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Testing planetary urbanisation: Siberia's trans-scalar spatial regime of oil production

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Abstract

This paper analyses the extended urbanization of oil production in Siberia in order to test Neil Brenner and Christian Schmid's theory of planetary urbanization. According to these authors, the intensification of the urban process triggered by the consolidation of global neoliberalism since the early 1990s, has transformed the planet into a situation of total urbanization. In their view, this planetary condition can be measured by the incorporation of former remote wilderness such as the Amazon, the oceans, the deserts or Siberia within urban circuits of production (which they label under the notion of extended urbanization). In this article we test if Brenner and Schmid's hypothesis applies to the Siberian case. With that goal, we develop a diachronic historic and cartographic analysis which shows first the incorporation of Siberia to the Russian Empire, second the consolidation of East Asia-Russia commercial circuits, and third the conceptualization of Siberia as primarily an area for resource extraction. Such analysis leads us to define three historic spatial regimes for the whole Siberia, the last of which we study in relation to the notion of planetary urbanization. Our study compares the geographies of oil production in the region first during the Soviet period, and then, following Brenner and Schmid's chronology, after the 1990s. The article concludes that the latter phase certainly implies an unprecedented intensification of extended urbanization and the incorporation of Siberia into trans-scalar global circuits of production. Finally, in order to analyse the relation between this process and the consolidation of neoliberalism we develop a synchronic study and mapping of the operations of two oil companies: a public one, NOC ROSNEFT, and a private one, LUKOIL. We conclude that both are similarly invested in creating the trans-scalar geographies of uneven development that characterize neoliberalism.

Keywords: Planetary urbanization, Oil production, Urban fabric, Extended urbanization, Globalization

Introduction and methodology

This paper analyses Siberia's historic and contemporary territorial transformations in relation to Henri Lefebvre's thesis of complete urbanization (Lefebvre 2003 [1970]) and to Neil Brenner and Christian Schmid's theory of planetary urbanization (Brenner and Schmid 2011, 2015). Lefebvre used the term "urban" to refer not only to city creation, but also to the socio-spatial processes that integrate agriculture into the industrial realm; therefore, defining urban society as "the society which results from industrialization, which is a process of domination that absorbs agricultural production" (Lefebvre 2003 [1970]). In Lefebvre's account the physical imprint of urban society is no longer characterized by the compact city, but by the "urban fabric", a term that comprises "all manifestations of the city over the country" (Lefebvre 2003 [1970]) including a variety of spatial phenomena, from infrastructures to non-city facilities. Lefebvre delineates the historic processes of emergence of the urban, and proposes that in the 1970s it was already possible to detect a point of inflection from previous stages of urban development, a moment of "implosion-explosion" of the city that resulted in the constitution of a"critical zone" approaching the moment of total urbanization of the planet.

Two key aspects of the Lefebvrian thesis must be highlighted when analysed through the lens of Brenner and

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Schmid's theory of planetary urbanization. First, for Brenner and Schmid the possible dialectical contrary of the city is not the rural space but the wilderness. Second, while Lefebvre still considered that "[complete] urbanization is virtual today, but will become real in the future" (Lefebvre 2003 [1970]), Brenner and Schmid define our contemporary situation with the notion of "planetary urbanization". This theory postulates that "during the last 30 years the form of urbanization has been radically reconfigured", producing a series of deep socio-spatial transformation across the world, which the authors synthesize as: "*The creation of new scales of urbanization", "The blurring and rearticulation of urban territories", "The disintegration of the 'hinterland'", and" The end of the 'wilderness*" (Brenner and Schmid 2011). For the authors, this disappearance of the wilderness would imply the integration within urban circuits of vast, almost unpopulated remote geographies, such as the tropical forest, the oceans and deserts, or—as in our case study—Siberia.

This study of the transformations of Siberian territory attempts to answer two additional questions related to the Lefebvrian argument. First, if a once-remote "wilderness" territory has been incorporated into the urban fabric and, if so, if this process intensified in, roughly, the last thirty years. In the light of Lefebvre's analysis of the association between urbanization and industrialization as an intensification of the market economy (Lefebvre, 2003 [1970]), Brenner and Schmid's periodization leads to a third question: is there a parallel between the consolidation of planetary urbanization and neoliberalism? In this context we consider neoliberalism as the stage of capitalist organization that consolidated across the world over the last thirty-years. That is, after the fall of the soviet-inspired regimes of Eastern Europe.

The study of Siberia's spatial transformations could present, in our view, some discrepancies in respect to this general argumentation. First, because it is possible to consider that the integration of Siberia into the Russian Empire from the late sixteenth century onwards was already a process of integration of a former area of wilderness into the urban realm, and that the main moment of intensification of this integration was under the Soviet regime; therefore, allowing the inscription of the disappearance of the "wilderness" into a broader, *longue-durée* historical narrative. Second, because of this broader historical picture, the integration of the region within the urban may be associated with distinct socioeconomic regimes—the tsarist state, the Soviet Union—that do not exactly match or are directly alien to capitalism. This consideration can be extended to the current situation. A period of intense deregulation and privatization occurred in Russia as it reconsolidated its geopolitical position after the collapse of the USSR. This period is characterized by a recovery of the role of the state in economic activity, something most evident in the key sectors of Siberia's economy, which are related to extractive industries.

Our study of the region parallels these two possible discrepancies with two methodological procedures. First, the research does not consider the contemporary disappearance of the wilderness per se, but rather what specific forms this disappearance is acquiring in relation to previous historic spatial regimes of integration within the urban. This historic analysis has revealed the specificity of the contemporary situation, showing the particular processes of urbanization that are taking place and the specific kinds of "planetary" urban fabric they are generating at the local, regional, and trans-national scale. The analysis reveals the long running importance of mineral extraction in the region (Baievsky: 1927), but it also shows that the post-1960's relevance of oil and gas extraction lead to processes of intensification that challenged the previous territorial configurations of the region with original trans-scalar formations, therefore confirming Brenner and Schmid's hypothesis. In order to understand the specific material *assemblages* that are consequently being generated, we focus on the case of oil extraction, which determines our second methodological approach around the question of whether neoliberalism is shaping the geographies of the area.

The intensification of oil extraction started in Siberia in the 1960's, when the USSR still existed. Until then, the Urals were the most important oil producing region in the country. Both the organization of the industry and its associated metabolism were influenced first by a non-capitalist regime and later by the subsequent political reorganizations that took place after the collapse of the USSR. After a moment of privatization, the latter led to a recovery of the direct participation of the state in the oil industry under Putin's long presidency. Because of this direct state involvement, we could not consider neoliberalism as an a priori condition for the process of urbanization of the "wilderness", nor as a necessary motor of the post-1989's intensification. At the same time, we acknowledge that many scholars have challenged the characterization of neoliberalism as a regime that reduces the role of the state (Schmidt 2009; Hirsch and Kannankulam 2011; Collier 2011). Furthermore, in our view, it would be theoretically incomplete to consider neoliberalism uniquely as a political and economic regime, divorced from its material manifestations. Because of these reasons, following Collier we posit that neoliberalism generates a specific form of urbanization—characterized by uneven geographical development, separation of capital accumulation from the place of production, and the integration in global flows of distribution of goods

and capital—that could be contrasted with other spatial formations (Collier 2011). This means that neoliberalism's subterranean presence under an assumed recovery of the state could be revealed through the analysis of specific spatial and material manifestations that are distinct from those of other socio-economic regions.

In order to carry out that analysis, we developed a comparative study of two situations which are linked to two geographic locations, historic periods and company corporations. In particular, we developed a diachronic analysis of the urbanization process in two different regions in two different moments, and a synchronic analysis of two different corporations in the same historical period.

Thus, we first considered the development of the Khanty-Mansiysk region over a twenty-year period between the 1970s and the 1990s, when communism was active. In this region we also studied the post-2000s territorial operations of LUKOIL, a post-soviet private company which ranks second in Russian oil business and that is essentially dependent on the Khanty-Mansiysk oil fields. Second, we analysed the development of Sakhalin Island since the 2000s, under Putin and Medvedev's presidencies, and the territorial operations there of the nationally owned company ROSNEFT; a corporation that resulted from Putin's renationalization politics after the forced dissolution of YUKOS and the acquisition of TNK, and which rates first in Russian oil industry.

On the one hand, the study of the urban fabric of the soviet period and the current metabolism of a private company in Khanty-Mansiysk, and on the other, of the post-2000s urban fabric of oil extraction and the metabolism of a nationally owned company in Skahalin has revealed, in our view, the consistency of the current political economic project of the Russian state with the generation of geographies of uneven spatial development of neoliberalism. While the urban fabric of Sakhalin clearly differs from the Soviet urban fabric of Khanty-Mansiysk, the metabolism of the state-owned company (flows of production, distribution and capital) is, with minor differences, coincident with the private model and definitely integrated into the global economic networks of the neoliberal regime.

