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Green to Gray: Political Ecology of Paving Over Green Spaces in Moscow, Russia

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Green to Gray: Political Ecology of Paving Over Green Spaces in Moscow, Russia

Abstract

Moscow, Russia is the largest city in Europe with over 12.6 million residents. The remarkable fact is that it is also a biologically diverse ecosystem with a few dozen specially protected natural areas, including 15 large forest parks and a variety of smaller nature-places. The recent landscaping “improvements” conducted by the Moscow government since 2010 greatly increased negative impacts on the green infrastructure, e.g., a lot more paving, systematic grass mowing, widespread planting of exotic plant species, increased residential and commercial construction, more noise, etc. While quantification of the impacts of the above on the biota is not easy, we offer some insights into the changes over the last 10 years with respect to birds, insects, and plants within a few green spaces inside the city beltway. We then proceed to analyze these changes from the political ecology perspectives by looking at what Moscow residents feel and how they interact with the now more controlled nature and how nonhuman actors interact with the residents. Paradoxically, some developments may have actually increased contact opportunities for the residents with certain elements of nature, while at the same time forcing the wilder natural elements to retreat away from the city and give way to lawns and other controlled substrates.

Keywords

Moscow, urban green spaces, political ecology, biota assessments

1 INTRODUCTION

According to the environmental conflict thesis of Paul Robbins (2012: 208), “despite the very material character of environmental struggles around the world, it is often concepts and constructions of community and nature that propel or suppress the conflict.” Indeed, a major component of research missing from the literature on the post-Soviet urban spaces is the political ecology approach involving urban populations and local natural areas and elucidating their mutual construction. Political ecology, broadly, is a critical approach that interrogates nature-society relations from multiple post-positivist perspectives, unlike traditional ecology, where nature is presumed to be an objective reality independent of the society (Watts 2000). Moscow green spaces provide a good case study to use the political ecology approach, because on the one hand, western and southern political ecologists do not have first-hand expertise in the post-Soviet urban landscapes and the region is missing from the recent reviews of literature on political ecology (Gabriel 2014; Heynen 2014; Turner 2016). On the other hand, Russian scholars rarely employ critical geography approaches in urban studies and stick instead to the more familiar narratives of quantifiable landscape change as seen, for example, from satellites, or as embedded in the local economic assessments and land use plans (Kirillov et al. 2019; Prishchepov et al. 2016). Many Russian geographers have traditionally focused on the formal economic or physical landscape analyses, eschewing the more diverse approaches that were embraced by geographers elsewhere (Graybill 2007; Kolossov et al. 1996). Therefore, we see a gap in our understanding of urban developments in the post-socialist cities and an opportunity to apply some critical tools to uncover the coproduction of nature and society in the largest city in Europe. In this paper, we aim to interrogate some of the recent changes in Moscow green spaces from the perspectives of political ecology with some additional insights provided by more traditional positivist assessments of the city ecology as observed on the ground and in the city management plans. This study does not aim to be an in-depth comprehensive account, rather outlines a few trajectories for the future geographical research.

Broadly, there are four entities that we find are actors in the political ecology narrative of Moscow of today: the city government with its bureaucrats and experts, the activist ecologists, the general public who are both producers and consumers of natural spaces, and finally the non-human components of the urban ecosystem, e.g., plants and animals, but also soils, waters, and airsheds. Their interactions are producing the urban green spaces in somewhat ambiguous and unexpected ways. This paper shows a few possible interactions in greater detail as an invitation for more substantial future research.

The following four research trajectories are discussed below:

- 1) How does the city government justify its actions of wholesale reconstruction of major swaths of the city green spaces, many of which are nominally protected and should not be subject of (re)development? While stated goals seem environmental benign, the practice of exclusion and coercion of the local residents and even scientists who work for the city results in dramatic reshaping of the previously coherent and reasonably healthy parksapes. This may be analyzed from the perspective of the conservation and control thesis of Robbins (2012) and primarily results in tensions arising between the official pro-government experts on the one hand and the environmental activists on the other (the line between city government vs activists on top of Figure 1).

- 2) What new environmental subjects and identities emerge from the engagement between the city agents and the public at large? The main interaction here is between the city policy makers and the city residents. Such users may be environmentally aware and active, or they may be more passive consumers of nature in the city. In Figure 1, this interaction fits on the vertical axis on the left side of the diagram (city government vs. residents). We find a number of interesting examples of emerging new identities in the city.
- 3) What networks form between human and non-human actors in and around the city green spaces? This is one of the most interesting, and least studied, topics in the Russian geographical literature, where non-human agency is rarely considered. In Figure 1, this is the interaction along the bottom of the diagram (residents vs. nature).
- 4) Finally, is it true that overall Moscow environment has become increasingly degraded in the last 10 years as usually bemoaned by the environmental activists? The short answer is yes, but there are many qualifiers to that. In Figure 1, this is the interaction along the right side of the diagram (activists vs. nature).

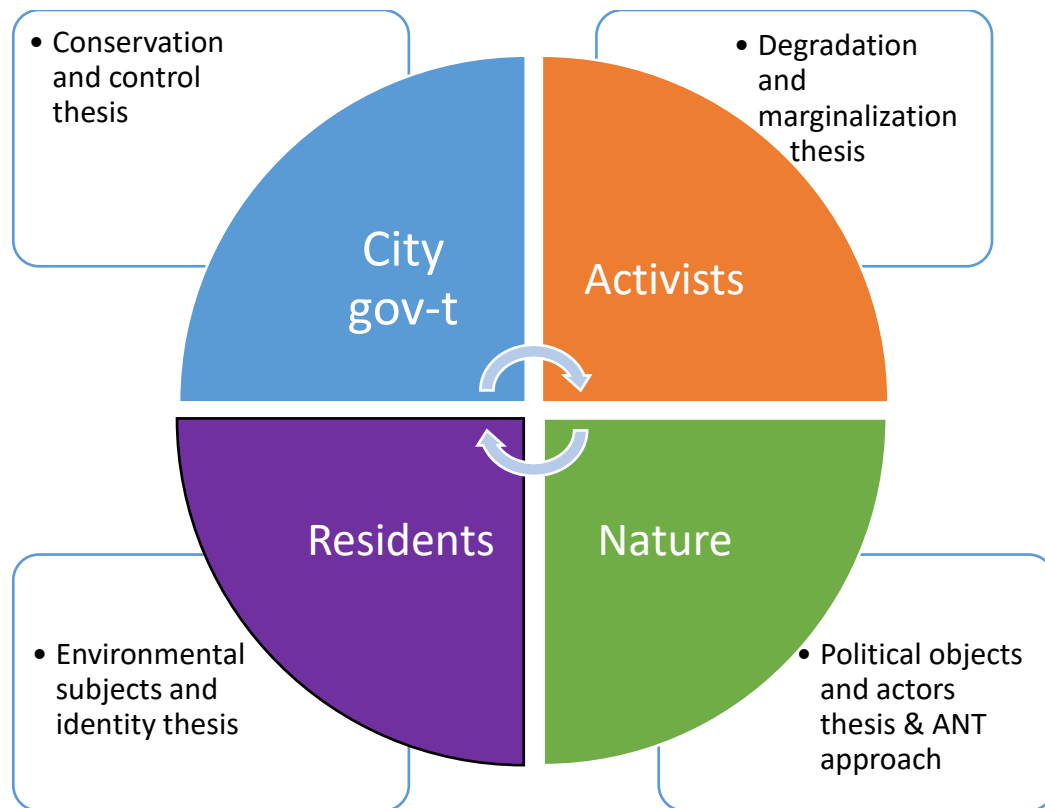


Figure 1. Theoretical framework of this study using four theses of P. Robbins (2012) and Actor-Network Theory.

