cultural constructs (Lefebvre, 1991).

Konstantin Axenov (1993, 2014) singles out the problem of the difference between physical and socio-geographical space. Physical space can be measured, it has boundaries and more structured methods of analysis, it is "container for matter, objects and processes" (Elatskov, 2012). Socio-geographical space is a more flexible concept, it does not reflect the size of an object, but reflects the scale of an event that occurred within a particular physical space. At the same time, it may not have rigid boundaries, such a space has a certain set of changing spatial factors and is a **dynamic category** that can change over time. Axenov does not consider space, abstracting from time, clearly linking these elements into a single space-time approach. It is appropriate to consider such spatial and temporal models for the analysis of various socio-geographical phenomena (Axenov, 1993, 2014).

If space is a dynamic category, then its transformation is the process of its change in **time**. According to Rodoman (2017), modern geography cannot refuse to study movements, dynamics, historical changes (Rodoman, 2017). Dynamic statics in geography explains immovable objects (in our case, urban space) as results, products, end and starting points, nodes, forms, instantaneous states of processes, movements, movements, flows (in the case of our study, this is a reflection of a change in urban regimes and their reflection in space). The basic particle of time is the "**event**", defined as the primary change in the essence of a social phenomenon (Axenov, 2014).

Geographical science considers space at different taxonomic levels (Metleva, 2011), in turn, transformation is able to dynamically change the essence of space on different levels. The

macrolevel of transformation can be called the cumulative changes in the properties of space at the country-wide and global levels (Yusim et al., 2015). This type of transformation can describe changes in formations as a whole (for example, the change from capitalism to socialism). The **mesolevel**, as a rule, is defined by researchers as a regional level (Zelinskaya, 2012), and is actively used in studies of regional economics (Kirdina-Chandler, Maevsky, 2020). In our research, we mainly consider the transformation on the **microlevel** – the level of specific territories, districts, generalizing the results obtained for the urban space as a whole. Transformation at the macro level most often sets a general trend for transformation at lower levels, the results of macro transformation are fixed in space, but have their own individual characteristics on different microlevels (Kuricheva and Kurichev, 2018).

Rodoman (1999) points out that under the influence of external factors, objects can **change their location, properties and functions** (the principle of “place pressure”). According to Axenov (2014), who studied the transformation at different levels of socio-geographical phenomena, the transformation of a place is also accompanied by the replacement of the essence that gave rise to it. So the transformation of space can be defined as “**a dramatic change in the properties of space and the disappearance of its essence**”. Transformation completely changes the essence of the place and replaces it with a fundamentally new one (Fig. 1.1; Axenov, 2014).

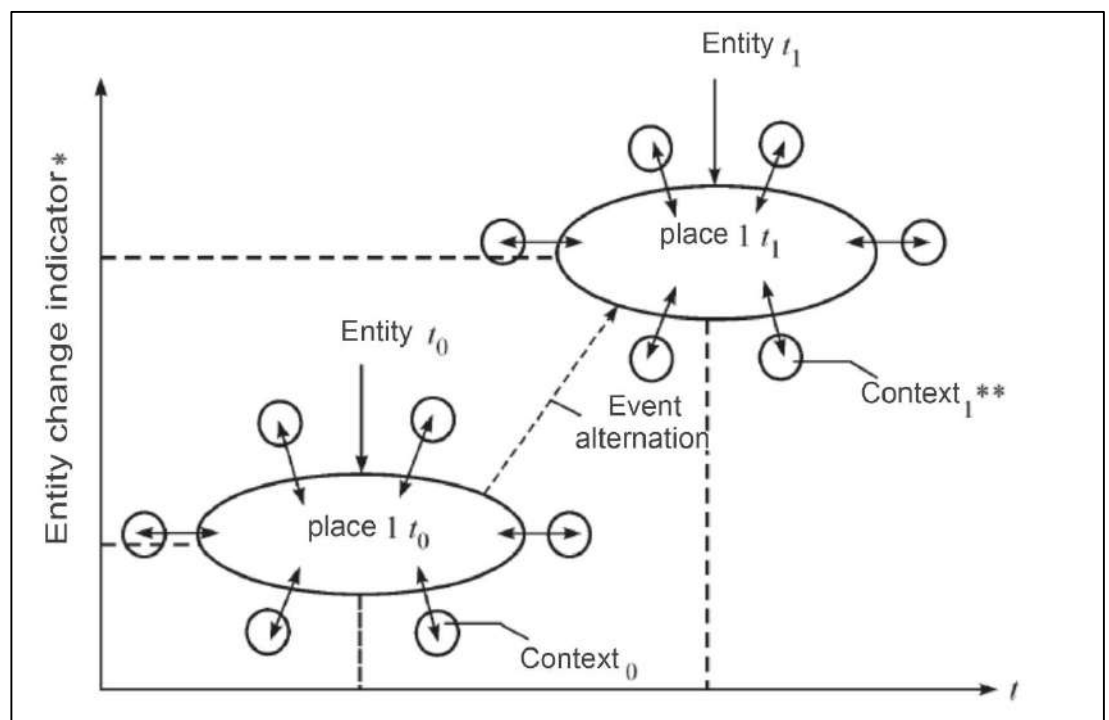


Fig. 1.1. Process of the place transformation
(on base of Axenov, 2014; translation by the author)

According to L. Sykora and S. Bouzarovski (2012), the transformation of a post-socialist city (Russian city can be attributed) is characterized by three essences – the transformation of

institutions, social practices and the morphology of urban space. These transformations can occur in different directions and at different forward speeds, but most often they are interconnected. Researchers argue that, despite the end of the institutional transformation, other types are still ongoing in Post-Soviet cities (Sykora & Bouzarovski, 2012). We consider the process of urban transformation from the point of view of new urban development trends and results that reflect the interaction of generally changed institutional actors and actively changing social practices in the morphology of urban space. In Russian literature, the problems of social transformation of the space of contemporary Russian city and its connection with urban morphology (gentrification and redevelopment) were studied by geographers Makhrova and Golubchikov (2012, 2013). Sociologist Mokrousova (2012) links the transformation of space with the social changes that take place in it.

According to Axenov (2011), today Russian cities are undergoing a post-socialist transformation at the macrolevel, the last complex transformation of urban space in modern history. The number of new or changed spatial objects and systems during this time was maximum, the results of these transformations were fixed in the urban space (Axenov, 2011). The post-socialist transformation in Russia, starting from the early 1990s, combines a whole series of socio-geographical events associated with a change in the functions of various socio-geographical places. New urban planning results that have appeared in the urban space as a result of such a transformation are the focus of this work. As close as possible to the subject of research is the concept of "redevelopment", which involves a change in the functional purpose in the course of transformation, as a result of which the space acquires qualitatively new properties that are more flexible to the current conjuncture (Gotham, 2001; Weber, 2002). Therefore, for the purposes of this work, the transformation of urban space is considered from the position of **the transformation of urban morphology and changes in the functional purpose of urban space**.

The transformation processes that we study are viewed through the prism of contemporary Russian urban space, however, it is worth noting that the study reviews the entire set of Russian cities. Speaking about the modern Russian space, we focus on how the urban regime impact can manifest itself in different Russian urban locations, what spatio-morphological changes might occur under this impact.

Firstly, the problems of development and transformation of urban space began to be actively studied in foreign academic science (for example, Stone, 1989; Lefebvre, 1991; Harvey, 1996, 2003). Therefore, according to Müller, "peripheral" urban studies emerging in the Post-Soviet space compete with the already existing "core" of Western science (Müller, 2019). By the word "western" we mean, first of all, American and Western European science (Great Britain,

France, Germany), that is, the science of developed (according to the UN classification²), capitalist countries.

The phenomenon of contemporary city development in most western papers is explained in terms of neoliberal and neo-Marxist theories (Kinossian & Morgan, 2014). Neoliberal theories tend to explain urban development in terms of development, governance, and institutions. According to Oleg Golubchikov, neoliberalism has become the narrative and the “standard” framework of analysis for the study of all cities in the post-socialist space (Golubchikov, 2010). Sjöberg and Müller (Sjöberg 2014; Müller, 2019) point out in their works a significant lack of original concepts and theories that explain the phenomenon of transformation of the post-socialist city and the nature of its governance. Sjöberg also notes the inherent problem of “localism” and the inaccessibility of “peripheral” research – urban studies scholarly literature remains in its own region, with limited access to a wider international audience (Sjöberg, 2014).

As A.I. Treyvish thinks, the cities of Russia are of particular difficulty for scientific analysis – they are an asymmetric "archipelago" of islands in the ocean of the inner periphery (Treyvish, 2009). V.L. Kagansky notes that in Russia, since the Soviet era, society has been much more identical with the state (than in the United States – author's note) and it also forms spatial structures (Kagansky, 2012). Everything in the space is “*statusally differentiated*”, that predetermines a powerful administrative-regional structure, which is characterized by rigidity and monopoly (Kagansky, 2012). The Russian city as a phenomenon represents a still poorly studied direction, being in its own way a “deviation from the scientific norm”, that is, not fitting into the justifications of traditional theories of urban space (Ferenčuhová and Gentile, 2016, 484). It is in this connection that we use the accumulated experience of research in different countries, even with the proviso that not all theoretical models are equally applicable to them.

It should be noted that the Russian economy and politics borrow both some of the market features of Western states and include certain features of the state Soviet system (Offe, 1991). Klaus Offe put forward the thesis that the very nature of the post-socialist transition creates huge contradictions (Offe, 1991). According to I.A. Matveev, Russian policy after 2014 began to be pursued, for which the interests of capital are secondary in relation to ideological mobilization and the foreign policy agenda (Matveev, 2017; Matveev, 2019). This is especially curious given that the neoliberal view of "transition" does not recognize the different paths and outcomes of this transition: for example, democracy, authoritarianism, and difficult cases "in the middle". It is characterized by homogenization according to the standard "westernized" pattern. However, it is

² UN country classification, 2014. Internet resource:
https://www.un.org/en/development/desa/policy/wesp/wesp_current/2014wesp_country_classification.pdf (Date of access: 15.01.2023).

obvious that not all recipes for homogenization are implemented in the same way in different countries, and reverse trends also work.

According to Gaddy and Ickes (2013), in the Russian case, there are some limitations to the “standard” analysis of the transformation of urban space. The first is the production structure inherited from the USSR as a special type of physical and human capital accumulated during the Soviet era, as well as a way of their distribution, including a special, “non-market” spatial distribution of cities and their infrastructure. The second impacting cities to a lesser extent is significant oil dependency, which means that rents must be distributed among manufacturing enterprises that use this inherited physical and human capital (Gaddy and Ickes, 2013). According to Kronenberg and Schweitzer, in the contemporary Russian city, the priorities of the urban agenda are beginning to shift from social to economic (Kronenberg et al., 2020) and environmental (Schweitzer & Stephenson, 2007).

Despite the fact that Russia regularly declares and does not openly reject the “broad” agenda for the political modernization of space (including democratization and expansion of political freedoms), it is either postponed or reduced to zero, as was observed in the early 2010s (Gelman 2015, 460). Contrary to Western participatory culture, Russia is still largely characterized by patriarchal (provincial) and subservient culture (Almond & Verba, 1965). According to Kinossian & Morgan (2014), such a culture is often spatially characterized by global economic peripherality and underdevelopment. Åslund calls it as "a tribal, plutocratic and neo-feudal system" (Åslund 2019, 232). The paternalistic consciousness of society, associated with a significant period of authoritarian and totalitarian political regimes, is a limitation for the formation of a culture of active public participation, broad democratic processes in Russian cities, which is also a limitation on the paths of transformation. Solving urban problems, as a rule, is not the prerogative of the local population, many functions are delegated to the state (Vagin et al., 2015; Shulga et al., 2017). Very often, government projects remain the driver of regional development. This situation is typical for a Russian city of the XXI century. Despite this we show that large cities in the 2010s have very strong local communities and a local culture of public participation (Galustov, 2016; Zhelnina and Tykanova, 2019; Khodachek et al., 2020; Galustov et al., 2021).

According to Axenov (2011), there is no clear answer to the question of whether Eastern European cities (including Russian ones) are catching up with Western cities or are developing their own structures. Neoliberal theories of modernization and “westernization” link the development of Russian cities with a market economy and democratic development, which means that in the future they will follow the “western” paths of development, although with some delay (Tikhonova, 2011). However, there are also a number of research approaches that highlight the unique path of urban development (Treivish, 2009; Burlina, 2019; Bederson and Shevtsova, 2021).

The object of our study is the space of a large Russian city, where, according to Natalia Zubarevich and Sergey Safronov (2013) most noticeable is the “center-periphery” gap, and urban policy depends on the complex nature of the interactions of its actors (regimes). Therefore, this study focuses only on those results of the transformation of the morphology and functions of urban spaces that have occurred due to the impact of urban regimes.

1.2. Theoretical and methodological approaches to the research of the urban regimes, its manifestation and impact on the spatial transformation of contemporary Russian city

Interests of actors have dramatically changed with development of institutes of business, civil society and reforms in political system. It directly leads to actor’s interactions that could significantly change urban space. As Lefebvre noticed, all actors fight for the right to produce the space and its change in their interests (Lefebvre, 2002). As David Harvey said, society has to unite and defend the “right to the city” in the urban space (Harvey, 2003), that has to be defended in constant interaction with the government and business.

Actors mean three major groups of players in urban space – government, business and society (Waddel & Brown, 1997). Each actor may have different ideas how urban space should be used (Brown & Timmer, 2006). By “power” we mean an analogue of the term “government”, which refers to a group of people who manage an organized urban community. This actor has the exclusive right to legislate and enforce them, to make final decisions regarding the use of urban space (Smelser & Baltes, 2015).

“Business” in the context of the study is a community of entrepreneurs, which includes, developers, investors and other entities with commercial interests in the use of urban space. The main goal of a business is to extract profit (income), develop own business, increase the scale of business results (Gold, 1990; Cugurullo, 2013).

The “society” in the study refers to the configuration of urban communities that has developed in the urban space, that is, all people and groups of people living in the city. Each urban community may have its own interest, so the behavior of different parts of society may be multidirectional (Andersen N., 2013). According to Harvey, society strives to use urban space, which is a resource for it (Harvey, 2018). However, society as an actor is distinguished by the absence of direct commercial interest (like business) and direct opportunities for spatial management (in comparison with government). Therefore, despite the maximum proximity “to urban land”, society has a very limited set of tools to influence on the transformation of urban space (Anderson E., 2013).

The patterns and efficiency of interactions between three main urban actors are analyzed by so-called “theory” (or concept) of urban regimes (or urban political regimes) (Stone, 1989; Fainstein, 1994; Dowding et al., 1999; Dowding, 2001; Ledyayev, 2008; Samataryova, 2017 and others). Of modern urban theories, it seems to us to be largely universal, since, on the one hand, the classical ecological approach of the Chicago school explains social processes from the point of view of the “invisible hand of the market” (Burns, 1980; Bishop, 1995). On the other hand, the left Marxist philosophy works within the framework of the “exploiter-worker” relationship, which does not explain the role of representatives of modern society who are not employees, as well as a complex set of relations between the authorities and the “business-bourgeoisie” (Trubina, 2011; Primakov, 2022).

In the study we see lots of interpretations of the “**regime**” concept. The word regime (from French “regime”, Latin “regimen”) is translated in a broad sense as “working conditions, activities”, “interactions”, “existence of something”, “manifestation of something”, “system of rules”, “routine of life”, “way of life” (Ushakov, 1940). In a narrower sense, “regime” means “management, command, control system” (Shamsunova, 2001). In political science, the most common interpretation of the regime is as “the political system, the state system” (Marchenko, 2010). There are also such explanations of the regime as “method (method) of transformation”, “routine, way of life”, “system of rules, interactions” (Popova, 2017). Krasner (1983) notes that a regime in a general sense is correct to mean “a set of principles and norms, **formal and informal interactions**” (Krasner, 1983; Shanin, 2008). In mechanics, the regime is called the “working state of mechanisms” (Svishchev, 1994) and P.L. Kapitsa in relation to the temperature regime indicates that in order to be able to study the regime, it must first be established (Rubinin, 1985), it is an important factor in the existence of the regime is the possibility of its establishment. A significant set of interpretations of the meaning of this word is often misleading. In our study, we consider the concept of regime in the broadest sense of the word. The essence of the concept is reduced to “**system of interactions, relationships, formal and informal rules observed in the way of life**”. At the next stage, it is necessary to explain how the concepts of “city” and “regime” are related.

The author of the theory of urban regimes, Clarence Stone describes the urban regime in his classical definition as “**the formal and informal arrangements by which public bodies and private interests function together to make and carry out governing decisions**” (Stone, 1989). In his work “Regime Politics. Governing Atlanta. 1946-1988” (Stone, 1989), using the example of the city of Atlanta (USA), he proves that the management system that has developed in it is fully dependent on the **informal relationships between the city administration and the business community**. And then this system of relationships deepens depending on the “degree of acquaintance, proximity” of government and business, and allows you to build a system that is

“behind the back” of formal management. The urban regime begins to form only when intersecting interests begin to emerge in the urban space in the interaction of actors (Papadopoulos, 1996). According to A. Papadopoulos (1996), “regimes can be described as **“software”** to the built environment’s **“hardware”** (urban result in urban environment).

In modern Russian literature, Stone's term "urban regime" has several translations (Axenov and Galustov, 2022). There are concepts of "urban regime" (Trubina, 2011), or "urban political regime" (Ledyayev, 2008), which in English is not delimited in Stone's concept. However, in our opinion, the term "urban regime" has a broader interpretation and describes precisely the relations and interactions that are being formed in the city, which can include not only political, but also economic, socio-cultural ones. Coalition formation and regime change can also be driven by non-political causes and involve more than just political processes. In this regard, for the purposes of this work, aimed at **analyzing urban regimes in terms of their impact on the spatial transformation**, we use the term "urban regime".

Clarence Stone proposed the first **classification** of the main types of urban regimes (Stone, 1989; Ledyayev, 2008). The urban regime can be permanent, but its dynamics manifests itself and regime interactions are transformed under the impact of changing interests and opportunities of actors. This study is based on the next classification:

1. Status quo regime. Actors are most interested in **balance maintaining** and do not bring any ideas to change the urban space. The basic principle is “it’s better not to do anything, as long as it doesn’t get worse”. Stone links the emergence of such regime to economic causes, believing that the likelihood of a regime increases as cities shrink. "Status quo" maximally slows down any diffusion of innovations in the urban space. Stoker and Mossberger (1994, 2001) describe "status quo" regime as the "watchman regime". Such regime was commonly characterised for the smallest Post-Soviet cities in the first period of post-socialist transformation (1990s), when business and society were just emerging as actors of the new coalition management.

2. Growth regime. This type is based on the concept of H. Molotch and D. Logan called "growth machines" (Molotch, 1976; Logan & Molotch, 1987). "Growth" is a set of economic indicators, including population growth, new construction, business activity (Molotch, 1976). The growth regime is formed in the format of cooperation between government, business or society (Papadopoulos, 1996) in the interests of the rapid economic growth of the city. It is this regime that makes it possible to experience the benefits of mutual cooperation, and therefore creates the need for consensus between the parties concerned. Most often, such coalitions are formed between government, business and adjacent design, service organizations, and architects. Stoker and Mossberger's (1994, 2001) typology calls such a regime "development regime" or "instrumental regime".

S. Elkin also substantiates the need for an internal subdivision of the "growth regime". He identifies pluralistic, federalist and entrepreneurial regimes (Elkin, 1985, 1987).

2.1. Pluralistic regime arises when the power is weakly dependent on business, associated with significant material resources of power. In these conditions business does not have a comparable potential for influence in other areas of public life. Such regimes are most characterized for cities with a mixed national structure (Elkin, 1985). The pluralistic regime is characterized by an increase in the efficiency of land use in the city center (gentrification) and improved transport links with the periphery. For instance, this regime is typical for Moscow of the 1990s-2000s.

2.2. The federalist regime is typical for cities strongly dependent on subsidies from the federal center (federal programs, targeted funding, etc.). This kind of regime is typical for territories experiencing a certain crisis of the "growth model", when social problems (education, jobs, services) are of paramount importance, which come to the fore in relation to the active use of urban space (Stoker, 1989).

2.3. The entrepreneurial regime is characterized by the total advantage of business in the decision-making process, this is the most obvious form of the "growth machine", which puts the urban economy in clear priority over urban politics. Urban policy priorities are almost always implemented in accordance with the ideas of private capital (Elkin, 1987; Ledyayev, 2008).

3. The progressive regime of the "middle class" emerges in economically developed territories, where society begins to seriously resist the costs from the "growth" ideas. According to Stone, the existence of an "**active middle class**" (active civil society) with a significant amount of free time is necessary for such regime type (Stone, 1989). The topic of ecology, anti-militarist issues, the protection of cultural heritage, and urban mobility are becoming a common cooperative agenda for society (Shpakovskaya and Chernova, 2017). A manifestation of the existence of a progressive regime in the city is the development of "cultural industries", new public and creative spaces (Khezmondalsh, 2014; Vlasova, 2021). Typically, the driving force of the regime are civil servants, freelancers, social workers, whose well-being is not directly related to growth. According to Nataliya Zubarevich, "it is in cities that people with higher incomes, a high level of education, higher human and social capital are concentrated" (Zubarevich, 2015, p. 34). As a rule, such regime occurs on the opposition of society to the strategies of growth of power and business. At the same time, the mere presence of public activism does not always lead to a progressive regime; this requires a decrease in the overall volume of commercial building construction, a shift in the urban agenda in favor of social and environmental functionality (look on Table 1.1). Stone's concept also notes that the presence of a "middle class" means an effective strategy for social participation (Stone, 1989). The authorities are much more successful in reflecting the

participation of the poor people against urban construction projects, renovations and environmental changes.

According to the typology of Stoker and Mossberger (1994, 2001), special case of the “progressive regime” is so-called “symbolic regime”, which directs the interests of urban coalitions participants to the ideology or image of the city (for example, Olympics and the World Cup, the trade brand of the city – "exhibition cities" Leipzig, Hanover, "Hanseatic cities" Hamburg and Lübeck, etc.). It is important for symbolic regime that the city strives to change the image and identity of local communities (Borisova, 2010).

The regime coalition can be combined from various alliances – there are three actors in the simplest model: government, business and society. However, sometimes religious organizations can also be added to them, which come up with their own agenda, or large state corporations, whose interests may be outside the line of conduct of the regional government and business. The actor coalitions play important role in the dynamics of urban policy and its outcomes (Stone, 1993). It is important to note that the urban regimes are dynamic and able to change depending on changes of the coalition interests.

The first narratives related to studies of actor participation in public life are in the early studies of the institutional direction of sociology (G. Spencer, P. Sorokin, T. Martons). Some institutional theories (R. Merton, F. Ratzel) also note the possibility of a country system differing from the generally accepted model, which can adapt the new system to the existing order. Also, including the theory of urban regimes in the context of geographical research, one should take into account the theoretical basis associated with attempts to explain social phenomena through the spatial factor (G. Bockl, T. Malthus) (Gromov et al., 2017).

The model of urban regimes is based on US studies historically (Stone, 1989; Stoker & Mossberger, 1994, 2001; Dowding, 1999, 2001, etc.). In European science, urban regimes may not coincide with traditional classification due to the traditionally higher role of the state and less business, a less pronounced capitalist model (half of the countries of Europe, including Russia, are post-socialist), as result the state is less dependent on civil society institutions. The role of the state in Europe is much higher, especially in the Post-Soviet countries, it was noted by many authors (Di Gaetano, 1993; Ward, 1996; Davies, 2003).

A. Papadopoulos (1996), who studied the nature of the existence of urban regimes in Europe (on the example of Brussels), believes that depending on the community of interests and the political agenda, tactical “cooperative regimes” can be formed and exist as long as there is a common interest. Communities can win many victories over the coalition of government and business, as long as it is about the destruction of houses, the facades of historical buildings protected by law. If these such collisions exist during long time, processes of cooperation become

stronger (Zakirova, 2008). In such cases, the government is often forced to resort to tactical coalition. On the other hand, using the example of Brussels, Papadopoulos demonstrates that in the case of large “power-business” coalitions (for example, the construction of office blocks), communities lose and then go into complete opposition to the “growth machine” – so-called “resistance regime” (Papadopoulos, 1996).

The problem of using the theory of urban regimes to analyze the processes of transformation of urban space in Russia (including in comparison with foreign practices) is also introduced in Russian literature (Karpov, 2013; Tykanova and Khokhlova, 2015; Khokhlova and Tykanova, 2017; Pustovoit, 2018). It should be noted that today there are many modern sociological studies on urban social practices, social activism and participatory activities (Zdravomyslova, 1990; Cabannes, 2004; Zakirova, 2008; Sanoff, 2015; Ivanova and Zykova, 2017; Kolodiy et al., 2017; Bakharev and Demina, 2019; Zhelnina and Tykanova, 2019). There are many studies in the literature on the analysis of the effects of the megaprojects implementation (Altshuler and Luberoff, 2004; Ansberg and Margolis, 2009; Dixon, 2010; Tykanova, 2013; Medvedev, 2016), environmental, urban planning and ecocultural protests in cities (Yadov et al. 2008; Medvedev, 2015, 2016; Galustov, 2016; Capri and Mattei, 2021), management practices in this area (Parchomovsky, 2006; Koroleva and Chernova, 2017; Shevtsova and Bederson, 2017; Bell, 2018; Kessler and Wagner, 2020; Lifshitz, 2020; Akkermans, 2020b). In geographic research, there are also a number of related works devoted to the problems of the image of geographical space, metageography and the integration of these representations in the systems of natural and social geographical sciences (Zamyatin, 2003; Zamyatin, 2010; Zamyatina, 2022). It should also be noted the papers of Kalutskov (2020) on geoconcepts that reveal the associative image of a place, space-time connections and associations.

There are also some papers devoted to criticism of the theory of urban regimes. Thus, Davis (2002) argues from neo-Marxist standpoint that the theory is unconvincing for two reasons. It is not structured enough and does not explain well the importance of local political processes. In another paper (Davies, 2003) he notes that, the institutions of urban politics in the UK are likely to remain quite different despite the fashion to copy US urban policies, that means that Stone urban regimes may not fully suit other countries. Di Gaetano (1993) calls this the “localistic bias” of urban regime theory, while emphasizing that it does a good job of explaining regime interactions in urban governance.

Some other researches postulate the same position, for example, Ward (1996) also notes the difficulties of transferring the theory of urban regimes to other grounds on the example of the USA and Great Britain. Burns (2003) argues that increased state participation is also taking place in cross-sectoral coalitions in the US. Ward insists that it is necessary to talk about contemporary

regime transformation only with more precise typology of urban regimes. Mark de Socio (2012) also notes that the role of the state is different in the UK than in the US. Due to the significant fiscal burden on the part of the regional and national governments of European countries, the role of the state here is much more tangible than the role of business (De Socio, 2012). In many ways, this also applies to Russian practice.

There is small amount of other works that require mention in the context of the study of urban regimes. Thus, Imbrosio (2003) notes that the innovative role of the theory of urban regimes in many respects forces us to rethink the foundations of scientific knowledge in economics and sociology. Davidson and Iveson (2015) describe that the city becomes a political entity due to the existence of an urban regime. I. Doherty (Doherty, 2000) deepens the problem of applying the typology of regimes in different countries, using the example of Great Britain, touching upon the question of how regime can manifest itself in different regional institutional conditions. Stone's later work (Stone, 2005, 2015) already notes that the success of urban reforms depends largely on how government actions are combined with the actions of non-governmental organizations, the contribution of the "non-elite" (society), as well as on the strategic support from the elites (business). Stone questions that stable and cohesive governing coalitions around a high-priority agenda can form in contemporary cities (Stone, 2015).

We support the argument of Davis (2003) and De Socio (2012) about somewhat different nature of the regime interaction model in European countries, as well as in Russia, China, India, and other developing countries. Signs of changing urban regimes here may not be as obvious as described by Logan and Molotch in the concept of "growth machines" (Logan & Molotch, 1987).

Developing the position of Imbrosio (2003), we emphasize that the introduction of the theory of urban regimes into geographical research also requires completely new scientific approaches and methods to study urban transformation, which are used in this thesis.

Theory of urban regimes in **geography** is also represented widely in foreign studies. Katherine Hankins (2015) explores how different regimes can manifest themselves in different American cities. She points out that prior exploration of place-city features provides a much more robust conceptual tool for understanding the contemporary urban political landscape, allows identifying the urban regime more precisely (Hankins, 2015).

Canadian scientist Elios Tretter, using the example of the Scottish city of Glasgow, links together the concepts of geographical scale, regimes and the system of urban governance - "urban governance". The main difference between governance and traditional government is the departure from the traditional patron-client approach to governance and the transition to joint "coalition", within each actor can have leverage on the urban space. The meaning of the theory lies in the fact that today; it is not enough to study the managerial decisions of the authorities for the analysis the

decisions in the city. It becomes important to study the interactions between government, business and society that influence on decision-making. The decision can be made under their direct impact. According to Guy and Pierre (2012), this concept is more suitable for describing the relationship between the complex modern organization of local government, especially in large cities, and the equally complex local public structures (Guy & Pierre, 2012).

Tretter points out the weakness of urban regime theory that it does not take into account the geographical category of scale. That is why urban regime theory tends to underestimate how effective city governance can be the result of people interacting at different spatial levels. Tretter's research demonstrates that the ability of the ruling coalition to transform the city and govern effectively was a consequence of policies and administrative actions taken at other geographic scales (Tretter, 2016).

Let us turn to the Russian studies of urban regimes. Yuri Pustovoit (2017), based on the works of Bruno Ferman (Ferman, 1996; Ledyayev, 2012), developed his own simplified classification of urban regimes and adapted for the analysis of Russian practice. In his opinion, the nature of the urban regime is determined by **the scale of the city**, in which a decrease of the number of different economic entities leads to the establishment of **“control”** regime. From the other hand, increase leads to the formation of **“coordination”** regime (close to the idea of Papadopoulos' “cooperation regime”). The regime of "control" is aimed at concentrating power resources in one hand, therefore, in many respects it is close to the concepts of subnational authoritarianism and neopatrimonialism. According to Pustovoit, such subnational authoritarianism at the urban and regional level may coexist with the democratic “design” of the country (Pustovoit, 2017). For example, this is clearly demonstrated by the examples of the governors of the “red belt” of Russia in the 1990s (Kolosov and Turovsky, 1996).

The regime of coordination is a set of relations between the participants, forcing them to reckon with each other and act on the basis of impersonal norms. Coordination is more characterized by the concepts of competition, regulation and polyarchy (Pustovoit, 2017). However, this classification of urban regimes is significantly limited by the focus on political aspects. In the context of the transformation of urban space, the Stone-Ledyayev classification is the most relevant for our study, since it can be used to identify more precisely the role and place of each actor, and the dynamics of urban regimes are more obvious. Therefore, we will use the basic classification "Status quo regime – Growth regime – Progressive middle class regime".