A final methodological consideration: both the general historic analysis of the territorial constitution of Siberia, and the comparative diachronic and synchronic analysis of the regions and the corporations were developed, strictly, in terms of their relation to urbanization. With that goal, we followed Brenner and Schmid's proposition to study urbanization through the categories of land use intensification, connectivity, and metabolism. For the definitions of the urban fabrics during the different historical periods, we emphasized the interrelationships between concentrated forms of urbanization (agglomerations) and extended forms of urbanization (infrastructures, communications, metabolic flows). Finally, we considered it necessary to differentiate the notion of urban fabric from that, more encompassing, of spatial regime. In this article, we use urban fabric strictly in the Lefebvrian sense, i.e., to refer to the material artifacts or infrastructures that make urbanization possible. Instead, we use the idea of spatial regime to indicate the structuration of different urban fabrics to create an overall territorial system uniting space and governance. This differentiation is especially relevant for the analysis of the contemporary situation, in which under the same spatial regime coexist a variety of trans-scalar urban fabrics.

Spatial regimes

We characterize the Siberian territory according to three distinct and, eventually discontinuous, spatial regimes, each one of them with a differentiated organization of its urban fabric. These are close to a historical periodization of the successive socio-political formations in the periods considered: the tsarist empire, the soviet regime and the post-soviet condition. Yet, they do not fully coincide with them. On one hand, the spatial regimes are configured by the ideologies of the state. On the other, these state visions are challenged through the internal tensions created by the urban process itself—according to Lefebvre's treatment of urbanization not as a "superstructure", but rather as a "reality that modifies the relation of production without being sufficient to transform them" (Lefebvre 2003 [1970])—and by the external factors (essentially global economies) associated with urbanization.

For the first regime we consider the period from the second half of the seventeenth century to 1891, when the construction of the Trans-Siberian railway line began. This regime is characterized by the inclusion of the territory east of the Urals to the Russian Empire, and by the consolidation of the state's territorial sovereignty specifically through the construction of cities in the remotest areas of the region (Nizhnekolimsk, 1644, in the East Siberian Sea; Anadyrsk, 1649, on the Bering Sea and Okhotsk, 1649 in the Okhostsk Sea), and intermediate ones dispersed throughout the territory. This process resulted in the construction of this territory as an object of governability and as a cultural entity in itself (Elden 2013). It meant the extension of the term Siberia to the whole geography of the area, and the equation of this nomenclature with the new geographic delimitation of Asia. In a parallel process of creation of the conditions of cultural difference—Asia, the remoteness—and of instrumentalization of that difference by the state as a means of legitimizing control by European Russia, this process was accompanied by a gradual, though incomplete, integration of the existing population into the Russian norms

and economies and, since the mid-eighteenth century by the introduction of industry and by the development of mineral extraction. This period is not, in Lefebvrian terms, urban, as agriculture remained the most important economic sector. Yet, it implied the integration of the territory into the urban necessities of the Empire and, consequently, a progressive increase in the forms of this integration. In spatial terms, in its moment of consolidation—prior to the construction of the trans-Siberian railroad—it consisted in a networked system of small cities of relatively similar size across the Siberian territory connected through river transport. Economically, it was characterized by regional relations together with a level of national integration and a minor trans-national level through the relation with China (Naumov 2006; Wood 1991) (Fig. 1).

The second regime transformed this dispersed, networked configuration into a linear structure as a result of the construction of the Trans-Siberian between 1891 and 1917, and it lasted until the late 1960s. Initially, this infrastructure of connectivity implied the consolidation of the Southern part of the region along a railroad axis of international commerce to the Pacific. Later, the railroad became instrumental to the post-1930s Soviet organization of the territory; especially during the intense industrial development of the region after WWII. These processes were based in specific ideologies of urbanization: Soviet territorial policies aimed at the intervention in the entire national space and, from the New Economic Policy on, they were based on the construction of relatively small-scale cities associated with industrial development that accompanied industrialism with the construction of small cities in a non-concentrated regional pattern (Collier 2011). Such a territorial model joins the production of forms of concentrated urbanization (cities) to the development of forms of extended urbanization, according to a classical developmentalist model of what urbanization is: cities, associated economies and infrastructures working together in an attempt to promote regional development. In the case of Siberia this general strategy was not implemented in the whole territory but essentially along the axis of the Trans-Siberian, accompanying the intensification of mineral extraction and agriculture in this linear axis. Its reverse was the relative diminution of significance and dissociation of the northern and eastern areas—a new remoteness—which became the

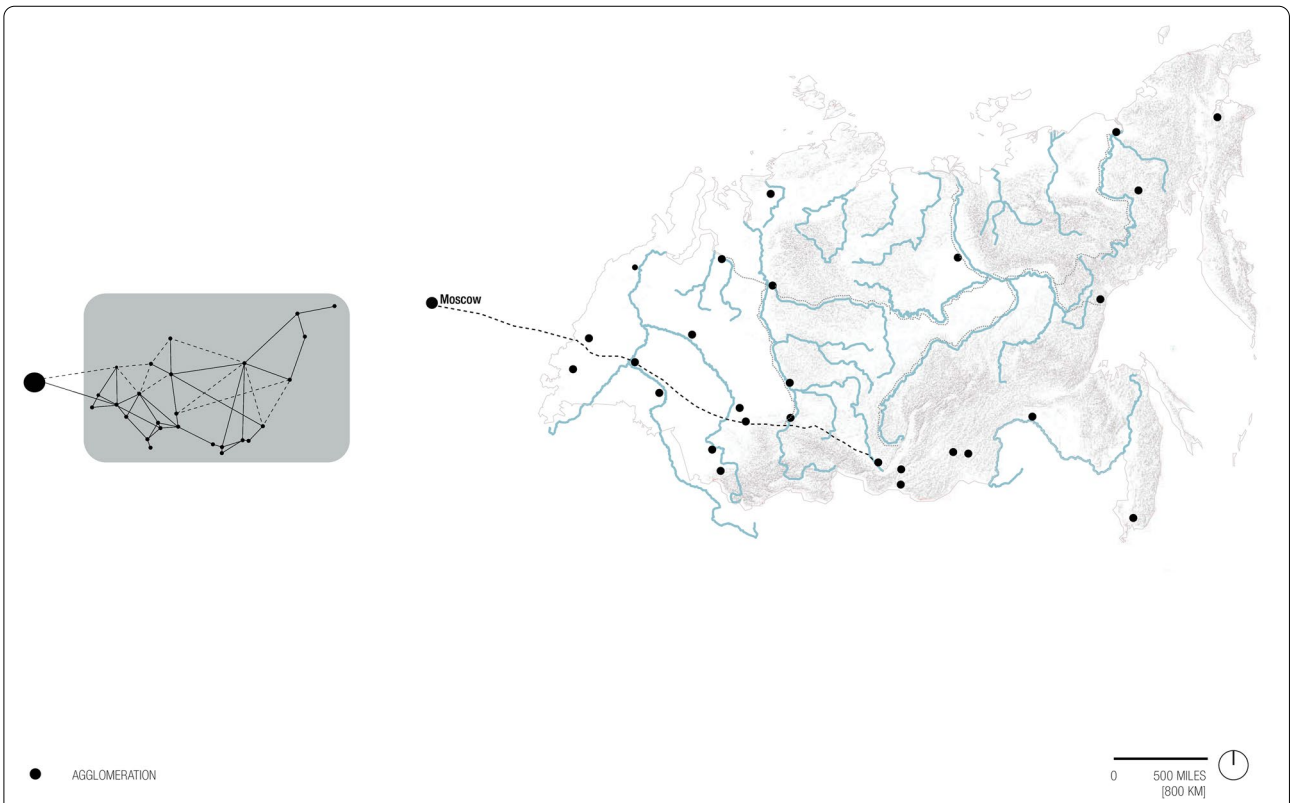

Fig. 1 Siberia: First spatial regime, showing new towns and the system of fluvial connectivity. Image credits: Salgueiro Barrio and O'Shea. Image Sources:Drawing 1:Cities: Naumov I V (2006) The history of Siberia. London: Routledge, 2006

locus of spaces of exception. The Gulag (1917–1960) or peaceful atomic tests took place there (Fig. 2).

The third regime corresponds to the intensification of oil, gas and mineral extraction from the mid-1960s on in the northern and eastern regions of Siberia (Khanty-Mansiysk, Yamal-Menets, Sakha Republic and, more recently, Sakhalin). In our reading of this situation, we find a clear process of land-use intensification associated with oil and gas extraction. Originally mostly confined to the areas of Khanty-Mansiysk and Yamal-Menets, resource extraction of these products is being continuously expanded geographically, paralleling in spatial terms the relative importance of the sector for the post-1989 Russian economy. In this post-Soviet period, resource extraction eventually implies a quasi-total mobilization of the territory, destroying any notion of remoteness as the previously neglected distant areas of the North and East Arctic Sea are integrated through a process of infrastructural intensification consisting mostly of the construction of pipelines and freight railway lines. In our reading, this is generating a third turn in the organization of the Siberian territory, where the south Trans-Siberian axis intensifies its role in the European-Asiatic connectivity benefiting from the products of these new areas while these in turn, are also associated with global distant flows of distribution of goods and capital (Fig. 3).

