

**BIRTH OF SAINT PETERSBURG AGGLOMERATION UNDER THE RULE OF  
PETER THE GREAT IN 1703–1724**Sergey V. Sementsov<sup>1</sup>Nadezhda A. Akulova<sup>2</sup>

**Abstract.** Relevance of this paper's subject is due to the necessity to elaborate a modern program of the development of Saint Petersburg agglomeration in northwest Russia for the following 15–20 years (up to the 2030s) based on the historical and genetical features of its origin and development. The aim of the paper was to study the early stage of the uprising of the initially urban (and subsequently metropolitan) Saint Petersburg agglomeration in the 1703–1720s on the basis of the drastic functional alterations of the rural resettlement scheme that had existed here over the centuries. The main approach to the problem was a comprehensive city-planning, functional and landscape analysis based on the examination of historical cartography and archival documents. Principal study results include the findings that a purposeful deliberate creation of the “regular” metropolitan Saint Petersburg agglomeration on the orders of Peter the Great was conducted on the basis of the already existed rural resettlement scheme merging historically Russian territories and,

partly, newly conquered in 1702–1709). In the 1703–1720s it went through three phases of the primary formation, and spatial development of the governorate and agglomeration outpaced emergence and crystallization of their single center. Future single center of the agglomeration and the center of the governorate, Saint Petersburg, developed with a chronological gap with the territories development. Thus, in the case of Saint Petersburg agglomeration, first of all territories, their nodes and routes were formed by the administrative order, and only afterwards the center was formed which integrated them. This variant of the governorate, agglomeration and their center formation is unconventional for the history of agglomerations development. The data of the article may be useful for both city-planning historians and modern urban specialists.

**Keywords:** Peter the Great, Saint Petersburg governorate, “ideal” Saint Petersburg and “ideal” Saint Petersburg agglomeration created on principles of regular planning and development.

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## 1. Introduction

Identifying the particularities of the foundation, formation and development of agglomerations in different regions of the world is of the great historical, cultural and city-planning interest. Studying the mechanisms of the agglomerations' birth and growing-up and rising of their importance demands considerably refined studies. Such questions have been investigated by many researchers in different scientific centers all over the world. Naturally, they interlink the problems of city-planning with the problems of human-made landscape formation and development in these the built-up areas [1,2,3,4,5,6].

Among such historical agglomerations of special interest are those agglomerations whose history of birth and development deviate from the traditional "rules". One can mention here unconventionality of origin and further development of the Russian metropolitan Saint Petersburg agglomeration with Saint Petersburg as its historical and modern center. Indeed, Saint Petersburg is one of the few agglomerations with quite distinct time frame of the birth and clear evidences of the controllability of the development processes. Its creators, first of all Russian tsar Peter the Great himself and his circle elaborated it deliberately in the framework of

implementation of the "regularity rules" so typical of the "ideal" city-planning of the 18th century.

## 2. Methodological framework

Investigation on the historical development of urban agglomerations would be impossible without involving a wide range of sources. In this case, historical cartographic documents stored in several Saint Petersburg collections, archival documents, publications by historians specializing in different areas of the history of culture, development of the state system, city-planning history. Comprehensive parallel study of archival and historical and cartographic documents revealed trends and patterns of the spatial, city-planning, functional and socio-cultural development of not only Saint Petersburg which had been growing since 1703, but also its outskirts formations simultaneously in 1703–1725 within Saint Petersburg governorate and Saint Petersburg agglomeration.

## 3. Results

During the shortest, by historical standards, period of time, from 1703 to 1724, almost simultaneously in East Baltic, circum-Ladoga and circum-Neva regions within the boundaries of the newborn Saint Petersburg governorate, a unique metropolitan Saint Petersburg agglomeration was formed

intentionally and deliberately. It was regular and “ideal” with regard to the principles of its spatial organization. Its central city was Saint Petersburg, a capital of the Russian state, and it included enormous area of thousands square kilometers, with scores of towns, settlements and objects of different functions, united through a system of regular routes. Creation and development of the city and agglomeration were carried out through reconstruction and transformation of the rural irregular settlement system that had existed in this area up to the beginning of the 18th century. No other agglomeration of such type was registered in the history of European city-planning till the middle of the 19th century.

### *3.1. The first stage of the territory development. Forming Saint Petersburg governorate as an initial stage of the territory development*

Russian tsar (since 1721 – emperor) Peter the Great was working on the development of Saint Petersburg for only 22 years, from 1703 to 1724. During that time, on the huge circum-Neva territory not only one of the largest Russia capital city appeared, but also its vast governorate and agglomeration almost simultaneously began to form. The whole history of their birth and development demonstrate significant

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predominance of purposefulness, and “manual management” and conscious control over the processes of the spatial and city-planning life.

At the initial stage of the primary crystallization of the capital, its governorate and metropolitan agglomeration (starting from 1703) significant influence of the spontaneity and randomness of the self-development, which are so typical of the common conditions in which many provinces and agglomerations are born, were still perceptible. However as early as by the mid-1710s, owing to the efforts of Peter the Great and his administration, spontaneity of the formation of the territories surrounded the city was replaced by the obvious regularity in the spatial and functional development.

