

# Vilnius beyond Urban vs Non-Urban Opposition: A Few Entry Points to the Planetary Urban Futures

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**Abstract.** The article analyzes Vilnius urban forest by applying the notion of planetarity and considering its implications for urban research. The author’s argument is delivered in three parts. The first part scrutinizes the difference between globalization and planetarity in a long-term perspective of social urban scholarship. The second part examines the significance of the vast amount of forest in Vilnius, as well as its lineage in the context of post-WWII urban growth. The third part regards the Karoliniškės Landscape Reserve as part of Vilnius green belt and as a potential opening in place of a former boundary, compatible with the earlier modern urban growth civic projects meant to replace the medieval city walls as “isolation belts.” Finally, the author discusses the Reserve’s three dimensions in the course of such opening—as more-than-urban heritage, non-human-centered public space, and a potential green commodification frontier.

**Keywords:** planetarity, urban nature, *Umwelt*, urban ecosystem, Vilnius, the Karoliniškės Landscape Reserve, more-than-urban heritage, non-human-centered public space, green commodification frontier.

## Vilnius anapus miesto ir nemiesto opozicijos: keletas minčių apie miestų planetinę ateitį

**Santrauka.** Straipsnyje pasitelkus planetiškumo sąvoką ir jos reikšmę urbanistiniams tyrimams analizuojamas Vilniaus urbanistinis miškas. Argumentai išdėstyti straipsnio trijose dalyse. Pirmojoje dalyje detalai nagrinėjami globalizacijos ir planetiškumo skirtumai ilgalaikėje socialinės urbanistikos perspektyvoje. Antrojoje dalyje dėmesys kreipiamas į didelio miško masyvo Vilniuje reikšmę, taip pat jo vietą pokario miestų augimo kontekste. Trečiojoje dalyje Karoliniškių kraštovaizdžio draustinis vertinamas kaip Vilniaus žaliosios juostos dalis ir kaip potencialus buvusių ribų atvėrimas – kreipiamas dėmesys į šio draustinio dermę su ankstesniais modernaus miestų augimo projektais, pakeitusiais Viduramžių miesto sienas, laikytinas savotiškomis „izoliacinėmis juostomis“. Tyrimas atskleidžia tris naujus šio draustinio aspektus: kaip daugiau nei urbanistinio paveldo, kaip ne į žmogų nukreiptos viešosios erdvės ir kaip potencialios žaliosios komifikacijos sienos.

**Reikšminiai žodžiai:** planetiškumas, urbanistinė gamta, *Umwelt*, miesto ekosistema, Vilnius, Karoliniškių kraštovaizdžio draustinis, daugiau nei urbanistinis paveldas, ne į žmogų nukreipta viešoji erdvė, žalioji komifikacijos siena.

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## Introduction

One of the most interesting tendencies in urban studies of the last decade is increased attention to the status of urban nature. This attention implies a range of questions formulated and approached by several academic disciplines and research fields, and more generally, the realms of intellectual and creative practice.<sup>1</sup> How to enhance biodiversity in the cities? How to promote nature-based solutions? And how to nurture less confrontational relations between nature and culture? On a conceptual level, these questions are most often undergirded by the notion of planetarity, which opens new empirical, analytical, and normative horizons for social urban studies.<sup>2</sup> Given the scope and the character of green spaces in Vilnius, its urban nature is one of the most intriguing dimensions in the city's short- and medium-term future development. In 2025, Vilnius holds the title of Europe's Green Capital,<sup>3</sup> which is likely to be a motivation to search for a toolkit to solidify and further promote this distinction in socio-cultural and policy dimensions. The article offers empirical and conceptual scaffolding for the perspective research on Vilnius urban nature by analyzing Vilnius urban forest (with the special focus on the Karoliniškės Landscape Reserve) in its three dimensions: as more-than-urban heritage, non-human-centered public space, and a potential green commodification frontier. On a theoretical level, the analysis presented in this article is conceptualized as a showcase of planetary urban research.