2 STUDY AREA

Moscow is the biggest city in Europe by population estimated at 12.6 million in 2020 and the area of slightly over 2,500 km² (State Committee on Statistics of the Russian Federation 1 2020). It is thus unique and is the only true megacity in the post-socialist space of Northern Eurasia. It is one of just four major Russian cities that increased in size between two last censuses (2002 and 2010) and continued to expand since (State Committee on Statistics of the Russian Federation 2 2020). The first Soviet General Plan of Moscow (“Genplan 1935”) had explicitly acknowledged the need for limiting city size and protection for a forest buffer around the growing city, envisioned as a wide “green belt” of forest-parks. Following the leads of London, New York, and Paris, but under very different political and economic conditions, Soviet planners attempted to harmonize the urban spread with the need to preserve clean, green areas for hygienic and recreational purposes in the form of Russian new urbanism. The deforestation of the green belt has been always a threat (Rodoman 1974), but it particularly accelerated since the neoliberal reforms under Boris Yeltsin (1992-1998) and with the advent of the automobile-driving “middle class” and especially new wealthy Muscovites interested in escaping the city for the slice of suburbia, frequently in a gated community (Blinnikov et al. 2006; Boentje and Blinnikov 2007). Still, Moscow City was a well-confined subject of federation until 2012, with an area of 1,045 km², with the bulk of it (~900 km²) contained within the Moscow Beltway (*Moskovskaya Koltsevaya Avtomobilnaya Doroga*, or MKAD, built in 1960) (Figure 2). Surrounded by the Moscow Oblast (a different subject of federation), Moscow City has been steadily encroaching upon its less prestigious neighbor (O’Loughlin and Kolossov 2002), but has not formally spilled over until a major increase in the city area was announced in 2011 (Sobyanin2011). This so-called New Moscow or *Novaya Moskva* effectively added the area of about 1,500 km² to the Moscow city and increased the total by a factor of 2.4. In this study, we limit ourselves just to the traditionally defined old Moscow, without the new additions.

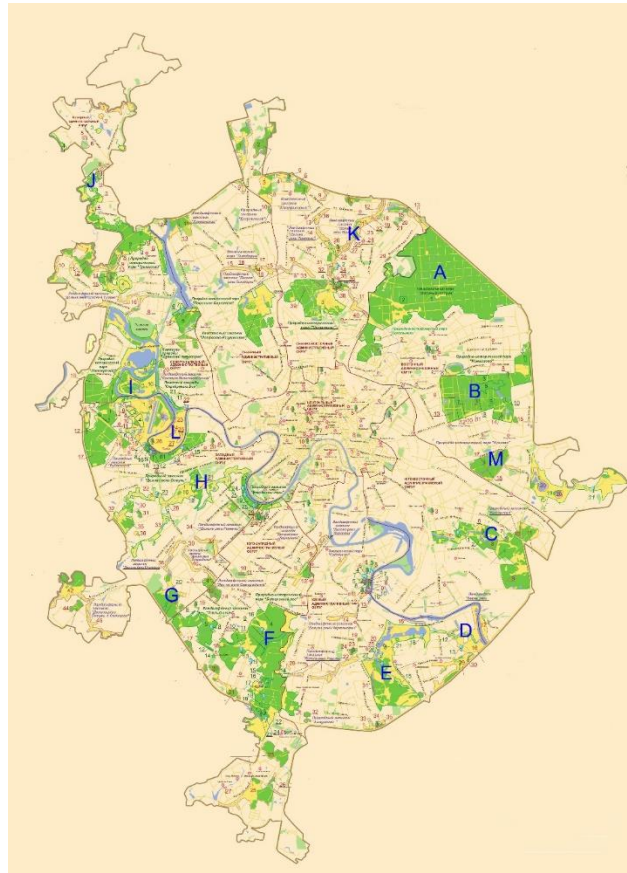


Figure 2. Map of Moscow's specially protected natural areas (SPNAs). Dark green –forested and dark yellow – non-forested areas inside existing and planned SPNAs, light green-forested areas outside SPNAs. Letters refer to the areas mentioned in text: A – Losiny Ostrov National Park, B – Izmailovo Park of Nature and History, C – Kuzminki-Lyublino Park of Nature and History, D – Brateevskaya Poyma Wildlife Zakaznik, E – Tsaritsyno Park of Nature and History (with Borisovskie Prudy), F – Bitsevsky Les Park of Nature and History, G – Troparevsky Landscape Zakaznik, H – Setun River Valley Nature Zakaznik, I - Serebryanny Bor Nature Monument, J – Skhodnya River Valley in Kurkino Nature Park, K - Yauza River Valley Landscape Zakaznik, L – Mnevniki Floodplain (part of Moskvoretsky Pary of Nature and History), M – planned Kuskovo Park of Nature and History. Source: Department of the Environmental Management and Protection of Moscow (DEMP). Full map in high resolution is available at: <http://www.dpioos.ru/eco/image?objectId=8770>

We are interested in studying ecologies of all Moscow city green spaces, but primarily focus on specially protected natural areas (SPNAs) controlled by the Department for Environmental Management and Protection of Moscow (DEMP) as seen on Figure 2. While many such spaces are essentially urban parks, a common word “park” is problematic, because it is not unequivocally defined under Russian law. Moscow Government’s main portal *mos.ru* has an interactive map (www.mos.ru/map) showing 904 “parks” in the city ranging from tiny playgrounds of a few 100 square meters to the largest of all, the National Park Losiny Ostrov covering 3,077 ha within Moscow city limits (Ministry of Natural Resources of the Russian Federation 2011). In fact, some such “parks” are merely tree and shrub covered areas inside urban city blocks without much legal protection, while others are SPNAs under the law. Formally, the Federal Law of the Russian Federation “On Protected Natural Areas” of 14.03.1995 envisions strictly protected scientific reserves or *zapovedniks* (Title II of the law) (Weiner 1988), national parks (Title III), *zakazniks* or wildlife sanctuaries (Title V), and nature monuments (Title VI). At the regional level, nature parks, *zakazniks*, or nature monuments can also be created. The City of Moscow is its own subject of federation corresponding to the state level in the USA and as such can have its own protected areas (Sobolev et al. 1996), but also includes a portion of the federal national park.