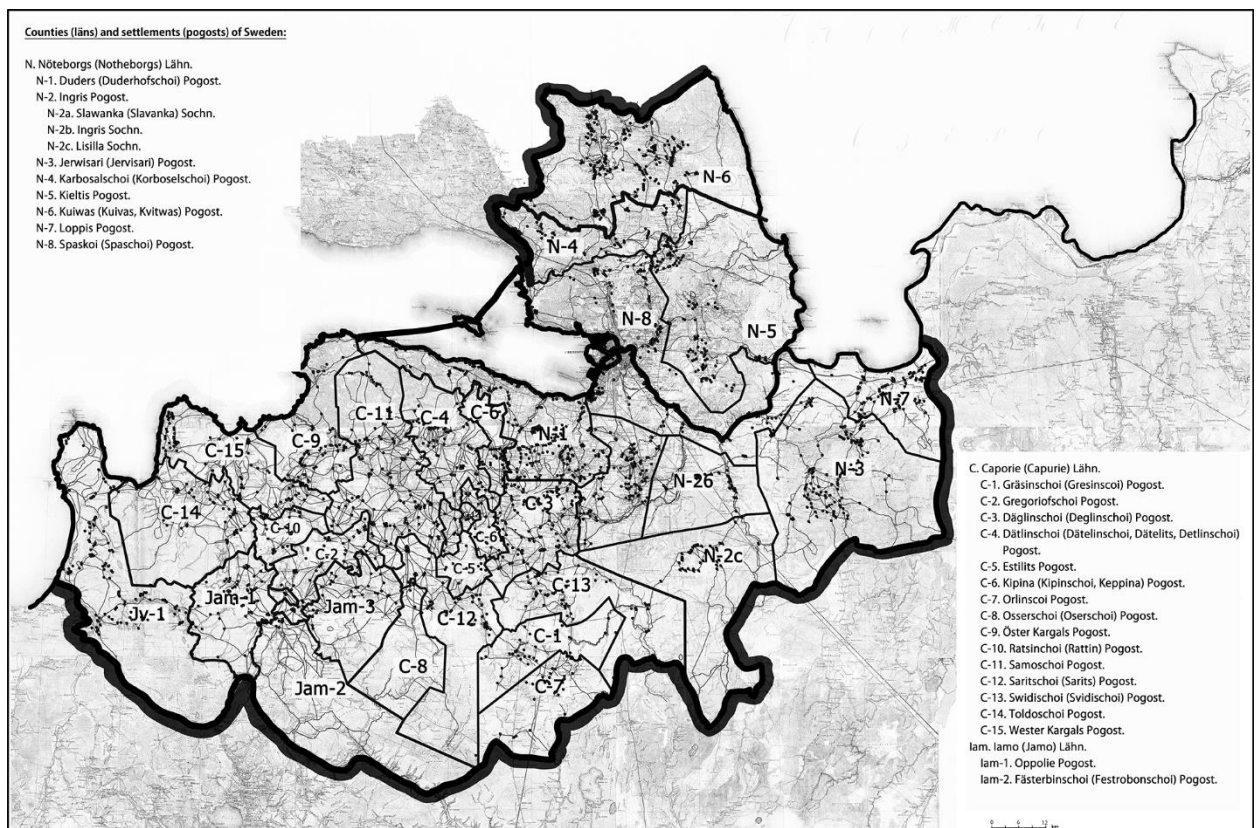
Based on the numerous archival materials from Russia, Sweden and other countries it has been revealed that before the 1700s (or, in other words, before these territories were returned back to Russia and Saint Petersburg was founded) all the south coast of the Gulf of Finland was populated. Over the centuries (at least in the 15th–17th centuries) a rather stable and compact rural settlement system existed here, with several towns and fortresses, thousands of smaller settlements, such as farmsteads of the nobility, villages, hamlets, united through a complicated system of roads of the different significance, from state high roads to the

secondary roads, with a total length over thousand kilometres [7].

The history of the development of the territories on the Neva banks started in the 5th–6th centuries, when Slavic tribes came here and occupied a huge area along the south coast of the Baltic Sea up to Germany. Until 1478 the lands on the south coast of the Gulf of Finland and between Lake Ladoga and Lake Onega constituted a part of the Novgorod republic. In 1478, they passed to

the Moscow state [8], but in 1579–1580, Sweden army invaded the territory, heightened its military pressure during the Time of Troubles (the 1600s), and for a century these lands became a periphery of Sweden under the name of Ingria (Swedish Ingria) and Western Karelia (Swedish Karelia). This transfer to Sweden was acknowledged by the Treaty of Stolbovo (1617) (Fig. 1) [9, 10, 11, 12, 13].

**Figure 1.** 1580–1703. System of rural settlements on the territory of Swedish Ingria. (Reconstruction by S.V. Sementsov, E.V. Skogoreva, N.A. Akulova based on the topographic map of 1916)



Starting from 1702–1703, Russian military operations against Sweden were

waged on the territories under question. Up to 1721 (up to the Treaty of Nystad between

Russia and Sweden), the lands were gradually restituted to Russia. During the Great Northern War Russia attempted to retrieve not only the territory of Ingria and Western Karelia, but also the Baltics, which in the 10th–13th centuries belonged to Russia (according to the data of Russian chronicles) and later were seized by the Livonian Order and formed Estonia and Livonia. This territory was of special importance, taking into account that here, on the route of Baltic Sea – the Neva River – Lake Ladoga – the Volkhov River, the largest water trade routes in Europe and Asia crossed and widely used from the earliest times, namely, trade route from the Varangians to the Greeks and The Great Volga River Route. These waterways known from the 5th–6th centuries connected Northern Europe to both Southern Europe (the Mediterranean) through the Dnieper and the Black Sea, and Asia Minor, Western Asia, India, China and the Far East through the Volga and the Caspian Sea.

The liberation of these lands by the Russian army and their transfer under Russian jurisdiction took place in several stages. At first, in October 1702, the city-fortress Noteburg, an ancient Russian town Oreshek, founded as early as 1323 by the Novgorod prince Yuri Danilovich and situated at the Neva River source, was liberated. In May 1703, Russian forces occupied the estuary of the Neva River with

a Swedish town Nyen (founded in 1611) and accompanying Nyenschantz fortress (built in the 1630s). In 1704, Russian army appeared in the territory to the east of Lake Peipus and the Narova (Narva) River, took by storm the cities of Narva in Estonia and Derpt (Dorpat) in Livonia. Thereby in 1702–1704, Ingria was liberated from the Swedes. In the winter campaign of 1710, fortresses of Vyborg and Kexholm (in Finland) and Elbing (Elbląg), Dünamünde, Pärnu (Perona), Revel (in Estonia and Livonia) were besieged and taken. Thus, in 1710, the conquest of Finland, Estonia and Livonia was finished.

In 1703–1710, simultaneously with these military operations, the territory of Saint Petersburg governorate was formed.