Forest as a theme is currently undergoing a clear-cut transformation in Lithuanian social, cultural, and architectural research. From an unarticulated, opaque, and uncanny element of local geography and society, it has transformed into a central intrigue and a matter to explore. In 2009, I gave a talk at the International Mayors Forum “Culture as a Driving Force in City Development,” which was a part of Vilnius 2009 European Cultural Capital program. The major thematic focus was on the cities that compete among each other by trading their cultural assets with the goal to attract investment, economically active residents, international attention, etc. The event was dominated by the talks on revitalization / gentrification, urban lifestyles, urban pop-up projects, urban identity politics, etc.—the mainstream repertoire of urban studies in the 2000s and the early 2010s. Philosopher Nerijus Mile-rius, who invited me to the Forum, gave a talk about the visual representations of Lithuanian forest as the representations of Europe's periphery (“Europe's border”). In his talk, he approached forest as absolute non-urban, looking at it only from the perspective of demarcation of where the urban ends. If one looks at today's mainstream, one sees that even though only fifteen years have passed, the forest topic has moved to the center of architectural discourse. In the most recent 2023 Venice Architecture Biennale, the Lithuanian pavilion's statement was based on the premise that forest is actually architecture.<sup>4</sup> Comparable tendencies are detectable beyond Lithuania too. One of the recent issues of “The UNESCO Courier” titled “The Call of the Forest”<sup>5</sup> is devoted to the ways of preserving forest ecosystems as heritage and, equally important, nurturing the appropriate social forms and political frameworks for this agenda.

<sup>1</sup> See more (including the earlier research) Gottdiener, M.; Feagin, J. R. The Paradigm Shift in Urban Sociology. *Urban Affairs Quarterly*, 1988, Vol. 24, No. 2, p. 163–187, <https://doi.org/10.1177/004208168802400201>; Smith, D. A. The New Urban Sociology Meets the Old: Rereading Some Classical Human Ecology. *Urban Affairs Review*, 1995, Vol. 30, No. 3, p. 432–457, <https://doi.org/10.1177/107808749503000306>; Milicevic, A. S. Radical Intellectuals: What Happened to the New Urban Sociology? *International Journal of Urban and Regional Research*, 2001, Vol. 25, No. 4, p. 759–783, <https://doi.org/10.1111/1468-2427.00343>; Žiemelis, D. Miesto ekosistemos sampratos transformacija: klasikinės ir šiuolaikinės miesto ekologijų atvejai. *Sociologija. Mintis ir veiksmai*, 2018, Vol. 43, No. 2, p. 107–132, <http://dx.doi.org/10.15388/socmintvei.2018.2.5>.

<sup>2</sup> See more Clark, N.; Szerszynski, B. *Planetary Social Thought: The Anthropocene Challenge to the Social Sciences*. Cambridge: Polity Press, 2020.

<sup>3</sup> See European Green Capital Award—Winning Cities—Vilnius 2025. *European Commission*. Retrieved from [https://environment.ec.europa.eu/topics/urban-environment/european-green-capital-award/winning-cities/vilnius-2025\\_en#:~:text=The%20Lithuanian%20capital%20was%20elected,greenest%20city%20in%20the%20making%E2%80%9D](https://environment.ec.europa.eu/topics/urban-environment/european-green-capital-award/winning-cities/vilnius-2025_en#:~:text=The%20Lithuanian%20capital%20was%20elected,greenest%20city%20in%20the%20making%E2%80%9D) [accessed 29/07/2024].

<sup>4</sup> See, e.g., Neringa Forest Architecture: About. *Neringa Forest Architecture*. Retrieved from <https://neringaforestarchitecture.lt/about-nfa/> [accessed 29/07/2024].

<sup>5</sup> *The UNESCO Courier: The Call of the Forest*, 2023, Vol. 2023, No. 3, <https://doi.org/10.18356/22202293-2023-3>.