In Russia, there are also some studies related to the adaptation of the urban regimes theory to the study of Russian cities. Thus, sociologists Anisya Khokhlova and Elena Tykanova, in particular, point to the **“growth machine”** regime is typical for Saint Petersburg (Logan and Molotch's term) – a tactical compromise between the interests of the authorities and the large

construction business. This “machine” suppresses other actors, deprives them of their voice, and society forces them to look for ways to consolidate with various political groups, parties, and city protection organizations in order to influence the situation (Tykanova, 2013; Tykanova and Khokhlova, 2015). Stone points out that such a situation can only arise in the conditions of the ability of government and business to mobilize capital. In such a case, even limited profit potential becomes a secondary factor for the formation of the coalition regime. Geographers Alla Makhrova and Oleg Golubchikov generalize the upward trend as universal for Russian cities. They refer to the Russian version of the “growth machine” as a model of “**urban entrepreneurship**”, which also involves the pursuit of profits and the extortion of money from urban development projects (Makhrova and Golubchikov, 2012).

In the earliest works of the sociologist Daniil Tev, it is noted that actor interactions are strongly associated with urban space. In cities where “growth coalitions” are in power, efficient and sustainable use of real estate and undeveloped space is essential (Tev, 2006). In many ways, therefore, the historical and cultural factor becomes an additional factor, since the greatest likelihood of such a regime occurs in large cities that have a characteristic history and architecture that intensify competition for urban space (Jon & Cole, 1998; Tykanova and Khokhlova, 2015). A manifestation of the growth regime in the 2000s is also the tightly intertwined network between the city administration and the largest financial and construction companies. These companies receive opportunities for political hegemony. Also, the growing tourist attraction of the city, its brand and identity are the most important factors for the formation of the growth regime (Tev, 2006).

The growth regime (“growth machines”) is completely understandable prerequisite for the transformation of the Russian urban space. Recovery economic growth is becoming the most important structural factor in the formation of growth coalitions; it was widespread in Russia in the first half to mid-2000s (Borisova et al., 2011). According to David Harvey (2003), urban space attracts capital due to the extensive factor of development (for example, the replacement of old industrial depressive territories with new housing, gentrification³), which allows businesses to make very large profits and invest in the development or redevelopment of territories all the time. At the same time, there may not be an automatic increase in the well-being of citizens, moreover, the possibility of their influence on the use of space is rapidly decreasing. According to Trubina, they become “victims of gentrification” (Trubina, 2011). This is characterised for all countries of the post-socialist model.

³ Gentrification is redevelopment of degraded urban areas through beautification and subsequent attraction of wealthy residents (Lees et al., 2008).

Theory of urban regimes is used as an analysis tool that allows to see the ability of various actors to work together to produce an outcome in urban space (Stone, 1989). The urban regime in our case is such system of relations that realizes as a town-planning result in the urban space. In our case studies, we demonstrate through various examples that urban regimes can directly impact on the transformation of urban space.

The premise of the study is the fact that the urban regime cannot exist outside the coalition character, since it is result of the joint actors' activity dependent on each other (Ledyayev, 2008). We also support Ward's (1996) thesis on the importance of urban regimes typologisation, considering it fundamental that this typology should not be divorced from urban geography with its large-scale polyvariance and local specificity. We rely the thesis of Tretter (2016) about the differences in the urban regimes manifestation on different geographical scales, Yuri Pustovoit (2017, 2019) also points out the same fact. We generalize the methodological approaches of the research based on the main aspects of the theory of urban regimes and its application in geography.

As we mentioned before, the methodological approaches of our research are based on the combination of geographical and sociological research methods with the use of auxiliary methods from other sciences. According to Axenov, space is an integral attribute of social activity (Axenov, 2014). Based on the ideas of Mills (2001) and Harvey (2018), we link together the **change in spatial essence (transformation of urban space) and social, political processes (urban regimes)** that take place together into the space. This study offers a new view at the mechanisms of urban spatial transformation.

Theory of urban regimes has been chosen as the main theoretical and methodological paradigm, since it combines the entire system of urban decisions around space, including those that are not formal institutions (informal agreements, rules). This theory allows us not to focus on a monosyllabic control system ("who rules?"), but take into account the moves of all players who use and change the urban space. For the classification of regimes in the study, the combination of the approaches of K. Stone (1989) and V. Ledyayev (2008, 2012) seems to be the most effective. This approach assumes the presence of status quo, growth and progressive regimes, as well as transitional variations of these regimes (Ledyayev, 2008).

In order to determine the features of the urban regime transformation impact, we identify properties that help to approximately determine which urban regime corresponds to the situation. Based on the analysis and generalization of existing studies (Stone, 1989; Stoker & Mossberger, 1994; Tev, 2006; Ledyayev, 2008; Tykanova and Khokhlova, 2015; Khokhlova and Tykanova, 2017; Pustovoit, 2019) we make conclusions about the nature of the urban regime. Below there is a table of such properties (Table 1.1).

Table 1.1. Urban regime properties

№	Regime type	Regime properties
1	Status quo	<ol style="list-style-type: none"> 1. Absence or suspension of major infrastructure projects 2. The media and information agenda of the authorities does not voice the ideas of renewal, changes in urban space 3. Low influence of business and society, apathy in decision making 4. Low level of inter-actor interaction 5. Suspension of all reforms, projects for changing urban space
2	Growth	<ol style="list-style-type: none"> 1. General economic growth of the city (growth of city budget revenues) in the short term 2. A high degree of cooperation between government and business around key investment projects 3. Society is forced to look for ways to consolidate with other actors, almost unable to take part in decision-making 4. High competition of actors for the use of urban space (typical for global cities, financial centers, "cultural and architectural capitals", tourist attraction, brand)
2.1	Pluralistic	<ol style="list-style-type: none"> 1. The weak influence of business on decision-making 2. High percentage of gentrification 3. Stable, low taxes
2.2	Federalist/ paternalist	<ol style="list-style-type: none"> 1. High dependence of the urban economy on federal subsidies 2. Low attention of urban actors to the urban space use 3. The emergence of socio-economic problems that divert attention from the use of urban space
2.3	Entrepreneurial	<ol style="list-style-type: none"> 1. Business is allowed to power 2. Business almost always emerges victorious from urban conflicts. 3. The political elite begins to make decisions on the use of space only in the interests of business (with rare exceptions)
3	Progressive regime of the "middle class"	<ol style="list-style-type: none"> 1. The presence of critical mass of the middle class (majority), influencing decision-making 2. High percentage of civic engagement 3. New environmental, anti-war, civil movements are emerging in the city 4. Decrease in construction volumes 5. Active change in legislation in accordance with the request of the society, change in the rules for issuing building permits, the coefficient of use of the territory 6. High taxes 7. Attention to the social and environmental rather than economic utility of territorial objects
4	Transitional	Inability to identify unique features specific to a particular regime

The literature analyzes the conditions necessary for the urban regime formation. Stone marks that regimes are most likely to emerge and persist in large cities, and especially with uniqueness and originality (Stone, 1989; Ledyayev, 2008). Opportunities of stable complex systems of informal inter-actor relations are more wide (Pustovoit, 2014). At the same time, the processes of the urban territory expansion, active migration processes can destroy the collective identity, which is necessary for the cooperation of actors' efforts. If we summarize the most important factors for the existence of the regime in principle, then five main ones can be distinguished (Jon & Cole, 1998; Borisova et al., 2011):

1. Local projection of business interests, its active participation in city politics.
2. Integration and association of business with the urban economy.
3. Urban coalitions can emerge and persist in relatively large cities with a high level of collective identity.
4. Coalitions are more likely to form in cities that are unique and distinctive.
5. The city has historical experience of successful partnership of actors.

To identify a change in the urban regime, a critical mass of events is needed that directly indicates not just individual urban changes of various directions, but new direction of urban development. For example, in the case of a long-term existence of a growth regime, the main sign of its change to a progressive regime of the middle class is the active and effective involvement of society in the urban agenda (Ledyayev, 2008). Performance should be understood as the suspension of controversial projects (from the point of view of society), a change in urban planning policy. The emergence of the status quo regime will be indicated, for example, by the absence/suspension of large infrastructure projects by government and business (Stone, 1989). However, the key task of this study is not so much the accuracy of determining the nature of the urban regime, which is a purely theoretical task, but the identification of what changes occur in the urban space as a result of the existence of regime relations. In previous studies, the question was not posed in this way - this is a significant scientific novelty of the work, which means that new original research methods are needed to solve such a scientific problem. These methods are described in Paragraph 2.1.

Urban regimes can also differ in their scale. Alex Papadopoulos supposes that the urban regime can often be local as well, since certain urban areas may have their own system of interactions between actors (Papadopoulos, 1996), which may differ from the citywide governance system (using the example of Brussels, Papadopoulos proved that within the same city, there may be local regimes depending on political and economic circumstances). In the other modern researches (Tev, 2006; Tretter, 2016; Axenov and Galustov, 2023), regime interactions are also described at the local level, which allows us to speak about the possibility of the presence of regime

elements even without the obligatory fulfillment of five factors of the urban regime existence according to John and Cole (1998).

Therefore, the author uses the theory of urban regimes on the example of various **local cases** in Russian cities. Developing the thesis of Tretter (2016) about the underestimation of the role of scale in the study of urban regimes, this thesis focuses on differences in the manifestation of the regime impact of on the transformation of the city on different taxonomic levels. We proceed from the fact that urban transformation under the influence of urban regimes can be studied using the so-called “game of scale” (Kagansky, 1997; Haggett, 2001; Treivish, 2006), which allows to inductively see at the local and higher levels the conflicts of interests of actors and their results (reflection) in urban space. The author focuses on identifying local urban regimes, the totality of which makes it possible to draw conclusions about the nature of the urban regime as a whole. The examples studied by the author mainly describe just local changes in urban regimes, however, they often become “precedent” for the studied cities. Regime impacts themselves are studied at different levels of scale – from all-Russian to intracity.

According to Stone (1989), the urban regime exists only in cities with idiosyncrasies. But it is also important that the regime can only be identified as an established stable system (Stone, 1989; Di Gaetano, 1993), which means that the existence of interactions in the city over a certain period of time is a necessary condition. Therefore, in the study, conclusions about the existence of urban regimes are formed on the basis of long-term cases that show non-randomness and stability of actors’ interactions.

Vladimir Gelman and Olga Bychkova emphasize that, despite countrywide trends, urban regimes in different cities may differ depending on the amount of political and economic resources (Bychkova, Gelman, 2010). Change in these proportions between actors can also lead to the formation of a new urban regime.

Recent studies interpret the Russian urban situation in the 2000s and early 2010s as “growth machine” (Tev, 2006; Makhrova and Golubchikov, 2012; Tykanova and Khokhlova, 2015). Stone points out that such situation can only arise in the context of the ability of government and business to mobilize capital (Stone, 1989; Bederson et al., 2021). As soon as these opportunities become limited, the ground for the formation of a new regime appears. We demonstrate that the growth regime in the 2010s in contemporary Russian city not so corresponds to modern trends in urban development. New conflicts in the urban space show that **social activism** is becoming an essential factor in urban change. The rest of the actors are forced to maneuver in decision-making, and the interests of “growth” are blocked by the possibility of serious political risks (Axenov and Galustov, 2023). In this research, we will focus on those cases that have been changed under the impact of social activism, since it is precisely indicates the involvement of all actors. We believe that this

factor has become a new driving force of the modern urban transformation. Therefore, the boundary of the study is to focus on those types of impact of the urban regime that are associated with a clash of **all actors** in space and reflection in all three public discourses - business, government and society.

Chapter 2. Practice of the spatial transformation of contemporary Russian city under the impact of the urban regimes

2.1. Research methodology of the cases of the urban regime impact on the spatial transformation of contemporary Russian city

We explore how urban regimes can impact on the spatial transformation of the Russian cities. The author selects methods to identify the impact of the urban regime on the city, as well as changes in urban space as a result of the impact. Despite a significant number of studies directly related to the analysis of urban regimes (Stone, 1989; Stoker & Mossberger, 1994; Ledyayev, 2008, etc.), sociological context and specifics of urban transformation in Russia (Axenov, 2012; Kolodiy et al., 2017; Zhelnina and Tykanova, 2019), this study connects the complex process of actors' interaction with the result of this interaction in urban development – the appearance or disappearance of new city functions, houses, parks, temples, business centers and other morphological features.

In this regard, we study only those cases that connect urban regimes with morphological and functional changes in urban space. Thus, we do not analyze the dynamics of the economic parameters of the city or changes in political representation in city parliaments (for example, Bederson et al., 2021), since their results are not necessarily reflected in the transformation of urban space. Our focus is only on such examples of the urban regime impact that can be seen in urban space, which means that they change or are able to change urban context.

The limitations of the study were described in Chapter 1, we used them to select cases of the urban regime impact:

1) We study only those types of the urban regime impact that are not associated with the growth regime already proven in Russian cities (Makhrova and Golubchikov, 2012; Tykanova and Khokhlova, 2015; Zhelnina and Tykanova, 2019), and therefore associated with the presence of a **clash of interests of all three main actors** in space and reflected in all three public discourses - government, business and society (Axenov and Galustov, 2022, 2023). The emphasis of the study is only on those cases that cause direct, visible clashes between all three actors – **conflicts** over ways to change urban space;

2) Since different local levels may have their own systems of interactions between actors (Papadopoulos, 1996), which may differ markedly from the citywide management system, the author examines specific **local cases** in cities that have appeared on different scales of public discourse - from federal to municipal;

3) The author explores local cases on three scales of the urban regime impact – on the example of **different cities**, on the example of **districts of one city**, on the example of **intra-city spaces** in certain areas, using the principle of “game with scales” (Kagansky, 1997; Haggett, 2001; Treyvish, 2006);

4) The urban regime is relatively stable over time and does not change instantly depending on what urban issues are being discussed politically (Stone, 1989; Di Gaetano, 1993; Ledyayev, 2008). In this regard, the study considers only **sustainable, long-term systems of urban interactions** that can be assessed over time;

5) Only cases related to the possibility of changing urban space, the emergence of new objects or the conservation of old ones are studied - the author is not interested in any impact on the urban economy or politics, but only in the **manifestation of the urban regime impact in changes in the urban functional essence, topography and morphology**.

The impact of urban regimes on the transformation of space can be associated with the presence of a clash of interests of actors, studied at the local level (Papadopoulos, 1996) and at different urban scales. In accordance with the above limitations, we have identified **two main research approaches**:

1. Analysis of the implementation of various **publicly valuable projects of the urban environment transformation** as an example of the urban regime impact on the transformation of contemporary Russian urban space;

2. **Spatio-temporal models** of the impact of the urban regime on the transformation of the space of contemporary Russian city using the **example of conflicts around the transformation of urban space – ecological and eco-cultural conflicts**. Based on spatio-temporal models, the results of the transformation of intracity spaces under the urban regime impact in individual urban areas are analyzed.

The main idea of the consistent application of the selected approaches is the deductive analysis using the above-mentioned “game with scales” technique. As A. Isachenko wrote, “going from the general to the specific, we consistently trace the entire picture of differentiation of the geosphere from top to bottom” (Isachenko, 1991). In this regard, without being able to deeply explore absolutely all the illustrative cases in all Russian cities within the framework of one study, in the first approach at the all-Russian level (macro level) only the most publicly significant transformation projects in different cities are analyzed. The second approach focuses on spatio-temporal models of the urban regime impact within single urban space. Based on this approach, a

study of the transformation of intra-city space is undertaken at the lowest micro-level of transformation – using the example of individual districts.

The first approach to the study is analysis of the implementation of publicly valuable projects of the urban environment transformation (also – PVP) as an example of the impact of urban regimes on the transformation of contemporary Russian urban space. Recently, projects have been appearing that are “signature” for society, have image significance for government and business, and become famous in the international arena. Such projects include the reconstruction of Vladivostok for the APEC summit, the failed construction of the Okhta Center complex in Saint Petersburg, and the construction of Olympic facilities in Sochi in 2014.

Publicly valuable projects of the urban environment transformation are high-profile, visible in the media and public discourse, and are the result of complex inter-actor interactions, therefore, in our opinion, they can be considered as an indicator of the impact on the transformation of urban space. The general principles of mutual influence of public health zones and urban regimes were substantiated in original scientific publications (Axenov and Galustov, 2022, 2023).

The first approach focuses only on urban space transformation projects that have **public significance or public valueness**. This concept has many different interpretations. Thus, from a socio-economic point of view, a project that solves or mitigates social problems is already publicly valuable (Petrov et al., 2018). Ageeva (2019) adds that those projects can be called publicly valuable, the results of which have a significant impact on the socio-economic conditions of urban development. According to Koroleva and Chernova (2018), the importance of projects grows if the authorities begin to pay attention to public opinion. From the point of view of impact on the urban environment, environmental protection can manifest itself in different forms. The most common and well-known today is “redevelopment,” which, as we described in Chapter 1, involves a change in functional purpose, as a result of which the object acquires qualitatively new properties that are more flexible to the economic situation (Gotham, 2001; Weber, 2002). This could be the construction of a hotel instead of an enterprise, the creation of a landscape park instead of a garage cooperative, etc. In recent years, processes of “renovation” have emerged in Russian cities, which is understood as the renewal of territories through significant redevelopment of abandoned spaces with the possibility of reassessing the role and function of an important part of the city (Martinaitis et al., 2004; Jensen and Maslesa, 2015), “revitalization” – revitalization of a disused area or facility (Hughes, 1999; Barney et al., 2011), “megaprojects” were implemented, which in the literature mean any projects to change the urban environment with increased costs (Altshuler and Luberoff, 2003). At this stage of the study, we leave out the term “urban conflict” (a clash of opposing interests, goals, attitudes, ideologies between individuals, social groups, classes in urban space)

(Cherepanov, 2013; Dementieva, 2013a), although in most cases many social significant projects will intersect with many urban conflicts. Any of these cases (most often redevelopment, accompanied by a conflict-clash of actors) can fall into the area of attention of our research if it is able to influence the formation of a new image of the city in public space.

PVP reflect the interaction of changed institutional actors (Sykora and Bouzarovski, 2012) and actively changing social practices in the transformation of the morphology of urban space (Axenov et al., 2006; Axenov, 2014). For example, the unrealized construction of the Okhta Center led the administration of St. Petersburg to the idea of limiting the height of buildings under construction in the center and in the urban semi-periphery⁴, and the unrealized construction of the Supreme Court of the Russian Federation complex on Tuchkov Buyan aggravated the issue of the transfer federal authorities to Saint Petersburg⁵ (Axenov and Galustov, 2023).

The urban environment itself as a concept is a stable characteristic of socio-geographical space-time and one of the essential components of the structure of urban space (Axenov, 2014). Publicly valuable projects form another component – **the essential content of the urban environment**, which, in turn, surrounds and influences the processes occurring within it. Therefore, generalizing and supplementing the above approaches and definitions, by “publicly valuable” we mean those transformation projects that have **the maximum impact on changing and consolidating a new image of the city in the public consciousness** (Gelman, 2003), **change the essential content of the urban environment and urban space** (Gotham, 2001; Weber, 2002, Axenov, 2014), **significantly correct the current public discourse** (Belobragin and Grosheva, 2015; Koroleva and Chernova, 2018) **and urban development in general** (Ageeva, 2019). We believe that as a result of this, publicly valuable projects can serve as an **example of the urban regime impact**, since it is in these cases that at the local level one can see clashes of interests of actors and their results in space. Public significance is closely related not only to the clash of interests of actors, but to the predominance of the interests of society over the interests of other actors, which is one of the methodological conditions of the study.

The approach uses several basic methods. In our study, it includes the following key stages:

- development of selection criteria for PVP;

⁴ «In Smolny they want to control the height of new buildings in St. Petersburg», 30.11.2015. Internet resource: https://www.novostroy-spb.ru/novosti/v_smolnom_hotyat_kontrolirovat (Date of access: 22.12.2021); «Everything is lower and lower», 05.10.2015, <https://asninfo.ru/magazines/html-version/672-spb/15114-vse-nizhe-i-nizhe> (Date of access: 22.12.2021).

⁵ «Putin supported the idea to set up a park instead of a judicial quarter in Saint Petersburg», 23.04.2019. Internet resource: <https://www.rbc.ru/society/23/04/2019/5cbf1ba29a7947cde3bed5f9> (Date of access: 23.12.2021); «The Supreme Court is preparing to move. Why are the residents of St. Petersburg not happy about this?», 22.10.2019. Internet resource: <https://www.bfm.ru/news/427625> (Date of access: 23.05.2023);

«The quarter for the Supreme Court in Saint Petersburg was postponed until 2028», 16.01.2023. Internet resource: <https://www.rbc.ru/business/16/01/2023/63bff19e9a794700634b9bce> (Date of access: 23.05.2023).

- selection of key contemporary PVPs over the past 10 years that fall under the developed criteria (also – Criterion) and selection of several cases that are most relevant for the purposes of the study;
- analysis of PVP results for the city, region and the Russian Federation as a whole;
- determination of the nature of the urban regime functioning, based on the analysis of the PVP results;
- identification of the urban regime impact features on the transformation of contemporary Russian urban space.

The selection of PVPs in Russian cities is based on the author's methodology for identifying "**criteria of public valueness**". Assessment of social significance is carried out by analyzing the interest of actors, the participation of senior officials of the state and corporations, the reaction of the media, and the diversity of concepts for the development of the urban environment. This methodology is based on published author's work (Axenov and Galustov, 2023), and also uses the analytical approach of E. Tykanova, A. Khokhlova and A. Zhelnina (2015, 2019), who examined cases of protest initiatives of local communities in Saint Petersburg, Moscow, Paris to determine the nature of existing urban regimes. To analyze the participation of actors in publicly valuable projects and create their typology, the methodology of Bin Li (Bin Li, 2021) was adapted. At the same time, this methodology has been modernized and also includes geographical aspects of location and scale corresponding to public discourse. In accordance with the identified criteria, an array of cases was selected that most corresponded to the objectives of the study. Subsequently, the cases are compared according to the scale for determining the significance of the criteria, on the basis of which the effectiveness of the selected cases is analyzed.

The second approach involves drawing up spatio-temporal models of the impact of the urban regime on the transformation of the Russian city space based on the analysis of urban conflicts in Saint Petersburg. This methodology is based on the author's publications (Galustov, 2016, 2022, 2023), which explored models of the influence of ecological and ecocultural public protest on the use of space through a system of spatio-temporal criteria of scale, location, duration of transformation, and number of publications. To demonstrate the impact of the urban regime, we chose ecological and eco-cultural conflicts, since in the arenas of urban conflicts the interests of the parties involved can be identified and resolved: society, business and government (Stone, 1989; Fainstein, 1994; Ledyayev, 2008), and culture and ecology in are largely related to the image of the city and urban identity (Zhelnina, 2011). It is the term "**ecological and ecocultural**" that we will use in relation to the urban conflicts studied in the work.

This approach is used to analyze the transformation of urban space using the example of the second most populous Russian city – Saint Petersburg. Saint Petersburg is a large monocentric agglomeration with diversified economy and high level of employment in the services sector, science, education, and culture. St. Petersburg has a dual administrative-territorial origin. On the one hand, by all indications it falls under the concept of a city, on the other hand, it is at the same time a subject of the federation, and therefore a region (Zimin et al., 2021). Therefore, it can manifest both problems of a local urban nature, and those characteristic only of large cities, as well as regional problems. According to the Globalization and World Cities Study Group led by Peter Taylor (Beaverstock, Smith, Taylor, 1999), St. Petersburg is also a city with “minimal signs of emerging as a global city”. According to The Global Cities Index in 2021, Saint Petersburg ranked 78th among global world cities⁶. With the exception of Moscow, this is the only city in Russia that falls into this “elite” category. It is truly in state of formation as a “global” one, since it contains representative offices of transnational corporations, banks, and hosts the Saint Petersburg Economic Forum. Saint Petersburg is the most important business center of the Russian Federation with high role and influence of business circles.

In the context of the study, it is appropriate to consider Saint Petersburg, since it coexists with typical problems for rapidly growing city related to the city’s ability to accept economic growth in any of its forms (Uskova et al., 2019; Zubarev, 2019). As a result, more and more conflictual interactions arise between actors, during which the interests of society, business and government are manifested (Cherepanov, 2013; Bederson and Shevtsova, 2020). It is these conflicting interactions between actors that are studied in the work. Using the example of urban conflicts, we attempt to demonstrate that the existing growth regime in the 2010s no longer fully corresponds to modern trends in urban development.

The nature of ecological and eco-cultural conflicts in large city is quite similar to each other. Ecological conflict is a conflict in the field of environmental problems (liquidation of green areas, deforestation, pollution, noise, garbage), the goal of which is to achieve the harmonious coexistence of nature and humans in an urban environment. Ecocultural (ecological-cultural) conflict lies primarily in the area of socio-ecological problems (preservation of cultural values, historical monuments, architectural environment) (Galustov, 2016). In narrow sense, eco-cultural conflict is identical to urban planning, and in a broad sense it is associated with problems in the field of social ecology (Zelenov, 2000; Alekseev and Lenchovsky, 2010).

⁶ Ranking of global cities A. T. Kearney. Internet resource: <https://nonews.co/directory/lists/cities/global-cities-index>. (Date of access: 17.05.2022).

The time frame of this study starts from 2006 to the present⁷. In 2005, one of the key regulations was adopted that ensured the dominance of the growth regime in Saint Petersburg, associated with the liberalization of the boundaries of the city's security zone, which allowed the development of many territories⁸. This led to the strengthening of the construction business in the historical and cultural core of Saint Petersburg (Tev, 2006). Despite the still existing fluctuations within the government (protests by deputies of the Legislative Assembly), the rules were adopted⁹. Based on this liberalization, next year in 2006, a major conflict broke out around the construction of the Gazprom City business center (Okhta Center). The cancellation of construction and the transfer of the administrative building of Gazprom to the periphery of the city in Lakhta significantly changed the further policy of transforming the urban space (see Paragraph 2.2). The story of the Okhta Center construction became an echo of the perception of innovation not only in Saint Petersburg, but even became the subject of public discussions in other regions.

The role of Leningrad – Saint Petersburg in the field of protection the urban environment in the environmental sphere and protecting cultural values is innovative for the USSR / RF space. It is important to note that the formation of political parties in Leningrad was largely due not to political or economic reasons, but specifically to eco-cultural ones (Galustov, 2016). The driver for the emergence of such movements is the peculiarities of public demand, which is expressed in the reluctance of detachment from political processes (Zdravomyslova, 1990; Dementieva, 2013b). Today, ideas of creating a comfortable urban environment are being added to this trend (Evplova and Mityagin, 2014).

Due to the presence of strong movements for the protection of cultural heritage (Zhivoy Gorod, ERA Group, etc.), eco-cultural conflicts are an important feature of Saint Petersburg. They play an important role in the relationship between society and government, since the issues of preserving cultural values are among the priorities of a significant part of Saint Petersburg residents (Tev, 2006; Dixon, 2010; Tykanova and Khokhlova, 2015). It is also worth noting the interest in environmental issues, for example, around the traditional problem of preserving the hydraulic system and the coast of the Gulf of Finland (Zalygin, 1992), as well as the increasing number of conflicts around the development of parks and squares in the city¹⁰.

⁷ Author's note. The end of data collection for the study is fixed at the time of 2022.

⁸ Law of Saint Petersburg dated December 22, 2005 «About the General Plan of Saint Petersburg and the boundaries of the zones of protection of cultural heritage sites on the territory of Saint Petersburg». Internet resource: <https://docs.cntd.ru/document/8422495?marker>. (Date of access: 19.04.2022).

⁹ «The court refused to cancel the General plan of Saint Petersburg», 19.07.2007. Internet resource: <https://www.fontanka.ru/2007/07/19/044>. (Date of access: 17.05.2022).

¹⁰ «Speaker of the Legislative Assembly Makarov: The cathedral will be built in Malinovka Park», 05.12.2018. Internet resource: <https://www.fontanka.ru/2018/12/05/042/> (Date of access: 20.01.2022).

«Murinsky park was protected from development», 8.12.2020. Internet resource: <https://bellona.ru/2020/12/08/murinskij-park-zashhitali-ot-zastrojki/> (Date of access: 17.05.2022).

The study includes the following methods:

- selection of criteria for spatio-temporal models of the impact of the urban regime transformation on the example of ecological and eco-cultural conflicts;
- preparing of the list of ecological and eco-cultural conflicts in Saint Petersburg;
- content analysis of media response about conflicts based on regional Internet-media and references in electronic search engines;
- quantitative/weight assessment of the criteria for spatio-temporal models;
- calculation of scores of spatio-temporal models and their distribution by regions;
- organisation of expert survey according to the Bryman method (Bryman, 2012) in order to verify the weight of the scores of spatio-temporal models;
- mapping of spatio-temporal models of the urban regime impact on the transformation of urban space.

In this approach, the construction of spatio-temporal models is used as the resulting method for assessment of the urban regime impact of on the transformation of the space of contemporary Russian city. The basis of the study is the base of eco-cultural and ecological conflicts, which was compiled by the author on the basis of content analysis of the media and expert survey verified the weight of the criteria of the studied models. The expert survey was compiled based on the author's methods tested in similar studies (Galustov, 2016; Galustov, 2019; Galustov and Khodachek, 2021). Using the example of eco-cultural and ecological conflicts, in Chapter 2.3 we will consider the specifics of the impact of the urban regime on the urban spatial transformation on the example of Saint Petersburg.

Next subchapter 2.4 examines the practice of urban space transformation on example of intracity spaces using Vasileostrovsky and Petrogradsky districts of St. Petersburg. All cases in these areas are analyzed in detail and transferred to maps with detailed comments. This approach allows to deeper consider individual spatio-temporal models of the urban regime impact. Thus, we obtain detailed information about the prevailing interests of the actors in each particular case, as well as how this is related to the functional content of the space and the level of involvement of the participants.

2.2. Publicly valuable projects of the urban environment transformation in Russia as an example of the urban regime impact on the spatial transformation of contemporary city

Analysis of publicly valuable projects of the urban environment transformation and determination of their indicative role in the urban regime impact is the first research approach. As we said above, this approach is used due to its maximum public and social valueness (Trumbull, 2010, 2012; Fedotova, 2018; Orlova et al., 2019), such projects become permanently “fixed” in the urban material space, affecting the public consciousness of people (Gelman, 2003; (Belobragin and Grosheva, 2015). During the implementation of projects, tools appear for regulating the relations of all interested actors (Tykanova, 2013; Koroleva and Chernova, 2017).