Initially, before 1702–1703, in the border zone of Russia and Sweden, a belt of originally Russian lands formed. These lands were characterized by a high fortification, functional, industrial, cultural and ethnical unity. From the beginning of the Great Northern War (1700), the unifying processes became even more intense. Here, in the borderline area, a single functional space designed to solve the problems of military, transport, construction and food supply of defensive operations against advancing Swedish troops, was being rapidly formed. Thereby a system of different territorial-functional objects developed, which combined gradually Russian and conquered

objects and ensured quartering of the troops; maintaining a system of fortresses (“fortezzas” (fortresses), garrisons, regimental settlements, etc.) in fighting trim; creation and development of manufactures of different types (ferrous and non-ferrous metallurgy, ship-building, tanning industry, gunpowder and armor industry, linen manufacturing, timber and stone cutting, building goods production, fishing and agriculture, etc.), accelerated development of transport communications, both by land and by water, reconstruction of already existed cities, suburbs and villages and construction of new ones.

For example, the system of fortresses and settlements for the regiments and garrisons quartering included the Sankt-Peters-Burch fortress and its Crownwork (since 1703), the Admiralty fortress (since 1704), sea port Kronshlot with the batteries and redoubts on the island of Kotlin (since 1704), ancient Koporye, Oreshek (Nöteborg), Ivangorod fortresses (liberated by the Russian army in 1702–1704), Pskov, Novgorod, Ladoga, Izborsk, Porkhov, the town of Yamburg – Yamgorod (liberated in 1704), newly conquered Sweden fortresses of Narva (since 1704), Kexholm (since 8(19)

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September 1710), Vyborg (since 13(24)<sup>3</sup> June 1710) with a new Russian Tronsund fortress being constructed (since 1710–1711), the fortresses of Riga (since July 1710), Dünamünde (since August 1710), Perona (since August 1710), Ösel island with the Arenburg fortress (since September 1710) and Dagö island (since September 1710) were reinforced. At the same time, “smaller fortresses” were built in 1705–1707 near the former Nyenschantz, along the left bank of the Neva, on the Spit of Vasilyevsky island, on the islands along the coast of the Gulf of Finland, in the estuaries of the Tosno river and Izhora river, on the banks of the Krasnenkaya river, Malaya river (later – the Moyka river); artillery batteries and sconces were also constructed in the delta of the Neva river (since 1704).

In a similar way, creation of the Admiralty shipyard (since 1704) in front of the emerging city of Saint Petersburg widened a system of shipbuilding facilities in this area. The shipbuilding system gradually included a dockyards in the mouth of the Syas river (in operation since 1702), Schlüsselburg dockyard (since 1702), Olonetsk (Lodeynoe Pole, Svir) dockyard on the Svir river (since 1703), in Selitskiy Ryadok dockyard (since

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<sup>3</sup>In Russia, the Julian calendar as a civil calendar was replaced by the Gregorian calendar after the October Revolution on February 1(14), 1918. Thus, all the events before this moment can be

dated either by the Gregorian calendar, or by the Julian calendar. Here and elsewhere in the paper, the double dating is given: the first date is by the Julian calendar, the second is by the Gregorian calendar [Translator’s note].

1705), Novoladozsk dockyard (since 1706(?)), Rytchard (later Kotlin) island (since 1706(?)), on the Izhora river (since 1710), Galernaya dockyard (since 1712), Patrikulyarnaya dockyard (since 1718), Okhta dockyards (since 1712), and others.

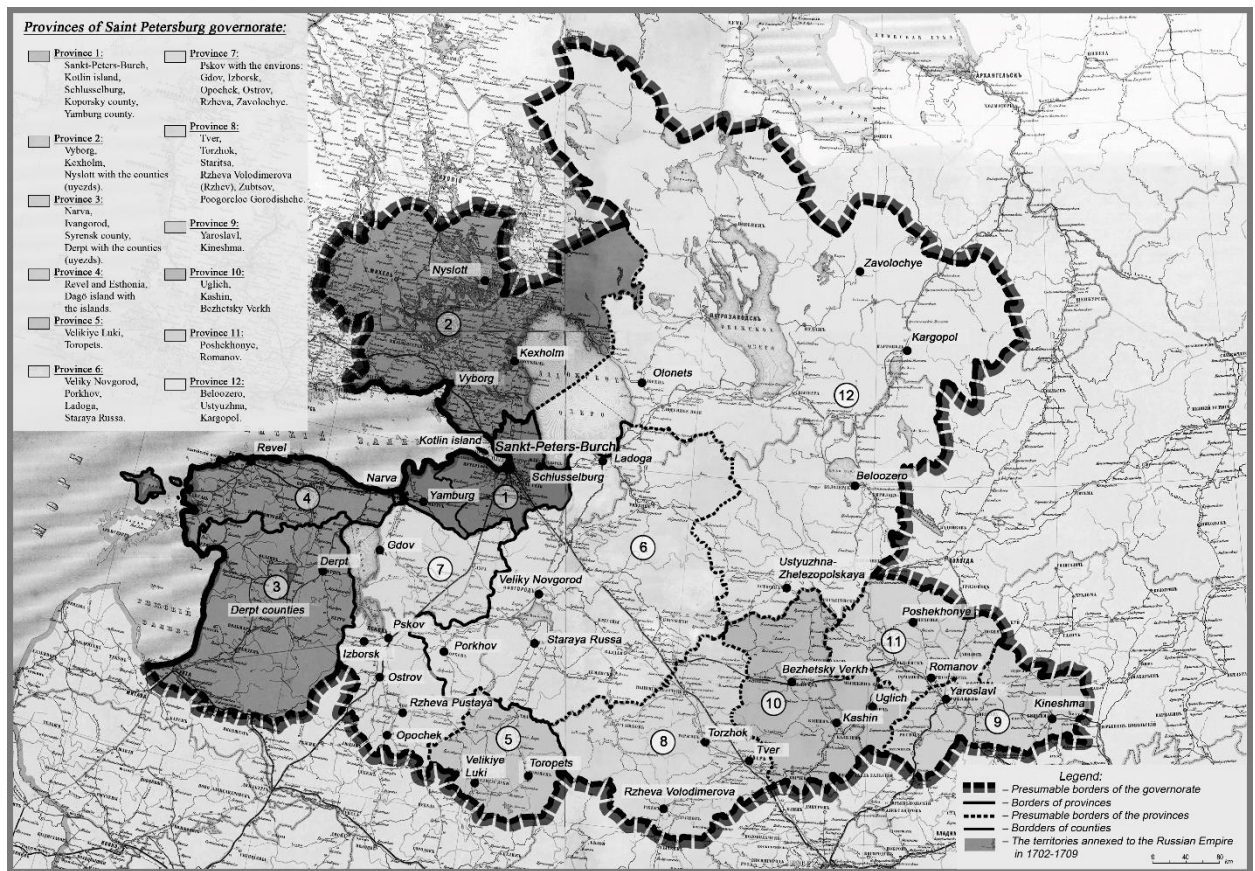
The war turning point in 1702–1703, when Russian army took on decisive action, led to the significant increase in territory and administrative innovations. In 1703–1704 annexation of Ingria resulted in creation and administrative formalization of the Izhora lands under the rule of the prince A.D. Menshikov. During this process, not only Ingria itself, but Russian territories along the former state border from Pskov and Ivangorod to Rzhev (Rzheva Volodimerova), as well as newly conquered Derpt, Narva to the east of Lake Peipus and the Narova river, also were united. In 1706–1707 by the decree of Peter the Great, Veliky Novgorod, Staraya Russa, Velikiye Luki, Toropets, Pskov, Gdov, Kholm, Yamburgsky uyezd (district) and Samerskaya volost (district) joined the already unified Ingrian governorate, to which they had been functionally related. According to the provincial reform by the decree of 18(29) December 1708, the whole Russia was divided into 8 governorates. Saint Petersburg governorate, successor of Ingrian governorate, significantly expanded its boundaries and included 29 towns with their surroundings. And since 1710, Finland,