The final part of this paper analyses the specific trans-scalar urban fabric and the *assemblages* that characterize this third, post-1960s spatial regime and its possible coincidence with a broader understanding of the spatial structure of neoliberalism. With this in mind, we will focus on the study of the continuities and discontinuities that this third phase has in relation to the second phase of urbanization—the Soviet model—considering the sociospatial development between 1966 and 1989 in

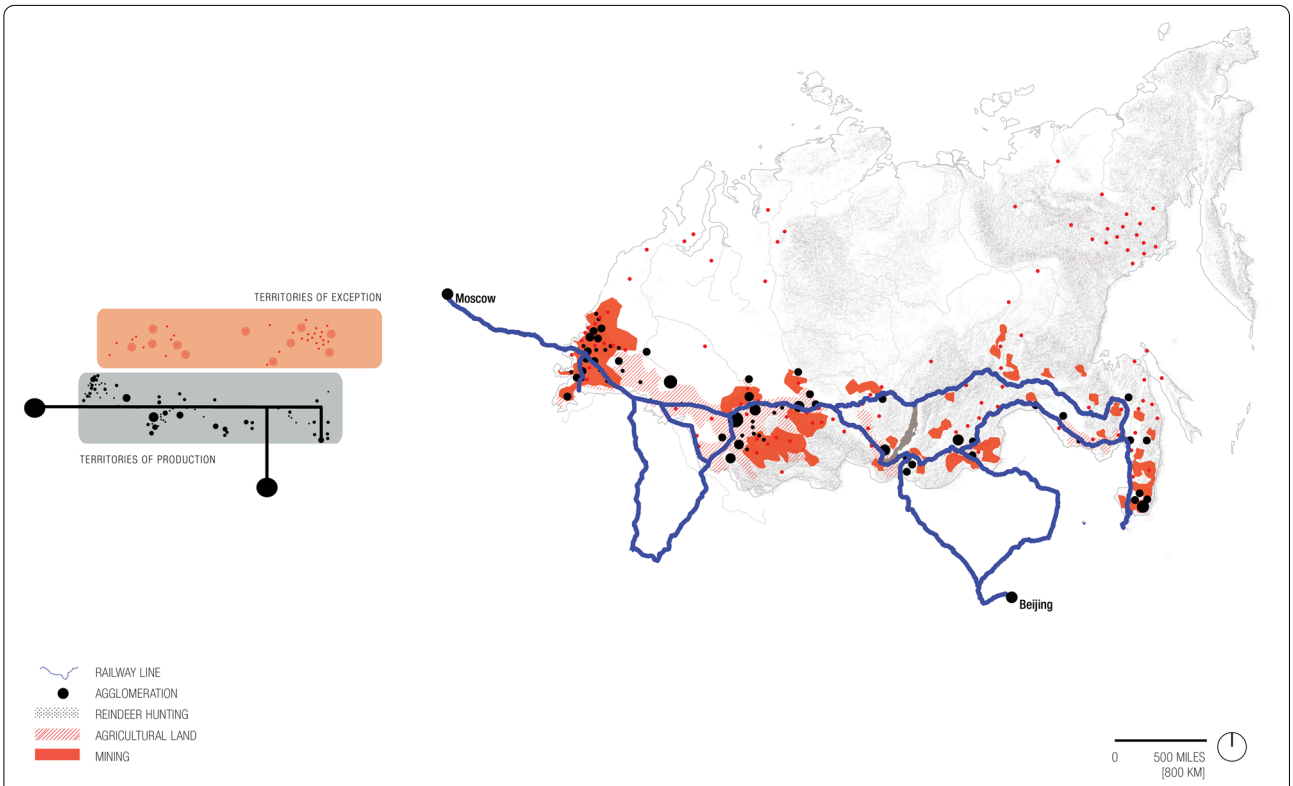

Fig. 2 Siberia: Second spatial regime. The development along the Trans-Siberian railroad includes infrastructures, settlements and areas of production, while the remote North of Siberia is treated as an area of exception. Image credits: Salgueiro Barrio and O'Shea. Image Sources: Drawing 2:Cities: ESRI, Naumov, Wikipedia, Google Maps. Transportation networks: ESRI.Mining and oil:Brown, TJ, RA Shaw, T Bide, et al. "World Mineral Production". British Geological Survey 2013. Keyworth, Nottingham. WebCoburn, Leonard L. "Russian oil- A long term view" International Agency for Energy Economic. Working paper series. (2010). Web. (https://www.iaee.org/en/publications/newsletterdl.aspx?id=105)Grama, Yulia. "The Analysis of Russian Oil and Gas Reserves". International Journal of Energy Economics and Policy. Vol. 2, No. 2 (2012) pp.82-91. Web. (http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&sqi=2&ved=0CDEQFjAA&url=http%3A%2F%2Fwww.econjournals.com%2Findex.php%2Fijeep%2Farticle%2Fdownload%2F185%2F104&ei=DjWMUaH6GJbJ4AOG0IDADg&usg=AFQjCNF2MUx_VCUvekHTS2yEsuJ3K8n4Pw&sig2=L5eDYFZJ6Uo3u3HTpz5aGg&bvm=bv.46340616,d.dmg). Agriculture: Shotskii, V. P. (Vladimir Porfir'evich). Agro-Industrial Complexes and Types of Agriculture in Eastern Siberia. 8 Vol. Budapest: Akadémiai Kiadó, 1979. Print

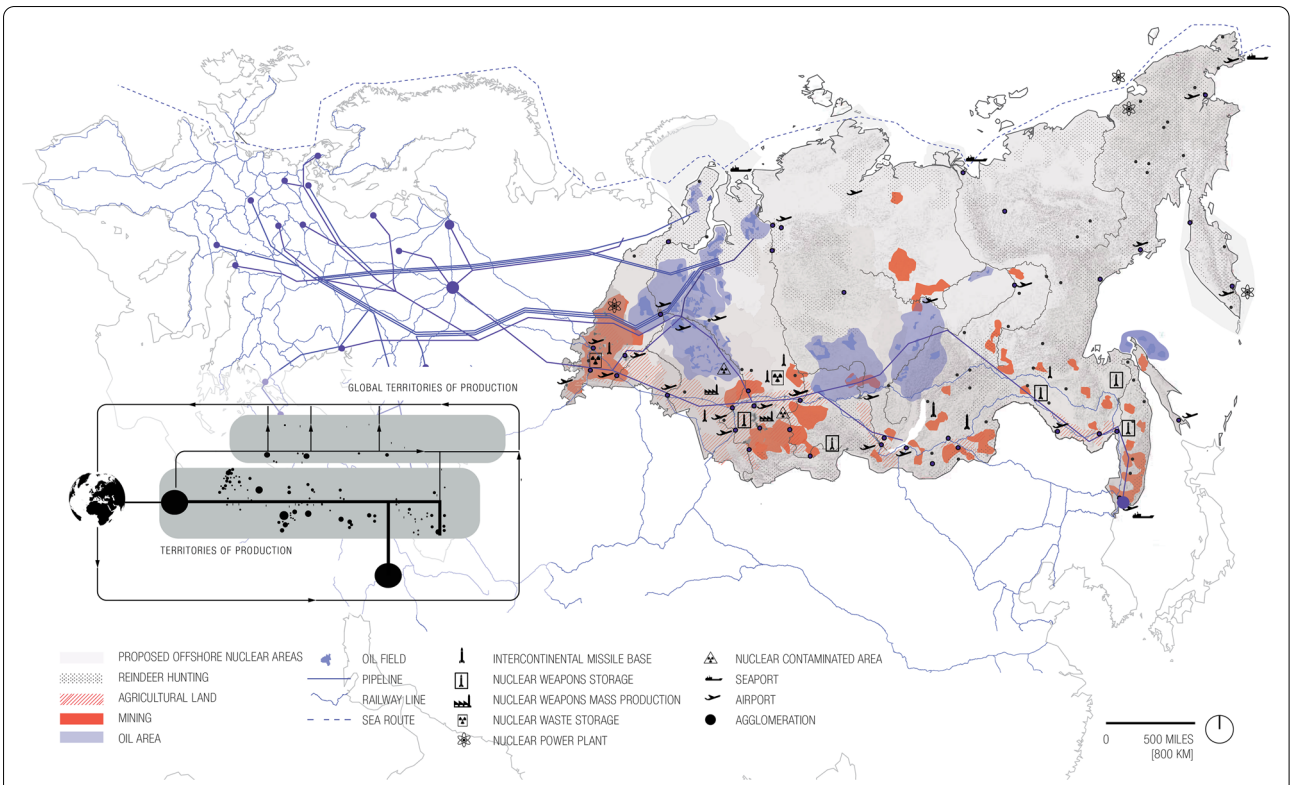

Fig. 3 Siberia: Third Spatial Regime. Oil and gas resource extraction industries colonize the former remote areas of the North and West of the region. The areas of exception become integrated within economic circuits of production. Image credits: Salgueiro Barrio and O'Shea. Image Sources: Drawing 3:Cities: ESRI, Naumov, Wikipedia, Google Maps. Demographics: Russian Census and Wikipedia. Transportation networks: ESRI. Agriculture: http://sedac.ciesin.columbia.edu. Oil Fields:Russian Government Decree number 1715-3 "Energy Strategy of Russia for the period up to 2030,"ROSFNET: https://www.rosfnet.comLUKoil: https://www.lukoil.comPipelines: TRANSFNET https://en.transfnet.ruMilitary Industry: Globalsecurity.orgNuclear Uses: International Agency for Atomic Energy