To assess the impact of urban regimes, the author proposes three groups of **criteria for the public valueness of the urban environment transformation projects**. These criteria have been verified and published (Axenov and Galustov, 2023). They describe all 3 sides of the phenomenon being studied:

- 1. Spatial (“environmental”).**
- 2. Actors’ participation and resonance.**
- 3. Transformational.**

Within the groups, the criteria that determine the public valueness of the PVP are highlighted; they are described in detail in each of the groups.

Group 1. Spatial (“environmental”) criteria

Criterion 1.1. Large territory redevelopment project localized in the city. The focus is only on redevelopment projects of certain urban areas, that is, related to the emergence of new urban functions in the territories. Projects affecting only individual urban objects or areas of new development (receiving a certain urban function for the first time, and not changing the current one) were not included in the consideration.

Criterion 1.2. Location in the publicly valuable location of the city. Deepening criteria 1.1, we focus on the fact that the city itself can be divided into locations that consolidate the status of the city and those that are secondary to them. Publicly valuable locations, as a rule, include central, historical, publicly accessible and visited places, aesthetically or symbolically significant places. To evaluate the criteria, the “center-periphery” model already described and adapted for urban space is used (Galustov, 2016; detailed description in Paragraph 2.3).

Group 2. Criteria of the actors' participation and resonance

Criterion 2.1. The clash of interests of three main actors in space and reflection in all three public discourses – government, business and society. If at least one of the actors does not have an interest in the project, such a project will not be perceived as publicly valuable. It is the presence of this criterion that removes from our field of view “federal megaprojects” of urban transformations, such as the preparation of Sochi for the 2014 Olympics or Vladivostok for the APEC Summit – they were not a field of conflict for all actors. As a rule, those projects that cause direct clashes of interests of all three actors – **conflicts** over the use of urban space have a complex public response.

At the same time, PVP attract more “spontaneous” attention to the project from the outside, not allowing it to be resolved by the realization of the interests of one specific actor and locally influence changes in the urban regime. In the study, we focused on those projects that were able to change under the influence of social activism, since it is in these cases that the interaction of actors most clearly demonstrates the impact of the urban regime.

Criterion 2.2. Participation of all levels of state and municipal authorities in public discourse. The most “divisive” transformation projects for actors do not allow the conflict to be resolved within the framework of the usual intra-city system of interaction “urban government – urban business – urban communities.” As a rule, in such cases, the public valueness becomes so great that it requires the involvement of external echelons of power in the discourse – in special cases, even the highest officials of the state. The existence of this type of decision-making refers to the concept of the so-called “paternalistic urbanism”¹¹, which is very typical for such country as the Russian Federation. This work uses cases that correspond to the parameters of this concept.

Criterion 2.3. Significant resonance for the image of the city in public discourse, media and online media. The increased attention to the transformation project is largely due to the growth in the number of publications in the media, the level of media in which discussions are taking place, the number of public events and events that generate news stories and are related to the possible implementation of the project.

¹¹ Paternalistic urbanism is a type of decision-making in city government, when it is expected that some important contentious issues related to the jurisdiction of the city will be resolved (or de facto resolved) not by the city itself, but by the central (external highest) authorities. It is important that after the intervention of the central (external higher) authorities in the controversial issue of urban development, all conflicting urban entities stop the conflict, even if the solution does not fully satisfy them and such a compromise would not be acceptable to them before (Bin Li et al., 2021).

Group 3. Transformational criteria

Criterion 3.1. The process of changing the functional purpose of a spatial object in the process of redevelopment. If new business center appears on the site of a business center, and a more landscaped green zone appears on the site of an old park, then such a project cannot radically change the image of the urban space. It is important that the transformation project changes the essential content of the urban environment, significantly changes the characteristics and image of the city, and gives actors the opportunity to obtain new spatial functionality as a result.

Criterion 3.2. Change of project concept during implementation. It is assumed that the most significant examples of PVP are those that, due to circumstances, do not find final result for a long time, even in the event of intervention by higher authorities. Such projects are capable of forming an assessment of the quality of urban environment management both in the country and abroad; they have very complex positive and negative connotations among different actors. As a rule, change/adaptation of a project (as well as its transfer described below) in such cases occurs in the process of conflict communication between actors, which is perhaps the most significant indicator for assessing changes in urban regimes. Each change in concept marks the beginning of a new phase of the project. One phase is the period from the establishment of one project concept to its change to another under the influence of changing inter-actor interactions.

Criterion 3.3. Transfer of the transformation project implementation to new location during the revision of the project. Some projects have a special public valueness, the functions of which are implemented in a new place as a result of a clash of interests of actors in the same space. According to Axenov (2014), change in the position of the object in space creates fundamentally different place and is a direct sign of the transformation of space. The spatial relocation of the project can reduce the negative background associated with the previous location, and there may also be a drop in public valueness due to the loss of the previous conflict location and a general decrease in tension in the relationships between the actors.

As a result of selecting possible cases for consideration based on the described criteria, it turned out that there are many regional projects that fall under Criteria 2.1 and 2.3 in Russia. One can, in particular, recall the conflicts surrounding the development of the Nagatinskaya floodplain in Moscow, the construction of alluvial territories in Saint Petersburg, and the reconstruction project for the 1000th anniversary of Kazan. However, there were not so many projects in which there was any intervention from the federal level (Criterion 2.2), which influenced a change in the concept of transformation or the transfer of project implementation to another place (Criteria 3.2

and 3.3)¹². It is this criterion of intervention by the federal level of government, together with the criterion of radical change in concept, that turned out to be the decisive “cut-off” criterion. Thus, based on the methodology described above, we identified just six such large cases (Table 2.1).

Table 2.1. Publicly valuable projects of the urban environment transformation and public discourse

№	Project	City	Public discourse¹³
1	«Okhta-center»	Saint Petersburg	«Economy – preservation of cultural heritage»
2	Park «Zaryadye»	Moscow	«Power infrastructure – green areas in the center»
3	Cathedral of St. Catherine	Yekaterinburg	«Cathedrals – parks»
4	Tuchkov Buyan	Saint Petersburg	«Expensive development with power functions – green areas in the center»
5	Concreting of the river Vologda embankment	Vologda	«Improvement – preservation of green zones»
6	Field development of the Timiryazev Academy in Moscow	Moscow	«Redevelopment – science»

Made by the author.

1. The first selected project is the unrealized project for the construction of the Okhta Center complex (Gazprom City) in the center of Saint Petersburg, which led to the collapse of the

¹² In 2020, under the guidance of Prof. Dr. K. Axenov, master students of the Geourbanistics program of Saint-Petersburg University collected and summarized primary material on 9 cases of publicly valuable transformation projects of the last decade in 5 cities. Among them: the project of the Okhta-Lakhta Center («Gazprom Tower»), which is studied in this research; protest against the development of the park by S. Fedorov in Moscow; also touched upon in the work are conflicting projects of the Cathedral of Saint Catherine in the public garden in Yekaterinburg, «Tuchkov Buyan» in the center of Saint Petersburg and others. These materials are partially used in the work and supplemented with new data and new cases.

¹³ Public discourse is the author's evaluation category based on the published study about the cases (Axenov and Galustov, 2023).

previous model of urban planning policy. This conflict was the result of a widening gap in the understanding of urban development between government, business and society (Vorobyev and Stiglitz, 2014). The state company Gazprom, as the initiator of construction, obviously pursued the goals of consolidating its special economic role through architectural and spatial methods of symbolic politics, while public organizations were guided by cultural and aesthetic ideas about the preservation of the historical and cultural landscape (Malysheva and Chernyshev, 2013). Their interests did not coincide at all. Even if we assume that the goals of the actors were argued convincingly on both sides, the lack of normal public debate was the decisive critical factor leading to the largest eco-cultural conflict of recent years (Dixon, 2010). The situation began to be resolved after the World Heritage Committee at UNESCO, under the influence of urban protection protests, asked Russia to develop and conduct an examination of alternative projects for the Okhta Center. The cancellation of construction took place under the invasion of President D. Medvedev, who said that the decision on the construction of the Okhta Center should be made after the completion of legal proceedings and consultations with UNESCO. The subsequent relocation of the administrative building of Gazprom to the periphery of the city in Lakhta became an important stage in the crisis of the “growth machine” regime that had developed in Saint Petersburg by the 2000s (Tykanova and Khokhlova, 2015). On Fig. 2.1 we demonstrate an example how the project could affect the urban space if it were implemented.

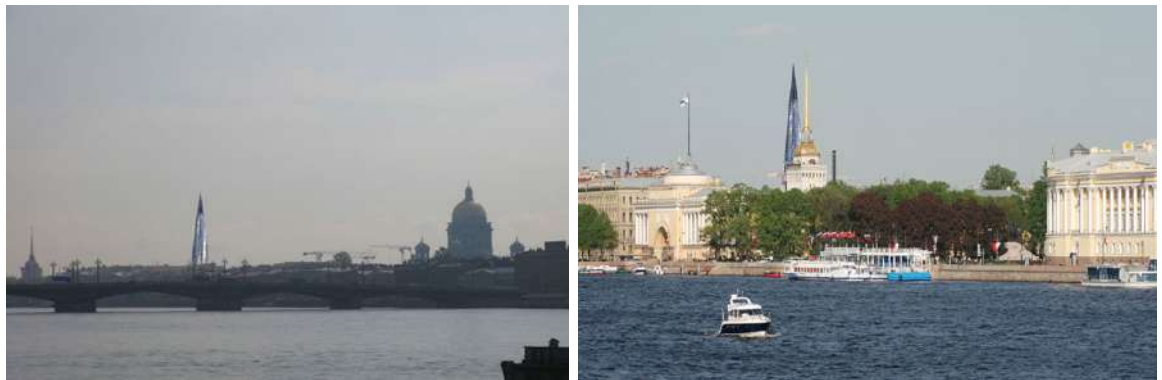


Fig. 2.1. Modeling of the Okhta Center potential impact on Saint Petersburg “sky line”¹⁴
(made by the author on base of gorzakaz.org)

2. Zaryadye Park is a huge area in the heart of Moscow, east of Red Square. The idea of the park greatly influenced the urban image of Moscow both in Russia and abroad (Tkachenko, 2019). Until 2007, this territory was occupied by the building of the Rossiya Hotel in the style of Soviet modernism. After long discussions about the possibilities of reconstruction, a decision was

¹⁴ Expertise of the All-Russian Society for the Protection of Historical and Cultural Monuments: "Okhta Center" and panoramas of Saint Petersburg", 29.05.09. Internet resource: <http://www.gorzakaz.org/news/view/14892.html>. (Date of access: 26.04.2022).

made to demolish the hotel and build a Parliamentary Center on this territory (for the relocation of the Federal Assembly of the Russian Federation), a hotel and business complex and a residential quarter. However, in 2012, based on the results of survey among residents about possible location for Hyde Park¹⁵, it was decided to create a park area. It is characteristic that both decisions did not provoke opposition from socially active groups of the population (Tkachenko, 2019). The authorities recognized that the greatest value for this place is as a recreational and tourist site (Ter-Voskanyan, 2018; Tkachenko, 2019). Despite the regional competence of the project, the federal significance of the project was emphasized by a joint statement by the Prime Minister of the Russian Federation V. Putin and the Mayor of Moscow S. Sobyenin. According to Putin, building a parliamentary center, a business zone with a hotel complex, as previously proposed, is ineffective, since this will create an additional burden on the Moscow city center¹⁶. As a result, with the help of the federal center direct intervention, disputes about the functional future of the territory were finished (Tkachenko, 2019).

3. The construction of the Saint Catherine Cathedral in Yekaterinburg became the most resonant transformation project outside of Moscow and Saint Petersburg. The urgency of the issue is due to the fact that the cathedral construction was supposed in the city center. Moreover, this case is interesting because, under the social activism the potential location for the cathedral construction was changed four times¹⁷. Seven years of sluggish public resistance to the development gave way to significant pressure from regional and municipal authorities on the issue of building the cathedral and mass unauthorized rallies of the local population in 2019¹⁸. The conflict quickly became known throughout the country, and Yekaterinburg became almost a symbol of the anti-religious agenda and the people's struggle for the "right to the city" (Lefebvre, 2002; Harvey, 2003; Tykanova and Khokhlova, 2015). The conflict was resolved by the intervention of Russian President V. Putin, who proposed to find compromise and conduct a survey of the population¹⁹. Based on the survey results consensus was reached between city actors.

¹⁵ «Moscow citizens vote for Bolotnaya Square and Zaryadye as analogue of Hyde Park», 25.05.2012. Internet resource: <https://ria.ru/20120525/657359450.html> (Date of access: 01.02.2022).

¹⁶ «Analogue of St. Mark's Square will be built on the site of the Rossiya Hotel», 19.04.2013. Internet resource: https://www.vedomosti.ru/realty/articles/2013/04/19/na_meste_gostinicy_rossiya_postroyat_analog_ploschadi (Date of access: 01.02.2022).

¹⁷ «In Yekaterinburg the results of a survey on a new site for the cathedral were summed up », 14.10.2019. Internet resource: <https://www.rbc.ru/society/14/10/2019/5da443249a794740315d8995> (Date of access: 04.02.2022);

¹⁸ «Residents of Yekaterinburg took to the action against the cathedral for the third night in a row», 15.05.2019. Internet resource: <https://www.interfax.ru/russia/661291> (Date of access: 19.01.2022);

«Activists proposed to submit to a referendum the issue of land for the cathedral in Yekaterinburg», 11.06.2019. Internet resource <https://www.interfax.ru/russia/664818> (Date of access: 19.01.2022);

«Putin intervened in the conflict over the cathedral in Yekaterinburg», 17.05.2019. Internet resource: <https://www.vedomosti.ru/politics/articles/2019/05/16/801646-konflikt-vokrug-stroitelstva> (Date of access: 19.01.2022).

¹⁹ «Putin proposed a way to resolve the conflict over the cathedral in Yekaterinburg», 16.05.2019. Internet resource:

4. The Tuchkov Buyan territory in Saint Petersburg is distinguished by significant variety of projects that have arisen for the possible use of the territory. If initially, after the demolition of the State Institute of Applied Chemistry located on the territory, it was planned to build a residential and business quarter “Embankment of Europe”²⁰, then in 2012, by the decision of the President V. Putin there was decided to build a complex of Supreme Court buildings²¹. As part of the campaign for the election of the Governor of Saint Petersburg in 2019 Acting Governor A. Beglov initiated the decision to implement park in this area, taking into account numerous requests and demands from citizens. This decision was personally supported by the President of the Russian Federation, who changed his position on the issue of building the Supreme Court in this territory. However, in 2022, the issue of building a Supreme Court quarter on this location again appeared in the media agenda²².

5. The project for concreting Vologda embankments was widely discussed on the regional and federal agenda. The developed plan provided for the improvement of the embankments, but met fierce resistance from the local population. The principal position of the regional authorities, which called for “not to listen to anyone”²³ led to repeated direct complaints from the local population to the President of the Russian Federation²⁴. However, in this case, even the intervention of the first person did not immediately slow down the concreting process²⁵. Today, the process has been partially suspended, the possibilities of more rational landscaping, with maximum preservation of green areas, are being discussed²⁶.

<https://www.rbc.ru/politics/16/05/2019/5cdd66b29a79470bfa116d24#ws> (Date of access: 04.02.2022);

²⁰ «The Governor liked the projects of the "Embankment of Europe"», 04.03.2009. Internet resource:

https://www.bsn.ru/news/market/spb/16141_gubernatoru_ponravilis_proekty_naberezhnoy_evropy/ (Date of access: 01.02.2022).

²¹ «Petersburg clearing land for federal judges», 04.12.2012. Internet resource: https://www.rbc.ru/spb_sz/04/12/2012/5592a5af9a794719538cd961?utm_source=amp_full-link (Date of access: 01.02.2022).

²² «BBC: Putin wants to complete a judicial quarter in Saint Petersburg instead of park, », 11.01.2022. Internet resource: <https://www.kommersant.ru/doc/5157179> (Date of access: 01.02.2022).

²³ «"So what if the banks will be concreted": the Vologda governor spoke about the work on the embankment», 20.07.2019. Internet resource: <https://newsvo.ru/news/121398> (Date of access: 09.02.2022).

²⁴ «People complained to Vladimir Putin about the concreting of the historic embankment in Vologda», 14.02.2019. Internet resource: <https://vologda-poisk.ru/news/na-zlobu-dnya/vladimiru-putinu-pozhalovalis-na-betonirovanie-istoricheskoy-naberezhnoy-v-vologde-video/> (Date of access: 19.01.2022);

«Vladimir Putin was again reminded about the scandalous concreting of the embankment in Vologda», 26.06.2020. Internet resource: https://www.xn--b1aqxu.xn--p1ai/articles/society/vladimiru_putinu_vnov_napomnili_o_skandalnom_betonirovanii_naberezhnoy_v_vologde_/?sphrase_id=2623533 (Date of access: 19.01.2022);

«Architect Nadezhda Snigireva told Putin that the city embankment in Vologda was being poured into concrete», 12.02.2019. Internet resource: <https://newsvo.ru/news/118678> (Date of access: 09.02.2022);

«Putin was again reminded of the concreting of the embankment in Vologda», 27.06.2020. Internet resource: <https://newsvo.ru/blogovo/127926> (Date of access: 09.02.2022).

²⁵ «The terms of the bank protection of the embankment in Vologda were extended until September 2020», 17.01.2020. Internet resource: <https://newsvo.ru/news/124744> (Date of access: 09.02.2022).

²⁶ «EMBANKMENT. Abstracts of the big interview of the Mayor», 16.12.2020. Internet resource: <https://newsvo.ru/blogovo/124235> (Date of access: 09.02.2022).

6. The development of the territory of the Timiryazev Academy in the north of Moscow also became a major significant project that reached the federal level. In this case, we were talking about the implementation of large residential construction on the territory of the Academy's scientific testing polygons. However, the current situation caused discontent among the public and Academy employees, who turned to the President, who proposed in response to leave the territory without construction²⁷. Initially, the decision was made to maintain the construction plans on the site, but to make more efficient use of the land²⁸. At the moment (2023), under the impact of public and federal government intervention, the project has been reduced from 100 to 24 hectares²⁹.

The following scale (Table 2.2) assessed the criteria for the public valueness of PVP. For Criteria 1.1 and 1.2 geographical parameters of location and scale, information about the functional status of the territory before the implementation of the project are introduced. Criterion 2.1 was designated as "Predominance of the interests of actors at the beginning and end of the project" and differentiated according to the principle of which of the actors was the largest beneficiary at the beginning of the project and at the end of the project. Criterion 2.2, which assesses the significance of the project for different levels of government, is built on a hierarchical principle from the highest level of intervention (international, federal) to the lowest (regional, municipal). The significance of the transformation project is classified on a scale of "high – low". Criterion 2.3 focuses on the breadth of publications about the project and reflects the extent to which the discourse has gone beyond the regional (city) agenda. A scale similar to Criterion 2.2 was used for assessment. Criterion 3.1 analyzes the change in the functional purpose of the territory during the project and allows us to see how the essential direction of the transformation project changes. Criterion 3.2 evaluates the number of changes in the concept of the transformation project and its functional content in the process of agreement by all actors. Finally, Criterion 3.3 demonstrates whether a decision was made to move the project (or its function) to another location, which indicates the type of resolution of the conflict around the case and reflects the special public valueness of the transformation project. A more detailed analysis of the substantive effectiveness of the cases, the role and participation of actors in publicly valuable projects is presented additionally (Table 2.3).

²⁷ «Putin offered to "leave alone" the Timiryazev Academy», 14.04.2016. Internet resource: <https://www.rbc.ru/rbcfreenews/570f8f059a794765734b5ea8> (Date of access: 08.02.2022).

²⁸ «The closer to the elections, the more stuffing», 14.04.2016. Internet resource: https://www.gazeta.ru/politics/2016/04/14_a_8176571.shtml (Date of access: 19.01.2022).

²⁹ «They want to build up Timiryazev Academy again», 15.10.2021. Internet resource: <https://www.vesti.ru/article/2626889> (Date of access: 08.02.2022).

Table 2.2. Scale for assessing the criteria for public valueness of the urban environment transformation projects

Criteria groups		Group 1. Spatial		Group 2. Actors' participation and resonance			Group 3. Transformational			
№	Criteria/ Case name, implementation time	Criterion 1.1. (Parameters of the territory redevelopment project)	Criterion 1.2 (Location)	Criterion 2.1 (The predominance of actors' interests at the beginning and end of the project)		Criterion 2.2 (Significance for different levels of government)	Criterion 2.3 (Public resonance in public discourse and media)	Criterion 3.1 (Functional change)	Criterion 3.2 (The number of phases- changes of project concepts during implementation)	Criterion 3.3 (Project relocation)
				Start	End					
1	«Okhta-Center» (2006 – present)	Saint Petersburg, 4,7 hectares, Last function: Industrial	Semi-periphery of Saint Petersburg. Krasnogvardeysky district. The historical territory of Cape Okhtinsky, the territory of the former fortresses "Landskrona" (1300 - 1301) and "Nienschanz" (1617 - 1703)	Business, Governm ent	Society	High 1. UNESCO 2. President 3. Governor 4. Deputies of Legislative Assembly 4. Municipal deputies	High	In social- business – public- recreational (refusal of business function)	3 phases 1. 2006 - 2010 Headquarters of the state corporation "Gazprom" 2. 2010 - 2020 Public and business center with a significant cultural function 3. 2020 - present Museum and exhibition space with a high proportion of public spaces	Yes («Lakhta- Center»), Urban periphery

2	Park «Zaryadye» (2006 – 2017)	Moscow, 13 hectares, Last function: Social-Business	Center of Moscow. Tverskoy district. The historical territory of the merchant building of Zaryadye.	Government	Society	High 1. President 2. Mayor 3. Moscow parliament	Low	In recreational-touristic (refusal of administrative and business functions)	3 phases 1. 2006 - 2010 Reconstruction of the hotel "Russia", the creation of offices 2. 2010 - 2012 Construction of the parliamentary center, hotel and business quarter 3. 2012 - 2017 Creation of the park	Yes (Transfer of the Parliamentary center in Mnevniki) Urban periphery
3	Cathedral of St. Catherine (2010 – present)	Yekaterinburg, 0,6 hectares, Last function: Recreational	Center of Yekaterinburg. Truda Square, water area of the city pond, Square near the Drama Theater	Government	Society	High 1. President 2. Governor 3. Mayor	High	In recreational (refusal of religious function)	4 phases 1. 2010 Project for the cathedral construction of on Truda Square 2. 2016 - 2017 Cathedral construction project in the water area of the city pond 3. 2017 - 2019 Project for the cathedral construction in the park near the Drama Theater 4. 2019 - present Construction project on the territory of the former instrument-making plant. Preservation of the	Yes (3 relocations, transfer to the territory of the instrument-making plant) Urban periphery

									recreational area near the Drama Theater	
4	Tuchkov Buyan (2006 – present)	Saint Petersburg, 9,95 hectares, Last function: Industrial	Center of Saint Petersburg. Petrogradsky district. Territory of the former State Institute of Applied Chemistry	Business	Society	High 1. President 2. Governor 3. Parliament deputies 4. Municipal deputies	High	In administrative-recreational (refusal from residential and commercial function)	3 phases 1. 2006 - 2012 “Embankment of Europe” (construction of luxury housing, hotels, Dance Theater) 2. 2012 - 2019 The Supreme Court quarter (with the preservation of the project of the Dance Theater) 3. 2019 - present Tuchkov Buyan Park (with the preservation of the project of the Dance Theater)	Yes (Transfer of the Supreme Court complex to the Garden on the Neva)
5	Concreting of the river Vologda embankment (2011 – present)	Vologda, 5,5 hectares, Last function: Recreational	Center of Vologda. Green embankments near the Vologda Kremlin and along the entire Vologda River	Government	Society	Low 1. President 2. Governor 3. Mayor	Low	In ecological (refusal of the modern-recreational function)	2 phases 1. 2011 - 2018 Implementation of concreting of embankments in Vologda 2. 2019 - present Conception of green landscaped embankments	No
6	Field development of the Timiryazev Academy in Moscow (2016 – present)	Moscow, 24 hectares, Last function: Scientific-industrial	Periphery of Moscow. The territory of the Russian State Agrarian University	Business	Society	Low 1. President 2. Ministry of Agriculture, Ministry of	Low	In scientific (partial refusal from residential and commercial function)	2 phases 1. 2016 -2020 Construction of residential buildings on the Timiryazev	No

			- Moscow Agricultural Academy by K.A. Timiryazev			Natural Resources and Ecology 3. Deputies of the State Duma 4. Mayor			Academy fields 2. 2020 - present Construction of dormitories, new buildings for the Academy and residential development	
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Made by the author.

Table 2.3. Scale of role and result evaluation of actors' participation in PVP

№	Case name	Implementation phase	Main objective functions	Who decides on the function	Who agrees	Who is going to fund	Who minds	Way of expressing dissatisfaction
1	"Okhta Center"	<p>Phase 1 (2006 - 2012) Gazprom City (Okhta Center)</p>	<p>Business center, headquarters of the state corporation "Gazprom"</p>	<p>City and business</p>	<p>UNESCO, Federation, City</p>	<p>Business with the help of the City</p>	<p>The public, experts in urban planning, urban protection movements, deputies of the Legislative Assembly, UNESCO</p>	<p>Protest rallies in St. Petersburg and Moscow, petitions, blocking public hearings, public statements by experts, iconic people, UNESCO representatives, initiation of a referendum, going to court</p>
		<p>Phase 2 (2010 - 2020) "Okhtinsky Cape" New redevelopment projects of the same territory by Gazprom</p>	<p>Public and business center with a significant cultural function</p>	<p>Federation (influenced by UNESCO and social activism), City (influenced by Federation) - Phase 1 stop Business</p>	<p>UNESCO, Federation, City</p>	<p>Business, City, Federation</p>	<p>The public, urban planners, ecologists, deputies of the Legislative Assembly</p>	<p>Collecting signatures, petitions, people's gatherings, going to court</p>
		<p>Phase 3 (2020 - present)</p>	<p>Museum and exhibition space with a high</p>	<p>Federation, City</p>	<p>UNESCO, Federation, City</p>	<p>Federation, City</p>	<p>Business</p>	<p>Publications in the press</p>

		Museum of History and Archeology at Okhtinsky Cape	proportion of public spaces	(under the influence of social activism)				
2	Zaryadye Park	Phase 1 (2006-2010) Reconstruction projects of the Rossiya Hotel	Hotel, offices, parking	City	City	Business ("ST Development")	Business ("Monabou") (dissatisfaction with the competition)	Court
		Phase 2 (2010-2012) Construction of the parliamentary center, hotel and business quarter, residential quarter)	The building of the parliamentary center, public and business center	City	Federation, City	City	Architects, Federation (Prime Minister), City (Mayor of Moscow)	Media, alternative decision making
		Phase 3 (2012 - present) Creation of the park	Pedestrian zone, park zone, historical buildings are preserved, green zone, parking zone, philharmonic society, concert hall, hotel	Federation, City (influenced by social activism)	Federation, City	City	Architects, environmentalists	Media

3	Cathedral of Saint Catherine	<p>Phase 1 (2010) Project for the construction of a cathedral on Truda Square</p>	<p>Reconstruction of the cathedral that historically existed on this territory (the temple was located on Labor Square until 1930)</p>	Region, City	Region, City	<p>Business (Ural Mining and Metallurgical Company - UMMC)</p>	<p>The public, city planning council, architects</p>	<p>Protest rallies, actions, media</p>
		<p>Phase 2 (2016 - 2017) Cathedral construction project in the water area of the city pond</p>	<p>Construction of a cathedral in the city pond in the very center of the city. The emergence of a new visual symbol of the city</p>	<p>Region, City (influenced by social activism)</p>	Region, City	<p>Business (UMMC, Russian Copper Company)</p>	<p>Public, architects</p>	<p>Appeals of residents to the President of the Russian Federation, Mayor of Yekaterinburg, public hearings, media</p>
		<p>Phase 3 (2017 - 2019) Project for the construction of a cathedral in the square near the Drama Theater</p>	<p>Construction of a square on the shore of a pond as a temple object with the arrangement of a cultural zone for events and</p>	<p>Federation, Region, City (influenced by social activism)</p>	Federation, Region, City	<p>City, Business (Church of St. Catherine LLC, St. Catherine's Foundation)</p>	<p>Public</p>	<p>Mass protests of the population, the initiation of a referendum, the action "City roll call" not authorized by the authorities</p>

			placement of a recreation area					
		<p>Phase 4 (2019 - present)</p> <p>Survey at the construction site.</p> <p>Construction project on the territory of the former instrument-making plant</p>	<p>Conducting a survey of 13 new construction sites.</p> <p>Approval of a new place for the construction of the cathedral.</p> <p>Preservation of the recreational area near the Drama Theater</p>	<p>Federation, Region, City (influenced by social activism)</p>	<p>Federation, Region, City</p>	<p>City, Business (St. Catherine's Foundation - founders of RCC and UMMC)</p>	<p>Public</p>	<p>Petition for the recognition of the instrument-making plant as a monument</p>
4	<p>Tuchkov Buyan</p>	<p>Phase 1 (2006 - 2012)</p> <p>Embankment of Europe</p>	<p>Luxury housing, hotel, luxury retail and service facilities for commercial purposes, Dance Theatre, public pedestrian promenade, no park, one historic building preserved</p>	<p>City and federation (influenced by business)</p>	<p>City</p>	<p>Developer under the guarantees of the Federation, Federation</p>	<p>City planning experts, pastor of a nearby cathedral, employees of a demolished factory, a member of the city government, the city community, several NGOs</p>	<p>Media, picket, open letter to the governor, then the resignation of a city government member, online signature collection, protest rallies</p>

		<p>Phase 2 (2012 - 2017) Judicial Quarter</p>	<p>Supreme Court Building, Dance Theatre, open public space, public or private pedestrian promenade, no park. The status of historical heritage has been removed, buildings are not preserved</p>	<p>Federation</p>	<p>Federation, City</p>	<p>Federation</p>	<p>The public, city planners, ecologists</p>	<p>Media, collection of signatures online</p>
		<p>Phase 3 (2019 - present) Tuchkov Buyan Park</p>	<p>Fully open public space, park, public waterfront, Dance Theatre, one historic building is preserved</p>	<p>Federation, City (under the influence of social activism)</p>	<p>Federation, City</p>	<p>Federation, City</p>	<p>Architects</p>	<p>Media</p>
5	<p>River embankment concreting Vologda</p>	<p>Phase 1 (2011 - 2018) Implementation of concreting of embankments in Vologda</p>	<p>Improvement of embankments, protection from flooding and flooding</p>	<p>Region, City</p>	<p>Federation (Federal Water Resources Agency),</p>	<p>Region, City, Business (JSC Vologodavtdor)</p>	<p>Local residents, activists, architects, environmentalists, students and teachers of the local university</p>	<p>Numerous rallies, actions, media, media expressions, appeals to the President, statements to the police, to the Committee of Natural</p>

					Region, City			Resources, inspection of the facility, public discussions
		Phase 2 (2019 - present) Stopping the implementation of the project in its original form. Continuation of concreting. The emergence of the concept of green landscaped embankments	Formation of a green landscaped embankment, creation of new green areas	Federation, Region, City (influenced by social activism)	Federation (Federal Water Resources Agency), Region, City	Region, City, Business (Magistral LLC)	Local residents, activists, architects, environmentalists, local university students and faculty, designers, historians and heritage conservationists	Protest actions, a round table with an architectural bureau, appeals to the President, public discussions
6	Field development at the Timiryazev Academy in Moscow	Phase 1 (2016 - 2020) Construction of residential buildings on the territory of the fields of the Timiryazev Academy	Residential development 100 hectares, park area	Federation, City, Academy	Federation (Agency for Housing Mortgage Lending, Ministry of Agriculture of the Russian Federation),	Business (Housing Development Fund)	Former heads of the Ministry of Agriculture of the USSR and the Russian Federation, students, teachers and employees of the university, the Ministry of Natural Resources, functionaries of the	Petition, rallies, media reports, appeals to the president, public statements

					City, Academy		United Russia party, the Ministry of Education and Science, the leader of the party Spravedlivaya Russia Sergei Mironov	
	Phase 2 (2021 - present) Construction of dormitories, new buildings for the university and residential development	Residential development, student dormitories, a residential building for university staff and other buildings for the academy	Federation (President of the Russian Federation), City, Academy (under the influence of social activism)	Federation (Ministry of Agriculture of the Russian Federation), City, Academy	Business (LSR Group)	Local residents, students, teachers, human rights activists, Archnadzor	Collection of signatures, media reports, public speaking	

Made by the author.