Estonia and Livonia, that had become a part of Russia again, were incorporated into Saint Petersburg governorate.

By the end of 1710, a single vast administrative industrial, socioeconomic and cultural fortification territory had formed. It ran from Northern Karelia with lake Roskolo in the north to Velikiye Luki, Toropets and Rzhev in the south, from the coast of Gulf of Riga in the west to Kargopol, Yaroslavl, Romanov in the east. Later, by the decree of 29 May (10 June) 1719, Saint Petersburg governorate included more than 40 towns with their surroundings: Saint Petersburg itself, Kronstadt, Schlusselfurg, Koporye, Yamburg, Vyborg, Kexholm, Nyslott, Narva, Ivangorod, Derpt, Revel, Velikiye Luki, Toropets, Novgorod, Staraya Russa, Pskov, Porkhov, Ladoga, Gdov, Izborsk, Opochek, Ostrov, Rzheva Pustaya, Volok Lamsky, Tver, Torzhok, Staritsa, Rzheva Volodimerova (Rzhev), Zubtsov, Yaroslavl, Kineshma, Uglich, Kashin, Bezhetsky Verkh, Poshekhonye, Romanov, Beloozero, Ustyuzhna-Zhelezopolskaya, Kargopol, Charonda. These territories of the same governorate, since 1719 divided into 13 provinces, existed up to 1725–1727. And the whole governorate included at this moment a huge area of 490 000 km<sup>2</sup> (Fig. 2), which surpasses an area of modern Germany (357 021 km<sup>2</sup>), Denmark (43 094 km<sup>2</sup>), the

Netherlands (41 526 km<sup>2</sup>) and Belgium (30 528 km<sup>2</sup>) put together.

**Figure 2.** 1710–1725. Territory of “Saint Petersburg governorate” which included Russian lands to the east of the Russia-Sweden border (according to the Treaty of Stolbovo of 1617), newly-annexed territories of Ingria (1703–1704), Western Karelia (1703–1710), Finland (1710), Estonia (1704–1710) and Livonia (1704–1710) (Reconstruction by S.V. Sementsov, E.V. Skogoreva, N.A. Akulova)



All these territories of Saint Petersburg governorate even at that time became a peculiar territorial-economic system targeted at successful ending of the Great North war and efficient development of the territories themselves in the framework of interrelated specialisations, including zones of fortresses and fortifications, temporal and constant regiment dislocations, zones of spatial concentration of population,

development of different industries, maintaining and expansion of the road network, creation of transport hubs, etc. [14].

Thus, initial defensive operations of the Russian army in 1700–1703 and, later, military offensives of 1703–1710, led to the gradual enormous expansion of the territories, united by the common military, functional, transport, cultural, ethnic and social tasks, which by 1711 were transformed



into a single administrative and territorial system under the name of Saint Petersburg governorate. Since 1710–1711 the governorate (still in the same area) it self and its constituent elements kept on developing, becoming stronger and improving significantly all the areas of human activity. Fortresses were reconstructed and strengthened and new fortresses of different classes were built; historical towns and villages were reconstructed and new ones were founded; scores of new factories and manufactures were created; numerous estates appeared. Under significant improvement of the territories, a fast growth of the population was observed, since thousands of people were transferred here from central regions of Russia, first of all, from Moscow region, Vologda and Yaroslavl lands.

Different industries and transport services had been developed: existing factories and manufactures were extended and new ones were created; renovation works were conducted; new roads were constructed; navigation channels were built; towpaths, docking facilities, piers and sluices were constructed. Open-cast minings for limestone and different ores extraction were created. Wood cutting areas and scores of saw productions were established in order to supply expanding networks of military and civil shipbuilding dockyards, as well as housing and construction. Numerous

shipbuilding manufactures were established: forged and cast wares production (anchors, cannons, nails, etc.), cables and sails production; scores of new construction facilities were established, including these producing bricks, tiles, glass, slack lime, construction products made of sawn limestone, etc. In addition, luxury goods manufactures were created, fore example, these producing laces, espaliers, mirrors, wall paper, furniture, etc. It is notable that by 1725 the number of such factories and manufactures in the region had reached more than 250 [15].