Moscow City Planning Code has three wide categories of green spaces of Moscow: SPNAs, [other] natural areas, and landscaped areas. Moscow law on “Specially protected natural areas in the City of Moscow” #48 of 26 September 2001 envisions the following SPNA categories: National Park (federal level), Natural Park, Natural-Historical Park, Ecological Park, Natural Preserve, Natural Monument, Protected Natural Site (not applied), Botanical Garden/Dendrological Park, City Forest (not applied), and Water Protective Zone. Under the city law #37 of 2005, Moscow is home to one federal national park (Losiny Ostrov), one botanical garden, 10 nature-historical parks, and about 100 *zakazniks* and nature monuments on about 17,000 ha (www.dpioos.ru/eco/ru/oopt), not including a number of recreational areas (e.g., the famous Gorky Park), some of which may have SPNAs inside or alongside their borders. Many SPNAs are still considered “scheduled” under Moscow city law, but are not yet protected and may never be, given the breathtaking pace of the city development since the beginning of the 21st century. In addition, the city has a few 10,000s ha of vegetated areas inside the city blocks, small neighborhood “parks,” street boulevards, >1,000 ha of cemeteries, and marginal lands under power lines and in and around former industrial enterprises totaling perhaps 40% of the city area within the beltway or about 35,000 ha. The total is approximately 45,000 ha frequently cited in, for example, the City General Plan of 1999 or annual environmental reports of the Moscow government. The term used in Moscow planning documents is *zelenye nasazhdeniya* or literally “green plantings,” but their definitions vary from document to document. In this article we primarily focus on the SPNAs, rather than all existing green spaces, as their conservation status is more significant and more contested.

In terms of the timeframe, we are looking primarily at the last decade of green spaces’ evolution, from the time when Sergey Sobyenin became the mayor of Moscow in October of 2010. Appointment of S. Sobyenin ushered in a new epoch of prolific spending on city projects. Moscow City has a colossal annual budget of almost 2.6 trillion rubles in 2019 (\$40 billion or, for comparison, about 80% of the New York City budget that year). This represents about one fifth of the combined spending in the regional budgets of all 85 subjects of Russian Federation, while the city only accounts for <9% of its population. The main expenditures of the city budget are provided in Table

1. Of particular note is the expenditure item called “development of the city environment” totaling 107.4 billion rubles. This is less than the city spends on road construction, social payments, healthcare, or education, but more than what it spends on economic development, culture, or sports. A major portion of these expenditures is diverted to the so called “park improvement” projects known under the Russian term *blagoustroystvo*. The city budget revenue and spending has swollen from just over 1 trillion rubles in 2011 to almost 3 trillion in 2019. It is beyond the scope of this article to analyze the reasons for such major increase, but it is primarily a result of improved tax collection and raising income levels of the richest Russians and almost all major corporations of the country that are headquartered in the city. To some extent, this is also a reflection of improved collection of local fees, fines, and taxes under the new mayor. The city is unwilling to cut spending, because this would incentivize the federal government to step in and trim the unspent extras. This is a major driver behind the unprecedented spending on the public infrastructure projects.

Table 1. Moscow City budget planned expenditures in 2019 (Source: Law #30 of 2018 of the Moscow City, MOS.RU).

Major Category	Allocated amount (billion rubles)
Development of transportation infrastructure	608.5
Social welfare	452.5
Education	330.3
Health	279.2
Housing	203.6
Development of the city environment	107.6
Energy and other utility services	93.8
Smart city	74.3
Economic investments and development	58.8
Culture	52.1
Public safety	34.5
Sport	32.8
City planning policy	22.4
Open government	20.7
Other	231.9

Note: Mid-2019 currency conversion rate of 65 rubles = \$1 US may be assumed.

3 METHODS

We approach Moscow political ecology of green spaces primarily from the frameworks presented in Paul Robbins (2012). In addition, given our deep interest in the living elements of the urban landscape, we employ more traditional narratives of urban ecology, botany, and wildlife studies. The authors are most versed in studies of three natural components of city green spaces, plants (and vegetation more broadly), birds, and insects. Undoubtedly, many additional groups of organisms could be a subject of the study. Our main methodological framework is shown on Figure 1.

We derive information from the open governmental sources, e.g., city plans and brochures, websites, and administrative documents available online from mos.ru portal and social media accounts of the city government. Furthermore, we look at some media

reports, local neighborhood activists' group accounts (especially on VKontakte, vk.com, which is the largest social media platform in Russia with over 460 million users worldwide). Additionally, we rely on our own data including birdwatching and entomological studies and human participant-observation studies in the Moscow green areas conducted between 2011 and 2019, and our own policy work with some advisory bodies in the local municipal units and within our home institutions. Finally, many observational data on wildlife can be now obtained on the iNaturalist platform or other such citizen science sites.

4 RESULTS AND DISCUSSION

4.1 Improvements of the City as the Embedded Control Mechanism

From an environmentalist's perspective, the last ten years have seen the relentless onslaught of the political structures of the Moscow government on the city's nature. The number of green spaces and their factual acreage has been reduced, more and more green spaces have been paved over, massive plantings of exotic shrub and tree species occurred, while native grass and wildflowers were mowed down. Almost every green area in Moscow have seen an increase in noise levels, consumptive uses of space for seasonal and permanent events and exhibits, more light pollution, more littering, and construction of substantial permanent buildings (e.g., cafes and stages, sports infrastructure, and even VIP apartment blocks). While this may be a major concern to environmental activists, many of whom have professional degrees in biology or ecology, this transformation has been presented to the general public as the inevitable good and justified by the city administration in countless pamphlets, on Moscow 24 TV news channel, and in media stories in print and online. The sheer amount of money spent on all this has been steadily increasing. Between 2012 and 2018 over 159 billion rubles (\$2.5 billion) was committed to the "improvement of recreation and tourism infrastructure" in the city, while the overall city budget almost tripled.

As an example, consider the brochure promoting the new park improvements released in 2011 by the Moscow government (*Parki: Moskva, Dlya Zhizni, Dlya Lyudej*). The brochure's foreword is signed by Mayor S. Sobyenin. The front picture shows a generic, ultramodern park alley with artificial clumps of exotic flowers, heavily paved walkways (60% of the visible surface sealed), short grass lawns, expensive street lamp posts, manicured tree canopies, and restored historic buildings of the red brick in the background (Figure 3).



Figure 3. *Parki Moskvy* brochure cover page. Source: www.mos.ru

Personal knowledge of the city suggest that this is probably the entrance to Tsaritsyno Park in SE Moscow, an area that is actually mainly classified as a specially protected nature area (SPNA)! The second photo in the brochure features the mayor with a watering can in hand in front of two school children and two adults, smiling and watering some tree saplings in an undisclosed school yard. Careful reading of the brochure and general content analysis reveals deep fascination of the authors with technology, public infrastructure investments, conspicuous spending (amounts in billions of rubles highlighted in red ink), and many statements about the city residents being amazingly better off as a result of the actions described. The brochure mentions that besides 14 recreational parks, 118 SPNAs will also see “improvements.” Many of the proposed projects violate protected status of such territories, as for example construction of lighted trails and recreational complexes inside Losiny Ostrov National Park, golf courses inside Bitsevsky Les, a waterpark inside Troparevsky Landscape Zakaznik, and paving over sections of the protected river floodplain in Setun River Valley Nature Zakaznik. Even declared projects violate the spirit (and the law) of conservation. The actual implementation of this program has been dramatically worse.