It is worth noting that all transformation projects that required the intervention of federal authorities were resolved through various forms of consensus between the actors. All the projects under consideration required the personal participation of the President of the Russian Federation, and in the case of the Okhta Center, even the intervention of a global actor – UNESCO. As a result, none of these projects were implemented as originally planned. In addition, 4 of the 6 projects reviewed were moved and implemented in new and less conflicting location (for example, the transfer of cathedral in Yekaterinburg to the territory of a former instrument plant, the transfer of the Okhta Center to the outskirts of the city in Lakhta, Saint Petersburg). Such transfers largely correspond to the public response in the media and are accompanied by a change in the concept of projects in the original territory.

It is obvious that the cases we have chosen demonstrate a more complex system of inter-actor interactions. As we mentioned above, according to some researchers (Makhrova and Golubchikov, 2012; Tykanova and Khokhlova, 2015), large Russian cities in the 2000s were characterized by **growth regime** due to the existence of tactical coalitions between large construction businesses and the authorities (according to Gelman (2010) – “predator state” regime). Once the possibilities for compromise and joint mobilization become limited, the stage for changes in the urban regime arises. In the case of active influence of society, **progressive middle class regime** begins to form. In the case of passive influence of actors on urban processes, **status quo regime** is formed.

In our opinion, it is the “**progressive regime of the middle class**” that characterizes the current situation in most cases. According to Clarence Stone, in order to change the regime to a progressive one, the existence of an “active middle class” (active civil society) with a significant amount of free time is necessary (Stone, 1989). In such a situation, society begins to counteract the agenda emerging in the field of ideas of growth, environmental and urban protection movements appear and develop. The transition to progressive regime largely explains the abandonment of such symbolic projects for the city’s image as the Church of Saint Catherine, the Okhta Center or the European embankment on Tuchkov Buyan. However, in the initial phases of the implementation of these PVP, the situation was much closer to the growth regime (see Table 2.2). “Growth machines” (situational coalitions of government and business) suppress other actors, deprive them of their voice, forcing society to look for ways to consolidate with various political groups, parties, and urban protection organizations in order to influence the situation.

As follows from the materials in Tables 2.2 and 2.3, all of the PVPs included in the review were initiated either by business or government (Criterion 2.1). Almost all of them initially had a business/commercial goal (one had a religious-business goal), which was abandoned in the process of interaction between the actors in favor of new publicly valuable one (Criterion 3.1). An exception may be the case of the Timiryazev Academy development project, where the scale of the project was reduced in favor of preserving the existing function on part of the territory. According to the theory of urban regimes, the initial phase of all projects obviously took place in the realities of local urban growth regimes, with the predominance of the interests of established coalitions of business and government. The increasing role in public activism projects that followed at the next stages (Criterion 2.3) and the subsequent change in goal setting in all projects under its influence (Criterion 2.1 and Group 3) allow us to assert that during their implementation a change in the local urban regime occurred. Since the composition of the coalitions influencing projects expanded at the expense of the social actor and it was his interests that became governing in the final stage of all projects, we can claim that in five cases we observed a change in local urban regimes from “growth” to “progressive”, since realized public interests there were associated not with conservation, but with development in the interests of the urban “middle class”, and in the case of the Timiryazev Academy, the regime transformed more towards the “status quo” regime. In a significant part of the Academy, the original function was preserved, but in another part of it, business interest prevailed (see for more details Axenov and Galustov, 2023).

The obtained materials allow us to draw conclusions about the process and results of the of the local urban regime impact. We showed that in 5 studied cases there was a transition of urban regimes from “growth” to “progressive”, and in one – from “growth” towards the “status quo” regime (the case of the Timiryazev Academy). The main “cut-off” criterion for intervention at the federal level of government used in the selection of the cases under study, together with the criterion for the subsequent radical change in the concept of the project in the context of the peculiarities of the Russian political system, allows us to assume that the studied cases, although they describe only local changes in urban regimes, nevertheless become potentially “precedent » for the studied cities.

The studied PVPs are important indicators of the urban regime impact. They allow to see conflict and conflict-free interactions between actors at the micro-level. In the studied cases, elements of the progressive middle class regime change the prevailing growth regime. In this regard, it is important to emphasize the local nature of urban regimes in different cities. They may vary within a particular city and depend on the local environment. Similar conditions can arise in

any large Russian city, then we can expect similar results from the transformation of urban space as described (Axenov and Galustov, 2023).

2.3. Spatio-temporal models of the urban regime impact on the urban spatial transformation on the example of ecological and ecocultural conflicts in Saint Petersburg

The method of constructing spatio-temporal models of the impact of the urban regime on the transformation of urban space is the second assessment method, which was tested (Galustov, 2016) and improved on the example of ecological and eco-cultural protests (Galustov, 2022, 2023). The use of spatio-temporal models for geographic analysis is relevant, since the symbiosis of space and time is the most important methodological issue of social geography (Sharygin and Chupina, 2013; Axenov, 2014). The factual basis of the study was the information base of ecological and ecocultural conflicts, compiled by the author on the basis of media content analysis (in general, regional press) and expert survey to verify the weight of the criteria for the conflicts.

In Paragraph 2.1 we argued that ecological and ecocultural conflicts are indicators of the impact of urban regimes. In turn, the conflict itself take into account the dominant "growth machines" in Russian cities, can be viewed using **two-actor scheme** with two poles of interest – "growth coalition" (power + business) and society (Fig. 2.2). This approach is used, since in each individual conflict it is not always directly obvious who is the only beneficiary of its result, most often the interests of government and business merge together (Tev, 2006; Tykanova and Khokhlova, 2015; Zhelnina and Tykanova, 2019). Tykanova and Khokhlova (2015) emphasize "the exclusion of city dwellers from discussions about the forms and goals of redevelopment" in the context of the existence of "growth machine", which itself is a discursively constructed image of coalition of political and business elites against the "common enemy" – society. The "growth machine" common to government and business is met with increased protest and resistance from ecological organizations, opponents of compact development, and defenders of historical and cultural heritage (Tev, 2006). On Fig. 2.2 we have drawn a diagram from which it follows that if society wins ("victory"), then local change in the urban regime occurs, and if the government or business ("defeat"), then the regime remains the same. In the case of intermediate solution or compromise, it is more difficult to talk about unambiguous trends, however, a compromise may be a sign of the "growth machine" slowing down.

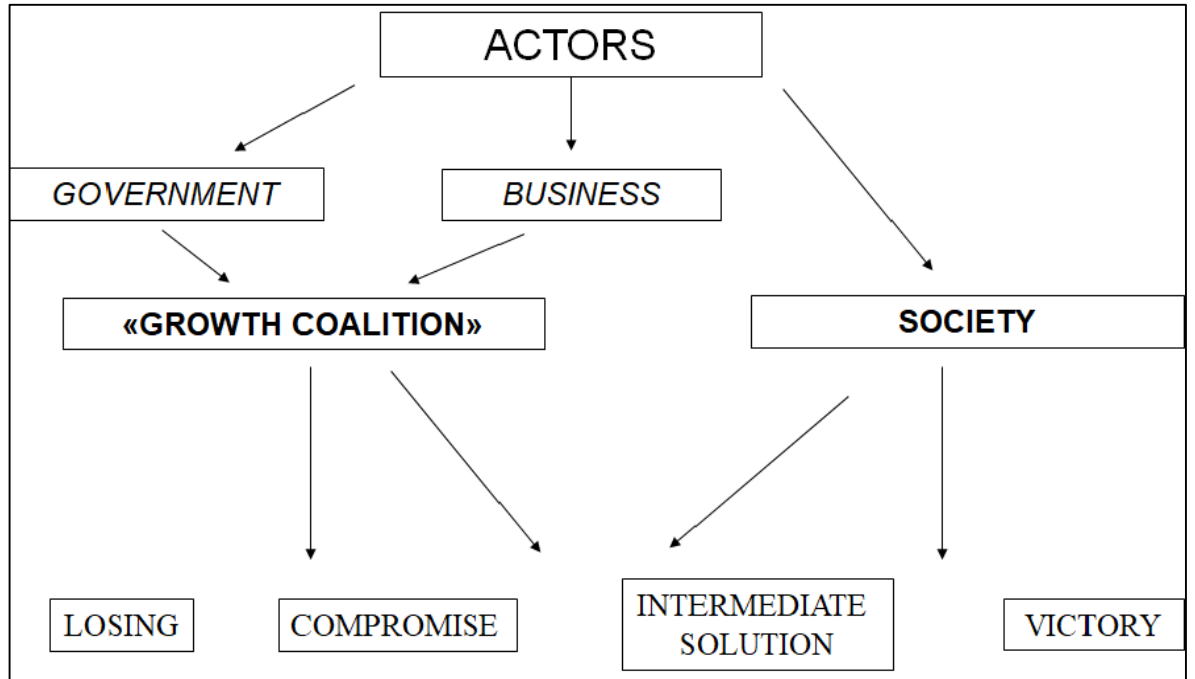


Fig. 2.2. Two-actor scheme of conflict (made by the author)

We proceed from the premise that protest activism is a direct public initiative of the communities (Barash and Antonovsky, 2019). Therefore, we use conditional parameters for convenience, denoting the outcome of conflict resolution from the position of society (victory – victory for society, defeat – victory for government / business). The sample includes the main conflicts that have taken place since the Okhta Center project (2006). Among the conflict areas there are recreational areas (green spaces), public spaces, valuable buildings and objects. In order to create spatial and temporal models, scale of ecological and eco-cultural conflicts was compiled (Appendix A) into the following categories:

- 1) Name of the conflict;
- 2) Result of the conflict;
- 3) Scale of the territory;
- 4) Level of the conflict solution;
- 5) Duration of the conflict;
- 6) Location of the conflict (in system "center-periphery");
- 7) Conflict mentions in media (content response).

Further, scores of conflicts and their number by districts are calculated (Appendices B and C). The scores have different weights for each conflict category. In order to objectively evaluate the conflict criteria, expert survey was conducted to verify the weight of the conflict criteria, the detailed content that is presented below (Appendices D and E).

Result of the conflict:

- 5 points – victory of the social activism
- 3 points – intermediate solution/compromise
- 1 point – defeat

Scale of the territory:

- 3 points – large (more than 3 hectares)
- 2 points – average (from 1 till 3 hectares)
- 1 point – small (less than 1 hectares)

Level of the conflict solution:

- 5 points – global
- 4 points – federal
- 3 points – regional
- 2 point – municipal

Duration of the conflict:

- 4 points – more than 3 years
- 3 points – 1-3 years
- 2 points – 0,5 – 1 year
- 1 point – less than 0,5 years

Location of the conflict:

- 3 points – center
- 2 points – semi-periphery
- 1 point – periphery

Conflict mentions in media:

- 5 points – more than 1 mln.
- 4 points – from 100 000 till 1 mln.
- 3 points – from 10 000 till 100 000
- 2 points – from 1 till 10 000
- 1 point – less than 1 000

The result of the conflict is the most important parameter that determines the level and significance of protest actions in a particular area. The result of the conflict can be divided on four main scenarios:

- 1) **victory** (positive outcome of the protest activity);
- 2) **defeat** (negative outcome of the protest activity);
- 3) **intermediate solution** (freezing of the conflict for indefinite period);
- 4) **compromise** (mutual concessions of actors).

The characteristic of the territory scale is less significant, but rather important category from the point of view of the conflict possibility diffusion into adjacent territories (Galustov, 2016). In some cases, the scale of the territory is not always a conflict factor; it is enough to cite any micro-conflict in the city historical center as an example. Small is the scale of less than 1 hectares, medium – from 1 to 3 hectares, large – more than 3 hectares.

The level of solution / coverage of the problem is a significant parameter that shows the involvement of the authorities, which is closely related to the importance of the proposed project and the level of public attention to the problem. In the case of high public significance, actors external to the region (state officials, UNESCO) may interfere in the conflict.

The conflict duration is the only temporal component of the spatio-temporal model of the urban regime impact transformation on the transformation of urban space. The long course of the conflict is often associated with increase of the attention level. Fast conflict resolution usually indicates the low significance of the conflict for society, or, conversely, the importance of the conflict resolving for the authorities (Axenov and Galustov, 2023).

The criteria of the conflict location is a key and reflects the geographical distribution of conflicts. To create a location scale, we proposed to take as a basis the classical theory of geopolitical economy "center-periphery", formulated in 1966 by the American urban geographer John Friedmann and sociologist Immanuel Wallerstein, that the world is divided into 3 zones – the

center, the semi-periphery (borderland) and periphery (Wallerstein, 1987). We apply a similar model to the city, but with slightly different criterion that define concepts in the "center-periphery" system.

The center can be defined as the territory within the historical center boundaries of the city. UNESCO uses the concept of "the historical center of Saint Petersburg", meaning the territory of the surviving buildings, embodied according to a certain plan (mainly in the pre-revolutionary era)³⁰. In this territory, ecological and ecocultural conflicts are especially sensitive due to the great importance of the territory for society and significant concentration of monuments and protection zones. In accordance with the center-periphery model, the center can also be defined as an area that has a significant impact on the entire urban area, since conflicts in the central part of the city can be the object of general attention, can provoke a similar protest in the periphery.

The periphery is the urban outskirts, which were developed as an urban area mainly in the period of the 1960s-2000s. Conflicts in this territory, as a rule, affect only the local population and are resolved at the municipal or regional level (if the conflict is significant for residents of adjacent territories).

The most problematic is the definition of the urban semi-periphery. It is proposed to consider as a semi-periphery a territory that is not included in the zone of the historical center, but located as close to it as it can have a direct impact (as well as on the adjacent periphery). An example is the mentioned issue of changing the historical panorama of Saint Petersburg during the construction of the Gazprom tower (Okhta Center). For example, the Okhta Center project involves construction outside the center, but its possible appearance would affect the overall panorama of the center from different points. Another example is the construction of the Western High-Speed Diameter in Saint Petersburg. The propylaea of the bridge invade the panorama of Bolshoy avenue of Vasilievsky Island, and also distort the visual panorama from the Troitsky Bridge and Dvortsovaya Embankment (Galustov, 2016). To assess the influence of urban panoramas, the Ministry of Culture of the Russian Federation approved the boundaries of a historical settlement in St. Petersburg, which, in turn, takes into account all-round panoramas and "pools of visual perception of the historical system of dominants." According to this document, "combinations of components of the historical urban landscape with accents and dominants against the sky within sight" are subject to protection, including panoramas. For citywide dominants (Peter and Paul Cathedral, St. Isaac's Cathedral, Smolny Cathedral, etc.) this limit is 11 km, for the main ones (Birzha, Saint Nicholas Cathedral, Panteleymonovskaya Church) the limit is up to 6 km.

³⁰ UNESCO World Heritage Convention. Internet resource: <http://whc.unesco.org/ru/list/540#top>. (Date of access: 19.04.2022).

Examples of different conflict locations in center, semi-periphery and periphery of Saint Petersburg are shown on Fig. 2.3.

Fig. 2.3.1



Fig. 2.3.2



Fig. 2.3.3

**Center**

Demolition of Rogov house

Semi-periphery

“Okhta-center” project

Periphery

Cathedral project in Malinovka park

Fig. 2.3. Examples of the urban conflict locations³¹

(made by the author on base of piter.tv, hraniteli-nasledia.com)

The last point is the number of conflict mentions in the press. During the analysis of the press, it can be concluded that conflicts that have reached a new level of consideration (for example, from local to federal) become an increased object of attention of the press. To estimate the number of publications, a content analysis of the main regional Internet media was used, after which all media references to the conflict were analyzed, and then the quantitative ratio of publications was added (including reprints that focus on the conflict). For conflicts that reached the federal level, an array of national media and publications in other regions was also analyzed (Galustov, 2016).

Based on the results of a generalizing analysis and summing up the scores of conflicts, the final aggregate indicator was modeled, calculated for each conflict and plotted on the maps of Saint Petersburg (Galustov, 2016; Fig. 2.4, 2.5, 2.6). It can be defined as **spatio-temporal models of the urban regime impact on the transformation of urban space**, which are built on base of the results of ecological and eco-cultural conflicts in Saint Petersburg.

³¹ Fig. 3.1. «Rogov's house will be restored by the court», 14.08.2017. Internet resource: <https://hraniteli-nasledia.com/articles/utraty/dom-rogoва-budet-vosstanovlen-sudom/> (Date of access: 24.03.2021).
 Fig. 3.2. «Saint Petersburg needs such facilities as Lakhta Center», 15.12.2017. Internet resource: <https://www.vedomosti.ru/realty/characters/2017/12/15/745405-nuzhni-lahta-tsentr> (Date of access: 24.03.2021).
 Fig. 3.3. «The cathedral will be transferred from Malinovka Park to the site for the hospital and maternity hospital», 7.08.2015. Internet resource: https://piter.tv/event/parka_Malinovka_hram/ (Date of access: 24.03.2021).

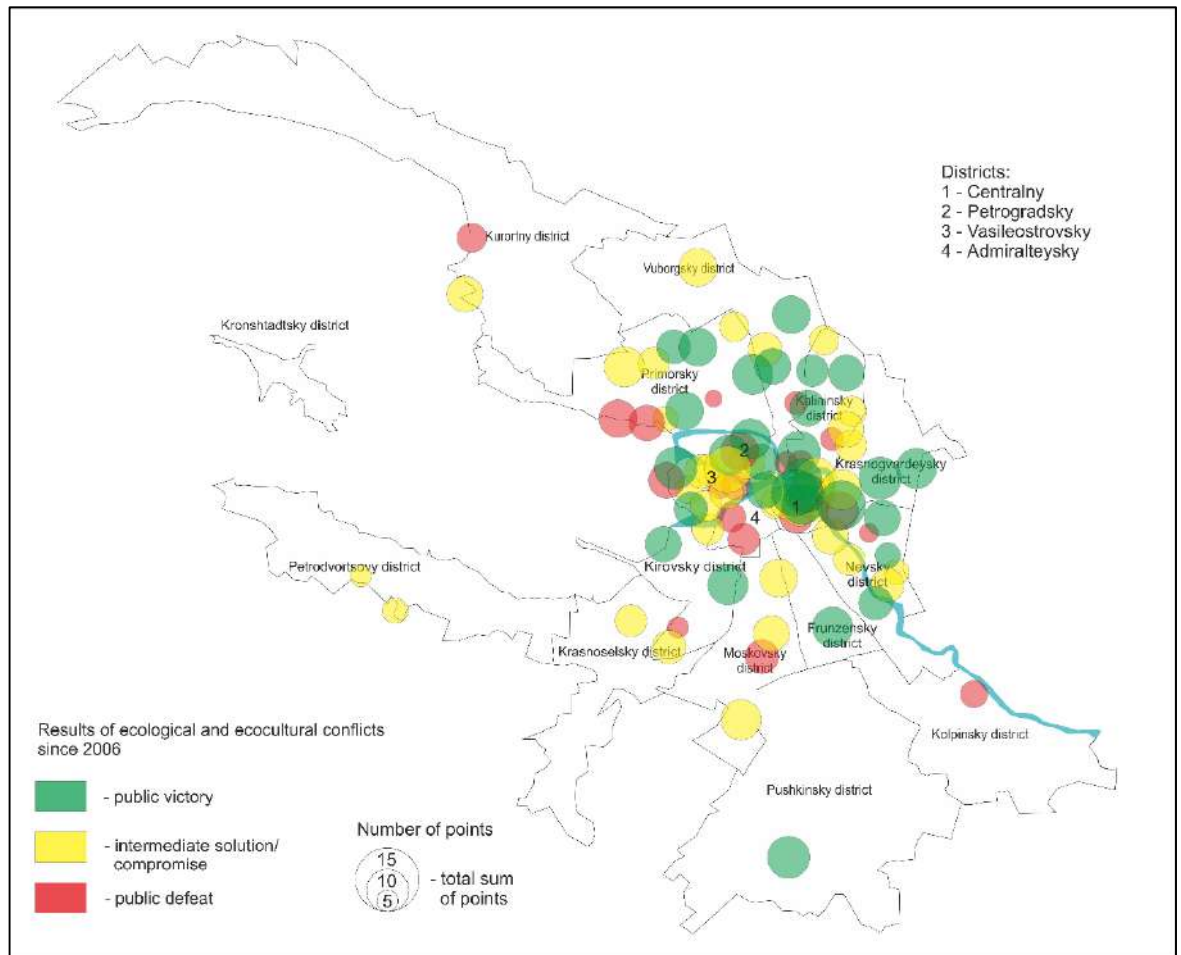


Fig. 2.4. Spatio-temporal models of the urban regime impact on the urban spatial transformation on the example of ecological and eco-cultural conflicts in Saint Petersburg (made by the author on base of Appendix B)

The figure shows spatio-temporal models of the urban regime impact on the transformation of urban space, made on the basis of indicative ecological and eco-cultural conflicts (Appendix B). As we already mentioned, we relied on a two-actor scheme (see Fig. 2.2), so the models are divided into 3 main categories – public victory (green), intermediate solution or compromise (yellow) and public losing, that is the victory of the authorities or business (red).

The figure shows spatio-temporal models of the impact of the urban regime on the transformation of urban space, compiled on the basis of indicative ecological and eco-cultural conflicts (Appendix B). As already mentioned, in the study we relied on a two-actor scheme (look at Fig. 2.2), so the models are divided into 3 main categories - the victory of the public (green), an intermediate solution or compromise (yellow) and the defeat of the public, that is, the victory of the authorities or business (red).

The circle size means the number of conflict points in absolute units, where 1 point is 2 mm. The conflict around the Okhta Center has the maximum number of points (23 points). This case ended with the victory of society, it was solved with the help of the intervention of global and federal actors, lasted for 4 years and there was maximum number of publications about. The second and third places were taken by the Konyushennoe Vedomstvo (22 points) and Tuchkov Buyan (21 points). Also, 20 points were given to conflicts around Babolovsky Park, Military Medical Academy by Sergey Kirov, Malinovka park, the bas-relief of Mephistopheles on the Lishnevsky House, the Blockade station and Park on Smolenka river. More detailed information about the total scores of conflicts is in Appendix B.

Based on the table data, we got the following picture – **94** conflicts in the sample, **34 ended by victory of the society**, 30 in intermediate solution, 9 in compromise, and only **21 in defeat**. In relative terms, majority of conflicts ended by public victory - 36%, 32% ended in intermediate solution, 10% in compromise, while 23% ended in favor of the “growth coalition”.

The red color indicates the dominant growth regime – the success of the coalition of government and business, the inability of society to defend its interest or the weakness of its resistance. A noticeably larger number of green spatio-temporal models indicates significant successes of society. Yellow models show numerous cases of impossibility of decision-making exactly in one direction or another – such situations are characterized by the search for consensus, the conflict prolongation. The power and business are forced to listen to society, but they are still quite capable of defending their own point of view on the original project. Such situations may well be an indirect sign of progressive middle-class regime.

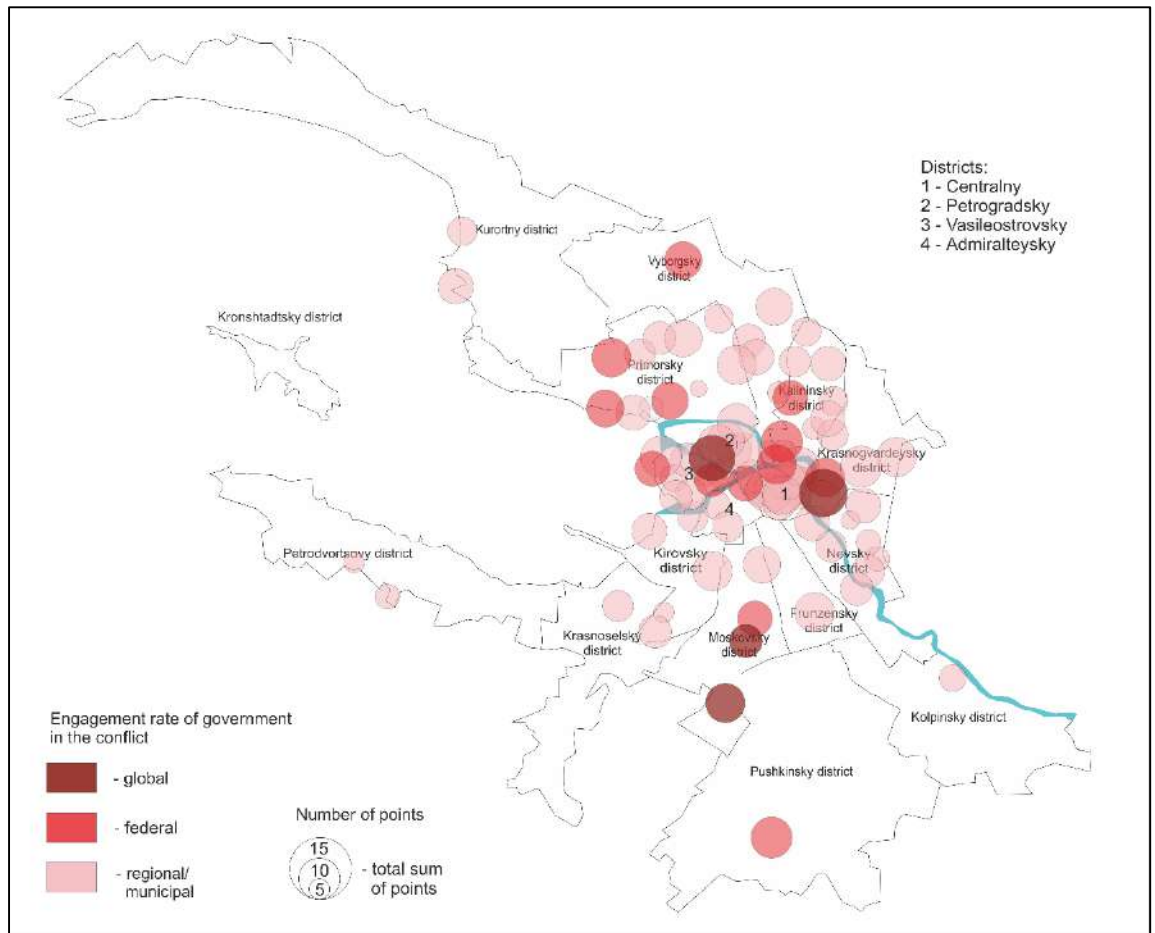


Fig. 2.5. Involvement of government in ecological and eco-cultural conflicts in Saint Petersburg (made by the author on base of Appendix B)

This map (Fig. 2.5) focuses on the aspect of power involvement in the conflict, which differentiates the roles of power impact in the conflict resolution. We divided the levels of power into 3 categories – “global”, “federal” and “regional/municipal”. Due to the fact that not all municipal conflicts come to the attention of the press, because of low significance, it seems possible to neglect the division into regional and municipal levels of intervention on the map (details are given in Appendix A). The size of the circle indicates the sum of the conflict scores, as in the previous chart.

As we see from the map, most of the urban conflicts are resolved on the regional or municipal level. Conflicts on the federal level are much more interesting subject for analysis. By global intervention, we include the participation of UNESCO and other international organizations in conflict resolution. In 3 out of 4 cases, this participation turned out to be critical and led to a change in the original project (Okhta Center, Tuchkov Buyan, Pulkovo Observatory). UNESCO's intervention in conflicts has actually made this organization a new, global actor in urban space, whose interests also have to be taken into account. Of the 14 cases of federal intervention in conflicts, 6 ended by victory of the society, 4 in intermediate decision, 2 in compromise, and only

2 in defeat. This largely shows that federal and global interventions contribute generally to the final consensus and consideration of the public interest.