What is behind this profound change of the meaning of nature and of relations between nature and culture in architecture, urbanism, and broader, in spatial practices? What has happened to how researchers and practitioners make sense of “urban” and what is the place of “nature” in this understanding? The city of Chemnitz in Germany, holding the title of European Capital of Culture (hereinafter, ECC) in 2025, is another interesting example. Chemnitz has been hardly a trendsetter in urbanism or urban policies. Rather the opposite, recently the city received negative attention due to its street violence, the neo-Nazi groups, and rather exclusive local urban culture. At the same time, one of the major projects of Chemnitz ECC, called “A Collective European Parade of Apple Trees” and “WE PARAPOM,”<sup>6</sup> was to plant 4,000 apple trees of 2,000 different species by invited artists and local residents. Planting trees in a city as part of the ECC program marks quite an update for urban culture, urbanism as applied practice, and urban knowledge generation. At the same time, given the broader tendencies as the ones referred above, it is not a big surprise. Is it fair to say that such projects belong to the same tendency as scrutinizing and practicing forest as architecture? Nevertheless, Chemnitz ECC can still hardly be considered an example of a very progressive project. In May 2023, “WE PARAPOM,” which had been running from 2021, was cancelled by the Chemnitz ECC office.<sup>7</sup>

Despite the change in empirical registers of research in urban studies, as well as in spatial and architectural discourse and practice, the transformations of urban processes have been uneven. When exploring the OpenTrees Map,<sup>8</sup> an international crowdsourcing project of documenting greenery in the cities (based on OpenStreetMap service), one sees a clear divide between the countries in Europe with and with no data in OpenTrees database. Former socialist countries (except the cities and towns of the former German Democratic Republic) are not represented in this database at all. The OpenTrees Map is the largest open data reservoir of municipal street and park trees, containing data harvested by both residents and municipalities. This extensive database includes information about each tree—the species (and the quantity of the species in a given location), an individual tree’s trunk size, health, maturity, etc. Although it is only one of many online resources that documents and represents urban greenery, the lack of coverage of former socialist countries should be read as a certain divide. Could we consider this divide as a meaningful one and provocatively hypothesize that today the lack of interest in trees in urban practices of residents and municipalities in former socialist countries is a new marker of periphery? In a similar way as when the forest itself was a marker and a symbol of periphery just fifteen years ago?

I develop the argument of this article in three parts. The first part introduces the notion of planetarity as a horizon for social urban research by examining the current tendencies in urban scholarship, to a significant degree aimed to address the variety of challenges posed by climate-related strains, in a longer-term historical perspective. It shows how “urban” is being analytically reinvented in view of this new research horizon in order to cultivate the awareness of the sites and processes that exceed the form of urban settlement but significantly define its character. The second part analyzes the lineage and the logic behind the large amount of urban forest in Vilnius resulting from post-WWII planning decisions. It reconstructs the justification and valorization of this phenomenon (and the Karoliniškės Landscape Reserve in particular) by the participants and observers of planning processes in soviet Vilnius in the 1960s and 1970s. It shows that Vilnius urban forest has been justified primarily as a landscape characteristic of Lithuanian culture and as a framing for the historical city’s architectural heritage. In the third part, I propose to go beyond understanding the Karoliniškės Landscape Reserve and Vilnius urban forest as

<sup>6</sup> WE PARAPOM!: Parade of the Apple Trees. *Chemnitz European Capital of Culture 2025*. Retrieved from <https://chemnitz2025.de/en/allgemein/parade-of-apple-trees/> [accessed 29/07/2024].

<sup>7</sup> In 2023, Chemnitz ECC project members were complaining about the pressure from rather hostile local politicians. See WE PARAPOM!: Has been Cancelled! *Chemnitz European Capital of Culture 2025*, May 26, 2023. Retrieved from <https://weparapom.eu/News> [accessed 29/07/2024].

<sup>8</sup> OpenTrees Map. *OpenTrees.org*. Retrieved from <https://opentrees.org/#pos=1.25/0/145> [accessed 29/07/2024].

an element of human-centered urban heritage. Instead, I suggest treating it as a site for potential opening up—by including new non-human actors and stakeholders in the urban development process, and thus developing less confrontational relations between Vilnius culture / society and nature. I do so by comparing a growing interest in Vilnius urban forest to the earlier projects in the cities—the replacement of the medieval city walls, where the former boundary and isolation belt was turned into the major site for development. I show how and why biodiversity and nature-based solutions, as well as the notions crucial to them should be approached with civic political lenses.