Some areas that have seen most radical transformation include the brand-new and highly artificial Zaryadye Park in front of the Kremlin, the reconstruction of the famous Gorky Park and associated development in the formally protected zakaznik Vorobyevy Gory, large projects in Khoroshevo-Mnevniki floodplain of the Moscow river in the northwest of the city, Tsaritsyno and Borisovskie Prudy in the south, Kuzminki, Izmaylovo and Losiny Ostrov in the east, Krylatskie Holmy, Fili and Serebryany Bor in the west, and scores of other smaller places throughout. Aside from particularly egregious land grabs, as for example, inside Serebryanny Bor nature monument, where

two VIP residential complexes were built in the urban forest disguised as “temporary recreational complexes,” many projects have received more nuanced treatment not immediately obvious to the visitors. For example, much of the Tsaritsyno Park with its beautiful ensemble of palaces dating back to Catherine the Great, had a lot of underbrush removed and old lime and maple trees trimmed so that the park trees are now exhibiting tremendous stress from desiccation as the litter no longer provides adequate moisture, while exotic species of weeds are moving in. In a few zakazniks, severe mowing of grass destroyed last remaining populations of endangered butterflies or grasshoppers and resulted in a drastic reduction in the total number of wildflower species. Paving of roads and pouring of concrete slabs and rubberized surfaces for recreational equipment reduced the infiltration of water and led to more severe damage from passing summer rainstorms. Salt liberally spread on winter roads and use of heavy tractors on trails in summer are now destroying sensitive roadside species of plants that were previously able to survive.

A good case study of the radical transformation of a local zakaznik is that of Brateevskaya Poyma in the extreme southeast of Moscow on the right bank of the Moscow river as it exists the city. The area is identified by DEMP as a faunal zakaznik, meaning that it is a wildlife sanctuary (Decree of the City of Moscow #67-pp of Ауйкгфкн 66 2019 . Indeed, this is the area with the highest local diversity of birds in Moscow with 175 species registered, including such rare or endangered species as great and lesser bitterns, moorhen, kestrel, and many species of ducks, shorebirds, and songbirds. Of the 226 ha originally available for nature protection more than half has experienced “improvements” in 2017-2018, including construction of a baseball diamond, a soccer field, a sun spa, rollerblade and skateboard park, and a few kilometers of heavily paved trails. The northern sector of the area was heavily mowed and a number of permanent landscape fixtures installed. In the spring of 2020, a large nesting colony of common gulls was bulldozed over and covered with sand (Kadashova 2020). The area today looks radically different from the unruly marshes and shrublands of just a few years ago: it is a sanitized heavily constructed leiscapescape. In a typical “park improvement” plan, two thirds of the money is spent on building more or less permanent structures, and on road construction. About a quarter is spent on replacing native meadows and forest floor plants with single or dual-species’ turf, imported from European countries and with non-native species of grasses (Figure 4).

Another example is the Valley of Skhodnya river in Kurkino, which is a nature park in the Moscow’s northwest. One of the ravines with native meadows was destroyed in the process of wholesale removal of the top soil, along with all the native plants and insects. Some species were listed in the Red Data Book of Moscow, which is a legal document approved by the Moscow government. In fact, large-scale lawn-mowing was uncommon in the Soviet times, but has begun in the mid-1990s and led to lost wild native plants together with anthophilous and grass-inhabiting invertebrates. The destruction of tall multi-species lawns was not a violation of any law. Both the Federal and Moscow City Rules for Creating, Managing, and Protecting Greenery provided for only two types of grass cover for residential developments and transport networks: a lawn parterre (1-2 species) and an ordinary lawn (3-5 species). The grass shall not be higher than 10-15 cm in an ordinary lawn, and flowering plants are not allowed there. The "meadow lawn" was allowed only for large parks and forest parks, where meadows are needed, but not lawns. One of the authors participated in creating a version of the Moscow Rules (№ 743-PP of 10.09.2002, as amended on 27.02.2007, № 121-PP) to introduce "multispecies lawn" as a new category of biodiversity-supportive lawn comprising only native wild

plants. This new category is applicable to residential areas. Its basic regime is once-a-year mowing of no more than 30 to 50% of the surface. This saves a fodder base for insects in the summer and places for wintering. Quality indicators include the presence of plant and insect species of Moscow Red Data Book list. These recommendations were, unfortunately, never implemented.

(a)



(b)



Figure 4. Brateevskaya Poyma zakaznik before (a) and after (b) “improvements.”

What is the justification of the improvements that the city administration states? In the classic example of the control thesis, it claims to know better what residents need and cite “expert opinions” (e.g., Motorina (2012), a landscape architect, justifies paving over a large section of Northern Tushino park as a way to raise park visitations to the level wanted by the city) and using public sham voting on various apps and web platforms as supposedly a way of collecting public preferences. Such votes rarely result in a negative outcome for the city government, because they are not conducted in an objective or verifiable way. In most polls, the choice of questions is already framed as the city needs it. For example, in one such poll in the summer of 2018, the citizens could cast votes on the *Aktivny Gorozhanin* city portal about their preferences of kinds of summer activities with kids in the city parks. The list of activities one could choose any three from included: use of exercise equipment, dance and yoga classes, or reading clubs, but did not include non-consumptive contemplative activities such as watching wildlife or jogging. A major concern for the government seems to be bringing more *active* people to the parks, for example, the aforementioned brochure suggested the need to almost double number of visitors to recreational parks from 16 to 30 million person-visits per year. The cost of this to nature is not at all mentioned.

The environmentalists’ perception of the true motives of the developments in the city parks involve a single main reason, that of the need to continuously profit from the construction projects by the very city government officials who authorize such projects, via complex socio-economic feedbacks (Badyina and Golubchikov 2005; Stoecker and Shakirova 2014). For example, a company with friendship or family ties to a city official in charge of the bid wins a lucrative contract and kicks back an undisclosed sum to the authorizer. Use of expensive granite bordure stones and pavers can be traced to a specific company with ties to top level Moscow government officials (Golunov 2017). Another scheme might be simply over-reporting the expenditures and spending some or even most of the money allocated for a construction project on other pursuits, effectively privatizing a portion of the city budget (Navalny 2019). While such practices are clearly against the Russian law, and the city does provide some transparency as to which companies win tenders and what is being purchased on such portals as *zakupki.gov.ru*, plenty of projects do not receive much needed public scrutiny, even when local municipal representatives get involved in investigations. It must be emphasized that even if there was no corruption, construction of major facilities simply allows to appropriate large sums of money as opposed to little money with small conservation initiatives. Thus, if a city manager is measured by how much money was “well spend,” there is a perverse built-in incentive to always spend as much money as one possibly can, which prioritizes larger, and more destructive, projects.