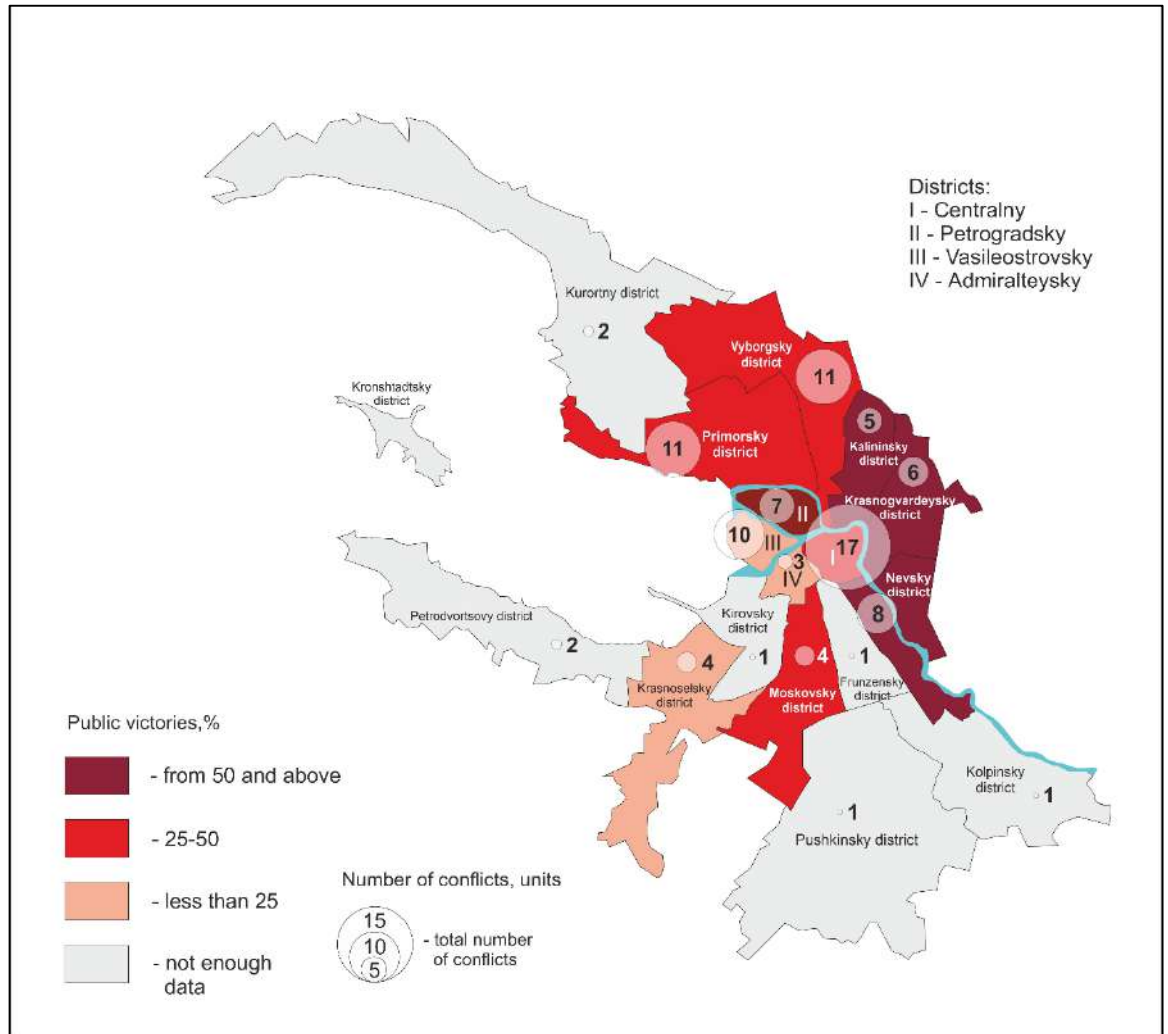


Fig. 2.6. Results of the actor “society” victories in Saint Petersburg districts, %
 (made by the author on base of Appendix C)

The following map (Fig. 2.6) is in mixed cartogram and diagram map format, where the cartogram shows the relative score (percentage of public wins) and the diagram map demonstrates the absolute score (total number of conflicts). The percentage of wins is normalized according to the following scale: "from 50% and above", "25-50%", "less than 25" and "insufficient data". In turn, the circle size reflects the absolute number of conflicts per district, where 1 point = 2 mm. After analyzing the percentage of public wins by districts of St. Petersburg, we got the highest rates in the Kalininsky district (60%), Krasnogvardeysky, Nevsky and Petrogradsky (50% is in each). Centralny, Moskovsky, Primorsky and Vyborgsky districts were on the second stage by the number of victories. At the same time, the maximum number of conflicts was found in Centralny District (17), as well as in Primorsky (11), Vyborgsky (11) and Vasileostrovsky (10). In the

remaining districts the number of conflicts turned out to be statistically so insignificant, that is why we do not describe them for the study purposes (look at Appendix B).

Based on the obtained results, it can be seen that the most successful active part of society is in the eastern periphery of the city and Petrogradsky district – we use this district to study cases in more detail. This may indicate strong local communities and the absence of unambiguous geographic regularities in favor of the center of Saint Petersburg. At the same time, far peripheral areas (Pushkinsky, Petrodvortsovy, Kurortny, Kolpinsky) are actually conflict-free territories, as we assume, due to large undeveloped spaces and the absence of close-knit urban communities. However, the Frunzensky and Kirovsky districts close to the center also turned out to be quite conflict-free. The areas of rapid development (Primorsky and Vyborgsky) still have pronounced features of the growth regime, the number of successes of government and business here is noticeably higher than in the less rapidly developing eastern periphery.

We emphasize that ecological and ecocultural conflicts are indicators of the urban regime impact, which affects changes in urban morphology. In this regard, there is also a pattern that conflicts in the central and semi-peripheral parts of the city are mainly of eco-cultural nature, while on the periphery they are mostly ecological (Galustov, 2016). As result of conflicts in the territory, new development and redevelopment projects may or may not arise.

Differences in the location of conflicts have a significant impact on public attitudes towards them (Galustov, 2023), and the heterogeneity of transformation processes in different urban areas increases (Hillier & Hanson, 1984). The most significant for the citizens are conflict cases that gravitate towards the city center, towards the protected zones of cultural heritage (Chernysheva and Khokhlova, 2021). The maximum concentration of intermediate solutions and compromises is observed on the territory with average longest duration of the conflict (Tykanova and Khokhlova, 2015). In many ways, cultural heritage objects attract the attention of more significant parts of the urban community than the same on the periphery.

The results of the spatio-temporal models analysis demonstrate the local impact of the urban regime on the space of Saint Petersburg. New round of social activity, most noticeable after the events around the Okhta Center in 2006, became a significant factor in the beginning of the breakdown of the existing urban regime in Saint Petersburg (Verevkin and Sokolov, 2012). This is also demonstrated by results of most ecological and ecocultural conflicts (Galustov, 2022). Basically, all urban conflicts that required the intervention of federal authorities were resolved in various forms of consensus of actors. The rarest of such projects were implemented in the originally planned form (examples: "Marine Facade", buildings close to the 300th Saint Petersburg

Anniversary park or public garden on 6th Sovetskaya Street). Another part of the most important projects was relocated and implemented in completely new and less conflict location (for example, the transfer of the Supreme Court complex or Okhta Center). Such transfers largely correspond to the content response in the media and are accompanied by change in the concepts of projects on the previous territory³².

The impact of the urban regime manifests in the new functional changes of the urban space. Both in the case of publicly valuable projects or urban conflicts, the direction of spatial changes often changes. Plans for urban transformation in the case of “growth machine” can be accelerated, in the “status quo” they can be slowed down or frozen, and in the case of “progressive” regime, they can be adjusted or revised in accordance with new social demands (Galustov, 2023). In the next subchapter we will take closer look at how regime interactions can be found in urban morphology and urban functions, in urban spatial transformation as a whole.

2.4. Results of the transformation of intracity spaces under the urban regime impact on the example of Vasileostrovsky and Petrogradsky districts of Saint Petersburg

The author selected two central districts of Saint Petersburg (Petrogradsky and Vasileostrovsky) for demonstration of the differences in the spatial transformation under the urban regime impact at the intracity level. According to the results obtained in Paragraph 2.3, the Petrogradsky district is one of the leaders in the number of public victories (57%), it has an exceptionally low number of conflicts in which the coalition of government and business successfully prevented public resistance. On the other hand, the neighboring Vasileostrovsky district is characterized by significantly high concentration of conflicts and multi-vector results of the impact of urban regimes (Appendix A, Fig. 2.4, 2.6). Public intervention in the conflict played noticeably less pronounced role.

Using the example of the **Petrogradsky district** of Saint Petersburg, we consider the transformation using the following spatio-temporal models of the urban regime impact on the transformation of urban space. As follows from Appendix A, seven such models have been identified in the region:

³² «Putin supported the idea to set up a park instead of a judicial quarter in Saint Petersburg», 23.04.2019. Internet resource: <https://www.rbc.ru/society/23/04/2019/5cbf1ba29a7947cde3bed5f9> (Date of access: 23.12.2021); «The Supreme Court is preparing to move. Why are the residents of St. Petersburg not happy about this?», 22.10.2019. Internet resource: <https://www.bfm.ru/news/427625> (Date of access: 23.05.2023); «The construction of the quarter for the Supreme Court in St. Petersburg was postponed until 2028», 16.01.2023. Internet resource: <https://www.rbc.ru/business/16/01/2023/63bff19e9a794700634b9bce> (Date of access: 23.05.2023).

- Redevelopment of Tuchkov Buyan (Bolshoy avenue of Petrogradskaya Side, 1a);
- Reconstruction of the Basevich House (Bolshaya Pushkarskaya street, 7);
- Restoring the Mephistopheles bas-relief on the Lishnevsky House (24 Lakhtinskaya street);
- Redevelopment of the Matveevsky Garden (Bolshaya Pushkarskaya street, 35);
- Redevelopment of the Lopukhinsky Garden (Akademika Pavlova street, 13);
- Demolition and adaptation of the Meltzer Factory residential complex (Karpovka River embankment, 27).

The following spatio-temporal models have been found in the **Vasileostrovsky district** (Appendix A):

- Alluvial areas – “Marine Facade” (western coast of Vasilievsky Island);
- Redevelopment of the coastal area of the Gulf of Finland – “Park on Smolenka river” (Korablestroiteley street, 28-30);
- Potential demolition of the building of Medical and sanitary unit № 1 of the Plant named by Kalinin (Dekabristov Island, Odoevskogo street, 10);
- Development of the Sovereign business center “Sovereign” on the site of the park (Maly avenue Vasilievsky Island, 22);
- Height regulations of the Birzha Business Center (26th line of Vasilievsky Island, 15, building 2);
- New building of the Hospital of Saint Mary Magdalene (2nd line of Vasilievsky Island, 47);
- Demolition and new construction on the site of the Gavanskie Baths (Gavanskaya street, 5);
- Damage of the historic Chubakov House (11th line of Vasilievsky Island, 58);
- Redevelopment of the Opochininsky Garden (cross-section of Bolshoy avenue V.I., Nalichnaya street, Opochinina street, Srednegavansky avenue);
- Creation of the “Zarosli” park and construction on the Makarov embankment (Dekabristov Island, Uralskaya street, 1).

In Petrogradsky district there are spaces where public intervention resulted in a complete revision of the original transformation projects – these are the Matveevsky, Podkovyrovsky, Lopukhinsky gardens and the Lishnevsky House. In these conflicts, the decision to preserve/renovate these spaces was driven by social activism. Under pressure of society, recreational function may be preserved or recreational function may appear for the first time

instead of implementing a business function. As a result of the conflicts, the gardens were completely protected from potential development by business, and the issue of restoring the image of Mephistopheles was resolved positively, despite significant resistance from the legislative structures³³.

Another situation arises in the case of intermediate decisions or compromises – in this case the space does not change (conservation of the Basevich House) or changes slowly with corrections of the original project (Tuchkov Buyan), or the project is redone on the compromise basis (Meltzer Factory).



Fig. 2.7. Exterior view of the Basevich House in 2020 (left) and original renovation project (right) (made by the author on base: <https://kultfond.com>)

The example of the Basevich House (Fig. 2.7) shows that the conflict between actors around the issue of preserving or reconstructing of cultural heritage site led to its deterioration and desolation³⁴. The same thing happens in other situations when government, business and society cannot reach a compromise. The construction business is not interested in the costs of preserving the site, proposing complete demolition and construction of the site from scratch, while society opposes the destruction of the historical city center (Bederson et al., 2021). Ultimately, in urban space the status quo situation is often maintained, the space comes to a “frozen state.” In such a case, **neither development nor conservation** occurs (Ledyayev, 2008), which greatly affects the appearance of the city.

Using the example of the Tuchkov Buyan we see that regional authorities and businesses prefer to wait for federal decisions and drivers (Bin et al., 2021). The intervention of federal actors, the disunity of regional elites, the change of governors – all these factors influenced the fact that for 15 years this territory has not found a function acceptable to everyone. The only constant element throughout all the changes in redevelopment plans remained the construction of the Dance

³³ «The Legislative Assembly did not return Mephistopheles to Lakhtinskaya Street in 2016», 21.10.2015. Internet resource: https://spb.aif.ru/politic/situation/zaks_ne_stal_vozvrashchat_mefistofelya_na_lahtinskuyu_ulicu_v_2016_godu/ (Date of access: 28.02.2023).

³⁴ On the beginning of 2023.

Academy building, publicly promised by the President of the Russian Federation to the director of the theater Boris Eifman³⁵ (see Table 2.4).

Table 2.4. Transformation of Tuchkov Buyan's space

	Phase 1 (2006 - 2012) Embankment of Europe	Phase 2 (2012 - 2017) The Court quartier	Phase 3 (2019 - present) Tuchkov Buyan
The main functions of the project	Luxury housing, hotel, luxury retail and service facilities for commercial purposes, Dance Theatre, public pedestrian promenade, no park, one historic building preserved	Supreme Court Building, Dance Theatre, open public space, public or private pedestrian promenade, no park. The status of historical heritage has been removed, buildings are not preserved	Fully open public space, park, public waterfront, Dance Theatre, one historic building is preserved
Who decides on the function	City and federation (under the impact by business)	Federation	Federation, City (under the impact of social activism)
Who agrees	City	Federation, City	Federation, City
Who is going to finance the project	Developer under the guarantees of the Federation, Federation	Federation	Federation, City
Who minds	City planning experts, pastor of a nearby cathedral, employees of a demolished factory, a member of the city government, the city community, several NGOs	The public, city planners, ecologists	Architects

Made by the author on base of Bin et al., 2021.

As can be seen from Fig. 2.8, the constant change of projects for interests of certain actors leads to the conservation of space. In the period from 2006 to 2021, no work was carried out on the Tuchkov Buyan, despite the fact that the previous industrial function was lost (the complex of buildings of Applied Chemistry State Institute was demolished). Also, as in the case of the Basevich House, there was a “freezing” of space with the prospect of an inter-actor compromise in the nearest future. At the same time, the space of Tuchkov Buyan was cut off from any use for a long-term period³⁶.

³⁵ «Putin assured Boris Eifman that the project of his theater will not disappear from the development plans of Saint Petersburg», 25.04.2013. Internet resource: <https://tass.ru/spb-news/618351> (Date of access: 15.02.2022).

³⁶ «Court or garden? Two versions of the future "Tuchkov Buyan"», 15.12.2021. Internet resource: <https://www.fontanka.ru/2021/12/15/70319066/> (Date of access: 26.04.2023).



Fig. 2.8. Tuchkov Buyan. A – “Embankment of Europe” (project). B – Judicial quarter (project). C – Park with the Eifman Theater (project). D - Reality in 2020 (made by the author on base of archi.ru, zaks.ru)

At first glance, transformation as a change in the essence of an object in the cases under consideration is not obvious. However, as we noted, it is fundamentally important to change the functional purpose during the transformation, as a result of which the **space acquires qualitatively new properties, more flexible to the current situation and the different interests of actors** (see Chapter 1). In this regard, the Matveevsky and Lopukhinsky gardens saved their main function, but during the transformation they acquired properties that allowed them to be further developed as green parks without the threat of potential redevelopment of the territory.

In the Vasileostrovsky district, there are only two territories where it would be appropriate to talk about the effectiveness of public intervention – Park on Smolenka river and Opochininsky Garden (*author's note* – new round of eco-cultural conflict unfolded around the Opochininsky Garden started in 2023). Compromise solution was found in the case of the Birzha Business Center, where, after complaints about changes in height regulations, the building was reduced by two floors³⁷. The situation developed in a similar compromise or intermediate way in other cases. In the case of the construction of the facade buildings on Vasilievsky Island, the “Sovereign” business center, the new building of the hospital of Saint Magdalene, public resistance was overcome, the

³⁷ «The exchange with "cut off" floors was opened in St. Petersburg», 11.02.2010. Internet resource: https://www.dp.ru/a/2010/02/11/v_peterburge_otkrili_birzh/ (Date of access: 26.04.2023).

“growth machine” represented by government or business was able to achieve the result it needed. Such cases significantly distinguish the nature of the urban regime impact in the Vasileostrovsky district from the Petrograd district.

The example of the park on Smolenka river shows how multidirectional the process of transformation of space can be. The initial project to build a theater and then a hotel in a spectacular location at the mouth of the Smolenka River caused a flurry of criticism from the local population, which had already suffered significantly from the construction projects of the Western High-Speed Diameter and the development of alluvial areas. A social movement emerged for the creation of a Park on Smolenka, a change in the ideology of attitude towards the territory of the Vasileostrovsky district³⁸. Ultimately, under the impact of public activism, the city abandoned the idea of developing this space. The idea of the park won, but in 2023 no landscaping work had been carried out here³⁹ (see Table 2.5, Fig. 2.9).

Table 2.5. Case “Park on Smolenka river”

	Phase 1 (2011 - 2015) Theater of Alla Pugacheva	Phase 2 (2016 - 2018) Investment hotel "New territories- development" LLC	Phase 3 (2019 - present) Park on Smolenka river
The main functions of the project	Theater, cultural complex, completion of the perspective of the Smolenka River, which was conceived as the center line of Nevsky avenue	Apart-hotel complex	Free public space with the organization of embankments, without building
Who decides on the function	City and business	Business	City (under the influence of social activism)
Who agrees	City	City	City
Who is going to finance the project	Business	Business	City

³⁸ «Smolenka forest. How activists are fighting for the park on Smolenka river?», 25.03.2019. Internet resource: <https://luna-info.ru/discourse/park-na-smolenke/> (Date of access: 20.04.2023).

³⁹ « What disturbs to the creation of the park on Smolenka river?», 24.09.2019. Internet resource: <https://spb.mk.ru/social/2019/09/24/cto-meshaet-sozdaniyu-parka-na-smolenke/> (Date of access: 20.04.2023).

Who minds	The public of the district and city, deputies of the Legislative Assembly	The public, architects, environmentalists, deputies of the Legislative Assembly, city protection movements	Business, city government officials
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Made by the author on base of Bin et al., 2021.

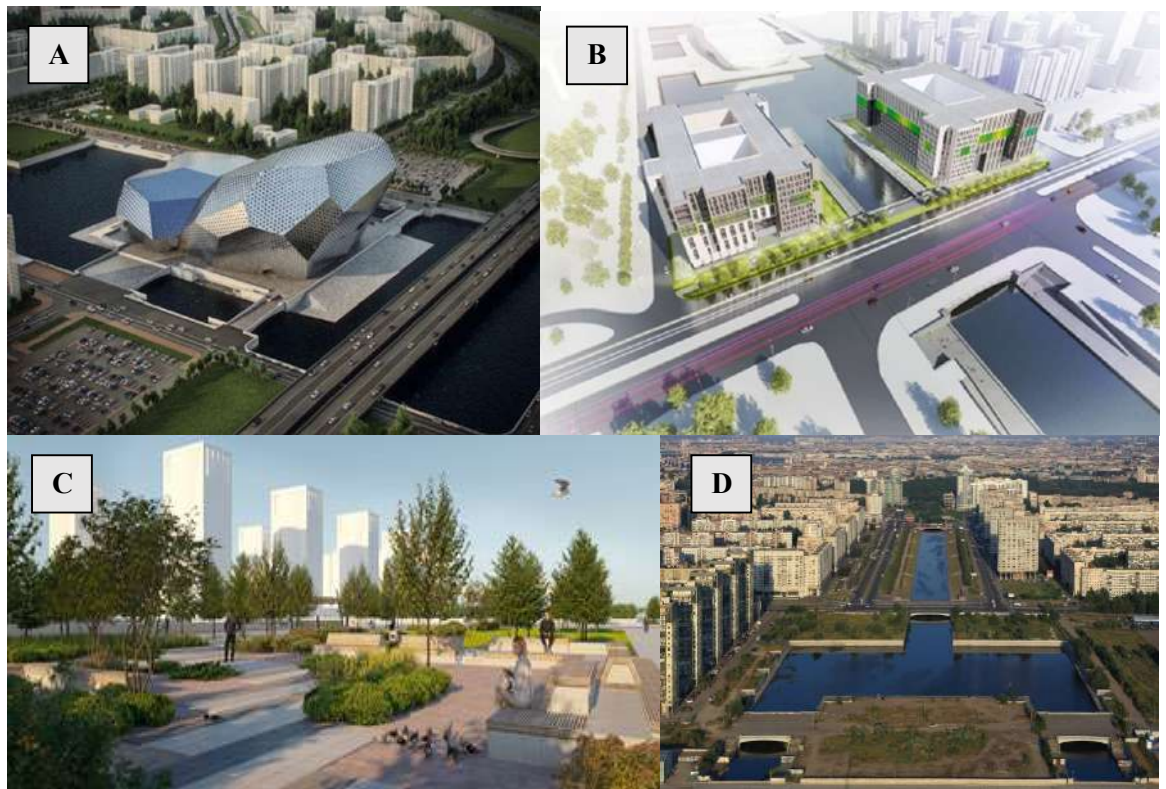


Fig. 2.9. “Park on Smolenka river”. A – “Alla Pugacheva's Theater” (project). B – Invest-hotel (project). C – Park on Smolenka river (project). D – Real situation in 2021 (made by the author on base of S. Kholmatov data, dp.ru, sobaka.ru, oreke.ru)

As can be seen from Fig. 2.9 that, as in the case of Tuchkov Buyan, the constant change of projects under the influence of new actors did not lead to the development of space, but led to the conservation of ideas for its development (Bin et al., 2021). The function of the place has been changed; now it is a recreational space. However, despite the fact that, under the influence of public activism, the city and business abandon their initial decisions, the implementation of public interests is noticeably slower. The “growth machine” proceeds from the fact that, under a favorable set of circumstances, the parameters for the use of this space can again be revised (as in the case of Okhtinsky Cape, Tuchkov Buyan, the redevelopment of the Timiryazev Academy and others). A selection of similar cases is presented in Appendix F. The analysis of similar representative cases in other areas is demonstrated in Appendix H.

From the considered examples, it is clear that in the course of decisions about changes in space, a decisive role is played by actors – decision makers, coordinators, financiers. Their interaction can lead to both the development of space and the freezing of any projects.

The second significant factor of transformation is functional significance (Weber, 2002). The function can be defined using several tools, such as:

- General plans of the city of different years + projects of the General plans
- Land use and development rules
- Spatial planning schemes
- Visual observations

The most conflict-related transformation projects for actors do not allow the conflict to be resolved within the framework of the usual intra-city system of interaction “urban government – urban business – urban communities”; an assessment of the scale of the actors’ intervention is required.

Based on these indicators, two maps of the transformation of urban space under the urban regime impact were constructed (using the example of Vasileostrovsky and Petrogradsky districts of Saint Petersburg):

1. Map of the initial phase (project) of transformation of urban space;
2. Map of the transformation results of urban space.

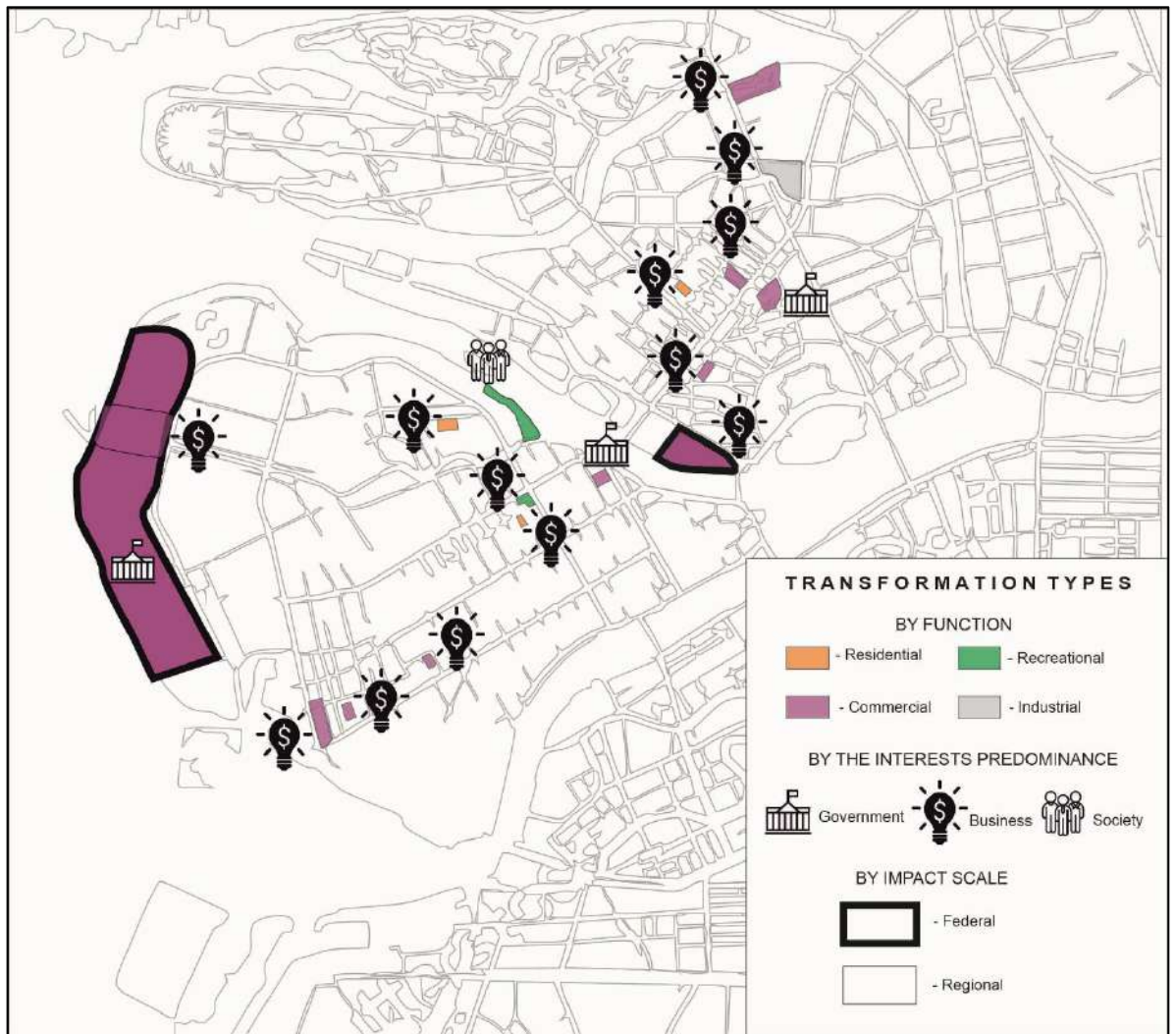


Fig. 2.10. Map of the transformation initial phase in Vasileostrovsky and Petrogradsky districts of Saint Petersburg (made by the author)

Fig. 2.10 demonstrates examples of transformation of urban space at their initial stage. These results were obtained on the basis of spatio-temporal models of the urban regime impact on the transformation of urban space. 17 cases of transformation are depicted – 10 in the Vasileostrovsky district and 7 in the Petrogradsky district. As we see, in 13 from 17 cases (77%) business interests prevail at the initial stage. Some of the projects were initiated by the authorities, and only one initiative of the society (Park “Zarosli”) was partially implemented and subsequently faced significant resistance from other actors⁴⁰. In most cases, transformation begins with the implementation or attempt to implement commercial function (11 out of 17 cases). In three cases this is a residential function, in two – recreational, in one – industrial. Then, we will consider what changes have occurred in the process of transformation in the space of Saint Petersburg districts.

⁴⁰ «Smolny rolls the Zarosli park into asphalt. Highway defeated greenery in the minds of authorities», 23.01.2022. Internet resource: <https://www.fontanka.ru/2022/01/23/70395272/> (Date of access: 24.04.2023).

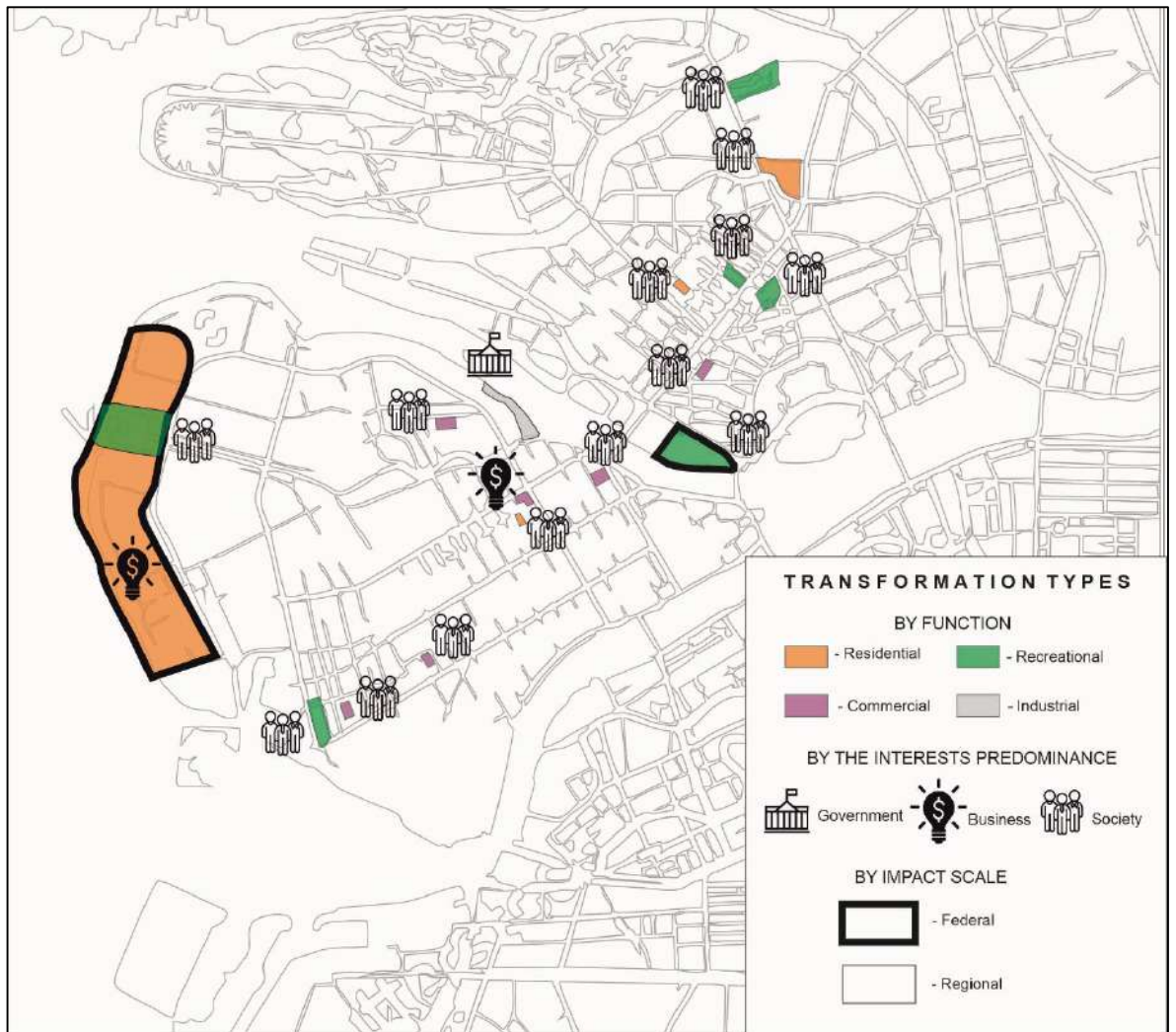


Fig. 2.11. Map of the transformation results in Vasileostrovsky and Petrogradsky districts of Saint Petersburg (made by the author)

Fig. 2.11 shows the results of the urban spatial transformation under the urban regime impact. It is obvious that significant changes have occurred in the urban area. In 11 cases there was **transformation of the functional purpose** of the territory. In 14 cases, the function of the space was changed under the impact of social activism. In both cases of federal intervention (“Marine Facade” and Tuchkov Buyan) change in functional purpose occurred.