Khanty-Mansiysk and from the year 2000 on Sakhalin. As in both cases there has been direct participation of the state—through the former Ministry of Oil Industry in Khanty-Mansiysk and through the nationally-owned company (NOC) ROSNEFT in Sakhalin—it is possible to compare the state's role in generating two distinct spatial models. We will consider the regional consequences of the trans-scalar forms of oil urbanization in order to understand how the same phenomenon has generated two distinct modes of relation between concentrated and extended urbanization and two distinct forms of urban fabric (Brenner: 1999, 2000, 2001; Jessop: 2000; Swingedow: 1997, Swingedow: 2000; Smith: 2008 [1984]; Swyngedow, Heynen and Kaika: 2006). As the various urban fabrics of the Siberian territory are now being constructed through the operations of oil corporations, we will analyse the spatial patterns of the NOC ROSNEFT in comparison with those produced by the private company LUKOIL in order to emphasize the relation between the role of the state and the constitution of neoliberal spatial forms.

Khanty-mansiysk

The development of the Khanty-Mansiysk oil region since the late 1960s constitutes the first stage in the formation of the third spatial regime of Siberian urban fabric. It marks the beginning of a subsequent process of generation of remote oil producing regions in Eastern Siberia. The development of this new oil region was the most salient result of a series of initiatives by the Soviet state intended to increase oil extraction in the USSR that were supported by the discovery of oil and gas reserves in Western Siberia. First, the resolution of the USSR Cabinet of Ministers (May, 19th, 1962) "On Measures to Boost Geological Exploration for Oil and Gas in the Regions of Western Siberia", followed by the creation of the Ministries of Oil Industry and of Gas Industry on October, 2, 1965, and by a following agreement on the 23rd Congress of the CPSU (1966) to increase oil production to 380–390 million tons by 1970. On the whole, these initiatives were oriented to the consolidation of a Russian oil industry—already fully developed around Baku—that could support the industrial activities of the USSR and of the countries

of Eastern Europe. In that sense, originally, they were mostly intended to fulfil the necessities of the domestic market. Yet, they soon enabled a scenario that would allow for a deeper involvement of the USSR in the global oil markets, in correspondence with the 1973 oil crisis and with the new status of the USSR as the major producer of oil of the world, and a subsequent dependency on global markets for obtaining revenues. This scenario of internationalization was compounded after the end of the USSR in 1989, generating the most distinctive features of what we consider Siberia's third spatial regime.

Our understanding of the urban fabric developed around the Khanty-Mansiysk oil fields is that it initially constituted a phase of continuity with the ideologies and practices of the second spatial regime of Siberia. It implied a further integration of the Siberian "remoteness", expanding the already consolidated urban fabric along the Trans-Siberian; using for it the same kind of spatial strategies of the post-NEP period. That is, constitution of small size, new agglomerations, creation of associated infrastructures, and internal associated development in the region (Fig. 4).

The Khanty-Mansiysk oil fields are situated on the North of Tyumen Oblast. This is a vast region of Western Siberia which extends from Russian's south border with Kazakhstan to the Arctic coast. Khanty-Mansiysk is an extremely cold area, which is also ecologically sensitive and extremely resistant both to human inhabitation and oil extraction, as 70% of the area is covered by swamps. These difficulties motivated the Soviet government's initial reluctance towards the construction of settlements in the area—the policy supported by the Tyumen regional government—based on its huge economic cost, and the government's alternative support of the exploitation of oil fields through labour force operating on a rotational basis. Yet, ultimately a model of development based on new settlements associated with places of production prevailed (Alekperov 2011).

Accordingly, since the late 1960s a multitude of new towns were founded or existing small settlements were significantly expanded, forming a constellation of cities around the oil fields: Noyabrsk (created in 1975 and reaching a population of 85,000 by 1989), Surgut (founded in 1595, obtaining town status after 1965, and reaching a population of 250,000 by 1989), Nefteyugansk (founded in 1967 and reaching a population of 94,000 by 1989), Kogalym (founded in 1975 and reaching a population of 45,000 by 1989), Langepas (a town since 1985 and reaching a population of 25,000 by 1989) and Megion (a town since 1980 and reaching a population of 40,000 by 1989). This development of forms of concentrated urbanization in the same area of production was paralleled by a similar demographic intensification in the associated "centers" of the region, situated on the southern part of Siberia, such as Tyumen, Ekaterinburg and Cheliabinsk, and by the construction of associated infrastructures of connectivity for humans (motorways) and for resources (pipelines).

Although Bucellatto and Mickiewicz (2009) argue that the organization of the Soviet oil business already generated internal geographies of uneven development, diverted local economic benefits from the region to the Western part of the country, instrumentalized the profits for the military industry, and lessened the inefficiencies of other sectors of production, we find that this pattern of spatial organization joined industrialization to local forms of concentrated urbanization and to regional and national forms of extended urbanization, generating, at least spatially, internal regional development (IWACO Consultants 2001). This pattern, entirely consistent with the logics of the second spatial regime, limits the urban fabric of oil extraction to a regional/national scale (in our case through the connection of the places of production of Khanty-Mansiysk to administrative centers (Tyumen, Moscow), to places of refining (small refineries in Khanty-Mansysk and bigger ones in Nizhny-Novgorod, Volvograd, and Perm) which are, in turn, associated to the final places of consumption (the industries of the Urals).

The power of this structure allowed it to remain stable even after the introduction of transnational forms of extended urbanization through the construction of pipelines to Europe in the 1980s with the help of German capital. In contrast, the post-Soviet model of urbanization is going to mark a clear discontinuity with this model of integration of "remoteness" through the construction of a fragmentary and unequal landscape defined by the spatial dissociation between places of production and agglomerations, and by the intensification of global forms of extended urbanization. The essential trigger for this spatial reorganization has been the post-1991 dissolution of the formerly integrated soviet oil-industry into a myriad of vertically integrated oil companies (VICs), initially mostly private and now both private and nationally owned, that have globally dispersed the processes of production, distribution, consumption and capital accumulation associated to the oil industry. This reorganization has already fractured the urban fabric associated with the Khanty-Mansiysk region. Yet, this new landscape is more clearly represented by Sakhalin, as the intensification of oil production in the area is entirely a product of the post-Soviet socioeconomic regime.

Sakhalin

The development of resource extraction industries in Eastern Siberia (Sakha Republic, Chukotka Autonomous