## 1. Planetary As a Horizon for Urban Research

The changes in researchers and practitioners' understanding of relations between nature and society in urban context have been profound and belong to the last decade's process of redefinition of the category of "urban" itself. The agenda of "planetary urbanization," developed by Neil Brenner and Christian Schmid and aimed at criticizing the notion of a city as a bounded unit or as a type of settlement, is one of the most recognizable research agendas. They regard the criticized notion as the legacy of the early twentieth century sociological studies of cities, primarily associated with the Chicago School.<sup>9</sup> By contrast, they proposed to focus on urban processes as connected to and determined by other spatial units: regions, localities, agricultural land, extractive sites, connective infrastructures, etc. According to Brenner and Schmid, the current socio-spatial processes make the category of "the city" irrelevant. They explain it by observing the five "patterns and pathways of urban restructuring": first, the creation of new scales of urbanization like metropolitan areas or metropolitan zones extending beyond national borders; second, blurring and re-articulation of urban territories such as urbanization beyond historic central city cores, as well as omnipresence and normalization of suburbia; third, disintegration and ongoing restructuring of hinterlands, which facilitate urban development such as extraction sites, electricity grids, agro-industrial land-use systems, etc.; fourth, the new corridors of urbanization, primarily through the planetary scale networks and connections between metropolitan areas; and fifth, the end of wilderness, where nature becomes an infrastructure—not wild but managed.<sup>10</sup> As one among several other endeavors to rethink urban research and urbanist practice priorities via the notion of planetary, this research agenda is part of a trend of the last decade, which requires scrutiny and reflection. In this part, I make sense of the notion of planetary in urbanist research and practice by putting it in the longer-term perspective of social studies of urban transformations. Although brief and thus simplified, this long-term perspective is advocated in this article's argument as a means of cultivating awareness of a historical condition of possibility of the current social urban scholarship.

In particular, I propose that in a longer-term perspective, the robust social concepts of a modern city inherent in specific historical conditions are defined by the identification of crises, which have to be empirically and conceptually addressed and subsequently, resolved or softened. Such crises are recognizable first in urban environments. They are also conceptualized as requiring policy and design interventions and measures on the urban scale, even though they are connected to other socio-spatial scales. The current tendencies in urbanist practice and research agendas increasingly prioritize the nurturing of the new modes of inhabiting the planet amidst the climate crisis. Such prioritizing implies not merely

<sup>9</sup> More on the Chicago School of Urban Sociology see Kuklick, H. *Chicago Sociology and Urban Planning Policy: Sociological Theory as Occupational Ideology*. *Theory and Society*, 1980, Vol. 9, No. 6, p. 821–845, <https://doi.org/10.1007/BF00169091>; Bulmer, M. *The Chicago School of Sociology: Institutionalization, Diversity, and the Rise of Sociological Research*. Chicago: University of Chicago Press, 1984; Breslau, D. *The Scientific Appropriation of Social Research: Robert Park's Human Ecology and American Sociology*. *Theory and Society*, 1990, Vol. 19, No. 4, p. 417–446, <https://doi.org/10.1007/BF00137620>; Žiemelis, D. *Miesto ekosistemos sampratos transformacija: klasikinės ir šiuolaikinės miesto ekologijų atvejai*, p. 111–116.

<sup>10</sup> See more Brenner, N.; Schmid, Ch. *Elements for a New Epistemology of the Urban*. In: *The SAGE Handbook of the 21st Century City* / Eds. S. Hall, R. Burdett. London: SAGE Publications, 2017, p. 47–48, <https://doi.org/10.4135/9781526402059.n4>.

technical solutions but also a re-invention and re-interpretation of “urban” as a field for research and interventions meant to respond to the climate-related strains. In order to research and understand urban processes, the new concepts and empirical fields are needed to make cities the arenas of experimentation in the dimensions of institutions, design, and modes of living. The strengthening of this tendency does not deny or overshadow other research agendas in social urban studies; however, today it could be considered the major political challenge translated specifically in the empirical and conceptual repertoire of urban studies.