As a result of the transformation, in 6 out of 14 cases a recreational function was established, in the other six – commercial function (of which in 4 the already existing business function was preserved), in 4 residential function appeared and in one – industrial. In general, the number of objects of business function fell by approximately 2 times, recreational ones increased by 3 times, residential and industrial functions remained at the same level.

The number of cases of business interest’ predominance decreased from 13 to 2, governmental predominance – from 3 to 1, and social impact increased from 1 to 14. In these 14 examples of public interest’ predominance, recreational function appeared in 6 cases, commercial

function in 5, and a residential function in 2 cases. Under the influence of the authorities, project for engineering and industrial use of the territory appeared, and business managed to achieve commercial and residential functionality for the territories.

The authorities gave control over one case to business (Marine Facade), and two to society (Hospital of Saint Mary Magdalene and Matveevsky Garden). However, there were also cases when the interests of the authorities prevailed (construction of the continuation of the Makarov embankment on the site of the “Zarosli” park)⁴¹. The interests of business here were secondary, but in the case of the implementation of the “Marine Facade” project and the “Sovereign” Business Center, it was the interest of business that played a decisive role in the emergence of projects in their present form.

Based on a study of transformation in the Petrogradsky and Vasileostrovsky districts, we find that in different places and regions the transformation of urban space can have different scenarios, a heterogeneous nature and rate of change in function, the predominance of the interests of different actors and differences in the scale of significance. Transformation has different typological characteristics depending on the location, level of participation and interests of the actors. Some transformations are very similar to each other in spatio-temporal characteristics, and some are significantly different. To derive general principles and patterns of transformation, knowing the properties of each case, it is advisable to consider the possibility of forming a typology of this process and its results. The problem of typologisation of the urban spatial transformation and searching for its universal principles and patterns is the subject of the final chapter of this research.

⁴¹ Author's note. Despite the decision taken by the authorities to build an extension of the embankment, construction work has not begun in 2023. It can be assumed that this also happens under the influence of social activism and the difficulty of reaching an inter-actor consensus. If significant part of society is not interested in building a road, the question arises of its fundamental expediency. Similar cases have repeatedly occurred in other locations (the construction of a highway through the Khimkinsky forest in the Moscow region, 2011; the construction of the Western high-speed diameter through the Yuntolovsky forest dacha, 2014).

Chapter 3. Types, principles and patterns of spatial transformation of contemporary Russian city under the impact of the urban regimes

3.1. Typology of spatial transformation of contemporary Russian city under the impact of the urban regimes

This chapter focuses on systematization and generalization the study of the urban spatial transformation under the impact of urban regimes. The examples of the urban regime impact discussed above (publicly valuable projects of the urban environment transformation and urban conflicts) are the basis for creating a typology. The typology can be divided into two semantic parts, arising from the structure of the study:

1. **The process of the urban spatial transformation.** The process of transformation of urban space is considered on the basis of the study results about publicly valuable projects of the urban environment transformation (Paragraph 2.2). The transformation process is examined based on evaluation criteria that are directly or indirectly related to the urban regime impact. Process and result of the spatial transformation for each case are assessed, taking into account detailed knowledge about the number of phase changes of project concepts and its implementation in another location (Axenov and Galustov, 2023).
2. **The effectiveness of the urban spatial transformation.** Cases from Paragraph 2.4, due to their representativeness, were used to analyze the effectiveness (outcomes) of the urban spatial transformation and construct tabular materials. The depth of this typology is less pronounced, but statistically more significant. The typology evaluates only the nature of functional changes, the predominance of the actors' interests and the scale of event significance in the urban space.

The first part of the typology is comprehensive assessment of the process of the urban spatial transformation. PVPs were used as cases for the typology. This typology is universal and has a single basis. Based on combined assessment of the research results, key transformation criteria were identified.

By predominance of the actors' interests:

- Government
- Business
- Society

By location:

- Center
- Semi-periphery
- Periphery

By functional change:

- Residential
- Commercial
- Recreational
- Industrial
- Special

By number of changes of the transformation directions:

- Single-phase
- Two-phase
- Polyphase

By duration:

- Less than 1 year
- Up to 5 years
- From 5 years and more

By scale of impact:

- Global
- Federal
- Regional

By resonance in media:

- High
- Average
- Low

The predominance of actors' interests is the most important indicator of the urban regime impact. It is the change in the influence possibilities of actors that reflects the process of the local regime impact. Since it is not possible to talk about a complete transformation of the urban regime in one case, it is proposed to evaluate the flow of interests of actors during the transformation of space.

Location indicates the location of urban space in the “center-periphery” system. This indicator is determined similarly to the methodology described in Paragraph 2.3. The level of the media resonance is established similarly to the methodology described in Paragraph 2.2.

Change of the spatial functional purpose is the most important criterion for transformation (Gotham, 2001; Weber, 2002; Axenov, 2011). For correct typology, we use not just the final function, but also the one that existed at the beginning of the transformation.

The time criteria used in the methodology for assessing the transformation process are the duration of the transformation and the number of changes in its direction. All publicly valuable projects are multi-phase long-term events with regular changes in the concept of implemented projects. In the case of ecological and eco-cultural conflicts, we also considered short-term, single-phase cases, where only one change in the transformation vector can be established.

As we noted above, transformation projects that are conflicting for actors often do not resolve the conflict at the regional level; federal (international) intervention is required. Moreover, to narrow the base of the study, we move the municipal scale beyond the scope of the study, focusing on global and federal projects at the level of the entire Russian Federation, and also assessing transformations at the regional level using the example of Saint Petersburg.

So, for example, based on the presented typology, the Okhta Center is an example of *multiphase long-term public semi-peripheral transformation of urban space on global scale*. The project is located in the semi-peripheral ring of Saint Petersburg, the concept of project implementation has changed several times (multi-phase), it has been going on for more than 17 years, and there have also been cases of intervention by various actors, including the federal government (President of the Russian Federation) and global participants (UNESCO). Another case – the development of the Timiryazev Academy fields is a case of *two-phase long-term public peripheral transformation of urban space on federal scale*. In this case, there were only two ways to develop the project – the construction of residential buildings, and then dormitories and new buildings for the university. The transformation received a response at the federal level (President of the Russian Federation), located on the periphery of Moscow. Detailed analysis of these transformations using the example of publicly valuable projects of the urban environment transformation is presented in Appendix G.

The author supposes that the used methodology is not universal approach to the study of transformation. Primarily because this approach requires detailed data for every case (see Paragraph 2.2). In effort to present the typology of transformation in the most visual form and based on the research in Paragraph 2.4, the author evaluates the **effectiveness of the urban spatial transformation** according to three indicative parameters. These parameters reflect changes in the functional purpose and morphology of urban space, the impact of the urban regime and the level of influence of actors. Taken together, the effectiveness of space transformation reflects the final direction and result of the transformation of urban space. To typologize the urban spatial transformation using this method, the following criteria were selected.

I. By predominance of the actors' interests:

- Before
- After

II. By function:

- Before
- After

III. By scale of impact:

- Global
- Federal
- Regional

As with the assessment of the transformation process, the initial actor-interest (government, business or society) and the “actor-winner” are first assessed. We conventionally call the transition of interests to society as the *social* transformation of urban space, the transition to business – *commercial*, the transition to power – *administrative*. These two states before and after the transition can be formulated as “Before – After”.

The initial and final functions of space as a result of transformation are assessed in a similar way. As mentioned above, issues of functional zoning are considered in many territorial planning documents (General plans, territorial planning schemes, Land use and development rules). The transformation has a conventional name, according to its result. For example, in the case of Zaryadye Park in Moscow, there was initially commercial function and business interests prevailed. As a result of the transformation, recreational function appeared and public interest prevailed. We call this case as *social-recreational transformation*. If in result of the transformation, the business function prevailed (as in the case of the development of the fields of the Timiryazev Academy in Moscow), then such a transformation is called *social-commercial*.

The only parameter that we do not evaluate for dynamics is the scale of the impact of the transformation is the scale of actors' impact. The scale is determined during the transformation and most often increases – from municipal to regional, from regional to federal, from federal to global (see Chapter 2). The scale can be established through media publications and public comments by actors at different levels. For the typology, we use the scale that was achieved at the peak of attention to the transformation of urban space. For example, in the case of the Okhta Center, the intervention of the federal authorities and UNESCO in 2010 (the 4th year of the project) suspended the implementation of the commercial function (construction of the business center).

Each type of transformation is coded using a specially created index, which can be used on any cases of transformation of urban space in any city. When choosing index symbols, we

proceeded from the idea of the uniqueness of letter symbols; they are universal, international and can be used in any example. Table 3.1 presents the urban spatial transformation index.

Table 3.1. Index of the transformation of urban space

1	Parameter	Predominance of the actors' interests				
	Meaning		Government	Business	Society	
	Symbol		G	B	P	
Function						
2	Parameter	Function				
	Meaning	Residential	Commercial	Recreational	Industrial	Special
	Symbol	L	C	R	I	S
Scale of impact						
3	Parameter	Scale of impact				
	Meaning		Global	Federal	Regional	
	Symbol		w	f	d	

Made by the author.

In order to demonstrate the principle of index, we can consider one of the research examples. The Saint Petersburg project of the Alla Pugacheva Theater on Smolenka river was an example of how a business was going to implement a business function in space. However, as a result of the urban regime impact, the interests of society prevailed, and a project for implementing a recreational function appeared – Park on Smolenka river. We denote the interest of society as P – public, and the recreational function as R – recreational. Taking into account the fact that this transformation, in terms of the scale of its impact, did not go beyond the boundaries of St. Petersburg and intra-city inter-actor interactions, this transformation was assigned the index d – domestic or regional. To form the index, the following sequence is used: first, the scale is mentioned (in a lowercase letter), then the predominant actor-interest (in a capital letter), then the function (also in a capital letter). Thus, the code for the transformation of the urban space “Park on Smolenka river” is **dPR**, which corresponds to the type – **social-recreational transformation on regional scale**. Table 3.2 provides complete breakdown of the index meanings with translation. The final typology of transformation of urban space is tested in Tables 3.2 and 3.3 using the example of research cases – PVP and cases in the Vasileostrovsky and Petrogradsky districts of Saint Petersburg, studied in Paragraph 2.4. Based on the types of transformation, the transformation index for each case is determined.

Table 3.2. Transcription of the index of the urban spatial transformation

Criterion	Litera	Transcription
Predominance of the actors' interests	G	Government
	B	Business
	P	Public (Society)
Function	L	Living (Residential)
	C	Commercial
	R	Recreational
	I	Industrial
	S	Special
Scale of impact	w	World (Global)
	f	Federal
	d	Domestic (Regional)

Made by the author.

Table 3.3. Typology of the transformation of urban space under the urban regime impact on the example of PVP

№	Transformation example	By the predominance of the actors' interests		By function		By scale of impact	Transformation type	Transformation index
		Before	After	Before	After			
1	"Okhta Center"	Business	Society	Industrial	Commercial	Global	Social-commercial global scale	wPC
2	Park "Zaryadye"	Government	Society	Commercial	Recreational	Global	Public-recreational global scale	wPR
3	Cathedral of St. Catherine	Government	Society	Commercial	Recreational	Federal	Public-recreational federal scale	fPR
4	Tuchkov Buyan	Business	Society	Commercial	Recreational	Federal	Public-recreational federal scale	fPR
5	Concreting of the river Vologda embankment	Government	Society	Recreational	Recreational	Federal	Public-recreational federal scale	fPR
6	Field development of the Timiryazev Academy in Moscow	Business	Society	Commercial	Commercial	Federal	Social-commercial federal scale	fPC

Made by the author.

Table 3.4. Typology of the transformation of urban space under the urban regime impact on the example of Vasileostrovsky and Petrogradsky districts of Saint Petersburg

№	Transformation example	By the predominance of the actors' interests		By function		By scale of impact	Transformation type	Transformation index
		Before	After	Before	After			
VASILEOSTROVSKY DISTRICT								
1	Birzha on Bolshoy avenue V.I.	Business	Society	Commercial	Commercial	Regional	Public-commercial regional scale	dPC
2	Hospital of St. Mary Magdalene	Government	Society	Commercial	Commercial	Regional	Public-commercial regional scale	dPC
3	Havana baths	Business	Society	Commercial	Commercial	Regional	Public-commercial regional scale	dPC
4	House of Chubakov	Business	Society	Residential	Residential	Regional	Public-residential regional scale	dPL
5	The building of the medical unit № 1 of the plant named by Mikhail Kalinin	Business	Society	Residential	Commercial	Regional	Public-commercial regional scale	dPC
6	"Marine Facade"	Government	Business	Commercial	Residential	Federal	Business-residential federal scale	fBL
7	Opochininsky garden	Business	Society	Commercial	Recreational	Regional	Public-recreational regional scale	dPR
8	Zarosli Park	Society	Government	Recreational	Engineering / Industrial	Regional	Administrative-engineering regional scale	dGI
9	Park on Smolenka river	Business	Society	Commercial	Recreational	Regional	Public-recreational regional scale	dPR

10	Square on the 9th line of V.I. (Business center "Sovereign")	Business	Business	Recreational	Commercial	Regional	Business-business regional scale	dBC
PETROGRADSKY DISTRICT								
1	House of Basevich	Business	Society	Commercial	Commercial	Regional	Social-commercial regional scale	dPC
2	House of Lishnevsky "Mephistopheles"	Business	Society	Residential	Residential	Regional	Public-residential regional scale	dPL
3	Lopukhinsky garden	Business	Society	Commercial	Recreational	Regional	Public-recreational regional scale	dPR
4	Matveevsky garden	Government	Society	Commercial	Recreational	Regional	Public-recreational regional scale	dPR
5	Podkovyrovsky garden	Business	Society	Commercial	Recreational	Regional	Public-recreational regional scale	dPR
6	Tuchkov Buyan	Business	Society	Commercial	Recreational	Federal	Public-recreational federal scale	fPR
7	Meltzer Factory	Business	Society	Industrial	Residential	Regional	Public-residential regional scale	dPL

Made by the author.

It is important to note that the used typology is applicable to any urban space. At the same time, the author is convinced that the potential use of the typology for analyze of the urban spatial transformation of any other Russian cities can provide valuable empirical material related to the manifestation of changes at the level of different urban spaces. The practical significance of the developed typology lies in the possibility of its instrumental use for the purpose of analyzing and reducing the overall conflict potential of space, calculating the possibilities of creative activity of actors in territories. The principles and patterns of the resulting changes in urban space are discussed in more detail in Paragraph 3.2.

3.2. Principles and patterns of spatial transformation of contemporary Russian city under the impact of the urban regimes

The goal of the last subchapter is to summarize the research part and identify general principles and patterns of the spatial transformation of contemporary Russian city under the urban regime impact. According to Isaac Newton's definition, "**principle** is a statement formed on the basis of experiments and observations of any phenomenon, used as a starting point for further conclusions and conclusions" (Walsh, 2017). In this understanding, the principle is a conditional premise, an indication that generalizes the results of observations and on the basis of which theories and laws can subsequently be created. The principles are not absolutely universal; in most cases they appear, but in certain situations there may be deviations from the principle. **Pattern** is a relatively stable and regularly occurring relationship between phenomena and objects of reality, which is found in the processes of change and development⁴². For pattern existence there must be at least two different phenomena and relationships between them, substantiated by empirical results.

The impact of urban regimes leaves significant "traces" in urban space (Papadopoulos, 1996; Tretter, 2016). Urban regimes **influence on the directions of spatial transformation** of the Russian cities and change its functional structure. Under the impact of urban regimes, the directions of transformation of urban space may also change (Axenov and Galustov, 2022). As we discover, the predominance of the interests of any of the actors over others is the most important factor in changes in the function and morphology of urban space. Moreover, as we found out from the typology, for different cases **common geographical and chronological features of the transformation manifestation** can be observed. This can be considered the first general principles for the transformation of urban space.

⁴² Electronic Library of the Institute of Philosophy of the Russian Academy of Sciences «New Philosophical Encyclopedia». Internet resource: <https://iphlib.ru/library/> (Date of access: 07.06.2023).

Detailed analysis of the functional transformation of urban space in Paragraphs 2.4 and 3.1 demonstrates that **business is most often interested in the residential and commercial spaces**, the same applies to the authorities, but they also lobby for the engineering and production facilities (for example, roads, transport interchanges nodes). In turn, an examination of transformation on the scale of Saint Petersburg districts showed that **social impact leads to the creation or preservation of recreational objects**, and compromise with government and business leads to the preservation of social and business functions (St. Mary Magdalene Hospital, Medical Center on Odoevskogo Street, Basevich House, etc.).

Various cases prove that, even if the city government believes that it still exercises direct control over the situation, in fact it is forced to **respond on social activism** and adjust the original projects for transforming the territories. Table 3.4 and Fig. 2.11 clearly demonstrate this situation. As a result of this process, instead of investment projects (for example, the Alla Pugacheva Theater, redevelopment of the Opochininsky Garden) recreational areas appeared/preserved. In general, there is a **general increase in the number of free spaces and undeveloped territories instead of the original redevelopment projects** (Zaryadye Park in Moscow, Truda Square in Yekaterinburg, Park on Tuchkov Buyan and Udelny Park in Saint Petersburg, Babolovsky Park in Pushkin).

According to the positional principle of Boris Rodoman, the level of spatial development is determined by its optimal position, in which objects function in the best way. “Place pressure” leads to the fact that some objects form a new position for themselves, while those incapable of change degrade (Rodoman, 1979). Conflict spaces (“bones of discord” for different actors) often become just such examples – they are faced with either **relocation** (Lakhta Center in Saint Petersburg, Parliamentary Center in Mnevniki, Moscow) or **degradation** (Konyushennoe Vedomstvo, Arakcheevskie Barracks in Saint Petersburg, etc.).

At the initial stages of transformation, the main actors of interest are government and business, while by the end of the transformation the public interests begin to prevail, which, as we noted above, is one of the distinctive features of the progressive middle class regime. For urban space in particular, this leads to the **growth in the number of public spaces** in the city in relation to commercial and administrative spaces noticed in the 2010s (Zakharova, 2017). In general, a significant part of the transformations considered in the study is associated with tendency to increase the number and role of public spaces (Vendina, 2009; Mastalerge, 2013). Their rapid growth stems from the neoliberal narrative, expressed in the desire of authorities to share the costs of organizing urban space with business (Vlasova, 2021). In such cases, according to Abramov and Zupan, **parks** (Abramov & Zaporozhets, 2014; Zupan & Budenbender, 2019) and **historical**

neighborhoods (Gladarev, 2013) become the **frontiers** between representatives of municipal authorities, business and society.

The origins of conflicts around park areas and cultural sites lie, first of all, in the predictable consequences of the liquidation of these objects. Vlasova points out that commercial objects, most often shopping centers, are beginning to appear on the site of demolished old buildings or parks (Vlasova, 2021). However, this approach gradually ceased to satisfy the needs of society and new requests began to appear – for improvement, public accessibility of the territory, a different balance of urban functions in favor of public, commercial and recreational types.

Nowadays, contemporary Russian urban space has become an arena for clashes between actors as a result of **massive redevelopment and the “biting” of green areas** (Makhrova and Golubchikov, 2012). The main contribution to the compression of public space and increased conflict potential is made by the new elite residential areas and shopping-entertainment centers, since the negative external effects of construction for local communities often outweigh the initial dividends.

The reason of such situation is that the space of the contemporary Russian city has experienced the rapid isolation of residential areas, schools, and courtyard areas, and internal disunity between actors has increased after the Soviet experience. As a result, the impact of the urban regime led to the segregation effects in urban areas. Many business complexes and social facilities (schools, kindergartens, clinics) were surrounded by perimeter fences (Isachenko and Grigorieva, 2012; Savoskul and Gavryushov, 2021). The same processes began to occur in low-rise residential areas. According to Makhrova and Golubchikov (2012), the analogue of the American “growth machine” in Russia was the transition from the model of **“urban managerialism”** (with a focus on creating general well-being) to the model of **“urban entrepreneurship”**, aimed at attracting investment to the detriment of broad sections of the urban population. They point to a special form of **affiliation between government and big business in Russian cities**, which assumes short-term responsibility of investors for completed projects and does not imply broad responsibility of the developer for the state of urban space (Golubchikov et al., 2010). The sharp increase in the volume of development of urban space in the 2000s as a result of such coalition and the subsequent decline in construction can be clearly seen in the trend for the delivery of houses and apartments; the graph for Saint Petersburg is shown below.

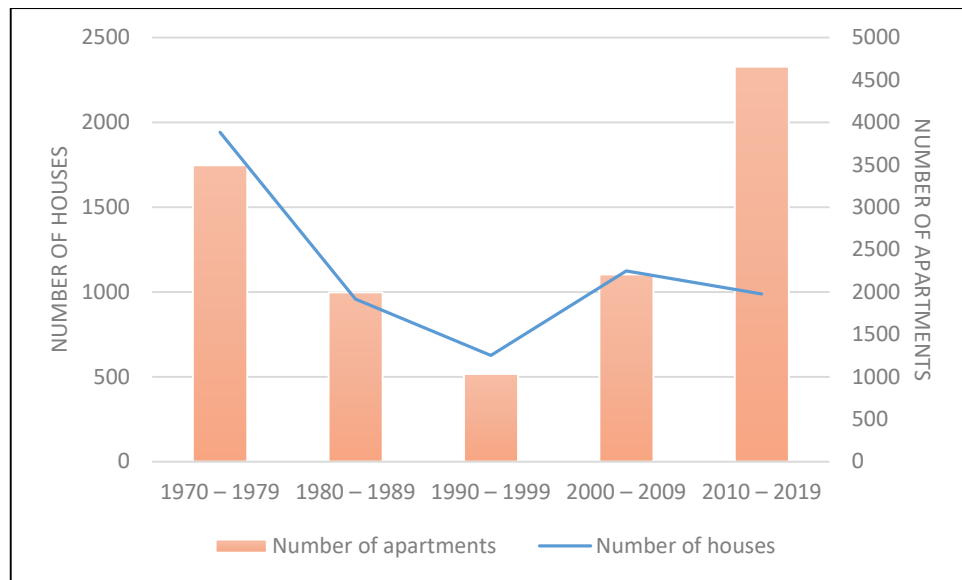


Fig. 3.1. The ratio of the number of houses and the number of apartments in Saint Petersburg⁴³ (made by the author on base of Appendix I)

After significant volumes of multi-storey construction in the later years of socialism, there was a downward trend, reaching its nadir in the 1990s. The “growth machine” of the 2000s led to sharp increase in construction volumes (Brade et al., 2005), in fact, 2 times more houses were built and 2 times more apartments were delivered than during the same period in the 1990s. However, already in the 2010s there is a decrease in the total number of houses built, but with an increase in the number of multi-storey buildings and rented areas. To replace the so-called “compacting” development came with multi-storey development in the periphery (districts Parnas, Lakhta, Murino, Shushary). Zones of conflict interactions in the city center are shrinking and blurred in the periphery (Kagansky, 2011).

With the resignation of Valentina Matvienko from the post of Petersburg Governor in 2011, the largest development project of VTB Development to implement the Embankment of Europe on Tuchkov Buyan was immediately curtailed (Axenov and Galustov, 2023), and the scandal with the Okhta Center predetermined problems of the Gazprom company with the development of the Okhta space for the years to come (Verevkin and Sokolov, 2012; Vishnevsky, 2021). By the end of the 2010s, model of relations between government and business had developed that led to the **reluctance** of investors to get involved in large infrastructure and development projects in Saint Petersburg, since the likelihood of public attention and non-implementation of the project became too high⁴⁴.

⁴³ The y-axis indicates the total number of houses and apartments. The number of apartments is normalized for clarity of display.

⁴⁴ «You can't sell it: why investors are in no hurry to occupy the historical buildings of Saint Petersburg», 30.07.2019. Internet resource: <https://nevnov.ru/22350968-prodat-nelzya-sdavay-pochemu-investory-ne-speshat-zanimat-istoricheskie-zdaniya-peterburga>. (Date of access: 28.02.2023).

Taking into account the slowdown in economic development (Zamaraev et al., 2013; Orlova and Egiev, 2015), the cancellation of the Orlovsky tunnel project (Nikolaev, 2013), the Bridge at the 22nd line of Vasilievsky Island⁴⁵, the highway through Udelny Park⁴⁶ and many others, it would be possible to assume the impact of the status quo regime. However, if this regime exists, garbage and transport reforms, increase in the number of public spaces, changes in the rules for drawing up the General Plan, Land Use and Development Rules and other trends that significantly transform urban space would be impossible. It is especially important to note that the existence of such urban regime cannot be accompanied by increase in public victories in urban conflicts over the use of space (see Table 1.1; Galustov, 2016; Stureiko, 2016).

The examples that Tykanova and Khokhlova (2015) cite as evidence of the “growth machine” functioning in Saint Petersburg are quite appropriate (the demolition of Rogov’s house, the demolition of garages in Parnas, the destruction of the birch grove in Alexandrino and many others). However, in our opinion, the authors’ thesis is that *“the formation of symbiotic complexes is more likely in cases where the business is represented by large construction companies; on the contrary, the limited investment potential of medium-sized businesses does not meet the financial interests of the authorities, who, in situations of conflict with the population, may prefer to reduce social and reputational costs”* (Tykanova and Khokhlova, 2015) already works slightly differently and even projects of large construction companies can no longer count on such unconditional support of the authorities, which they used in the 2000s.

We come to the conclusion that by the second half of the 2010s, **previously established growth regime began to work worse**. Therefore, the process of slowing income growth, civic participation and subsequent changes in urban space in the 2010s allow to talk about the formation of elements of **“progressive middle class regime”**, which gives society the opportunity to become a large and independent actor (Surowieski, 2014) and have full leverage impact on the use of urban space (Stone, 1989; Ledyayev, 2008). The cases examined in the study demonstrate the existence **transitional regime** from growth regime to progressive.

We also note that, starting from the 2010s, **the influence of social movements and communities on urban planning policy has increased** quite strongly (“Zhivoy Gorod”, “Krasivy Peterburg”, “Friends of Karpovka”, etc.) (Tykanova and Khokhlova, 2017). The authorities are forced to respond under the pressure of numerous appeals from residents and other forms of public protest. The rapid growth in strengthening civic participation is largely due to the improvement in

⁴⁵ «Novo-Admiralteysky bridge ran into the opinion of the city dwellers», 8.04.2011. Internet resource: <https://www.fontanka.ru/2011/04/08/151>. (Date of access: 26.04.2022).

⁴⁶ «Udelny park survived», 28.02.2020. Internet resource: <https://nsp.ru/1225-udelnyi-park-vystoyal>. (Date of access: 26.04.2022).

economic well-being in the 2000s and the increasing need of society for a comfortable urban environment (Tev, 2006) – this process is **universal for majority of the Russian large cities**. It corresponds with Stone’s definition of a progressive regime (Stone, 1989).

In situation of confrontation around the demolition of historical heritage, it is easier for a “growth machine” to form, since government and business often pursue a common interest in maximizing profits. However, the thesis of Vlasova (2021), that in situations of confrontation around the demolition of historical buildings, the authorities are on the side of developers, is no longer universal. Indeed, in the early stages of conflicts, this situation is typical. However, in the event of the emergence of public activism, the government may **leave the “growth coalition”**, begin to play the role of **arbiter**, and in some situations directly **ally with society** against the developer, **forming new coalition** (for example, the case of the Blockade station, Malinovka Park, Agrophysical Institute Square). As we saw in Paragraph 2.2, there may be different interest groups within the government itself – the city government may support a business project, and the federal government, external players or supervisory authorities may point out the inappropriateness of the project. This pattern is discovered repeatedly. Thus, in 2022-2023, the destruction of cultural heritage instantly became a subject of interest to the Investigative Committee of Russia⁴⁷. For instance, demolitions of the Finnish Regiment arena (20th line V.I., 19), Ekimovskie baths (Maly ave. P.S., 4), the Lenexpo buildings in Gavan, including the building of the Experimental Aviation Station (Nalichnaya street, 6), Vasilievsky wine town (Uralskaya street, 1) and Shagin’s house (Fontanka River embankment, 145b)⁴⁸. It can be said that the participation of this major federal actor on the part of the authorities is another example of a special configuration of progressive urban regime, within which society, without achieving its goals directly, receives the support of higher federal government in its desire as opposed to a coalition of regional authorities and the construction business. This specific regime is close to “progressive” in terms of public participation and to “status quo” from the position of the authorities’ reluctance to implement significant changes in urban space. Social activism motivates the federal government to intervene, after which the regional government withdraws from the fight for the interests of business – **the number of frozen and suspended investment projects increases**.

The special situation has developed in Moscow. The Zaryadye Park project appeared after multiple revisions of the development of very expensive land, and only a federal political decision

⁴⁷ «The Investigative Committee of city protection», 13.10.2022. Internet resource: <https://retrogradu.net/ekskljuziv/sledstvennyj-komitet-gradozashhity/> (Date of access: 12.01.2023).

⁴⁸ «Pushed from above: The Investigative Committee of Russia surpassed city defenders in activity in Saint Petersburg», 27.12.2022. Internet resource: https://www.dp.ru/a/2022/12/26/Podnazhali_sverhu (Date of access: 12.01.2023).

put an end to this process⁴⁹. A project was implemented that was in demand by society and determined the nature of the development of the entire urban space of the Moscow center (Tkachenko, 2019).

Table 3.5. Transformation of Zaryadye space, Moscow

	Phase 1 (2006 - 2010) Construction of a low-rise multifunctional hotel complex	Phase 2 (2010 - 2012) Construction of the parliamentary center, hotel and business quarter, residential quarter)	Phase 3 (2012 - 2017) Creation of the park
The main functions of the project	Hotel, offices, parking	The building of the parliamentary center, public and business center	Pedestrian zone, park zone, historical buildings are preserved, green zone, parking zone, philharmonic society, concert hall, hotel
Who decides on the function	City	Federation, City	Federation, City
Who agrees	City	Federation, City	UNESCO, Federation, City (Prime Minister of the Russian Federation)
Who is going to finance the project	Business (ST Development)	City	City
Who minds	Business (“Monabou”) (dissatisfaction with the competition)	Architects, Federation (Prime Minister), City (Mayor of Moscow)	Architects, environmentalists
Way of expressing dissatisfaction	Court	Media, alternative decision making	Media

Made by the author on base Appendix F.