4.2 New Environmental Subjects and Identities

While it is tempting to view the section above as merely another example of the traditional “environment” vs. “developers” antagonism (with developers being both governmental officials and private contractors), the really interesting and underexplored subject is the emergence of new and unexpected identities among the public affected by the developments happening inside the green spaces of the city. In addition to the expected environmental activists, we now see new categories that were rare or non-existent just 15 years ago, for example, physically active seniors involved in organized Scandinavian walk clubs, stay-at-home eco-aware mothers with preschoolers, or immigrant workers from the former Soviet republics, all of whom engage with green

spaces in novel and complex ways. To borrow from the Urban Political Ecology ideas, the uneven and economically mediated metabolism of Moscow produces new parkscapes, utterly natural for some, and an epitome of ecological disaster to others (Brownlow 2006; Heynen 2014).

There is a substantial literature on local identities that sociologists of the post-Soviet space produced (e.g., Belyaeva 2005; Mamonova 2016). One of the consistent findings is that the post-Soviet public tends to be generally passive and resigned to fate, because the society is atomized and economically stratified, and there are few reasons to expect that peoples' voices matter. This is especially true in post-2012 Russia where increasing authoritarianism of the central government and lack of representation of many alternative viewpoints trickles down to the regional and city governments. Moscow is especially conspicuous in this regard, because while it is the most diverse region of the country politically and wealthiest economically, yet it ranks only in the fourth place in terms of total political protest activity (Institute of Regional Expertise 2019). The stakes are the highest here and while people are more willing to stand up for their rights in Moscow than in most other units of Russia, there is also a corresponding oppressive burden of the police using excessive force keeping "public peace" as could be for example evidenced in the street protests in the summer of 2019 over the elections to the Moscow City Duma. Also, many residents in Moscow are themselves recent arrivals from the provinces, or from the other post-Soviet states, and as such have experienced some oppression from the local long-time residents and are unlikely to fight for their rights.

At the same time, and famously, local environmental protests have been part of the greater civil rights movement in the former Soviet Union since its late years and especially in the 1990s, when many local neighborhood groups effected major changes in the local contexts (Yanitsky 1993; Henry 2006). The spontaneous resistance to such regional projects as the construction of the Khimki private toll way (Smirnov 2011), land grabs in Zhukovsky, and protests against landfills in Moscow, Chelyabinsk, Archangelsk and other regions between 2011 and 2019 are therefore typical. Research done on both Soviet (Pryde 1991; Weiner 1988; Yanitsky 1993) and post-Soviet (Henry 2006; Mamonova and Visser 2014; Oldfield 2011; Turnbull 2010) environmentalism suggests a strong connection between the activists' perception of space worth protecting and the methods of protest practiced as a form of place-making (Martin 2003), following the classical model of triple juncture of meaning, nature, and social relations of Sack (1997). Simply put, local areas are defined by such protests more than they can be by any specific legal action or designation. For instance, "Khimki forest" is not a single legal entity or even an unbroken segment of the suburban forest belt. Rather, it became a new entity defined by the protests against the private tollway between Moscow beltway and an international airport in 2011 (Smirnov 2011). It is remarkable, however, how little research has actually been done on the underlying political and social structures of place making and production of meaning related to such protests, especially those of recent years. This is true even in Moscow, where much sociological research, for example, on political views has occurred.

As Robbins (2012) states, "*new environmental actions, behaviors, or rules systems lead to new kinds of people.*" There has been a major shift in recent years to view green areas in Moscow as needing "improvements" by the city government. Some such improvements started in the early 1990s, but this was a period of runaway inflation and budget deficits. Since about 2010, the overarching narrative of the city government has become development at any cost. To what extent are members of the public at large

agreeing with this governmental vision? As noted above in section 4.1, such improvements are always embodied in physical structures that facilitate consumption of green spaces by people. In promotional materials for the development of recreation and tourism program (2012-2018), the city officials essentially envision city parks transformed into outdoor playgrounds for all age groups and suited principally for the active use, enjoyment, and ultimately consumption. Total increase in visitors is seen as unquestionable good. For example, in one area (Borisovsky Prudy, 86 ha in size and home to two nature monuments) the city promised construction of 2 soccer fields, 8 volleyball and basketball courts, 14 playgrounds, “ecoparking” for 720 cars, 2 concert stages, 40 gazebos and 3 administrative buildings, just in 2011. A major question therefore is to what extent do Moscow residents are already in compliance with the city vision. What do they expect the green spaces to be best suited for? Which activities do people actively engage in? What would they like to see more of?

In one case study, we observed local people in a major, heavily used city park Kuzminki-Lyublino (park-kuzminki.ru) on 20 days in summer of 2018 to understand the extent of activities practiced. The park is 1,056 ha, of which about 20% is heavily developed for recreation, e.g., paved areas, a music stage, sculptures, thrill rides, and a few cafes and kiosks. This part of the park is a recreational zone and is not part of the SPNA. Instead, we observed peoples’ activities on the protected territory outside of the recreational zone, but along existing trails, near waterways and pond embankments, and in the forested zone which is largely mixed birch-pine or basswood forest. Some of the trees here date back to the early 19th century, when this was the estate of the very wealthy Golitsyn family. Despite the area being not zoned for heavy recreational use, the park still has many amenities added in just the last five years. For example, there are two outdoor gym areas with a few dozen equipment pieces on each, at least five large playgrounds for children, one area designated for meat grilling on about 0.5 hectare of land, five cafes, a boating station, and an artificial beach and sun tanning area along just two ponds in this section of the park. Based on over 100 hours of observation on 20 days in total (mainly on weekends or on weekday afternoons, in June-August), the following breakdown of activities was noted (Table 2). The majority of users are content with traditional, low-key and low-maintenance activities that do not require major investments from the park staff. Many visitors seem to be content to come into contact with wildlife, for example, watching and feeding mallards and squirrels. In a few cases, the observed would make comments about how nice it is to have so many animals present in the park. The management provides bird feeding stations and bird houses, as well as some informational billboards with photographs of most common wild flowers and birds.

To track down what people truly want, one should not rely on sham votes cast in the city-sponsored online polls. Instead, one can easily read the comments on various independent public forums online, for example, on VK.com social media site. VK is not only the biggest social media platform in Russia, it is also the one most readily engaged by the people to voice their opinions. While Facebook, Twitter, and Instagram have millions of users in Russia, they are less popular with the less globally engaged and predominately Russian-only speaking citizens and are thus more biased towards users with more global awareness. In the fall of 2019, there were about 20 public groups on VK.com that had “Moscow parks” as part of their description. By far the largest group in terms of number of subscribers was the official group sponsored by the city government, *Parki Moskvy*, with 20,744 people as of 25 September 2019. In contrast, all the groups that could be labeled as “activist” or “concerned citizens” focused on park

mismanagement numbered as few as 20 and as many as 1,038 members. The latter was the key opposition voice to “the improvements campaign” with the provocative name of *Blagovredoustroystvo v Moskve* (‘Misimprovements’ in Moscow).