If one looks at the history of modern social studies of the cities, starting with “The Condition of the Working Class in England in 1844” by Friedrich Engels (1845),<sup>11</sup> one can recognize that the very birth of this type of scholarship with its most recognizable phases starting in the mid-nineteenth century are connected to the series of critical points. The earlier attention to the cities in the nineteenth and the early twentieth century was enabled by the need to understand the rules and regularities of growing, industrializing, and urbanizing societies, characterized by the increasing complexity of division of labor, unplanned expansion of built areas, the rise of individual anonymity, the decline of traditional sources of authority and coercion, the spread of impersonal bureaucratic governance, the novel means of exploitation, etc. It was a critical point—the moment when the reality turned obscure and therefore required more and qualitatively new efforts for its understanding and interpretation. The same could be said about social science at large. Karl Marx, Emile Durkheim and Max Weber among others have created the foundation of the sociology as a discipline, because they have generated the notions and the arguments that explain this critical point.

The knowledge and competences inherent to this understanding and interpretation have gained even more relevance in the conditions of the twentieth century’s more managed growth of the cities and accelerating complexity of industrial economy, which, in order to plan future growth, needed to be monitored and diagnosed from the perspective of individual and collective behavior. The predominant form of this growth was the spatial spread and an increasing centrality of urban areas. That is why the expectations of a greater spread of industrial, urban, bureaucratically governed lifestyle, as well as the definition of the instruments for individual adaptation in those emerging conditions, became the overarching idea of this period. The social research on cities was expected to make sense and to prevent the destabilizing effects of this growth, such as delinquency, poverty, alienation, etc. “The City” by Robert E. Park and Ernest W. Burgess (1925)<sup>12</sup> and the legacy of the Chicago School of Sociology at large, is one of the most recognizable flagship projects and the “witnesses” of this analytical and applied lens on cities and urban transformations.<sup>13</sup> In this regard, for the most of the twentieth century, the social research on cities and urban life was serving mainly the state. One of the systemic outcomes of this orientation was that nation-state and bureaucratically governed national society became the main scale and the main lens of understanding and intervening both the urban processes and society at large.

The tendency of equating society to national society started to be massively criticized at the end of the twentieth century.<sup>14</sup> Reflexive approaches to this turn call themselves a critique of “methodological

<sup>11</sup> For the latest edition, see Engels, F. *The Condition of the Working-Class in England in 1844*. Cambridge: Cambridge University Press, 2010, <https://doi.org/10.1017/cbo9780511792700>.

<sup>12</sup> Park, R. E.; Burgess, E. W.; McKenzie, R. D. *The City: Suggestions for Investigation of Human Behavior in the Urban Environment* / Eds. R. E. Park, E. W. Burgess. Chicago: The University of Chicago Press, 1925. Retrieved from [https://dl1.cuni.cz/pluginfile.php/968107/mod\\_resource/content/1/Park\\_TheCity.pdf](https://dl1.cuni.cz/pluginfile.php/968107/mod_resource/content/1/Park_TheCity.pdf) [accessed 29/07/2024].

<sup>13</sup> Likewise, this lens is central in social scholarship of this period at large. Charles Wright Mills, one of the most quoted sociologists of this period, explains the goal of the discipline as the ability to regard the hindrances and possibilities of individual biographies through the features of history, or, in other words, the ability to juxtapose “the personal troubles of milieu” and “the public issues of social structure.” See more Mills, C. W. *The Sociological Imagination*. New York: Oxford University Press, 1959, p. 8. Retrieved from <https://ratical.org/ratville/AoS/TheSociologicalImagination.pdf> [accessed 29/07/2024].