Simultaneously, the sphere of food production was extended in order to produce food both the constant population of the governorate and large groups of seasonal population (military troops, constructionbrigades and others), as well as fodder for horses, cattle, poultry, etc.

### *3.2. Emergence of the future center of Saint Petersburg governorate on its territory, turned into the capital of Russian Empire in few years*

Surprisingly enough, this fine territorial system, which rather quickly – in only 20 years – turned into a single established governorate with several “belts” of spatial functional nodes, efficiently connected through a traffic network,

originally lacked its own center. What's more, at the initial stage, the governorate was developed as an administrative unit without the governorate center. Practical and administrative development of the territories far outstripped the development of both administrative and functional and territorial center. It is very uncommon in the history of urban planning. Usually, first a settlement as a center of attraction emerges, then it turns into a city, gains authority, and gradually a governorate and/or agglomeration forms around it with a lag, which is a reflection of its functional and areal significance, often supported by the emergence of an administrative-territorial zone (country, governorate, district, etc.) subject to this center.

So how actually emerged and developed Saint Petersburg, a future governorate center, agglomeration center and ultimately capital of the Russian Empire? Initially the urban status of the settlements emerging in the Neva river banks was not even supposed, awareness of the necessity to move to the next level and form a high-level capital here came later as a result of many steps taken often blindly, by trial and error.

Before Saint Petersburg was found, on these huge territories a rather dense net of smaller villages had already existed (typologically, it may be classified as a spontaneously formed spatial and terrain

system), including two towns, Noteburg and Nyen. Of course, in 1703–1704, when future Saint Petersburg was emerging, there was no capital city at all. On a vast area of the circum-Ladoga and circum-Neva regions, a system of fortresses, redoubts and ravelins, fortified points was being rapidly formed. They were interconnected with many already existent fortresses of the inner and outer circles, as well as with an emerging system of regiments, military units and garrisons dislocations on the enormous territory from Yamburg and the Narova river to Kargopol and Beloozero. And since 1704 on the territory of the Neva river delta, a powerful construction had started by the order of Peter the Great. Here shipbuilding industries were launched, Admiralty dockyard, with accompanying satellite industrial and warehouse facilities, was established, which also formed a single system with other dockyards and associated productions of the governorate (in these years, at least 7 dockyards were in operation on the territory.). At the same time in the delta of the Neva river, other industries were established: armory (since 1706), foundry (since 1711), gunpowder production (since 1711), etc., whose capacity increased capacity of the already existing industrial centers in both distant (peripheral) and central zones of the governorate. It resulted in the emergence and development of the spatial system of

industries of different assignment in all the territories developed by the governorate, from the coast of the Gulf of Finland to lake Onega, Yaroslavl and Moscow [16]. In a similar way, since 1703, small docking facilities had functioned, and since 1705–1706 emergence of new large docking and transport infrastructure facilities had been observed [17, 18].

At the same time, it should be noted that spatial nodes of growth and location of such facilities were often ancient rural settlements well lived-in for previous decades. And the role of such pre-Saint Petersburg settlements in the future formation of the metropolitan Saint Petersburg was crucial [19].

Note that the role of the rural settlements surrounding the city in the birth, development and life of agglomerations is not always taken into account [20]. But up to 1709, it had been a rather dispersed proto-urban structure with a purely functional orientation.

Administrative completion of Izhora lands (later Ingrian governorate, and ultimately Saint Petersburg governorate) required crystallization of the function of governorate control over these territories since 1704–1705, as well as the transformation of the conglomerate of the settlements emerging in the Neva river delta into a city with its surroundings, and

deliberate and consistent transformation: first, in 1706–1707, it became a city, in 1708–1709 – a governorate center, finally, in 1709 it became a de facto capital of Russian, though it is only in 1712 when functions of the capital were assigned to Saint Petersburg officially (even still without confirmation by the tsar's order).