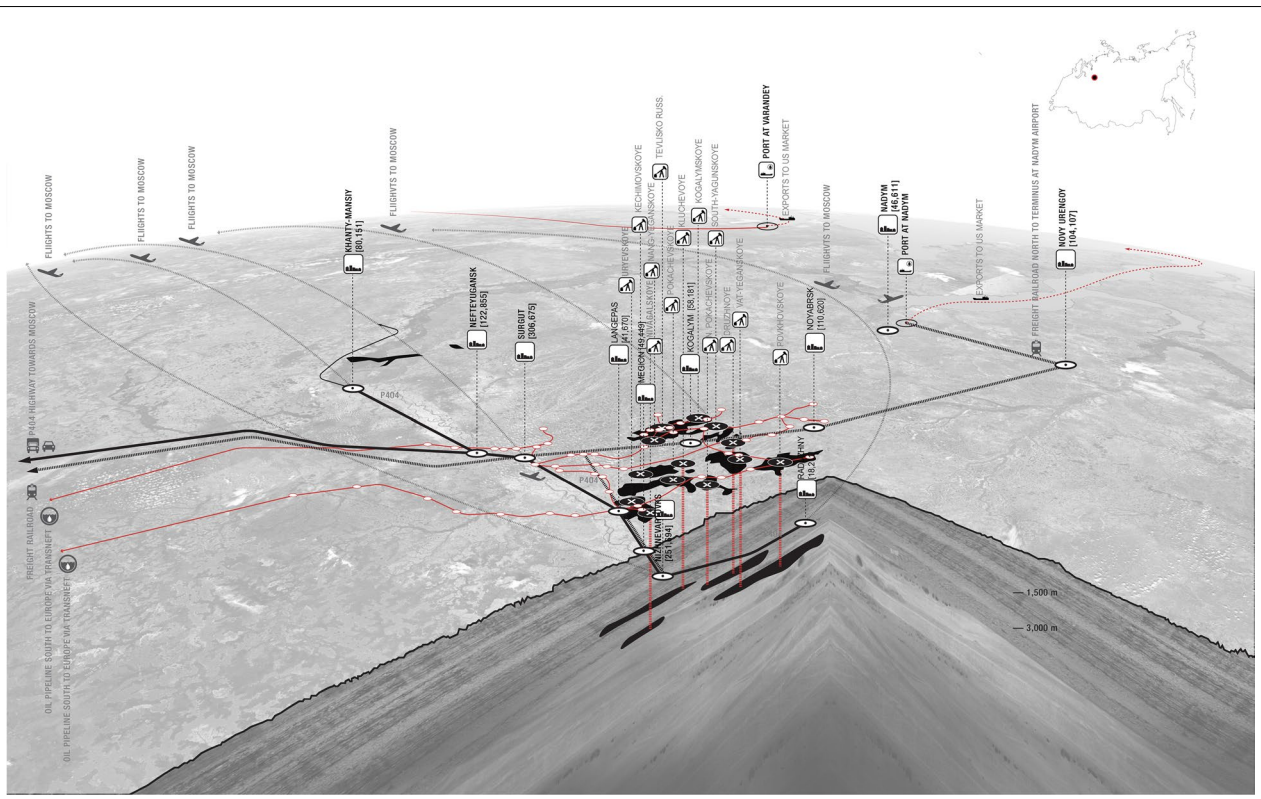

Fig. 4 Urban fabric of the Khanty-Mansyisk oil region, showing the association between new settlements and areas of resource extraction. Image credits: Salgueiro Barrio and O'Shea. Image Sources: Drawings 4: Satellite Imagery: Google Earth Pro. Cities: ESRI, Wikipedia, Google Earth Pro. Transportation Networks: ESRI, Google Earth Pro. Oil production in general:"The Oil Converter." <http://watd.wuthering-heights.co.uk/subpages/oilconverter.html>"To Privatise or not to Privatise."The Economist. January 19, 2013. http://www.economist.com/news/europe/21569756-russi an-government-has-ambitious-plans-privatisationsupposedly-privatise-or-not?zid=298&ah=0bc99f9da8f185b2964b6cef412227be"Russia." U.S. Energy Information Administration. http://www.eia.gov/countries/cab.cfm?fips=RS"Russia: Country Analysis Brief Overview." U.S. Energy Information Administration. <http://www.eia.gov/countries/country-data.cfm?fips=RS >. Oil Fields, Settlements, Infrastructure, Politics, and Economy:Dobretsov, N.L. et al. "Economics and Environment as Factors of Sustainable Development of Siberian Mineral Resources." Proceedings for a Workshop on Deposit Modeling, Mineral Resource Assessment, and Their Role in Sustainable Development. U.S. Department of the Interior, U.S. Geological Survey. 2000. <http://pubs.usgs.gov/circ/2007/1294/reports/paper8.pdf>"Enhanced Oil Recovery - CATF Fossil Transition "Web. 5/17/2013 <http://www.fossiltran sition.org/pages/_enhanced_oil_recovery__eor__/154.php>"Oil & Gas Research | Department of Energy "Web. 5/17/2013 <http://energy.gov/fe/ science-innovation/oil-gas-research>.Grama, Yulia. "The Analysis of Russian Oil and Gas Reserves." International Journal of Energy Economics and Policy. Vol. 2, No. 2, 2012, pp. 82-91. < https://www.econjournals.com/index.php/ijeep/article/download/185/104>"West Siberian Oil Basin - PetroNeft Resources Plc "Web. 5/17/2013 <http://petroneft.com/operations/west-siberian-oil-basin/>. Lukoil:"LUKOIL-Western Siberia on the Advance." Oil of Russia: Lukoil International Magazine." No. 1. 2010. http://www.oilru.com/or/42/858/"LUKoil Fact Book 2009" [http://www.lukoil.com/materials/doc/ DataBook/DBP/2009/Factbook/part2.pdf]"LUKOIL Annual Report 2011" [http://www.lukoil.com/materials/doc/Annual_Report_2011/LUKOIL_AR_ 2011_ENG.pdf]"LUKOIL Analyst Databook" [http://www.lukoil.com/materials/doc/DataBook/DBP/2012/Lukoil_DB_eng.pdf]"LUKOIL Fact Book" [http:// www.lukoil.com/materials/doc/FactBook/2018/Lukoil_OF_eng.pdf]"LUKOIL Overseas Holding LTD: Corporate Report 2011." <http://lukoil-overseas. com/upload/iblock/af7/annual_report_2011.pdf >. Rosneft:"Shareholder Structure." http://www.rosneft.com/Investors/structure/share_capital/Daly, John. "Russia's Rosneft Expanding Global Presence." Oilprice.com March 11, 2013. <http://oilprice.com/Energy/Energy-General/Russias-Rosneft-Expan ding-Global-Presence.html>"IPO" http://www.rosneft.com/Investors/structure/IPO/ "Oil Company: Rosneft."http://ceraweek.com/2013/sponsor/rosne ft/"Rosneft Annual Report 2011" Rosneft Oil Company. http://www.rosneft.com/attach/0/58/80/rosneft_go_2011_eng_gaap_web.pdf

Okrug, and Sakhalin) intensified after the 1990s and is currently in a moment of strong development. According to Russian Government Decree N° 1715-r *"Energy Strategy of Russia for the period up to 2030"*, it is necessary to increase the extraction of the expected oil and gas reserves of Sakhalin, Sakha Republic, Okhost Sea and Eastern Siberia Sea in order to ensure Russia's condition of supplier of the South-East Asia economies. From 1990 to 2006, oil production in the area increased by 235%, while the overall production in Russia decreased by 7%. Yet, this intensification of oil production has been paralleled by a regional demographic loss far greater than the

national one (-8.98% in East Siberia and − 0.69% in Russia) and also associated with a decline in economic diversity (Litvinenko and Murota 2006). This situation has led, in its most extreme cases, to the abandonment and even demolishment of existing Soviet agglomerations.

Sakhalin Island has not been immune to this inverse relationship between intensification of production and lack of local development. Certainly, oil production began on the island in the early twentieth century, and it intensified after the Soviet Union took complete control of the island in the 1940s and initiated a process of simultaneous construction of agglomerations and oil extraction sites, as in Khanty-Mansysk. Yet, Sakhalin remained a relatively minor producer within the USSR.

Since the 1990s, and particularly since the 2000s, this situation has completely reversed. Indeed, by 2030 the Russian government is considering developing eight oil regions surrounding the whole island, turning Sakhalin into the second major beneficiary of Foreign Direct Investment (FDI) in Russia after Moscow, and the major recipient of a single loan by the European Bank of Reconstruction and Development (EBRD) (Bradhsaw 2013). As this huge foreign investment indicates, the new oil fields will be developed through the participation of international corporations (Bradshaw 2013). The Russian state played a vital role in orchestrating the participation of international agents for oil extraction. ExxonMobil (USA), Texaco (USA), Marathon Oil (USA), ONCG (India), Shell (UK, Netherlands), BP (UK) Mitsui and Mitsubishi (Japan) are all involved through Production Sharing Agreements (PSAs) with the nationally owned company ROSNEFT. In fact, apart from the Sakhalin consortium SODECO, which has a 30% share in Sakhalin 1, ROSNEFT is the only Russian oil company that operates on the island.

What is remarkable about our model of the third spatial regime of Siberia is that this globalization of the economic flows, accompanied by a consequent globalization of the flows of distribution, refining and commercialization, generates a trans-scalar urban fabric that does not correspond with internal regional development. In fact, in some aspects, it corresponds with underdevelopment (Litvinenko and Murota 2006). We see in this regard the full impact of capitalist processes of scalar structuring (Smith: 2008 [1984]). The integration of the post-soviet economy into the existing circuits of capital has come in hand with a reinforcement of the major centres of the urban scale, represented in this case in Moscow, and with a consistent integration of Russian production into the global scale of markets. However, as Smith has aptly noted, under late capitalism this dual scalar movement also implies a process of internal, territorial differentiation. Increasing urban centralization of capital corresponds to regional underdevelopment, paralleling inside Russia the international division of developed and underdeveloped worlds.

The corresponding post-soviet urban fabric is a departure from Siberia's second spatial regime, as it abandons former links between production and the creation of regional agglomerations, and neglects the influence of the main axis of Siberian urbanization along the Trans-Siberian in favour of direct integration into global forms of extended urbanization. These three characteristics (absence of internal agglomerations, lack of regional development, direct connection to trans-national flows) and their corollaries (abandonment of the previous spatial regime, instrumentality for capital accumulation, contribution to the development of spaces of concentrated urbanization elsewhere, and constitution of a trans-scalar urban fabric) are the key marks of our speculative understanding of what will be the transformation of the urban fabric associated to oil production in Siberia.