Table 2. Typical activities of Kuzminki–Lyublino park visitors as recorded over 100 hours of the summer of 2018. For each visitor only one primary activity was recorded at the moment of observation.

Activity	Proportion of observed people
Walking/jogging	40%
Playing with kids	20%
Bicycle/rollerblades	10%
Exercising/sunbathing	10%
Sitting/eating	8%
Walking with pets	7%
Boating (*swimming)	4%
Birdwatching	<1%

Note: swimming is illegal in the park, but a handful of people were always doing it. Additional activities include grilling meats outdoors, playing loud music, dancing, collecting mushrooms and berries, and people-watching. However, not all of these activities are allowed everywhere along the survey routes.

In addition, there were a few dozen online neighborhood-focused groups that were not concerned mainly with parks, rather with the local issues pertaining to a specific city neighborhood, usually a city-level district, e.g., Orekhovo-Borisovo (O-B, which comprises two city districts with over 300,000 residents with 20,500 subscribers on VK.com in 2020) or Kuzminki, Troparevo, Kuskovo, etc. These groups would average a few posts per day with only about 10% of these related to the neighborhood environment, including parks. Nevertheless, they provide some of the more unbiased sources of public opinion, because the members are likely more representative of the larger community of local residents as the purpose of these groups is explicitly non-political. They may be age-biased, however, because the Internet audience in Russia is definitely younger than the population overall.

We analyzed all current content in the official city group, the main opposition group, and the local O-B group for a period of four weeks in September of 2019 to gage the proportion of critical or praiseworthy posts and, of course, the public comments to those. While a full quantitative analysis is not attempted here, the major finding, unsurprisingly, is very low incidence of any critical comments on the official public forum (<5%) and all postings there explicitly made to promote the active “care” the city supposedly takes of its parks. In contrast, the main opposition group had virtually no comments in favor of what the city was doing to the local green spaces, presenting instead the litany of examples of committed environmental atrocities with over 20 green areas thus violated in the span of just four weeks. The O-B neighborhood group had a strong pro-development slant in its posting, as for example, in discussion of how many new gazebos will be soon built at the Borisovsky pond to facilitate outdoor grilling. At the same time, a plurality of member comments were more critical – about 40% of all public comments related to parks’ usage were expressing concerns with deteriorating public spaces, litter, vagrancy, and destruction of shrubs and trees. Many posts were also related to the encounters with wildlife, although most posts with animals related to lost dogs or cats (see 4.3 below).

Public comments that pour praise on the governmental actions generally seem to come from two categories of users: pro-government “trolls” who post very favorable comments and genuine online users who like city “improvements” because those conform to their own personal preferences. The difference is in the repetition of the official mantras by the former, and the nuanced and novel representations revealed by the latter. For example, an official statement from Vice-mayor P. Biryukov regarding development of the South Medvedkovo project along the Yauza River in NE Moscow (inside a planned *zakaznik*!) states: *Project is developed with the input from the local residents. It implies preservation of natural balance in the surrounding nature. Works will not lead to damage of the constituent flora and fauna* (www.mskagen cy.ru/materials/2879199). Supporting comments will literally echo his words, as in “*this place will be so much better now!*” or “*thank you for taking good care of our local environment.*” Pro-governmental commentators (paid or unpaid) typically rehash exact words from the officials and are almost always very generic, because text itself may then be repurposed for any project. Here is an example from Mitino-Rozhdestveno pond: *Good news!...The territory around the pond will be improved this year into a complete rec zone with playground and exercise workout equipment, new garbage collectors and benches!* Another comment from a user in Kuzminki Park, *In recent years, Moscow literally has flourished because of its parks and squares. It is especially nice that people started working out more – all ages. Beach volleyball, skatepark, basketball freestyle, yoga....bicycles and walking – all you want for any ability!* These two users repeat some of the same language used by the Mayor of Moscow, S. Sobyenin, in many of his public speeches or in brochures, as for example, in the presentation about Brateevskie Prudy: *This park has existed for a while, but was not well kept. Now we have improved trails, quality lighting, better lawns, and especially not only a walking zone for pedestrians, but many areas for active recreation* (www.m24.ru/news/mehr-Moskvyy/10072018/38205).

The more interesting and peculiar views are revealed by the genuinely pleased, yet ecologically naïve, users of green spaces who are in fact unsure about the merits of the projects in hand, but are glad to share their subjective positive impressions. For example, a user from O-B neighborhood group posts a photo of badly trimmed apple trees in the old orchard with a comment: *Found some sawn-off apple branches... good bark for smoking meats!* A comment about from Mescherskie ponds improvements: *They plan to develop nature trails there, this gives me my max relax!.... They already started clearing the shoreline from all those rushes and cattails.* The former commentator does not conform to the majority of neighbor comments that it is generally sad to see apple trees cut down and damaged by sloppy trimming. The latter commentator seems oblivious to the ecological buffer function that cattails and rushes play in keeping the ponds clean. This suggests development of what we may call “ecophobic” personality (Louv 2008), a new identity of a person so out of tune with nature that s/he is afraid of “dirt,” “critters” and “wilderness,” and relishes the comforts of a well-controlled urban environment. Thankfully, such comments are relatively rare, one perhaps for 10 or 15 that are in favor of less, rather than more, controlled nature nearby.

Besides negative attitudes towards nature, we also found emerging new identities of people who are well disposed towards careful and sustainable use of outdoors. In recent years, the number of exercising seniors (e.g., Scandinavian walk clubs or outdoor yoga) in city green spaces have dramatically increased. Outdoor festivals happen in local green spaces on a regular basis, especially on weekends in summer and attract

schoolchildren and young adults to study local ecology. Not all of these events are well attended, but they do provide better access to lots of green areas where recreation otherwise would be very slim (Yakubov and Manukhina 2016). Some TV ads from the city have started explicitly targeting people interested in local natural and cultural heritage and promote naturalist quests. Therefore, we remain cautious optimistic that new pro-nature identities will continue to emerge.

4.3 Non-human Actors as Components of Networks in the City's Green Spaces

Political objects and actors thesis of P. Robbins (2012) suggests that not only human, but also non-human actors (components of nature) may be entwined with human struggles for control, and that in recent history, hegemonic institutions and (frequently corrupt) individuals in those have gained disproportionate influence. At the same time, the bottom-up resistance of networks of human and non-human actors upend such top level pressure through progressive and unexpected alliances. Another germane approach is the Actor-Network Theory or ANT (Latour 2005). In the literature on green spaces, a few studies from the UK provide good examples of using ANT to untangle local alliances and spontaneous resistance in an old city cemetery (Cloke and Jones 2004) and ambiguity of planting trees in South Wales (Bennett 2017). Struggles to preserve and use National Trust vegetated area in NW England were explored by Kitchen (2013). Her paper also focused on the role of non-human actors in nature. The latter paper uses urban political ecology as the main theoretical approach, but also provides insights into construction of urban forests that fits well with ANT. It is important to note that these two approaches do not merely state the obvious that “living things matter.” What is interesting here is the discovery of connections that we may not realize were there, until we took a closer look.