At the same time, significant part of the Moscow space, for example, between Ostozhenka and Prechistenka, is still “privatized” by a small group of wealthy people (Vendina, 2005). The growth of residential development in Moscow, associated with increased demand for housing in the Post-Soviet period, has led to very high competition for urban space. Unlike Saint Petersburg,

⁴⁹ «Analogue of St. Mark's Square will be built on the site of the Rossiya Hotel», 19.04.2013. Internet resource: https://www.vedomosti.ru/realty/articles/2013/04/19/na_meste_gostinicy_rossiya_postroyat_analog_ploschadi (Date of access: 06.05.2023).

in Moscow there has been an elitization of central neighborhoods and partial marginalization of the periphery (Axenov, 2009).

In Moscow, based on the level of public involvement and the significant number of negative results from urban conflicts for society, we can talk about the continued functioning of local growth regimes (Gelman and Ryzhenkov, 2010; Uss, 2022). Certain elements of social activism around the transformation of the city are present (reconstruction of the Syromyatnichesky Tunnel, development of a park on Torfyanka) (Aidukaite & Fröhlich, 2015), but it cannot be said that they have a significant impact on changes in the urban regime and urban planning policy in general (Fig. 3.2).



Fig. 3.2. «Reconstruction of the Syromyatnichesky Tunnel».

A – View of tunnel (before reconstruction). B – Initial tunnel expansion project.

C – Alternative project influenced by social activism. D – Stage of reconstruction on 2022.

(made by the author on base of Uss, 2022)

According to Makhrova and Golubchikov (2012), viable tandem of government and business around the issue of development and renovation of the territory fits into the framework of the elite model of urban politics, when changes in urban space often reflect the ambitions and ideas of a “growth machine,” which is relevant for any large Russian city. Public participation is more complex, sometimes both reflecting the ambitions of activists and aimed just on harmonization of the urban environment development. Therefore, public urban protection movements, regardless of their ultimate goals, emphasize their apolitical nature in order not to lose

public trust (Clément et al., 2010; Gladarev, 2013). As a result, **short-term and situational social connections** dominate in the field of activism, while in relations between government and business, relationships are often designed for a longer period, mutual benefit and promising projects (Vlasova, 2021).

Finally, it is worth mentioning that in modern Russian society there are primary institutions that provide for the participation of the population in the development of urban planning policy (Khodachek et al., 2020; Galustov et al., 2021b). According to Makhrova and Golubchikov (2012), this means a gradual transition to model of **“pluralist urban policy”**, which, within the framework of our study, corresponds to the thesis of increasing participation and taking into account the opinions of all actors. But, despite public control through the mechanisms of public participation and public hearings, the authorities have learned to overcome these barriers by consensus. Despite the repeatedly mentioned transfer of the Okhta Center skyscraper to Lakhta, the developer was able to quickly go through the necessary procedures, receiving consent to deviate from the height regulations (Makhrova and Golubchikov, 2012). Therefore, it is impossible to talk about complete transition to public dominance in making key urban planning decisions.

Also in the second half of the 2010s, new formats of inter-actor interaction began to spread in Russian cities. The program “Formation of comfortable urban environment”⁵⁰ appears, which shifted the emphasis of urban planning policy from the sphere of residential construction in favor of improvement (Chereshnev et al., 2022). In cities and rural settlement weakly expressed local forms of participatory design and participatory budgeting have appeared (Projects of local initiatives support, “Your Budget”, “People's Budget”) (Galustov et al., 2021a). All these initiatives were designed to realize the increased public demand for landscaping and to draw attention to the problem of low urban living standards. Over time, business began to focus on the same problem⁵¹. In the 2010s, there was boom in creative industries in Moscow, Saint Petersburg, Nizhny Novgorod, Kazan (Mastalerge, 2013), which formed completely new type of public space (New Holland, Sevkabel port, GES-2, Strelka, embankment of lake Nizhny Kaban, etc.). The appearance of these objects was largely a reaction to **unrealized demand of the middle class for high-quality urban environment** (Vlasova, 2021). The quality of the urban environment and the level of human potential become factors in differentiating the trajectories of transformation of Russian cities and increase the overall stratification between large and small cities. According to Golubchikov and Makhrova (2010), today it is the quality of the urban environment and human

⁵⁰ «Comfortable urban environment and housing and communal services». Internet resource: <https://gorodsreda.ru/> (Date of access: 03.05.2023).

⁵¹ «Open Island». «New Holland» has become a public park», 03.09.2016. Internet resource: <https://archi.ru/russia/70321/otkrytyi-ostrov/> (Date of access: 03.05.2023).

«In search of «third place», 25.11.2021. Internet resource: <https://www.kommersant.ru/doc/5087656> (Date of access: 03.05.2023).

potential, along with urban planning and administrative and market infrastructure, that is becoming the most important and high-margin⁵² factor for the transformation of the Russian city.

Based on the research results, the author proposes to systematize the general principles and patterns of the urban spatial transformation under the urban regime impact. The study mentioned the predominance of growth regimes in Russian cities (Makhrova and Golubchikov, 2012; Bederson et al., 2021), provided examples of the local regimes existence that differ from citywide trends (Papadopoulos, 1996) and described conflicts as manifestations of the urban regimes dynamics (Zhel'nina and Tykanova, 2019). This study makes additional theoretical contribution and new principles with patterns according to which changes in urban spaces develop today.

Principles of transformation of the Russian contemporary urban space under the impact of urban regimes:

- **Principle of the regime impact.** Urban regimes as systems of relations and interactions between actors directly **impact on the transformation directions** of the space of Russian cities, changing its urbanistic and town-planning content. Each type of urban regime corresponds to certain set of instrumental opportunities for actors to influence changes in space. Under the impact of the urban regimes, the functional structure of urban space changes. The predominance of the interests of any actor over others is the most important **factor in changes in the function and morphology of urban space.**
- **Principle of universality of the spatio-temporal features of the urban regime manifestation.** Urban regimes (growth, progressive, status quo) have common geographic and chronological features of manifestation in large Russian cities, determined by the framework and directions of behavior of authorities, business and society in different Russian cities.
- **Principle of change of the spatial transformation project as a reaction to the urban regime impact.** Changing the project of the urban spatial transformation under the impact of inter-actor interactions is the most important reaction, demonstrating the high public valueness and impact of changing urban regimes. The change in the project occurs in the direction of strengthening consensus between the parties interested in the transformation of space.
- **Principle of the transfer of the spatial transformation project as a spatial form of resolving the actors' conflict.** Obvious geographical manifestation of transformation is the relocation of the transformation project with the transfer of its original function to another territory (relocation of the Okhta Center in St. Petersburg, the temple in

⁵² Author's note. «High-margin» means highly benefitable, with a high potential rate of profit.

Yekaterinburg, the complex of Supreme Court buildings in St. Petersburg, the Parliamentary Center in Moscow).

- **Principle of the multi-scale level of the actors' involvement.** The scale of significance of transformation in urban space is associated with the level of intervention of actors and their ability to negotiate with each other. Regime interactions that are insoluble at the regional level, as a rule, eventually lead to either their “freezing” or to the intervention of higher-level actors (federal authorities, international organizations). It is this kind of intervention that often becomes a factor in changing the original concept of transformation, canceling or transferring the transformation to another location. If the conflict between actors is not resolved at a certain level, it is frozen or extrapolated to a higher level of resolution. In this case, urban space evolves under the influence of external factors and exogenous intervention.
- **Principle of the gradual transition to the progressive middle class regime.** In contemporary Russian city, regular factor in the impact of urban regimes is the presence of the **social activism** that can influence **on the direction of changes in urban space**. The emphasis is shifting to the social, ecological function of the space instead of the commercial one, and the proportion of commercial construction is decreasing. This situation characterizes the formation of elements of **the progressive regime of the middle class**, being the most noticeable trend for contemporary Russian urban space. It is important to note that, in contrast to American and European practices, the existence of a progressive middle class regime in a Russian city is associated not so much with the presence of a “middle class”, but with the effective involvement of society in the urban agenda. At the same time, as shown in the study, in some local cases, where the role of civic activity is low or insufficient to overcome the interests of government and business, there may be a tendency to maintain the growth regime.
- **Principle of the attitude between realization of the actors' interests and the function of urban space.** If the transformation of space is connected with the business interests, then much more often the space acquires **commercial (less often residential)** function. In the case of dominance of public interests, the space receives **recreational or social** functionality.
- **Principle of the optimal location of the transformation.** According to the positional principle of Boris Rodoman, the level of spatial development is determined by its optimal position, in which objects function in the best way. Under the “pressure of place,” some objects form a new position for themselves, while those incapable of change degrade (Rodoman, 1979). Conflict spaces often become just such examples –

they face with **relocation** (Lakhta Center in Saint Petersburg, Parliamentary Center in Mnevniky, Moscow) or **degradation** (Konyushennoe Vedomstvo, Arakcheevskie Barracks in Saint Petersburg, etc.).

Patterns of transformation of the Russian contemporary urban space under the impact of urban regimes:

- Collisions of interests of all three main actors lead to significant changes in urban space. In particular, the participation of higher levels of government can significantly change the directions of the urban spatial transformation. Based on the principle of scaling the involvement of actors, the following pattern has been determined – **the higher the level of involvement and participation of actors, the greater the likelihood of changing/cancelling spatial transformation project increases.**
- **If the differences in the positions of government, business and society are critical, then this prevents the implementation of many urban projects.** In most of the studied cases, the transformation is closely connected not just with conflict of actors' interests, but with the formation of progressive middle class regime based on public opposition to the growth strategies of government and business. If at the early stages in the studied cases, as a rule, the impact of government and business is high, then during the implementation of the project the role of society grows noticeably. Urban development scenarios are changing, and **the total number of implemented initial urban planning plans is decreasing.**
- **If the percentage of implementation of initial redevelopment projects decreases, then the number of recreational spaces increases** (“green zones”). Usually it happens instead of development or redevelopment (Zaryadye Park in Moscow, Truda Square in Yekaterinburg, park on Tuchkov Buyan in Saint Petersburg). With the transition to progressive middle-class regime, the number of preserved **cultural heritage sites** is growing, which during the growth regime in the 2000s underwent noticeably more significant and controversial reconstructions (examples: House on Nevsky, 112 Stockmann and Rogov House in Saint Petersburg). Such reconstructions began to take on “softer” form in the 2010s. Objects of the historical center began to be reconstructed with noticeably greater cultural and historical accuracy (examples: Arakcheevskie barracks, Stackenschneider House, Jurgens House in Saint Petersburg), or conserved (cancellation of the Konyushennoe Vedomstvo reconstruction). Relocation of projects opens up the potential for the development of new urban peripheral territories, previously untapped urban environments (Lakhta in Saint

Petersburg, Mnevniky in Moscow, the territory of former instrument-making plant in Yekaterinburg). Another natural trend is the general **increase in the frozen projects amount** (temporary vacant lots appear, free from development and redevelopment areas).

- **If there is increase in the conflicts number and publicly valuable projects in the center of the intracity space, then there may be diffusion of conflict transformations to the periphery over time.** Location is an important factor in the impact of urban regimes, and the “center-periphery” approach generally reflects the distribution of such impacts. The urban regime itself, according to Papadopoulos (1996), can develop as a set of local (district) regimes. If the total number of conflict transformations of space in the center and the adjacent semi-periphery is concentrated, then on the periphery it is noticeably more dispersed. However, using the example of Saint Petersburg, it is demonstrated that clashes between actors around the use of urban space are becoming increasingly acute outside the inner city core, shifting to the eastern periphery – to areas of dense soviet development and low population mobility (Fig. 2.6). There is also a certain “**neighborhood effect**” of administrative districts that are most susceptible to conflict transformations. At the same time, the transformation of urban space under the urban regime impact is not always subject to strict administrative-territorial patterns; it may be accompanied by clustering of actor interests and regime impact, the emergence of areas with pronounced dominance of social activism in decision-making (progressive regime), as well as areas with preserved local “growth machines”.

Conclusion

The results of the study demonstrate that urban regimes are capable to influence on the direction of the urban spatial transformation. Various combinations of regime interactions (according to A. Papadopoulos, “urban software”) change the essence and content of urban spaces. The form and content of space redevelopment change, projects arise and are frozen, green areas appear and disappear, houses are built and destroyed, new functions and morphological features appear in cities – the process of the urban space rethinking occurs under the impact of urban regimes.

Synthesizing the researches of C. Stone, A. Papadopoulos, E. Tretter, V. Ledyayev, A. Makhrova, E. Tykanova, O. Golubchikov, B. Rodoman and other scientists, the author introduces the urban regimes concept into Russian urban geography, conceptualizes the connection between urban regimes with the urban space. Combining quantitative and qualitative methods of sociological research, modeling, spatial and typological analysis, the author reaches new scientific generalizations. By analyzing publicly valuable projects for transforming the urban environment and urban planning conflicts, the relationships between actors are revealed, and it becomes possible to study them outside of the urban space. A new look at the combination of geographical and sociological approaches made it possible to draw up spatio-temporal models of the impact of the urban regime on the transformation of the space of contemporary Russian city, the methodology for creating which can be replicated using the example of any city. To obtain the models, the author collected his own unique database of ecological and eco-cultural conflicts of recent years in Saint Petersburg and verified the model criteria using expert survey. The resulting models demonstrate the local impacts of the urban regime on the space of Saint Petersburg, the general directions of functional changes in the urban space, the level and result of the involvement of actors in every case.

The research is the first that compile typology of the process and effectiveness of the transformation of urban space under the urban regime impact. To create a typology, criteria such as the predominance of interests of actors, location, nature of change of function, number of changes in the direction of transformation, duration, scale of influence of actors and resonance in the media are used. The typology is applicable to any space of contemporary Russian city. The used typology can provide a scientific basis for modernizing the indicators of the Ministry of Construction, Housing and Utilities (for example, the Urban Environment Quality Index), better and even more complete understanding of the roles, capabilities and tools of actors in urban space. The urban space transformation index allows to quickly assess the depth and nature of changes in cities and compare spatial transformations with each other.

As a result of the study, the following basic **principles** of spatial transformation were identified: 1) Regime impact; 2) The universality of the spatio-temporal features of the urban regime manifestation; 3) Changing of the spatial transformation project as a reaction to the impact of the urban regime; 4) Transferring the spatial transformation project as a spatial form of resolving the actors' conflict; 5) Multi-scale level of the actors' involvement; 6) Gradual transition to the progressive middle class regime; 7) Attitude between realization of the actors' interests and the function of urban space; 8) Optimal location of transformation. The author emphasizes that the consequence of the impact of the urban regime is a spatial reaction, a "geographical reflection of transformation" – the transfer of projects to another place, change in the scale of involvement of participants from small to large, the determination of the **optimum** – consensus point where the spatial development will satisfy the interests of all actors.

The following **patterns** were also discovered: 1) Increase in the likelihood of changing (cancelling) spatial transformation project with an increase in the level of involvement of actors; 2) Decrease in the share of implemented urban planning plans with an increase in conflict interactions between actors and the formation of the progressive regime of the middle class; 3) Increase the percentage of recreational zones and unused development areas due to decrease in implemented projects; 4) Diffusion of intra-city conflict transformations from the center to the periphery.

Sustainable urban growth regime leads to increase of business function and progressive middle class regime leads to increase in the recreational and social-commercial components. Features of the emergence of a progressive regime are increasingly appearing in Russian cities. Intra-city geographical features of the impact of the urban regime are associated with the diffusion of conflict zones of interaction between actors from the center to the periphery with the intensifying process of decentralization, expressed in the expansion of conflict phenomena on the urban periphery. Thus, clashes between actors for control over space over time become increasingly acute outside the business and historical-cultural core of cities. In general, the research demonstrates that the studied socio-geographical processes in different urban locations manifest themselves heterogeneously; the nature of the impact of urban regimes in intra-urban space can vary depending on the location and scale of socio-geographical events.

The research materials can be used by authorities, business, and public organizations to understand urban processes and strengthen institutions for interaction between actors. The research can become a conceptual and ideological basis for bills in the field of sustainable urban development, urban planning, renovation and protection of green spaces. The comprehensive nature of the study provides new methodological opportunities for studying various urban

processes – activism, urban conflicts, megaprojects, redevelopment, revitalization, gentrification, public participation in the management of the urban environment.

From the point of view of the practical prospects of the study, we believe that there are significant reserves for reducing the potential for conflict in the space of Russian cities. Attention to the opinions of different actors is critical for the balanced and sustainable development of Russian cities. A preliminary study of the actors' opinions allows for more careful planning of decisions on the use and change of urban spaces. This helps to save budget money at the stage of initial planning for the use of urban territory, since preventing conflict between actors at the beginning allows to avoid spending money on conflict resolving in the future. Taking into account the opinions of all parties with strengthening the tools for their rational interaction creates significant creative effect for the urban development.

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List of Abbreviations

APEC	Forum «Asia-Pacific Economic Cooperation»
Ave.	Avenue
CJSC	Closed Joint Stock Company
Ed.	Edited
ERA Group	Group «Ecology of ordinary architecture»
Fig.	Figure
FRG	Federal Republic of Germany
GC	Group of Companies
GIS	Geographic Information System
ICOMOS	International Council on Monuments and Sites
JSC	Joint Stock Company
LLC	Limited Liability Company
MFC	Multifunctional Center
Mln.	Millions
NGO	Non-Governmental Organisation
PVP	Publicly Valuable Project of the Urban Environment Transformation
R.	River

RCC	Russian Copper Company
RFBR	Russian Foundation for Basic Research
RSCI	Russian Science Scientific Index
SCK	Saint Petersburg Sports and Concert Complex
St.	Street
St. Petersburg	Saint Petersburg
UMMC	Ural Mining and Metallurgical Company
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
USSR	Union of Soviet Socialist Republics
V.I.	Vasilievsky island
VNIIB	All-Russian Research Institute of Pulp and Paper Industry

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Applications

Appendix A. Table of public ecological and ecocultural conflicts in Saint Petersburg from 2006 to the present

№	Name of the conflict	Area	Result of the conflict	Scale of the territory of the conflict	Level of solution / Coverage of the problem	Duration of the conflict	Location of the conflict	Conflict mentions (content response)
1	Angliysky park	Petrodvortsovy	Victory	Average	Municipal	2 months	Periphery	200
2	"Arakcheevsky barracks", houses on Shpalernaya st.	Centralny	Victory	Small	Regional	1 year	Center	25 thousand
3	Babolovsky park	Pushkinsky	Victory	Large	Federal	7 years	Periphery	29 thousand
4	Birzha on Bolshoy ave. V.I.	Vasileostrovsky	Compromise	Small	Regional	2 years	Semi periphery	80 thousand
5	Blockade station	Centralny	Victory	Small	Regional	7 years	Center	120 thousand
6	Hospital of St. Mary Magdalene	Vasileostrovsky	Defeat	Small	Regional	7 years	Center	3 thousand
7	Boulevard on the street Krylenko	Nevsky	Compromise	Average	Regional	7 years	Periphery	20 thousand
8	Business Center "Mont Blanc"	Vyborgsky	Defeat	Small	Regional	6 months	Semi periphery	20 thousand
9	Military Medical Academy named by Sergey Kirov	Vyborgsky	Victory	Large	Federal	3 years	Semi periphery	73 thousand
10	Resurrection Church, Metallostroy	Kolpinsky	Defeat	Average	Regional	5 years	Periphery	2,5 thousand
11	Havana baths	Vasileostrovsky	Compromise	Small	Regional	2 months	Semi periphery	35 thousand

12	State Museum-Monument "Saint Isaac's Cathedral"	Centralny	Victory	Small	Federal	1 year	Center	380 thousand
13	Deminsky garden	Nevsky	Victory	Small	Regional	9 years	Semi periphery	900
14	Art View House on emb. of r. Moika, 102	Admiralteysky	Defeat	Small	Regional	1 year	Center	170 thousand
15	House of Abaza	Centralny	Intermediate Solution	Small	Regional	9 years	Center	60 thousand
16	House of Basevich	Petrogradsky	Intermediate Solution	Small	Regional	4 years	Center	86 thousand
17	Book House	Centralny	Intermediate Solution	Small	Regional	6 months	Center	120 thousand
18	House of Writers (Nevsky avenue, 68)	Centralny	Compromise	Small	Regional	2 years	Center	300 thousand
19	House of Lishnevsky "Mephistopheles"	Petrogradsky	Victory	Small	Regional	7 years	Center	150 thousand
20	House on Nevsky, 112 "Stockmann"	Centralny	Defeat	Small	Regional	2 years	Center	90 thousand
21	House on Bakunin Ave., 33	Centralny	Intermediate Solution	Small	Regional	2 months	Center	25 thousand
22	House of Rogov	Centralny	Defeat	Small	Regional	8 years	Center	450 thousand
23	House of Chubakov	Vasileostrovsky	Compromise	Small	Federal	1 year	Center	30 thousand
24	House of Shagin (Zykov)	Admiralteysky	Intermediate Solution	Small	Federal	10 years	Center	33 thousand
25	House of Stackenschneider	Centralny	Victory	Small	Regional	6 years	Center	7 thousand
26	House of Jurgens	Centralny	Victory	Small	Regional	2 years	Center	120 thousand
27	Residential Complex "Aurora"	Vyborgsky	Defeat	Small	Regional	3 months	Semi periphery	15 thousand

28	VNIIB building (2nd Murinsky ave.)	Vyborgsky	Intermediate Solution	Small	Regional	4 years	Periphery	27 thousand
29	The building of the medical unit № 1 of the plant named by Mikhail Kalinin	Vasileostrovsky	Intermediate Solution	Small	Regional	4 years	Semi periphery	40 thousand
30	Konyushennoe vedomstvo	Centralny	Victory	Average	Federal	11 years	Center	155 thousand
31	"Lakhta Center"	Primorsky	Defeat	Large	Federal	5 years	Semi periphery	380 thousand
32	Lopukhinsky garden	Petrogradsky	Victory	Average	Regional	10 years	Center	68 thousand
33	Lugovoy park	Petrodvortsovy	Intermediate Solution	Average	Municipal	2 months	Periphery	140
34	Martynovsky Square	Primorsky	Victory	Large	Regional	5 years	Periphery	20 thousand
35	Matveevsky garden	Petrogradsky	Victory	Average	Municipal	2 years	Center	3 thousand
36	Mitrofanievskoe cemetery	Moscovsky	Victory	Large	Regional	6 years	Periphery	19 thousand
37	"Marine Facade"	Vasileostrovsky	Defeat	Large	Federal	2 years	Semi periphery	800 thousand
38	Dostoevsky Museum	Centralny	Victory	Small	Regional	2 years	Center	607 thousand
39	Murinsky park	Kalininsky	Victory	Average	Regional	1 year	Periphery	160 thousand
40	Garbage landfill on Levashovsky sh.	Vyborgsky	Compromise	Large	Federal	3 years	Periphery	30 thousand
41	Alluvial island in Sestroretsk	Kurortny	Intermediate Solution	Large	Regional	4 years	Periphery	22 thousand
42	Nekrasovsky garden (Greek church)	Centralny	Intermediate Solution	Average	Regional	8 years	Center	35 thousand
43	Obukhov hospital	Admiralteysky	Defeat	Average	Regional	2 years	Center	20 thousand

44	Opochininsky garden	Vasileostrovsky	Victory	Average	Regional	2 years	Semi periphery	400
45	Orlovsky quarry and Novoorlovsky reserve	Primorsky	Intermediate Solution	Large	Regional	2 years	Periphery	700
46	"Okhta Center"	Krasnogvardeysky	Victory	Small	Global	4 years	Semi periphery	2,5 million
47	Monuments of the Okhtinsky Cape	Krasnogvardeysky	Intermediate Solution	Average	Regional	3 years	Semi periphery	105 thousand
48	Park "Alexandrino" (birch grove)	Krasnoselsky	Defeat	Average	Regional	3 months	Periphery	54 thousand
49	Zarosli Park	Vasileostrovsky	Intermediate Solution	Average	Regional	1 year	Semi periphery	23 thousand
50	Malinovka Park	Krasnogvardeysky	Victory	Average	Regional	9 years	Periphery	68 thousand
51	Park of the 300th anniversary of St. Petersburg	Primorsky	Defeat	Large	Regional	5 years	Periphery	1 million 100 thousand
52	Park of the 30th Anniversary of October	Nevsky	Intermediate Solution	Average	Regional	3 years	Periphery	10 thousand
53	Academic Sakharov Park	Kalininsky	Intermediate Solution	Large	Regional	4 years	Periphery	15 thousand
54	Military Glory Park	Nevsky	Defeat	Average	Municipal	10 months	Periphery	100
55	Yesenin Park	Nevsky	Victory	Average	Municipal	4 months	Periphery	1 thousand
56	Internationalist Park	Frunzensky	Victory	Large	Regional	1.5 years	Periphery	420 thousand
57	Park on Smolenka river	Vasileostrovsky	Victory	Average	Regional	6 years	Semi periphery	930 thousand
58	Park at the Silver Pond	Vyborgsky	Defeat	Small	Regional	4 years	Periphery	20 thousand

59	Tuchkov Buyan Park	Petrogradsky	Intermediate Solution	Large	Global	9 years	Center	24 thousand
60	Muzhestva Square	Vyborgsky	Victory	Average	Federal	3 years	Periphery	10 thousand
61	Podkovyrovsky garden	Petrogradsky	Victory	Small	Regional	3 years	Center	25 thousand
62	Pulkovo observatory - Residential Complex "Planetograd"	Moscovsky	Compromise	Large	Global	3 years	Periphery	200 thousand
63	Rzhevsky forest park	Krasnogvardeysky	Victory	Large	Regional	7 years	Periphery	80 thousand
64	Garden of Ivan Fomin	Vyborgsky	Victory	Small	Regional	4 years	Periphery	180 thousand
65	Garden on the Neva	Centralny	Intermediate Solution	Average	Federal	1.5 years	Center	460 thousand
66	Sestroretsky Kurort	Kurortny	Defeat	Large	Regional	2 years	Periphery	27 thousand
67	Square 2A and 2G in Ulyanka	Krasnoselsky	Intermediate Solution	Large	Regional	8 years	Periphery	10 thousand
68	Square Benois	Kalininsky	Victory	Large	Regional	1 year	Periphery	900
69	Square on the 6th Sovetskaya street	Centralny	Defeat	Small	Regional	10 years	Center	70 thousand
70	Square on the 9th line of V.I. (Business center "Sovereign")	Vasileostrovsky	Defeat	Small	Municipal	2 years	Center	200
71	Square on Dolgouzernaya street	Primorsky	Defeat	Average	Regional	2 years	Periphery	25 thousand
72	Square on Kanonersky Island	Kirovsky	Victory	Average	Regional	4 years	Periphery	4 thousand
73	Square on Komendantsky avenue, 40	Primorsky	Victory	Small	Regional	1 year	Periphery	210 thousand

74	Square on Engels avenue	Vyborgsky	Victory	Average	Regional	2.5 years	Periphery	30 thousand
75	Square on the street Vernosti	Kalininsky	Victory	Average	Municipal	2 years	Periphery	50
76	Square on the street Gastello (Chesma Palace)	Moscovsky	Defeat	Small	Global	5 years	Semi periphery	30 thousand
77	Square on the street Demyan Bedny	Vyborgsky	Intermediate Solution	Average	Regional	10 months	Periphery	26 thousand
78	Square on the street Savushkina 112 (MFC "Astana")	Primorsky	Victory	Average	Federal	6 years	Periphery	7 thousand
79	Square on the street Savushkina 145	Primorsky	Intermediate Solution	Small	Municipal	1.5 years	Periphery	7 thousand
80	Square on Shkolnaya street	Primorsky	Defeat	Small	Municipal	1 year	Periphery	150
81	Square of Submariners	Kalininsky	Defeat	Average	Regional	1 year	Periphery	7 thousand
82	Square near Bolsheokhtinsky ave. (house of the Supreme Court of the Russian Federation)	Krasnogvardeysky	Intermediate solution	Large	Federal	2 years	Semi periphery	120 thousand
83	Square near the SCK "Petersburgsky"	Moscovsky	Intermediate Solution	Large	Federal	2 years	Semi periphery	42 thousand
84	"Heart of Dog", a house on Degtyarny per.	Centralny	Intermediate Solution	Small	Regional	2 months	Center	800
85	Staropargolovskiy massif (ave. Maurice Thorez)	Vyborgsky	Intermediate Solution	Large	Regional	3 years	Periphery	13 thousand

86	Technopark "Ingria", Kudrovsky forest	Nevsky	Compromise	Large	Municipal	7 months	Periphery	130
87	Udelny Park	Primorsky	Intermediate Solution	Large	Regional	9 years	Periphery	70 thousand
88	Meltzer Factory	Petrogradsky	Intermediate Solution	Average	Regional	3 years	Center	19 thousand
89	Farforovskoe cemetery	Nevsky	Victory	Average	Regional	1 year	Periphery	80 thousand
90	Temple on the Matisov Canal	Krasnoselsky	Compromise	Small	Regional	5 years	Periphery	45 thousand
91	Latitudinal highway	Krasnogvardeysky / Nevsky	Intermediate Solution	Large	Regional	4 years	Periphery	242 thousand
92	South Primorsky Park	Krasnoselsky	Intermediate Solution	Large	Municipal	4 years	Periphery	2 thousand
93	Yuntolovsky Reserve	Primorsky	Intermediate Solution	Large	Federal	12 years	Periphery	160 thousand
94	Yablonovsky garden	Nevsky	Victory	Average	Regional	3 years	Periphery	32 thousand

Made by the author.