If we compare Sakhalin's urban fabric (Fig. 5) to the previous case of Khanty-Mansyk (Fig. 4), we can observe the following phenomena: whereas new agglomerations were created in Sakhalin during the Soviet period, the current phase of land-use intensification in the island is not accompanied by an increase in population in the existing regional agglomerations (with the only exception of the capital, Yuzhno-Sakhalinsk) or by the creation of new agglomerations. Also, the influence that oil economy had in Khanty-Mansysk for the increase of agglomerations in other areas of the region (Tyumen) has not happened in the case of Sakhalin. So, at the scale of the island, while Yuzhno-Sakhalinsk increased its population from 159,000 in 1989 to 190,000 in 2018, the rest of the cities lost population in the same period: Kholmsk (51,000 vs 28,000), Korsakov (45,000 vs. 33,000), Okha (36,000 vs. 23,000), Nogliki (11,500 vs.10,000) and Poronaysk (26,000 vs. 16,000). At the regional scale the demographic increase in Tyumen (175,000 in 1960 and 450,000 in 1989) contrasts to the loss of population in Khabarovsk Krai, where the closest refinery from Sakhalin is located (1,824,500 in 1989 vs. 1,328,000 in 2020).

Furthermore, both the intensification of infrastructural connectivity and of energy production are essentially oriented to the consolidation of international exports. Despite its many gas and oil deposits, Sakhalin neither has a gas service or internal pipelines for the whole island, neither has an electricity grid, and is still essentially dependent on the consumption of coal. The rail infrastructure was built by the Japanese during their occupation of the island, and has not been expanded during the post-Soviet period. In fact, the only ongoing operation is its conversion to the Russian railway standards, and not until 2030 does the Russian railroad strategy plan to build

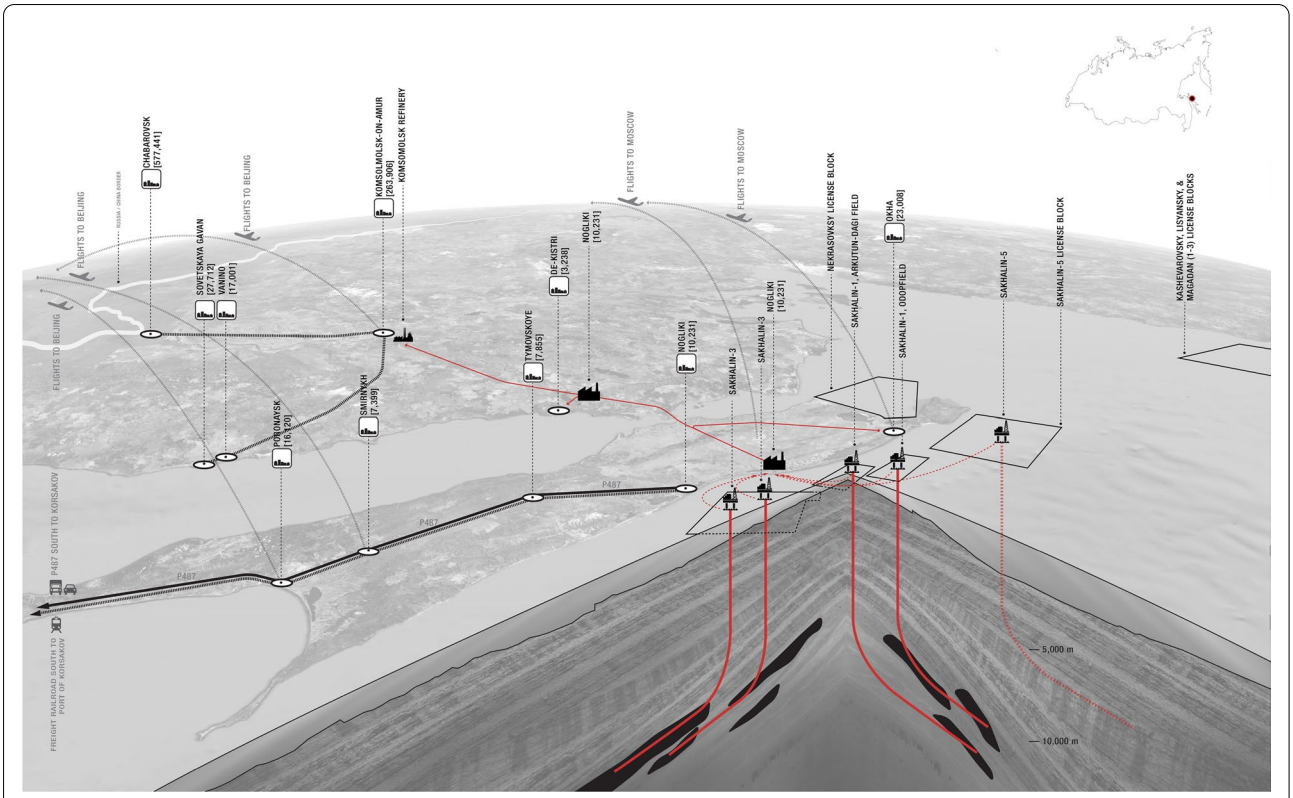

Fig. 5 Urban fabric of Sakhalin Island, showing the dissociation between settlements and areas of resource extraction, and the trans-scalar articulation of the extraction economies through systems of international transport. Image credits: Salgueiro Barrio and O'Shea. Refer Fig. 4

new lines in Sakhalin and a connection with inland Russia. Maritime and aerial transport suffer from the same lack of connections to the continent. In contrast, the airport has regular flights to Alaska, Hokkaido, Seoul and China, and a system of pipelines is under construction to directly provide with Sakhalin's oil major foreign agglomerations such as Tokyo, Seoul and Beijing and, through the connection to existing networks, Zhengzhou, Nanjing, and Shanghai (Bradshaw 2003).

David Held, Anthony McGrew, David Goldblatt and Jonathan Perraton define globalization as "'a process (or set of processes) which embodies a transformation in the spatial organization of social relations and transaction—assessed in terms of their extensity, intensity, velocity and impact—generating transcontinental or interregional flows and networks of activity: interaction and exercise of power" (Held et al. 2000). Michael Bradshaw uses this as a theoretical framework to describe the ongoing socio-spatial processes that affect Sakhalin. In Bradshaw's analysis, these characteristics of globalization are evidenced by: a) the transnational extension of the agents operating in Sakhalin; b) the inscription of the island in the dynamics of global geopolitics and energetic strategies; c) the dependency of Sakhalin's development on global economic flows, such as the 1997 Asian financial crisis, rather than on the internal economic situation; and d) the intensification of the international communication system. Globalization would also be present in the formation of an interconnected global and local society. For example, an alliance between international NGO's and native populations in defence of environmental or anthropological values.

At this point we would like to come back to our initial discussion about the presence of a hidden neoliberal condition lurking behind the presumed re-nationalization of the oil business in Russia and to the possible instrumentality of the state in the configuration of a neoliberal regime. As we sketched in the introduction, we have not considered neoliberalism as an a priori condition but as a regime which could be revealed through its effects in the configuration of the physical development associated with material processes such as oil production which, in our view, are central for understanding how the third phase of Siberia's urbanization is being constituted.

In this sense, the trans-scalar urban fabric associated with Sakhalin is not only characterized by the intensified global connectivity of Bradshaw's description, but by new geographies of uneven regional development

of the neoliberal regime. That, and not the urban integration of remoteness or globalization, is precisely the major departure from the previous spatial model. The diverse elements of our description of this new urban fabric (the lack of internal agglomerations, the tenuous links with other regional agglomerations, the direct trans-scalar jump to global networks and to external agglomerations) are from this point of view both the symptoms and the mechanisms of the primary phenomena at stake: the enclosure of common resources, and the consequent dissociation between the locus of production and the locus of capital accumulation.

The role of the Russian state in the constitution of this socio-economic regime and its correlative geography, even after the partial renationalization of the industry, takes place at multiple levels. In the broadest sense it is the perverse result of the transformation of post-soviet economy from an industrial country to an oil and gas producing country which, after a first phase of primitive accumulation through the total privatization of the oil industry and the constitution of VICs lead to the increase of importance for the state of the control of the flows and the metabolism of oil and gas production (Harvey 1989). But this intervention of the state has not been employed for a redistributive process, nor has it been part of a national-developmentalist conception of economic activity. It has been, rather, a fundamentally regressive step in the co-evolutionary processes linking technology, nature, and society promoted by neoliberalism (Harvey: 2010). In this context, the Russian state has aimed to operate as the leading sphere, creating institutional arrangements that manage the operationalization of Siberian's former remoteness, and its integration in planetary circuits of production.