<sup>14</sup> This criticism can be explained by the growing awareness that “the personal troubles of milieu” cannot anymore be explained by the organization of “the public issues of social structure” on a solely national scale.



nationalism,<sup>15</sup> which, when articulated specifically in urban research, have implied that different national societies are interconnected and interdependent, while the cities are the arenas and the points of intensification of that interconnectedness and interdependence.<sup>16</sup> The dominant framework for such arguments was the studies of effects of economic globalization starting in the 1970s. The social researchers of cities and urban life began to specialize in studying unintended consequences of international division of labor, as well as cultural and political responses to those consequences. Understanding social and urban processes beyond the borders became the dominant research agenda. As a result, in the 1990s–2000s, globalization was the main horizon in urban research. Pragmatically, these studies had a purpose of describing and explaining social effects of growing economic interdependencies: fused markets, flows of people (as well as goods, money, and services), emerging identities and lifestyles, and, of course, emerging inequalities and conflicts. In the background (especially in the mainstream public discourse), globalization was considered rather a homogenizing process. However, many powerful arguments were made, showing that homogenization is not the case. It would be more accurate to say that social sciences in the 1990s and 2000s were focused on global interdependencies through competition, mobilities, trade, and expansion of markets.<sup>17</sup>

The 2010s mark the break from this tendency. Today, intellectual and creative attention has been increasingly paid to another logic of interdependencies across the borders. Instead of the buzzwords “globe” or “global,” one hears more about the “planet,” “planetary” or the “earth.”<sup>18</sup> Instead of frictionless movement across the globe, the new type of sensitivity is to be cultivated—the sensitivity to the fragility of the planet in trouble.<sup>19</sup> The major underlying cause of this new emerging sensitivity is the climate crisis, and thus the need for profound infrastructural re-organization of the modes of living on this planet—through energy sources and resource extraction, consumption and lifestyle, new modes of mobility and inhabiting space in general. Such infrastructural re-organization seems to be a very hard political task, raising challenges to both national and international institutions. This recognized and further scrutinized fragility of the earth creates an effect that partially resembles the 1950s and 1960s notions of global biosphere’s fragility due to the nuclear threat.<sup>20</sup> Even though the humans are increasingly considered a problem to the environment, they are not the only or the main actors. In this regard, some suggest we need to reconsider the foundational notions of human subjectivity—to stop seeing hyper-subjectivity as a convention and to look for the forms of hypo-subjectivity to grow.<sup>21</sup>

Such a new sensitivity with its glossary, experimental design repertoire, and emerging type of subjects constitutes the break from the decades-long epistemic and political lens of globalization (starting

<sup>15</sup> See more Beck, U. *The Cosmopolitan Perspective: Sociology of the Second Age of Modernity*. *The British Journal of Sociology*, 2000, Vol. 51, No. 1, p. 79–105, <https://doi.org/10.1111/j.1468-4446.2000.00079.x>; Lash, S.; Urry, J. *Economies of Signs and Space*. London: Sage Publications, 2002, <https://doi.org/10.4135/9781446280539>; Wimmer, A.; Schiller, N. G. Methodological Nationalism, the Social Sciences, and the Study of Migration: An Essay in Historical Epistemology. *The International Migration Review*, 2003, Vol. 37, No. 3, p. 576–610, <https://doi.org/10.1111/j.1747-7379.2003.tb00151.x>; Norkus, Z. Max Weber on Nations and Nationalism: Political Economy before Political Sociology. *The Canadian Journal of Sociology / Cahiers canadiens de sociologie*, 2004, Vol. 29, No. 3, p. 389–418, <https://doi.org/10.2307/3654673>.

<sup>16</sup> See Wonders, N. A.; Michalowski, R. Bodies, Borders, and Sex Tourism in a Globalized World: A Tale of Two Cities—Amsterdam and Havana. *Social Problems*, 2001, Vol. 48, No. 4, p. 545–571, <https://doi.org/10.1525/sp.2001.48.4.545>. See also Sassen, S. *A Sociology of Globalization*. New York: W. W. Norton & Company, 2007.

<sup>17</sup> See more *Global Networks, Linked Cities* / Ed. S. Sassen. New York: Routledge, 2002, <https://doi.org/10.4324/9781315538808>. See also Scott, A.; Storper, M. Regions, Globalization, Development. *Regional Studies*, 2003, Vol. 37, No. 6–7, p. 579–593, <https://doi.org/10.1080/0034340032000108697a>.

<sup>18</sup> See for instance, Biennale Architettura 2021: How Will We Live Together? *La Biennale di Venezia*, 22 May, 2021. Retrieved from <https://www.labiennale.org/en/news/biennale-architettura-2021-how-will-we-live-together> [accessed 29/07/2024].