In this paper, we consider just three specific actors from the recent perturbations of Moscow green spaces: red foxes, house sparrows, and American boxelder. The choice is ours, many more organisms can be studied in detail. All three are interesting because they produced spontaneous resistance to the city designs.

Red foxes (*Voles voles*) are now ubiquitous in the Moscow's green spaces. In the 1990s, very few were known to have lived inside the city. In the last five years, dozens of sightings have appeared to make local news to the point that it is not a whole lot more noteworthy than, say, spotting a squirrel, another highly adaptable wildlife. While red foxes have always been lurking on the margins of the European village folklore, arguably they are a surprising and novel component of the heavily managed megacity. They seem to have proliferated at the time when stray dogs were massively culled, and also when new infrastructure disturbed their habitats on the city periphery. Instead of retreating further from the expanding city (as many mammals, for example, moose and wolf had done, Bragina et al. 2015), foxes stroke back and are now persisting near garbage containers and along newly paved trails in the city parks – somewhat analogous to North American skunks and raccoons. Foxes may carry rabies and attack dogs or cats. They are also unquestionably smart (“sly as a fox”) and integrate well with the newly built park infrastructure. They are not scared of lights and loud noises and are doing remarkably well. A review of worldwide literature on urban wildlife adaptations suggests that foxes are in fact the most notorious wildlife ‘rebels’ in many European cities, such as Zurich, Oslo, Bristol, Berlin, and Copenhagen (Adams and Lindsey 2011).

The proliferation of foxes in Moscow is now so well noted by the mainstream press that they no longer elicit much attention. The key actors that support foxes to express their agency are sewers, garbage containers, food kiosks, and mice. Some of their first-order approximations that are human actors include park staff, active park users (e.g., joggers, who use parks in the early or late hours when foxes are more active), and wildlife photographers. Without those, we would not notice foxes as much. People are generally delighted to see foxes, as witnessed by their posts on social media. Few people raise concerns about the impact foxes may in turn have on other fauna or on the health and well-being of the residents. One frequently noted concern, however, is the worry about foxes attacking pets, especially cats and small dogs.

House sparrows (*Passer domesticus*) provide a contrasting example of a very common species that became rare. Over much of the 20th century, house sparrows were the most common bird inside Moscow urban blocks. Since mid-2000s, their numbers started to decline, which became especially noticed since approximately 2015 (Geraskina 2018). The reasons for that are debated by ornithologists, but in general seem to be a spontaneous resistance response to the decreasing food base due to accelerated maintenance of lawns: sparrows frequently feed on the ground and are more omnivorous than, for example, Eurasian tree sparrows. There has been a tremendous decrease in available grass and litter (and tasty grubs!) since S. Sobyenin became the mayor and introduced the concept of leaf collection and merciless raking of the city lawns in every corner. Simply put, the old multispecies lawns were replaced with either bare ground or manufactured single-species turf lawns, which are essentially biological deserts. The first-order connecting actors for house sparrows include raked lawns, native seeds/insects, lawn mowers and trimmers, city maintenance workers, and shrub shelters. Eurasian tree sparrows, in contrast, have increased in numbers, but are more confined to the larger green areas, not as much to the city blocks. They are primarily seed eaters and their expansion coincided with the increase in available bird feeders. These birds are even more dependent on available shrub shelters, which are plentiful in most areas of Moscow. Residents interact with sparrows through the practice of feeding birds at park feeders or even on windowsills. Despite such efforts, sparrows are now outnumbered by the great titmouse as the most commonly seen wild bird inside city blocks.

One more example includes a plant. American boxelder (*Acer negundo*) was introduced in the Soviet Union soon after World War II. It is a North American ruderal species which is a medium-sized tree with a short lifespan, fragile root and branch system, but prolific offspring. The last 20 years have seen tremendous expansion of boxelder into any imaginable green space in not only Moscow, but throughout European Russia and onward to Novosibirsk in Siberia (Ebel et al 2016). The seeds are easily carried by wind, and there are apparently no pests or herbivores interested in consuming the saplings. The boxelders are wreaking havoc on the Moscow city plans to carefully control plantings of new shrubs and trees. Cloke and Jones (2004) found that in Arnos Vale cemetery in Bristol native plane and ash were doing most of the uprooting of the monuments. In Moscow, it is an alien maple species playing by its own rules. Interestingly, the city generally favors foreign species for plantings, many of whom are also from North America (e.g., red oak, western white cedar, silver maple, or Colorado spruce https://prod.cms.ag.mos.ru/images/svod_adresa_million_dereviev_2020.pdf), but not the boxelder. In recent years there has been an increase in severe thunderstorms in summer, which led to massive uprooting of trees in parks, including first and foremost boxelder. This very successful invasive weed is mocking the city efforts to keep parks clean and tidy (Figures 5 & 6). In the words of Cloke and Jones (2004), the trees have

made ‘wild’ the very places in which they were supposed to create some order. The actor-networks for the boxelder include other, less competitive native tree species, foresters, wind, and disturbance. With the ongoing climate change, more severe storms are likely, and the damage done by these trees is going to intensify.



Figure 5. Trees toppled by a storm in June of 2017 in Kuzminki Park represent spontaneous resistance to the governmental controls. Photo by authors.



Figure 6. Green topiary ‘subjects’ emerge from the feverish dreams of Moscow landscape architects fueled by out-of-control spending. The grass is single-species turf lawn of exotic provenance and is not doing too well four weeks after planting. Photo by authors.

4.4 Environmental Degradation and Marginalization or Is It?

It is tempting to succumb to the traditional paradigm of “good environmentalists” vs. “evil developers” in case such as this. Nevertheless, as we show in this study, many narratives exist and there are certainly countless ways how even traditional environmentalists would interpret the ongoing shifts in the (re)production and consumption of city green spaces under the current model. Robbins (2012) suggests that modernist development efforts usually lead to decreased sustainability of local practices and a decrease in the equity of resource distribution. We find this largely true in Moscow of today. The city government is so sure of itself and so full of promises and cash to make life better for the citizens that it devours any existing kernels of local ecological wisdom (e.g. ripping off topsoil in the city backyards where local residents would traditionally plant wildflowers to replace them with manicured sterile Eurolawns, Figures 7 and 8).



Figure 7. Valley of the Skhodnya River in Kurkino – a nature park in NW Moscow – was virtually destroyed in an “improvement” project in 2008. The area has recovered somewhat since. Photo by authors.



Figure 8. Unmanaged multispecies meadow, as was common during the late Soviet times, still survives today in Borisovskiye Prudy recreational area in SE Moscow. Photo by authors.

There are neighborhood interest groups that sometimes spontaneously organize to protect what is left. In recent history such groups, for example, organized in Kotlovka (trees cut for a new power line), Khimki (protests against highway construction, see detailed account in Smirnov (2011)), Khoroshevo-Mnevniki district (construction in a protected floodplain), Kuskovo Park (tree cuttings and replacement of native vegetation with alien flora), Losiny Ostrov National Park (commercial development and highway construction), Kosinsky Park, Ivanteevka, Troparevo and many other areas. The green spaces retreat under pressure, while local residents feel marginalized and their wishes routinely ignored by the authorities. The social media accounts amply testify to this fact. It is significant to note that since 2014 incomes in Russia have stagnated or even declined (even in the super-wealthy Moscow), while Moscow City budget grew by almost 200%!