As such, since the partial renationalization of the oil industry in the 2000s this control is organized through three particular mechanisms which are direct contributors to the new geographies of uneven development: 1) a tax system oriented to obtaining state revenue rather than regional revenues (in the case of Sakhalin the state obtains 100% of the taxes on oil production) without any guarantee of reinvestment in the region; 2) the promotion of foreign international capital through PSAs associated with ROSNEFT as the primary method for developing new oil fields; and 3) the correlation of the later trend with what Joachim Hirsch and John Kannankulam (2011) term as the privatization of politics: "the result of a strategy designed to extend private property rights and open up new investment opportunities for capital. The states are confronted by internationally operating companies, actors whose weight has increased considerably. This means that politics is increasingly taking place in state–private negotiation and decision-making structures that are almost impossible to control".

In this sense, even if the state is operating through the nationally owned company ROSNEFT, the forms in which these operations take place are oriented towards luring foreign capital and creating an autonomous economic sphere separate from actual democratic control. In the end, the Russian state is involved through ROSNEFT in the generation of a spatial model which does not differ essentially from that promoted by a private corporation. Because of that, we will finalize our argument about the consistency of the new geographies of Siberia with the general geographies of neoliberalism complementing our diachronic comparison of the late Soviet spatial regime of Khanty-Mansysk with the post-soviet one of Sakhalin with a synchronic comparison between the metabolism and corresponding forms of extended urbanization of the NOC ROSNEFT and the private company LUKOIL.

The extended urbanization of corporations: LUKOIL and ROSNEFT

The emergence of a post-Soviet regime after 1989 was politically oriented towards converting the Soviet economic system into a Western-like market economy, thereby dismissing any possibility of developing a "third way" (Collier 2011). Essential in that process was the general privatization of formerly state-owned resource industries, such as oil and gas. Effective after 1992, this policy fragmented the Soviet oil and gas industry into a range of private companies—although the state occasionally remained a shareholder in them—and the preservation of a small nationally-owned company, called ROSNEFT (Alekperov 2011). Privatization thus generated a constellation of corporations which, in turn, produced new associations between spatial structure and corporate strategies. In that sense, while the urban fabric constituted by the intermingling of concentrated and extended urbanization of late Soviet Khanty-Mansysk could be analysed as a single, stable set of relations between places of production and diverse external locations, the post-Soviet conditions of Siberia imply the multiplication, fragmentation and fragility of the urban fabric in correspondence with the changing variety of the agents involved and with their diverse interventions, procedures, etc. In the same way that the dynamics affecting regional agglomerations (concentrated urbanization) become subject to the changes of the corporations operating in that location and to their policies in relation to the organization of labour, the fabric of extended urbanization is also constantly reconfigured as changing corporate alliances, capital flows, etc. reformulate the only relatively stable network of sites of production, processing, and connective infrastructure. In that sense, while

our third spatial regime proposes a general framework for the reconfiguration of Siberia, this regime is characterized by a multiplication/fragmentation of the fabrics of extended urbanization associated with it.

In order to finally describe this type of fabric of extended urbanization we have to characterize the diverse corporate landscape. Because of its changing nature, this corporate landscape is best apprehended through a metabolic analysis of its industrial (production, distribution, refining and sales) and capital flows. In the comparative analysis of the metabolism of LUKOIL and ROSNEFT we will see that there are no significant differences between the extended urbanization of the private company LUKOIL and of the nationally owned company ROSNEFT. Both are producing a trans-scalar urban fabric, extending from their respective locus of production to distant worldwide geographies.

In the analysis of the metabolic flows associated with industrial processes, we find an equivalent large number of Russian sites of production in both companies. The major difference here is that, while LUKOIL is essentially dependent on the existing fields of Western Siberia—and therefore subject to a major concern about depletion—ROSNEFT has also obtained licenses for exploring the most promising new oil producing areas of Russia: Sakhalin, Vankor and the Arctic Seas. As a result, LUKOIL is increasingly involved in extraction operations outside Russia, a trend less present in ROSNEFT, although its collaboration with BP or ExxonMobil does allow ROSNEFT to participate in explorations abroad (Bloomberg 2011, LUKOIL 2011, ROSNEFT 2011).

LUKOIL has established a clear international geography for the processes of refining (with refineries in Russia and along the Mediterranean and Atlantic coast), distribution and sales (through oil stations) which is still incipient in the case of ROSNEFT (which operates eight refineries in Germany). However, in both cases the most significant share of the business is the direct exportation of crude oil and, in this case, through the organization of PSAs (Production Sharing Agreements) ROSNEFT is generating a more diverse international geography.

This leads us to our second question, which is the analysis of capital flows. As we have already described, ROSNEFT is the Russian Government's representative in the organization of PSAs with foreign companies, which has implied a strong presence of foreign capital in the development of most oil fields. The economic organization of the PSAs usually states that 80% of the possible profit of the operation belongs to the NOC through which the state operates.

But, ROSNEFT's capital structure is, in fact, also private. While during the 1990s and 2000s LUKOIL went through a process of externalization of capital, followed by a partial capital renationalization, which implied the involvement of a variety of national and local shareholders, ROSNEFT has constantly increased the presence of private and international capital (Reed 2013). This process started in 2006 with an initial public offering at the London Stock Exchange which allowed BP (UK), PETRONAS (Malaysia) and CNPC (China) and three major individual shareholders, Roman Abramovich, Vladimir Lisin, and Oleg Deripaska to become part of its capital structure. This internationalization, and privatization, of the NOC's capital has continuously increased. In 2009, by securing a 20-year credit by the Chinese Bank of Development and, since May 2013, with the increase of BP's ownership share of ROSNEFT to 19.75% (New York Times 2013).

In this sense, it is increasingly difficult to differentiate the NOC quality of ROSNEFT versus the private condition of LUKOIL, as our representation of capital and production flows show (Fig. 6). As previously noted, there are still some differences in the metabolic processes associated with oil extraction and refining, but these are diluted when analysing distribution and sales. That is, while LUKOIL operates mostly on the spatial conditions produced during the Soviet territorial regime, and ROSNEFT in the territorial conditions produced after the Soviet collapse, today both the private company and the NOC produce a similar global metabolism. Furthermore, in terms of capital flows, ROSNEFT is involved in a process of semi-privatization and internationalization. This late factor is of crucial relevance for understanding relations between concentrated and extended urbanization, and for the analysis of the specific urban fabrics produced by oil extraction. While it is extremely difficult to specify agglomerations directly linked to the distribution of the material (with the exception of places of refining) it is more evident which agglomerations are involved in the dynamics of capital accumulation through the dispossession of Siberian natural resources.

Conclusion

The post-Soviet urbanization of Siberia reconfigured the previous spatial regime. In this contemporary period there is a constant process of land use intensification associated with mineral extraction and, especially with oil and gas extraction which is paralleled by an equivalent intensification of connectivity, happening mostly through pipelines and railroad transportation, but also through the intensification of air connections. Importantly, this process is not operating in the same terms as the previous spatial regime, in which there was a simultaneous development of forms of extended and concentrated urbanization (even a predominance of territorial expansion through concentrated urbanization)