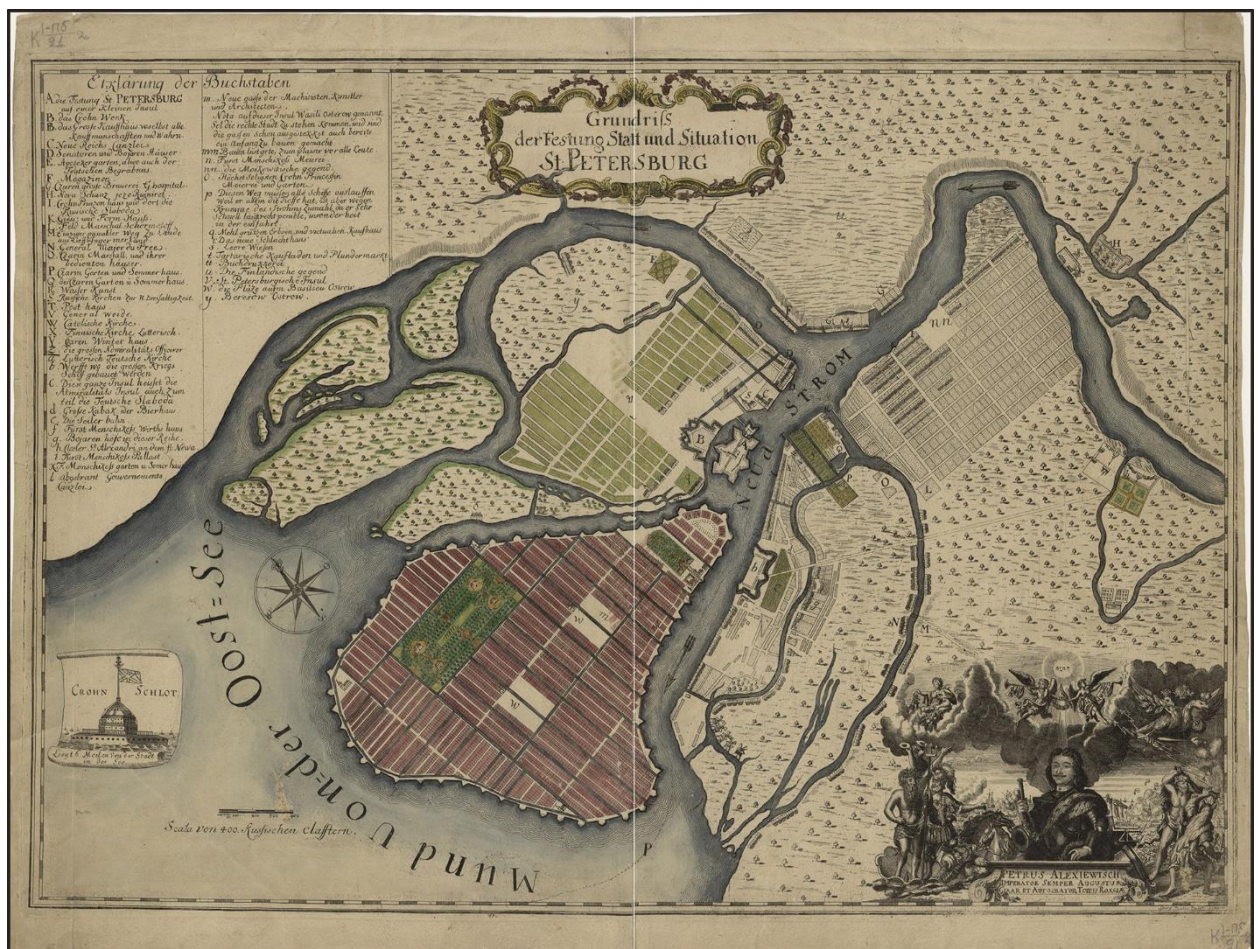
To sum up, Saint Petersburg, which had been developing since 1703, passed the following stages of its growing and maturation: 1703 – foundation of fortification facilities; 1704 – establishment of the first departmental multifunctional industries and settlements; 1706–1707 – the first attempts to unify separate settlements and departmental villages into a city; 1708–1709 – perception of the nascent city as a governorate center (“capital of the governorate”); 1709–1712 – transfer of the Russian capital functions into the city on the Neva river banks (“capital of Russia”).

Even the primary attempts to recognize the nascent city as a capital of the state required to reject a spontaneously formed planning system and development of the proto-city and try to find its new metropolitan look. It led to a repeated multistage reconstruction of the emerging city with a due account to the gradually realized requirements of its metropolitan nature. Since 1712, upon an initiative of Peter the Great and military builder D. Trezzini,

principles of regularity had been applied, and since 1717, upon an initiative of Peter the Great and architect J.-B.A. Le Blond, the idea of ensemble formation, had been implemented (Fig. 3, 4) [21, 22, 23, 24, 25, 26]. Thus, instead of curved street spontaneously laid at the first stage, straight streets of the normalized width were created; instead of spontaneously grown uneven-shaped blocks, rectangular blocks (or blocks of other shapes, but regular-shaped) with the

maximum possible number of rectangles of a specified size were formed. These sectors of a specific modular size should have been built up according to the unequivocal indisputable rules stated in the tsar’s decrees and supported by the special projects. And all of this was possible notwithstanding the earlier formed blocks and spontaneous city-planning, which was subject to changes according to new regularity rules.

**Figure 3.** 1716–1717. “Grundriss der Festung Stadt und Situation St:Petersburg”. Saint Petersburg. National Library of Russia, K 1-Pb 2/21. (A scheme of D. Trezzini’s projects on the Saint Petersburg planning based on the “regularity” principles)



**Figure 4.1717** “General draft of Sankt-Peters-Burch” by J.-B.A. Le Blond. Saint Petersburg branch of the Archive of the Russian Academy of Sciences, IX, 1, № 627. (Project of Saint Petersburg development created by J.-B.A. Le Blond based on the ensemble formation)



During the life of Peter the Great (till January 1725), in order to ensure necessary city-planning and architectural qualities of the formed capital adequate to its metropolitan status, the following big waves of reconstruction operations were undertaken in the whole city: from 1712, when spontaneous self-development was replaced by a regular system of city-planning; from 1716–1719, when a boring regular building

was replaced with a combination of “regularity” and ensemble formation in the city’s look, skyline and building; from 1721, when an idea of constructing not just a capital of the state, but a capital of the Russian Empire was implemented, which required searching for new, more radical methods of ensuring metropolitan features of the urban environment. These staged qualitative reconstructions were accompanied and

provided by the system of the tsar's decrees, necessary for implementation by all officials and residents [27, 28].

Almost at the same time similar reforms were carried out in many other surrounding objects in the framework of their transformation from spontaneously founded and developed into cities, towns, villages, estates, harmonious from the point of view of the planning and perfectly shaped from the point of view of their look town, with a rectangular network of roads, highways and passages. Simultaneously, a corresponding reconstruction of the road network in the governorate and agglomeration was carried out, during which historically formed picturesque roads correlating to the features of the landscape were straighten and acquired a regular shape with clear standardized dimensions.

Hence, 1712–1714 is a period when spontaneous rural and proto-urban settlements transformed into a large Russian metropolitan city of Saint Petersburg, with a well developed zonal system of satellite settlements of different functions, a period when principles of metropolitan nature of changes established in the city-planning and architectural activities and public perception.

Thus, in almost 10–20 years particular mono-functional objects created on the vast area of the circum-Neva region and scarcely related to each other, transformed

rapidly into a multifunctional node, turning from a system of rural settlements first into a proto-urban structure, then into a city with surrounding settlements, then into a capital of the Russian state, and finally into a capital with even more distinct metropolitan features, a capital of the Russian Empire. At that the governorate itself had developed rapidly **before** its center was created, and its development served a basis and a stimulus for the emergence of both governorate center (now as a node of growth, core of the subsequent crystallization) and particular cores of the future agglomeration.