Appendix B. Scoring system for spatio-temporal models

№	Name of the conflict	Result of the conflict	Scale of the territory of the conflict	Level of solution / coverage of the problem	Duration of the conflict	Location of the conflict	Conflict mentions (content response)	Sum of points
1	"Okhta Center"	5	2	5	4	2	5	23
2	Konyushennoe vedomstvo	5	2	4	4	3	4	22
3	Tuchkov Buyan Park	3	3	4	4	3	4	21
4	Babolovsky park	5	3	4	4	1	3	20
5	Military Medical Academy named by Sergey Kirov	5	3	4	2	2	3	20
6	Malinovka Park	5	2	4	4	1	4	20
7	Park on Smolenka river	5	2	3	4	2	4	20
8	Blockade station	5	1	3	4	3	4	20
9	House Lishnevsky "Mephistopheles"	5	1	3	4	3	4	20
10	Mitrofanievskoe cemetery	5	3	3	4	1	3	19
11	Udelny Park	5	3	3	4	1	3	19
12	Internationalist Park	5	3	3	3	1	4	19
13	Rzhevsky forest park	5	3	3	4	1	3	19
14	Lopukhinsky garden	5	2	3	4	3	2	19

15	Podkovyrovsky Square	5	1	3	4	3	3	19
16	"Arakcheevsky barracks", houses on Shpalernaya street	5	1	3	4	3	3	19
17	House of Jurgens	5	1	3	3	3	4	19
18	Dostoevsky Museum	5	1	3	3	3	4	19
19	Yuntolovsky Reserve	3	3	4	4	1	4	19
20	Square near Bolsheokhtinsky ave. (home of the Supreme Court of the Russian Federation)	3	3	4	3	2	4	19
21	Pulkovo observatory - Residential Complex "Planetograd"	3	3	5	3	1	4	19
22	Garden on the Neva	3	2	4	3	3	4	19
23	Martynovsky Square	5	2	3	4	1	3	18
24	Square on the street. Savushkina, 112 (MFC "Astana")	5	2	4	4	1	2	18
25	Garden of Ivan Fomin	5	1	3	4	1	4	18
26	Garbage landfill on Levashovsky shosse	3	3	4	4	1	3	18
27	Latitudinal highway	3	3	3	4	1	4	18
28	Monuments of the Okhtinsky Cape	3	2	3	4	2	4	18

29	Nekrasovsky garden (Greek church)	3	2	3	4	3	3	18
30	"Lakhta Center"	1	3	4	4	2	4	18
31	Matveevsky garden	5	2	2	3	3	2	17
32	Square on Engels Ave.	5	2	3	3	1	3	17
33	Yablonovsky garden	5	2	3	3	1	3	17
34	Muzhestva Square	5	2	4	3	1	2	17
35	Murinsky park	5	2	3	2	1	4	17
36	Square on Kanonersky Island	5	2	3	4	1	2	17
37	State Museum- monument "Saint Isaac's Cathedral"	5	1	4	3	3	4	17
38	Deminsky garden	5	1	3	4	2	1	17
39	Alluvial island in Sestroretsk	3	3	3	4	1	3	17
40	Academic Sakharov Park	3	3	3	4	1	3	17
41	Square near the SCK "Petersburgsky"	3	3	4	3	1	3	17
42	Meltzer Factory	3	2	3	3	3	3	17
43	House of Basevich	3	1	3	4	3	3	17
44	House of Shagin (Zykov)	3	1	3	4	3	3	17

45	House of Writers (Nevsky avenue, 68)	3	1	3	3	3	4	17
46	Park of the 300th anniversary of St. Petersburg	1	3	3	4	1	5	17
47	"Marine Facade"	1	3	4	3	2	4	17
48	Farforovskoe cemetery	5	2	3	2	1	3	16
49	Opochininsky garden	5	2	3	3	2	1	16
50	Square on Komendantsky avenue, 40	5	1	3	2	1	4	16
51	Square 2A and 2G in Ulyanka	3	3	3	4	1	2	16
52	Staropargolovskiy massif (ave. Maurice Thorez)	3	3	3	3	1	3	16
53	Boulevard on the street Krylenko	3	2	3	4	1	3	16
54	The building of the medical unit № 1 of the plant named by Mikhail Kalinin	3	1	3	4	2	3	16
55	House of Chubakov	3	1	4	2	3	3	16
56	"Book House"	3	1	3	2	3	4	16
57	House of Stackenschneider	3	1	3	4	3	2	16

58	House of Rogov	1	1	3	4	3	4	16
59	Square on the street. Gastello (Chesma Palace)	1	1	5	4	2	3	16
60	Square Benois	5	3	3	2	1	1	15
61	South Primorsky Park	3	3	2	4	1	2	15
62	Square on Dolgoozernaya street	3	2	3	3	1	3	15
63	Park of the 30th Anniversary of October	3	2	3	3	1	3	15
64	Zarosli Park	3	2	3	2	2	3	15
65	Birzha on Bolshoy ave. V.I.	3	1	3	3	2	3	15
66	"House of Abaza"	3	1	3	4	3	1	15
67	Cathedral on the Matisov channel	3	1	3	4	1	3	15
68	VNIIB building	3	1	3	4	1	3	15
69	Obukhov hospital	1	2	3	3	3	3	15
70	Square on the 6th Sovetskaya street	1	1	3	4	3	3	15
71	Square on the street Vernosti	5	2	2	3	1	1	14
72	Orlovsky quarry and Novoorlovsky reserve	3	3	3	3	1	1	14

73	Square on the Demyan Bedny street	3	2	3	2	1	3	14
74	House on Bakunin avenue, 33	3	1	3	1	3	3	14
75	Sestroretsky Kurort	1	3	3	3	1	3	14
76	Art View House on emb. of r. Moika, 102	1	1	3	2	3	4	14
77	House on Nevsky, 112 "Stockmann"	1	1	3	3	3	3	14
78	Hospital of St. Mary Magdalene	1	1	3	4	3	2	14
79	Havana baths	3	1	3	1	2	3	13
80	Resurrection Church, pos. Metallostroy	1	2	3	4	1	2	13
81	Park at the Silver Pond	1	1	3	4	1	3	13
82	Yesenin park	5	2	2	1	1	1	12
83	Lugovoy park	3	2	2	1	1	3	12
84	Square on the street Savushkina 145	3	1	2	3	1	2	12
85	"Heart of a Dog", a house on Degtyarny per.	3	1	3	1	3	1	12
86	Business Center "Mont Blanc"	1	1	3	2	2	3	12
87	Technopark "Ingria", Kudrovsky forest	3	3	2	2	1	1	12

88	Square of Submariners	1	2	3	2	1	2	11
89	Square on the 9th line of V.I. (Business center "Sovereign")	1	1	2	3	3	1	11
90	Residential Complex "Aurora"	1	1	3	1	2	3	11
91	Angliysky park	3	2	2	1	1	1	10
92	Park "Alexandrino" (birch grove)	1	2	3	1	1	2	10
93	Military Glory Park	1	2	2	2	1	1	9
94	Square on Shkolnaya street	1	1	2	2	1	1	8

Made by the author.

Appendix C. Number of conflicts and percentage of public wins by districts of Saint Petersburg

Districts	Number of conflicts, units	Public wins, %
Admiralteysky	3	33
Vasileostrovsky	10	20
Vyborgsky	11	36
Kalininsky	5	60
Kirovsky	1	100
Kolpinsky	1	0
Krasnogvardeysky	6	50
Krasnoselsky	4	0
Kurortny	2	0
Moscovsky	4	25
Nevsky	8	50
Petrogradsky	7	57
Petrodvortsovy	2	50
Primorsky	11	27
Pushkinsky	1	100
Frunzensky	1	100
Centralny	17	41
Total	94	

Made by the author based on Appendices A and B.

Appendix D. Questionnaire for expert survey

Hello!

My name is Kirill Galustov, I am a postgraduate student at Saint-Petersburg University. As part of the study on the topic “Transformation of the space of contemporary Russian city under the impact of urban regimes”, I am conducting an expert survey in this area.

The purpose of the survey is to compile an aggregate indicator (defined as the arithmetic mean of all indicators related to the conflict) and to build conflict intensity maps, protest results, and spatio-temporal models of the impact of the urban regime on the transformation of the urban space of St. Petersburg.

I ask you to take part in an expert survey and answer the questions of the proposed questionnaire.

To evaluate the criteria, a system of points has been compiled - they reflect the weight of each indicator. The scoring system will form an aggregate indicator. I ask you to evaluate the significance of each item in comparison with the rest in terms of the *significance of the conflict criteria*.

The assessment is proposed to be made on the basis of a 5-point scale. You can set your own maximum score (3, 4, 5) depending on the importance of each criterion.

1. Do you agree with the following assessment of the criterion “Result of the protest” criterion: 5 points - victory of the protest, 3 points - intermediate solution / compromise, 1 point - defeat.

- Yes
- No (describe your assessment of the criterion)

2. Do you agree with the following assessment of the criterion "Scale of the territory of the conflict": 3 points - large, 2 points - medium, 1 point - small.

- Yes
- No (describe your assessment of the criterion)

3. Do you agree with the following assessment of the criterion "Level of conflict resolution":
5 points - federal, 3 points - regional, 1 point - municipal.

- Yes
- No (describe your assessment of the criterion)

4. Do you agree with the following assessment of the criterion "Duration of the conflict":
5 points - 3 or more years; 4 points - 1-2 years; 3 points - 0.5 - 1 year; 2 points - from 3 to 6 months; 1 point - less than 3 months.

- Yes
- No (describe your assessment of the criterion)

5. Do you agree with the following assessment of the criterion "Location of conflict":
5 points - center, 3 points - Semi-periphery, 1 point - periphery (outskirts).

- Yes
- No (describe your assessment of the criterion)

6. Do you agree with the following assessment of the criterion "Mentions of the conflict in the media (content response)":

5 points - more than 1 million, 4 points - from 100 thousand to 1 million, 3 points - from 10 thousand to 100 thousand, 2 points - from 1 to 10 thousand, 1 point - less than 1 thousand.

- Yes
- No (describe your assessment of the criterion)

Your participation is very helpful for the research!

I thank you for your time!

Made by the author.

Appendix E. Results of the expert survey

In order to verify the assessment of the weight of the criteria for ecological and ecocultural conflicts, a survey was conducted among experts:

- Amosov M.I., PhD, specialist in the history of urban landscapes, ex-deputy of Leningrad City Council and deputy of the Legislative Assembly of St. Petersburg;
- Axenov K.E., Doctor habil. in Geography, Professor Vice President of GS Group (until 2021), geourbanistics expert;
- Alferova M.V., writer, city defender;
- Vishnevsky B.L., PhD, deputy of City Parliament, city defender;
- Dubrovskaya S.E., sociologist, specialist in the field of applied social research;
- Zinoviev A.S., specialist in political geography and limology;
- Mezhevich N.M., Prof., Doctor habil. in Economics, Director of the Center for Cross-border Studies St. Petersburg State University, specialist in the Baltic region;
- Minenko E.S., journalist;
- Sivokhina N.P., city defender.

For evaluation, it was proposed to make suggestions on the scale proposed by the author.

The result of the protest: 5 points - victory of the protest, 3 points - intermediate solution / compromise, 1 point - defeat.

Territory scale: 3 points - large, 2 points - medium, 1 point - small.

Level of conflict resolution: 5 points - federal, 3 points - regional, 1 point - municipal.

Duration of the conflict: 5 points - 3 or more years; 4 points - 1-2 years; 3 points - 0.5 - 1 year; 2 points - from 3 to 6 months; 1 point - less than 3 months.

Location of the conflict: 5 points - center, 3 points - semi-periphery, 1 point - periphery.

Number of publications in the media: 5 points - more than 1 million, 4 points - from 100 thousand to 1 million, 3 points - from 10 thousand to 100 thousand, 2 points - from 1 to 10 thousand, 1 point - less than 1 thousand

The questionnaire for the expert survey is presented in Appendix D.

During the survey, new comments and suggestions were made.

So, the expert Amosov M.I. proposed to lower the importance of location criterion and the level of conflict resolution. The expert also emphasized the special importance of the criterion of the number of publications in the media.

Expert Axenov K.E. agreed with the initially proposed scale, especially emphasizing the role of the criterion for the duration of the conflict.

Expert Alferova M.V. a proposal was also made to reduce the significance of the criterion for the location of the conflict, and shortcomings were noticed in the criterion for the number of publications.

Expert Dubrovskaya S.E. a proposal was made to reduce the significance of the criterion of the duration of the conflict and reduce the scale to 3-point by merging the considered intervals. The expert also proposes to distinguish between objective criteria, which include the scale, duration and location of the conflict, and image criteria (the result of the protest, the level of resolution, the number of publications in the media).

Expert Zinoviev A.S. proposed to increase the duration of conflicts, suggesting that conflicts in terms of time become significant if they last more than a year.

Expert Sivokhina N.P. expressed the opinion that sometimes even the most resonant problems rarely cause responses in the media, so the importance of the criterion of the number of publications should be reduced.

The rest of the experts, in general, agreed with the methodology proposed initially.

So, summing up, we got the following indicators:

The result of the protest: 5 points - victory of the protest, 3 points - intermediate solution / compromise, 1 point - defeat.

Territory scale: 3 points - large, 2 points - medium, 1 point - small.

Level of conflict resolution: 5 points - global, 4 points - federal, 3 points - regional, 2 points - municipal.

Duration of the conflict: 4 points - more than 3 years; 3 points - 1-3 years; 2 points - 0.5 - 1 year; 1 point - less than 0.5 years.

Location of the conflict: 3 points - center, 2 points - semi-periphery, 1 point - periphery.

Content response in the media: 5 points - more than 1 million mentions, 4 points - from 100 thousand to 1 million, 3 points - from 10 thousand to 100 thousand, 2 points - from 1 to 10 thousand, 1 point - less than 1 thousand

Appendix F. Cases of publicly valuable projects of the urban environment transformation

Table F.1. Case “Tuchkov Buyan”

	Phase 1 (2006 - 2012) Embankment of Europe	Phase 2 (2012 - 2017) Judicial Quarter	Phase 3 (2019 - present) Tuchkov Buyan
Location	Center		
Scale	Large		
The main functions of the project	Luxury housing, hotel, luxury retail and service facilities for commercial purposes, Dance Theatre, public pedestrian promenade, no park, one historic building preserved	Supreme Court Building, Dance Theatre, open public space, public or private pedestrian promenade, no park. The status of historical heritage has been removed, buildings are not preserved	Fully open public space, park, public waterfront, Dance Theatre, one historic building is preserved
Who decides on the function	City and federation (influenced by business)	Federation	Federation, City (under the influence of social activism)
Who agrees	City	Federation, City	Federation, City
Who controls the architectural competition	City	Federation	Federation, City
Who is going to finance the project	Developer under the guarantees of the Federation, Federation	Federation	Federation, City

Who minds	City planning experts, pastor of a nearby cathedral, employees of a demolished factory, a member of the city government, the city community, several NGOs	The public, city planners, ecologists	Architects
Way of expressing dissatisfaction	Media, picket, open letter to the governor, then the resignation of a city government member, online signature collection, protest rallies	Media, collection of signatures online	Media

Made by the author.

Table F.2. Case “Okhta Center”

	Phase 1 (2006 - 2012) Gazprom City (Okhta Center)	Phase 2 (2010 - 2020) The collapse of the Okhta Center project, new business renovation projects	Phase 3 (2020 - present) Museum of Archeology
Location	Semi-periphery		
Scale	Average		
The main functions of the project	Business center, headquarters of the state corporation "Gazprom" Buildings are not saved	Public and business center with a significant cultural function Partially preserved areas of archaeological research	Museum and exhibition space with a high proportion of public spaces The territory free from development, arrays of archaeological excavations are preserved
Who decides on the function	City and business	Federation (influenced by UNESCO and social activism), City (influenced by Federation) - Phase 1 stop Business	Federation, City (under the influence of social activism)
Who agrees	UNESCO, Federation, City	UNESCO, Federation, City	UNESCO, Federation, City
Who is going to finance the project	Business with the help of the City	Business, City, Federation	Federation, City

Who minds	The public, experts in urban planning, urban protection movements, deputies of the Legislative Assembly, UNESCO	The public, urban planners, ecologists, deputies of the Legislative Assembly	Business
The main ways to express dissatisfaction	Protest rallies, petitions, blocking public hearings, public statements by UNESCO representatives, initiation of a referendum, going to court	Collecting signatures, petitions, people's gatherings, going to court	Publications in the press

Made by the author.

Table F.3. Case “Alluvial island in Sestroretsk”

	Phase 1 (2009 - present) Attempts to build an alluvial island
Location	Periphery
Scale	Large
The main functions of the project	Residential and business construction
Who decides on the function	City and business
Who agrees	Federation, City
Who is going to finance the project	Business, City
Who minds	The public, ecologists, architects, designers, deputies of the Legislative Assembly
The main ways to express dissatisfaction	Petitions, initiation of a referendum, protest rallies

Made by the author.

Table F.4. Case “Park Malinovka”

	Phase 1 (2004 - 2010) Construction of the shopping center "June" and a fast food restaurant	Phase 2 (2010 - 2019) Construction of the temple complex in the park	Phase 3 (2019 - present) Formation of the green zone
Location	Periphery		
Scale	Average		
The main functions of the project	Use of a small part of the park for public and business functions, the emergence of a new hypermarket, fast food restaurant, cinema	Temple complex with winter gardens and Orthodox center	Implementation of a green zone for the recreation of local residents
Who decides on the function	City and business	City and business	City (influenced by social activism)
Who agrees	City	City	City
Who is going to finance the project	Business	Church City	City
Who minds	Public	The public, urban protection movements, deputies of the Legislative Assembly	Church, deputies of the Legislative Assembly

The main ways to express dissatisfaction	People's gatherings, social media posts	Court, protest rallies, petitions, participation in public hearings, public statements by UNESCO representatives, initiation of a referendum	Speeches by individual politicians, deputies and ex-deputies of the Legislative Assembly, publications in the press
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Made by the author.

Table F.5. Case “Medical and sanitary unit № 1 of the Plant named by Kalinin”

	Phase 1 (2005 - 2011) Privatization, termination of the building's original functions, placement of social security facilities	Phase 2 (2014 - 2017) Construction of high-rise housing CJSC "GC" Synergy "	Phase 3 (2019 - present) Second wave of housing attempts
Location	Semi-periphery		
Scale	Small		
The main functions of the project	Placement of social security facilities, termination of medical functions	Demolition of a historic building, construction of high-rise housing	Construction of high-rise housing, taking into account shortcomings in the primary examination, revision of the project
Who decides on the function	City and business	City and business	City (influenced by social activism)
Who agrees	City	City	City
Who is going to finance the project	Business	Business	Business
Who minds	-	The public, urban protection movements, deputies of the Legislative Assembly	The public, urban protection movements, deputies of the Legislative Assembly, ICOMOS

The main ways to express dissatisfaction	-	Protest rallies, trial, critical reviews for examination, meeting of a deputy of the Legislative Assembly with the vice-governor	Court, collection of signatures for the preservation of the medical unit, protest rallies, letters to the governor, examination
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Made by the author.

Table F.6. Case “Konyushennoe Vedomstvo”

	Phase 1 (2005 - 2010) Arrangement of a leisure and entertainment zone	Phase 2 (2010 - 2016) Apart-hotel Plaza lotus group	Phase 3 (2016 - 2021) Museum and Exhibition Complex, State Museum of the History of Saint Petersburg
Location	Center		
Scale	Average		
The main functions of the project	Luxury housing, hotel, luxury retail and service facilities for commercial purposes, Dance Theatre, public pedestrian promenade, no park, one historic building preserved	Elite housing, apart-hotel. The status of historical heritage has been removed, the buildings are partially preserved.	Cultural and educational center with galleries, an amphitheater, recreation and catering areas, an exhibition hall, a museum of modern art, open-air events In 2021, the State Historical Museum of Saint Petersburg abandoned the facility, transferred to the State Budgetary Institution "Agency for the Development of Mortgage Lending"
Who decides on the function	City and business	Business	City (under the influence of social activism)
Who agrees	UNESCO, Federation, City	UNESCO, Federation, City	UNESCO, Federation, City
Who is going to finance the project	Business	Business	City

Who minds	City authorities, it is proposed to transfer the object to a more significant investment project	The public, city defenders, urban planners, architects, deputies of the Legislative Assembly	Business, members of the Legislative Assembly
The main ways to express dissatisfaction	-	Protest meetings, collection of signatures, petitions, appeals to authorities	Publications in the press, appeals to authorities

Made by the author.

Table F.7. Case “Park on Smolenka river”

	Phase 1 (2011 - 2015) Theater of Alla Pugacheva	Phase 2 (2016 - 2018) Investment hotel "New territories-development"	Phase 3 (2019 - present) Park on Smolenka river
Location	Semi-periphery		
Scale	Large		
The main functions of the project	Theater, cultural complex, completion of the perspective of the Smolenka River, which was conceived as the center line of Nevsky avenue	Apart-hotel complex	Free public space with the organization of embankments, without building
Who decides on the function	City and business	Business	City (under the influence of social activism)
Who agrees	City	City	City
Who is going to finance the project	Business	Business	City
Who minds	The public of the district and city, deputies of the Legislative Assembly	The public, architects, environmentalists, deputies of the Legislative Assembly, city protection movements	Business, city government officials

Way of expressing dissatisfaction	Appeals of residents, a protest rally, submission of amendments to the law "On green spaces for general use"	Collection of signatures, media, protection of trees from clearing by construction equipment, protest rallies against construction and for the creation of a park, initiation of a referendum, pickets of activists, courts	Courts, disputes, appeals to authorities
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Made by the author.

Table F.8. Case “Park Zaryadye”

	Phase 1 (2006 - 2010) Construction of a low-rise multifunctional hotel complex	Phase 2 (2010 - 2012) Construction of the parliamentary center, hotel and business quarter, residential quarter)	Phase 3 (2012 - 2017) Creation of the park
Location	Center		
Scale	Large		
The main functions of the project	Hotel, offices, parking	The building of the parliamentary center, public and business center	Pedestrian zone, park zone, historical buildings are preserved, green zone, parking zone, philharmonic society, concert hall, hotel
Who decides on the function	City	Federation, City	Federation, City
Who agrees	City	Federation, City	UNESCO, Federation, City (Prime Minister of the Russian Federation)
Who is going to finance the project	Business (ST Development)	City	City
Who minds	Business (“Monabou”) (dissatisfaction with the competition)	Architects, Federation (Prime Minister), City (Mayor of Moscow)	Architects, environmentalists
Way of expressing dissatisfaction	Court	Media, alternative decision making	Media

Made by the author.

Table F.9. Case “Cathedral of Saint Catherine, Yekaterinburg”

	Phase 1 (2010) Project for the construction of a cathedral on Truda Square	Phase 2 (2016 - 2017) Cathedral construction project in the water area of the city pond	Phase 3 (2017 - 2019) Project for the construction of a cathedral in the square near the Drama Theater	Phase 4 (2019 - present) Survey at the construction site. Construction project on the territory of the former instrument-making plant
Location	Center			
Scale	Small			
The main functions of the project	Reconstruction of the cathedral that historically existed on this territory (the cathedral was located on Labor Square until 1930)	Construction of a cathedral in the city pond in the very center of the city. The emergence of a new visual symbol of the city	Construction of a square on the shore of a pond as a temple object with the arrangement of a cultural zone for events and placement of a recreation area	Conducting a survey of 13 new construction sites. Approval of a new place for the construction of the temple. Preservation of the recreational area near the Drama Theater
Who decides on the function	Region, City	Region, City	Federation, Region, City	Federation, Region, City
Who agrees	Region, City	Region (Working group under the Governor of the Sverdlovsk region), City (under the influence of social activism)	Federation, Region, City (influenced by social activism)	Federation, Region, City (influenced by social activism)

Who is going to finance the project	Business (Ural Mining and Metallurgical Company - UMMC)	Business (Ural Mining and Metallurgical Company - UMMC, Russian Copper Company - RMK, metallurgy patrons)	City, Business (Church of St. Catherine LLC, St. Catherine's Foundation)	City, Business (Saint Catherine's Foundation - founders of RCC and UMMC)
Who minds	The public, city planning council, architects	Public	Public	Public
Way of expressing dissatisfaction	Protest rallies, actions, media	Appeals of residents to the President of the Russian Federation, the Mayor of Yekaterinburg, public hearings, media	Mass protests unsanctioned by the authorities, initiation of a referendum, the action "City Roll Call"	Petitions for the recognition of the instrument-making plant as a monument

Made by the author.

Table F.10. Case “Concreting of embankments of the Vologda river”

	Phase 1 (2011 - 2018) Implementation of concreting of embankments in Vologda	Phase 2 (2019 - present) Stopping the implementation of the original project. Creation of the concept of green landscaped embankments
Location	Center	
Scale	Large	
The main functions of the project	Improvement of embankments, protection from flooding and flooding	Formation of a green landscaped embankment, creation of new green areas
Who decides on the function	Region, City	Federation, Region, City (influenced by social activism)
Who agrees	Federation (Federal Water Resources Agency), Region, City	Federation (Federal Water Resources Agency), Region, City
Who is going to finance the project	Region, City, Business (JSC Vologodavtdor)	Region, City, Business (Magistral LLC)
Who minds	Local residents, activists, architects, environmentalists, students and teachers of the local university	Local residents, activists, architects, environmentalists, local university students and faculty, designers, historians and heritage conservationists
Way of expressing dissatisfaction	Numerous rallies, actions, media, media expressions, appeals to the President, statements to the police, to the Committee of Natural Resources, inspection of the facility, public discussions	Protest actions, a round table with an architectural bureau, appeals to the President, public discussions

Made by the author with the support of I. Kotenko.

Table F.11. Case “Development of the fields of the Timiryazev Academy in Moscow”

	Phase 1 (2016 - 2020) Construction of residential buildings on the territory of the fields of the Timiryazev Academy	Phase 2 (2020 - present) Construction of dormitories, new buildings for the university and residential development
Location	Periphery	
Scale	Average	
The main functions of the project	Residential development 100 hectares, park area	Residential development, student dormitories, a residential building for university staff and other buildings for the academy
Who decides on the function	Federation (Government Commission for the Development of Housing Construction and Evaluation of the Efficiency of the Use of Land Plots Owned by the Russian Federation), City, Academy	Federation (President of the Russian Federation) , City, Academy (under the influence of social activism)
Who agrees	Federation, Agency for Housing Mortgage Lending, Ministry of Agriculture of the Russian Federation, City, Rosagropromsoyuz, Academy	Federation (Ministry of Agriculture), City , Academy
Who is going to finance the project	Business (Housing Development Fund)	Business (LSR Group)

Who minds	Former heads of the Ministry of Agriculture of the USSR and the Russian Federation, students, teachers and employees of the university, the Ministry of Natural Resources, functionaries of the United Russia party, the Ministry of Education and Science, the leader of Just Russia Sergei Mironov	Local residents, students, teachers, human rights activists, Archnadzor
Way of expressing dissatisfaction	Petition, rallies, media reports, appeals to the president, public statements	Collection of signatures, media reports, public speaking

Made by the author with the support of I. Kotenko.

Appendix G. Typology of the urban space transformation process on the example of the PVP

№	Transformation example	By the predominance of the interests of the actors			By location			By the nature of the function change	By the number of changes in the direction of transformation		
		Government	Business	Society	Center	Semi-periphery	Periphery		Single phase	Two-phase	Multiphase
1	"Okhta Center"			+		+		From industrial to commercial			+
	Formula	BS			SP			IC	MF		
2	Zaryadye Park			+	+			From commercial to recreational			+
	Formula	GS			C			CR	MF		
3	Cathedral of St. Catherine			+	+			From commercial to recreational			+
	Formula	GS			C			CR	MF		
4	Tuchkov Buyan			+	+			From commercial to recreational			+
	Formula	BS			C			CR	MF		
5	River embankment concreting Vologda			+	+			Recreational preserved <i>(with business elements)</i>		+	
	Formula	GS			C			RR	TF		
6	Field development at the Timiryazev Academy in Moscow			+			+	Commercial preserved <i>(scientific instead of residential and commercial)</i>		+	
	Formula	BS			P			CC	TF		

№	Transformation example	By time			By scale of impact			According to the media resonance		
		Less than 1 year	Up to 5 years	From 5 years and more	Global	Federal	Regional	High	Average	Low
1	"Okhta Center"			+	+			+		
	Formula	5+			G			H		
2	Zaryadye Park			+		+				+
	Formula	5+			F			L		
3	Cathedral of St. Catherine			+				+		
	Formula	5+			F			H		
4	Tuchkov Buyan		+			+		+		
	Formula	5+			F			H		
5	River embankment concreting Vologda		+			+				+
	Formula	1-5			F			L		
6	Field development at the Timiryazev Academy in Moscow			+		+				+
	Formula	5+			F			L		

Appendix H. Examples of space transformation in Centralny district of Saint Petersburg

A striking example of the transformation of space in the Central District is the case of the Konyushennoe vedomstvo. A large quarter of historical buildings, including the church, where in 1837 A.S. Pushkin, was abandoned in the post-Soviet years. Due to the large scale of the space, its complex renovation was difficult, and redevelopment is very limited due to the protected status of the site. However, the projects of the business to set up a leisure and entertainment area, and then the Plaza Lotus Group Apart-Hotel, turned out to be unclaimed. As a compromise, the creation of a museum and exhibition complex was proposed, but this idea was not destined to come true either (see Table F.6, Fig. H.1).



Fig. H.1. Konyushennoe vedomstvo

A - Leisure and entertainment zone (project). B - Apart-hotel (project).

C - Museum and Exhibition Complex (project). D - Reality in 2021

(made by the author based on Table E.6., sanktpeterburg.bezformata.com, archi.ru , mr-7.ru)

Such a transformation can be called “**zero**”, since according to its results, none of the actors has acquired the desired result. The authorities were unable to adapt the historic building for use, the business first received disapproval from the authorities, and then public resistance, and the society could only fight to preserve the current state of the complex, but this did not help it acquire a new function.

For example, the case of the new building of the Dostoevsky Museum demonstrates a case of a failed commercial transformation project that was presented for public needs. The publication of the project caused public protests, which led to a change in the authorities' position regarding the allocation of the territory of the square for the new museum building. As a result, the business project was

completely rejected, and instead of the space development project, a project for the improvement and improvement of the already existing green zone arose. Thus, the prospect of space transformation in favor of one of the actors has led to the impact of new regime factors and the improvement of space while maintaining its original recreational function (Fig. H.2).



Fig. H.2. Square near the Dostoevsky Museum.

A - Outside view of the square. B - Project of a new building. C - Park improvement project
(made by the author based on vecherka.spb.ru, archi.ru)

This case demonstrates that intentions to change the space on the part of one of the actors can lead to the intervention of other actors. The function of space does not change, but its essence changes - a new point of attraction arises due to the increased public valueness.

This allows us to say that under the influence of the urban regime, the process of initial transformation itself can be completed already during the design stage and go in a completely different direction. Regime interactions are changing and the transformation of space is developing in the key of preserving the original function and even strengthening it.

It is necessary to distinguish between the predominance of the interests of the actors and the results of the transformation. In the case of the Konyushennoe vedomstvo in St. Petersburg, the society managed to stop the implementation of the investment project approved by the authorities, but the development of the space did not happen, just like in the case of the Konyushennoe vedomstvo, Tuchkov Buyan, Okhta Center, it simply froze in the “zero position”. The same is happening in many other publicly valuable projects. They become a factor in the transition to a progressive regime, they cancel the conflict project, but in return they do not lead to positive transformations of space, but only fix the status quo.

Appendix I. Statistics of the total number of houses built and apartments delivered in
Saint Petersburg

Years of construction	Number of houses	Number of apartments
1970 - 1979	1941	349366
1980 - 1989	959	199615
1990 - 1999	625	103224
2000 - 2009	1124	220515
2010 - 2019	988	465575

Made by the author based on dom.mingkh.ru.