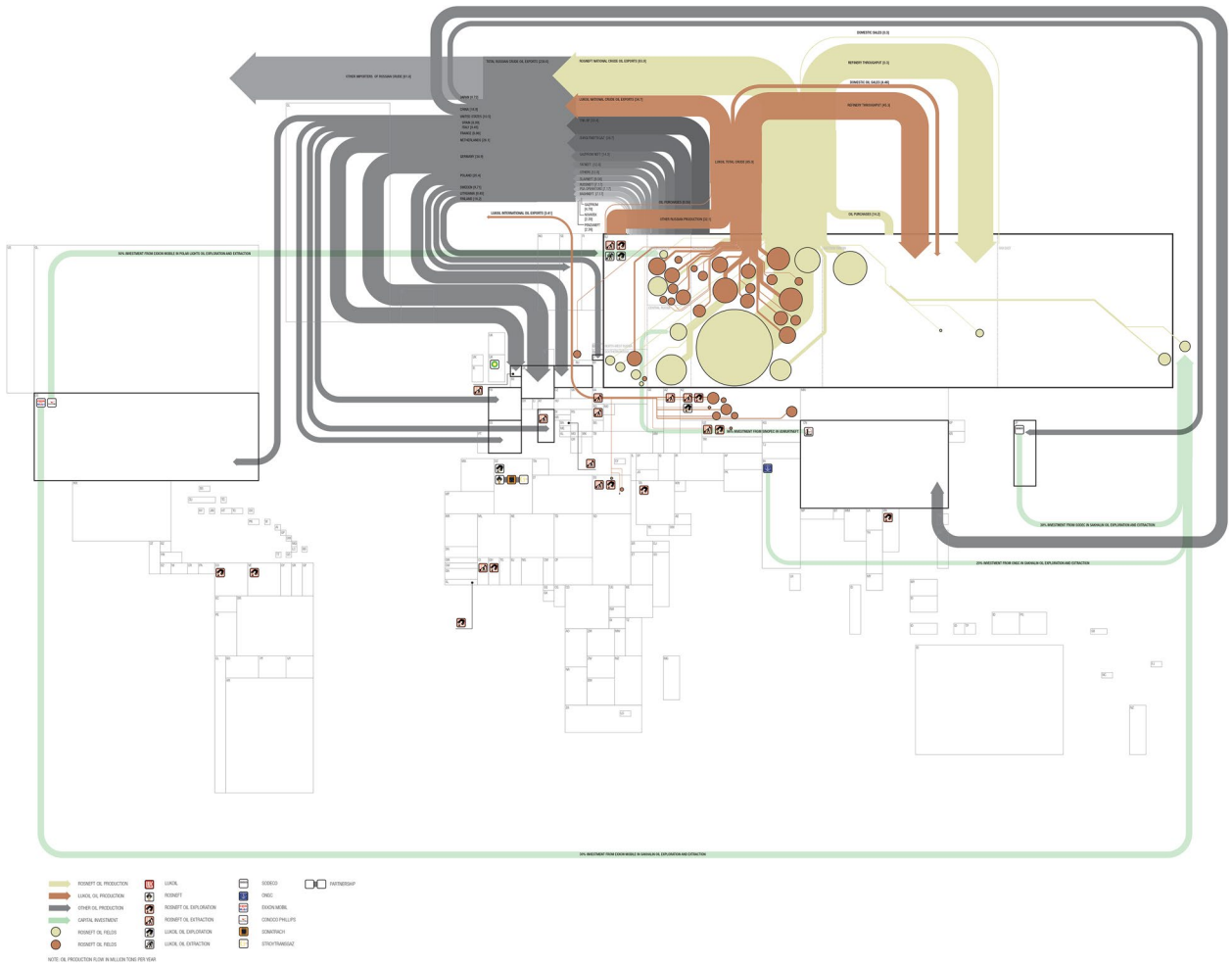

Fig. 6 ROSNEFT's and LUKOIL's capital and production flows. Image credits: Salgueiro Barrio and O'Shea. Refer Fig. 4

associated with internal regional development and the consolidation of a national economy. In this new phase, trans-scalar forms of extended urbanization which reach a planetary scale are associated with divergent forms of concentrated urbanization: a stagnation or decrease at the regional scale and a contribution, through capital flows, to concentrated urbanization elsewhere. This divergent process is mediated through a planetary urban fabric that includes the oil extraction fields and their declining, associated cities, infrastructures of transport, associated agglomerations for refining and distribution, the conglomerate of sales points and, of course, a center of power and capital accumulation situated far from the local contexts of production. The constitution of the third spatial regime of Siberian urbanization is mainly driven by the collaboration of two kinds of actors. The Russian state (and, together with it but in a minor way, the diverse forms of government of the Russian Federation) and the corporations. The Russian state is treating oil and gas extraction as the main drivers of economic activity. Despite the state's strong hand in economic activity, it is fully invested in constituting the appropriate landscape for the activities of the corporations; a landscape in which internal regional development is only a residual concern. In parallel, both private and NOC corporations are creating a trans-scalar urban fabric dissociating materials from local context, and reassociating them to global material and capital flows. In this operation, in the Russian context, the distinction between nationally owned companies and private companies is not operative, as it impedes understanding the crucial role both types of corporations play for the generation of a trans-scalar urban fabric operating within, and co-constructing a, global context of generalized neoliberalization.

Note on the impact of the Russian invasion of Ukraine

This article was written before Russia's dramatic invasion of Ukraine, an aggression which fiercely points to an

increasing geopolitical reconfiguration of the global neoliberal order. The full socio-political and geographical consequences of this conflict are still to grasp. For now, the war has implied a partial disconnect of Western companies as BP and Shell from their Russian counterparts, and the EU's attempt to diminish its dependency from Russian energy sources. Yet, this initial disconnect—the duration of which is still to know—may only imply a geographic displacement of the existing order of planetary entanglements of finance, resource extraction and urbanization. The potential reinforcement of the alliance between Russia and China is just a sign of that possible geographical reordering. Unfortunately, it is unlikely that the impact on the ground of this alliance will diminish the trend towards the exploitative operationalization of former wilderness within planetary urban networks.

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Author contributions
RSB and COS are equally responsible for the research, mapping, andwriting of this article. Both authors read and approved the final manuscript.

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Availability of data and materials
In addition to the references included in the article, the datasets analysed during the current study are publicly available in the webpages of the oil production companies we studied. LUKOIL's main page is: https://www.LUKOIL.com. LUKOIL's annual reports are at: https://www.LUKOIL.com/Search?q=annual%2520report. NOC ROSNEFT main page is: https://www.rosneft.com/. NOC ROSNEFT's annual reports are at: https://www.rosneft.com/Investors/Reports_and_presentations/Annual_reports/. All the demographic data used comes from https://www.wikipedia.org/

Declarations

Competing interests
The authors declare that they have no competing interests.

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References

Alekperov VI (2011) Oil of Russia: past, present and future. East View Press, Minneapolis, MN
Bloomberg (2011) Exxon Wins Russian Arctic Access. Bloomberg News, August 30, 2011. http://www.bloomberg.com/news/2011-08-30/exxon-wins-russian-arctic-access-in-deal-opening-gulf-of-mexico-to-rosneft.html.
Bradshaw M (2003) Prospects for oil and gas exports to Northeast Asia from Siberia and the Russian Far East with a particular focus on Sakhalin. Sibirica Interdiscip J Siberian Stud 3(1):64–86. https://doi.org/10.1080/1361736032000168030
Brenner N (1999) Beyond State-centrism? space, territoriality, and geographical scale in globalization studies. Theory Soc 28(1):39–78
Brenner N (2000) The Urban question: reflections on Henri Lefebvre, Urban theory and the politics of scale. Int J Urban Reg Res 24(2):361–378
Brenner N (2001) The limits to scale? methodological reflections on scalar structuration. Prog Hum Geogr 25(4):591–614
Brenner N, Schmid Ch (2011) Planetary urbanization. In: Gandy M (ed) Urban constellations. Jovis, Berlin
Brenner N, Schmid Ch (2015) Towards a new epistemology of the urban? City 19(2–3):151–182
Bucellatto T, Mickiewicz T (2009) Oil and gas a blessing for the few hydrocarbons and inequality within regions in Russia. Europe Asia Stud 61(3):385–407
Collier SJ (2011) Post-Soviet social: neoliberalism, social modernity, biopolitics. Princeton University Press, Princeton, NJ
IWACO Consultants (2001) West Siberia oil industry: Environmental and social profile. Greenpeace final Report. https://www.greenpeace.org/static/planet4-netherlands-stateless/2018/06/west-siberia-oil-industry-envi.pdf
Elden S (2013) The Birth of Territory. The University of Chicago Press, Chicago
Harvey D (1989) From managerialism to entrepreneurialism the transformation in Urban governance in late capitalism Geografiska Annaler. Ser B Hum Geogr 71(1):3–17. https://doi.org/10.1080/04353684.1989.11879583
Harvey D (2010) Capital Evolves. The Enigma of Capital. Oxford University Press, Oxford, pp 119–140
Held et al. (2000) Rethinking Globalization: an analytical framework. In the global transformations reader: an introduction to the globalization debate. Malden, MA: Polity Press, 54-61.
Hirsch J, Kannankulam J (2011) The spaces of capital: the political form of capitalism and the internationalization of the state. Antipode 43(1):12–37
Jessop B (2000) the crisis of the national spatio-temporal fix and the ecological dominance of globalizing capitalism. Int J Urban Reg Res 24(2):323–360
Lefebvre H (2003) [1970]) The urban revolution. University of Minnesota Press, Minneapolis, MN
Litvinenko TV, Murota T (2006) The spatial transformation of natural resource utilization and associated social and ecological problems: a field study on Eastern Siberia and the Russian Far East. Sibirica 8(3):22–52 (**Interdisciplinary Journal of Siberian Studies**)
Naumov IV (2006) The history of Siberia. Routledge, London, p 2006
Reed S (2013) Rosfnet completes acquision of TNK-BP. The New York Times, March 21, 2013. http://www.nytimes.com/2013/03/22/business/global/rosneft-finalizes-acquisition-of-tnk-bp.html?_r=0
Schmidt VA (2009) Putting the political back into political economy by bringing the state back in yet again. World Politics 61(3):516–546
Smith N (2008) Uneven development: nature, capital, and the production of space. University of Georgia Press, Athens (**1984**)

Swingedow E (1997) Neither Global nor Local: 'Glocalization' and the Politics of Scale. In: Cox K (ed) Spaces of Globalization. Guilford Press, New York, pp 137–166
Swingedow E (2000) Authoritarian governance, power and the politics of rescaling. Environ Plan Soc Space 18(1):63–76
Swyngedouw E, Heynen N, Kaika M (2006) Metabolic Urbanization: the making of Cyborg Cities,". In the Nature of Cities: Urban Political ecology and the politics of Urban metabolism. Routledge, London, pp 21–40
Wood A (ed) (1991) (1991) The history of Siberia: from Russian conquest to revolution. Routledge, London

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