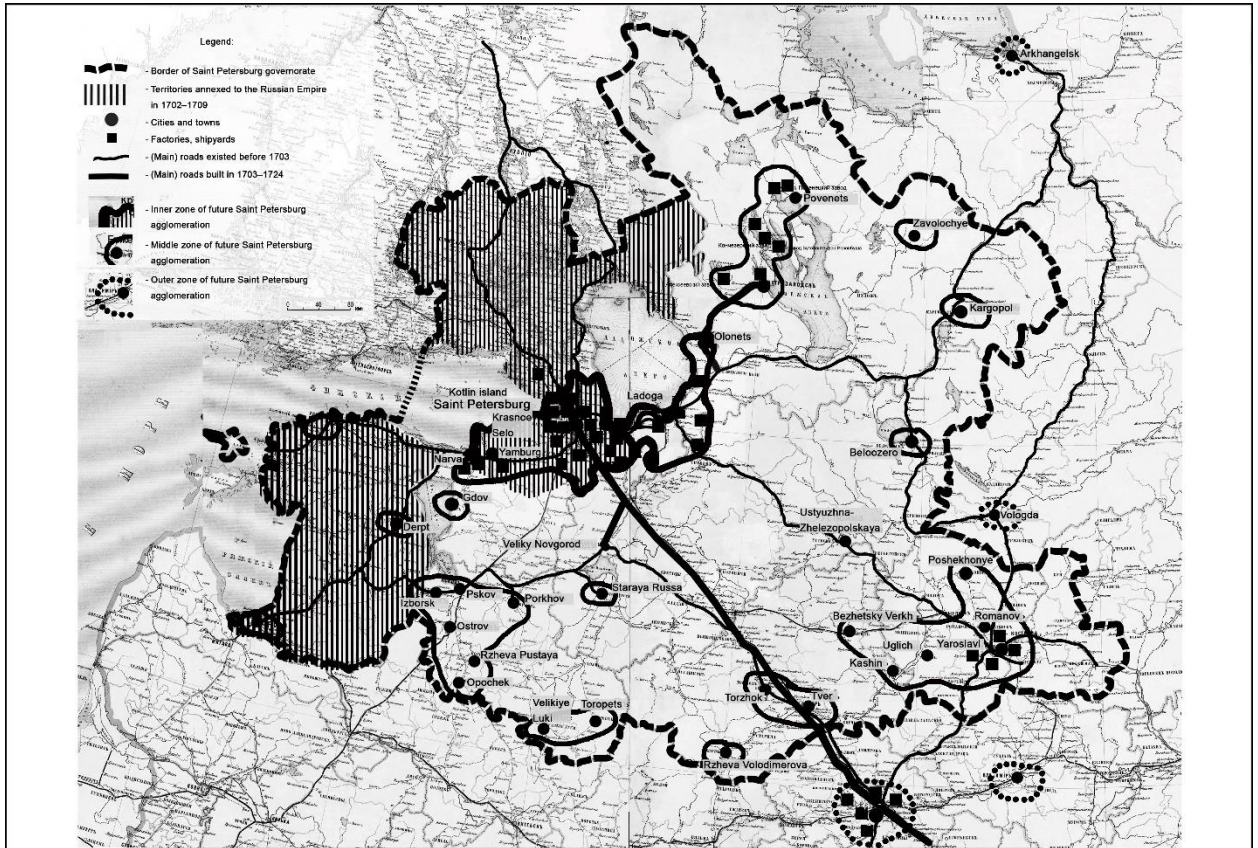
### *3.3. Initial stage of the metropolitan agglomeration emergence: generation of nodes (cores) around a nascent metropolitan Saint Petersburg*

Under political, social and cultural perception of a nascent Saint Petersburg as a Russian capital (even without any city-planning or architectural manifestations of such functions), since 1710–1712, simultaneously with a territorial and functional crystallization of the capital itself, on the most intensively used highways of the governorate, primary centres (zones, special territories) had strengthened. Later they became the nodes of the metropolitan agglomeration. Surprisingly enough, even these nodes formed on the basis of rural settlements and farms that had existed before

Saint Petersburg was founded. Among such future largest “agglomeration nodes” one can distinguish the settlements and farms turned into an Emperor’s country site palace and garden residences: Strelina Myza (before 1703, since 1712 Strelna); Sarishof (before 1703, since 1710 Sarskaya Myza, then Tsarskoe Selo), and others; historical settlements turned into large fortification nodes, for example, Kronstadt, the future sea capital of the Baltic fleet, on Kotlin island; settlements based on which large industrial nodes formed (e.g., future Krasnoe Selo and numerous villages along the Izhora river), etc. [29]. Thereby several zones of future metropolitan agglomeration started to form: an inner one (more than 300x150 km), middle one (up to 1200x1500 km), and outer one (more than 1500 km) (Fig. 5, 6) [30]. The nodes of the agglomeration itself and zones of distant cities were characterized by an