One significant group that is marginalized more than many and is under-represented in the social media accounts of the disasters of development in park are migrant workers. Primarily recruited from the former Soviet republics of Tajikistan, Kyrgyzstan, and Uzbekistan, these people are frequently maligned by the long-time Moscow residents as uncivilized *churki* (a racial slur) who occupy the lowest ranks in the city's capitalist pay scale. Many are very visible, because they represent disproportionately the poorly paid maintenance workers hired by the local housing management units (GBU "Zhilishchnik") to sweep yards, demolish and constructed playgrounds, work with planting shrubs, trimming trees, etc. (Figures 9 & 10).



Figure 9. Migrant laborers hired to rebuild a playground at a local small park in Kuzminiki district. Photo by authors.



Figure 10. Rubberized surfaces replace native grass. Photo by authors.

A good share of these laborers are seasonal migrants mainly from Central Asia surviving on below-minimal wage and subject to abuse from their neo-feudal overlords (i.e., local management companies and city officials) as well as police (Gabdulhakov 2019; Round and Kuznetsova 2016). While many such workers get the ire of the residents for destroying local nature, they are hardly at fault. Hiring of undocumented and underrepresented migrant workers is a common practice worldwide. The improvement projects are managed by and benefit local housing management units of the city government and private enterprises, not the workers themselves. Unquestionably the migrants also enjoy benefits of the local green spaces. In neighborhood parks and larger urban forests hundreds of migrant laborers congregate on weekends to hang out with their peers, play with children, grill kebabs, or play ball, just like the “true Muscovites” do. Yet their voice is conspicuously absent from much of the critical discourse against the mayor’s excesses. This is not surprising: many have tenuous migration status and fear reprisals. Also, those who work specifically for the local management units are happy to have a job, however harsh and thankless. Privately in conversations with the local workers in our own neighborhoods we hear them worried about the “ecology” of the local places, something that is widely shared by all residents. This finding fits the conclusion of Blanc (2019) for metropolitan Paris that urban space environmentalism is fostered by predominantly white middle classes, synonymous with the sidelining or disappearance of people of foreign origin. She found that in Greater Paris, such environmentalism is being promoted by people who mostly belong to intermediate and higher social categories of workers (especially senior public servants, intellectuals, and artists), underpinned by a combination of affinity-based social approaches.

At the same time, paradoxically, not all is gloom and doom, even under severe pressure from the developers. Moscow nature proves to be a resilient agent with its own agency (4.3). Recent ornithological surveys uncovered surprising resilience and even increases in raptors and owls in Moscow (peregrine falcons, hawks, barred owls). Mallards are numbering in 10,000s and now routinely overwinter in the city ponds and some other waterfowl species increasing as well. Titmice populations are thriving in parks and inside city blocks. Native grasses, forbs, shrubs, and trees break through concrete and pavers and occupy vacant city lots in the former factory belt. Planted mixtures and fake turf self-destroy, crack, and peel. Native multi-species communities in the remaining less-touched areas survive and even thrive.

There also has been an increase in public interest and expectations to come into closer contact with nature (Frolova and Batarin 2015). This is evidenced in the rising demand for summer naturalist programs for kids, guided walks in parks, more inquisitive requests and even political demands going to the city government via online portals to justify expenses and provide adequate ecological materials and assessments, self-organizing groups online and clubs in local neighborhoods, and in increased connections at all levels of the concerned citizenry about the future of the precariously swollen megacity. While most concerned are, as expected, “knowledge class” (professional biologists, graduate students, environmental activists), many concerns are expressed by regular people without ostensible tangible connections to nature other than through their neighborhood green space. Such local place-making is for example evidenced in sporadic rallies that emerge throughout the city whenever bulldozers come to cut turf on yet another new “improvement” and in neighborhood newspapers. Since 2019 Moscow Duma elections, there are now some opposition deputies in the city parliament (mainly

from the Communist Party) who openly disagree with the city leaders on how works in parks ought to be performed and paid for. This is a welcome and long overdue development.

5 CONCLUSIONS

This article attempts for the first time to look at the interactions among Moscow city government, environmental activists, general city residents, and elements of city nature (the non-humans) as they occur in and around multiple city's green spaces, especially protected natural areas. We expected to see a strong antagonism between the first and the second group, and broad indifference to nature among the residents. However, this is not what we found. The antagonism was there, but many ordinary residents (non-experts) do care about the surrounding green spaces and are even willing to contest the attempts of the city managers to remake their favorite park spots. As a future research project, such "enlightened locals" should be approached to better understand the trajectories of their personal lives and practices that lead to positive attitudes and engagement with wild nature even in the absence of formal ecological education or professional affiliation.

We found that the Moscow city government is spending tremendous amounts of money on wholesale (re)construction of major swaths of the city green spaces, many of which are nominally protected and should not be subject of (re)development. The chief justification given is the need to "improve" user experiences and to raise the total number of recreants. The improvements are almost always embodied in physical objects placed inside parks and, at least in the often cited opinion of the city mayor S. Sobyenin, are specifically those objects that lead to active and engaged consumption of green space. A nod is nevertheless given to the citizens' wishes, but those are chiefly allowed to be expressed on tightly controlled online forums and in closed-entry surveys where no deviation from the city general line is in fact afforded. Thus, a choice without a true choice is what the residents face. In our estimation, future local protests over the misuse of green spaces are likely. Overall economic and political situation in Russia in 2020 requires much renegotiation of the state-public relations that were assumed to be stable in the past. What remains to be better understood through careful economic analysis is who in the government primarily benefits from the projects? Such research would require access to frequently hidden figures in governmental contracts and a lot of interviews with the city managers, something that is very challenging to do.

Furthermore, we found accumulating evidence that new environmental subjects and identities emerge from the engagement between the city structures and the public at large. This matches findings from other regions of the world. Some formerly apathetic pensioners and homemakers become activists, when local green spaces are threatened. Conversely, new city initiatives breed a certain type of cynic consumer, who is basically convinced that "government knows the best" and who is now hooked on the idea of endless novelty and entertainment. One of the best places to observe such folks are the outdoor themed park fests, especially during summer. Tragically, there has been a lot of marginalization of local residents. This is not controversial or novel as far as "domestic" population is concerned. An overlooked group that is marginalized and is understudied, however, are migrant laborers, mainly from Central Asia, who are on the one hand directly involved in many construction and maintenance projects in the green spaces, but

are also suffering from the mistreatment and racial prejudices of both their own bosses and the public around.

Our final conclusion is that human and non-human actors are entwined in complex networks that are constantly reproducing specific places and practices, some of which are hotly contested. Nevertheless, there are some reasons to be cautiously optimistic. As more and more people get in touch with nature, some new connections will form that will allow new possibilities of mutually supportive co-existence.

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