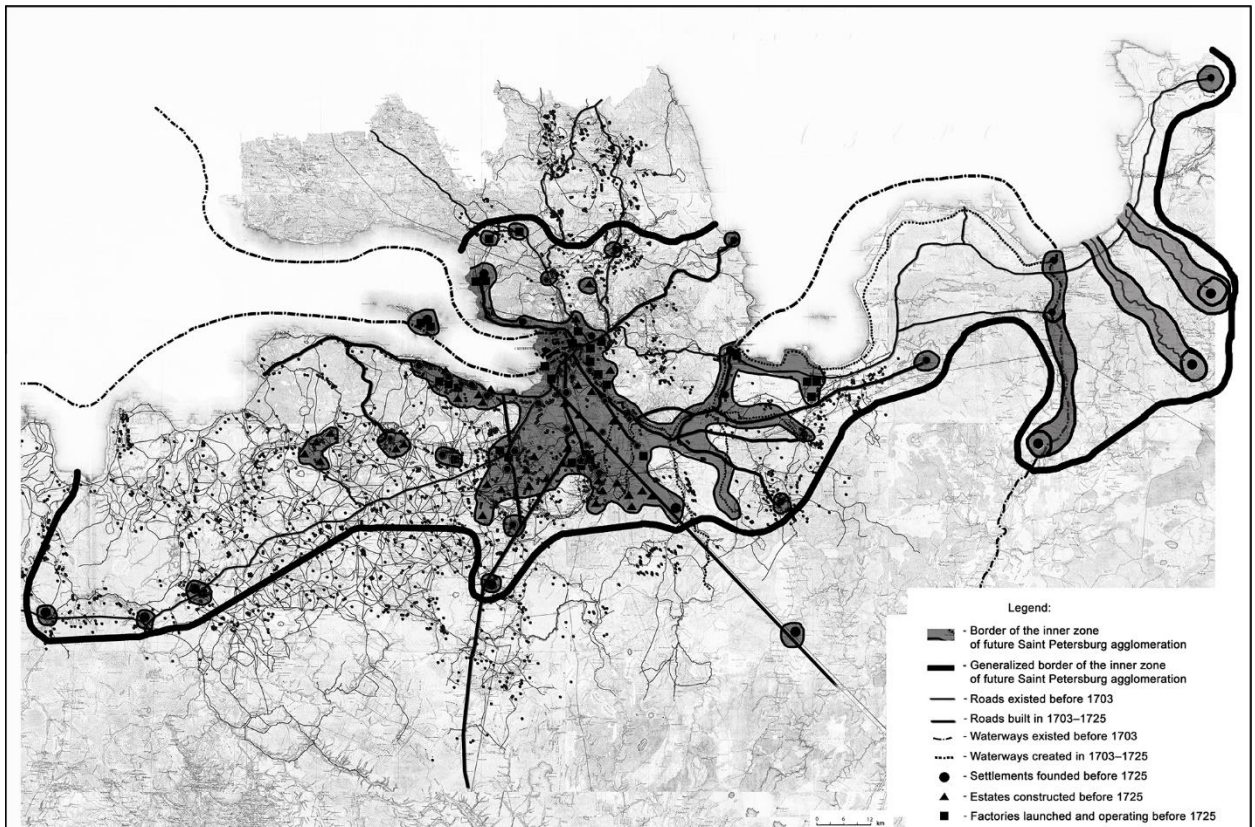
increasingly clear specialization. Thus, even from Moscow the following goods were delivered: construction materials, arms, gunpowder, decorating materials for buildings and other constructions. From Karelia, especially from the area of the present-day Petrozavodsk, where big ironworks and metallurgical manufactures were launched in 1702, they delivered iron, anchors, nails, cannon-balls, etc. On the rivers of Tosno, Naziya and Mya (Moyka) limestone was quarried (in blocks it was used in the construction or as slaked lime after slaking), and logging was carried out. Kostroma, Yaroslavl, Pereslavl-Zalessky provided construction works with numerous brigades of workers, from bricklayers to dressers. From the faraway lands of Kazan a fleet of float boards delivered ship timber by water. The list goes on.

**Figure 5.** 1710–1725. The largest multifunctional centers on the territory of Saint Petersburg agglomeration. The inner and middle zones of the future agglomeration (Reconstruction by S.V. Sementsov, E.V. Skogoreva, N.A. Akulova based on the topographic map of 1840)



**Figure 6.**1710–1725. The largest close centers of forming the future Saint Petersburg agglomeration. The inner zones of the agglomeration (Reconstruction by S.V. Sementsov, E.V. Skogoreva, N.A. Akulova based on the topographic map of 1916)





Chronologically, the waves of reconstruction activities in the city itself coincide with the waves of reconstruction of these emerging nodes of future agglomeration, also based on the principles of regularity (since 1712–1713) and ensemble formation (since 1717–1718). Central city on the one part, and objects and territories of future agglomeration, on the

#### 4. Discussion

Examination of the history of birth and early development of Saint Petersburg and an agglomeration and governorate surrounding it, has never been carried out before. Similar processes, when first a

other part, demonstrate an impressive coordination in reconstruction processes.

It can therefore be said that since 1712, alongside with a nascent large regular (“ideal”) capital, an equally regular (“ideal”) agglomeration had formed, whose most important nodes and elements formed on the basis of the regularity principle [31, 32, 33].

governorate and proto-agglomeration emerges, and only after this their administrative center is formed (in our case – metropolitan city of Saint Petersburg), have not been found in the world history of city-planning, particularly the cases, when both

the city and its agglomeration are formed deliberately according to the principles of “ideal” city-planning, as in the case of Saint Petersburg, whose projects were created by request of tsar Peter the Great.

## 5. Conclusions

As a result, chronological and qualitative analysis of the city-forming processes taken place or purposefully carried out in the 1700–1720s on the territory of future Saint Petersburg governorate has allowed distinguishing the following qualitative stages:

- 1703–1711. Formation of a single administrative and economic territory of Saint Petersburg governorate in its widest boundaries and gradual crystallization of Saint Petersburg as opposed to the conglomerate of rural settlements up to the stage of the governorate capital, with a subsequent retention of the same area of the governorate in the following years;
- 1712–1721. Crystallization of Saint Petersburg in the structure of the governorate and its public and political perception as a capital of the Russian state. Retention of the spatial vastness of the Saint Petersburg governorate and the beginning of its most

important nodes’ transformation into primary unit-forming elements of a metropolitan Saint Petersburg agglomeration. Large-scale reconstruction of Saint Petersburg and many towns and settlements surrounding it on the principles of regularity and ensemble formation, targeted at transformation of Saint Petersburg into an “ideal city”;

- 1722–1724. Birth of a full-fledged metropolitan Saint Petersburg agglomeration (more than 3000x1500 km), which unified structurally and spatially the core city of Saint Petersburg, a system of outer (outbound) highways outspreading of it, and already generated nodes and zones on these highways. The beginning of the transformation of the forming agglomeration into an “ideal agglomeration” on the principles of regularity (with straight and regular-shaped highways and rectangular planning of towns and villages).

## 6. Recommendations

The paper is of value for the researches in the history of city-planning, as well as for modern urbanspecialists working on the issues of contemporary development of the largest cities and their agglomerations.

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