<sup>19</sup> See Clark, N.; Szerszynski, B. *Planetary Social Thought: The Anthropocene Challenge to the Social Sciences*; Latour, B. *Down to Earth: Politics in the New Climatic Regime*. Cambridge: Polity Press, 2018; Purdy, J. *After Nature: A Politics for the Anthropocene*. Cambridge: Harvard University Press, 2015, <https://doi.org/10.4159/9780674915671>.

<sup>20</sup> See more Masco, J. Bad Weather: On Planetary Crisis. *Social Studies of Science*, 2010, Vol. 40, No. 1, p. 7–40, <https://doi.org/10.1177/0306312709341598>.

<sup>21</sup> See above all Morton, T.; Boyer, D. *Hyposubjects: On Becoming Human*. London: Open Humanities Press, 2021. Retrieved from [http://openhumanitiespress.org/books/download/Morton\\_Boyer\\_2021-hyposubjects.pdf](http://openhumanitiespress.org/books/download/Morton_Boyer_2021-hyposubjects.pdf) [accessed 29/07/2024].

in the 1970s and accelerating in the 1990s after the dissolution of the Soviet Union). The globe is defined first of all in terms of growth and unlimited opportunities, where the central framework of human experience is about the control of the environment through expanded and fused markets and the boom of infrastructural development, and not least, through the new technologies of visual representation of the earth as a model sphere we can now master—move the way we want with the help of Google and other digital service developers. This growth creates not only very understandable human expectations and meanings of comfort, which have turned out to be highly unsustainable, such as, for instance, suburbia or massive tourism and hospitality business. It also creates foundations for desirable political institutions and cultures, resting however on the massive expanding use of fossil fuels.<sup>22</sup> In such context, in contrast to the globe, the planet is defined in terms of crisis and fragility, whereas humans start to be considered as trouble. If globalization is about the competition around the globe as the main rule, with the elimination of barriers for the competition as the main goal, planetarity is about the sensitivity to the planet's natural processes as the main rule, with the setting of principles for such sensitivity as the main goal.

This shift suggests that the researchers and practitioners are looking for a new principle which would depict the role of and show the possible paths for a human (both individual and collective) in the repertoire of spatial practices, re-defined by the factors of climate crisis, deteriorating competition for energy resources, and degradation of those political regimes that are unable to embrace the new challenges in international politics and economy. Planetarity is becoming a new horizon for steering social urban research and social urban practices. It is distinct from the horizon of globalization, characterized by the themes of convergence and unhindered mobilities. It is still rather difficult to fully and comprehensively recognize the logic and the consequences of the “planet” replacing the “globe” in our thinking on urban social reality. However, it is possible to talk about the main tendencies in social urban research that reveal the contours of the new reality. In particular, it is obvious that scholars have to cultivate a new, less confrontational type of relationship between nature and society / culture or between natural and built environment. This is the goal for researchers, designers, politicians, and activists for decades ahead. One could document the emerging experimental ways of writing history on socio-political environmental formations by de-centering the human, i.e., where humans are not the focus of the narrative.<sup>23</sup> It is also becoming clear that urban research now tends to focus not solely on humans. This concerns not only the popularity of the notions of post-humanism or multi-species society, but also the proliferation of studies about the role of infrastructures (including digital platforms, applications, and algorithms) as crucial drivers and enablers of social processes. Some call this tendency “the new materialisms”<sup>24</sup>—the interest in material structures of social life and not only in norms, symbols, identities and lifestyles, as it has been most often the case in earlier conventional social and cultural research.

The “end of wilderness” and the treatment of nature as infrastructure in planetary thinking and research can be explained by the prevalence of the climate crisis and the manifold strains emerging from the attempts to address this crisis. In such a view, this is a part of the broader tendency of an urgency-driven re-invention of urban in its manifold connections and interdependencies with other forms of spatiality. The main logic behind this reinvention is the need to understand “urban” in the dynamic, i.e., a process rather than a finished form with its attributes and boundaries. Thus, the developed lens allows us to cultivate the approach to cities oriented towards guided change of the modes of inhabiting space in order to meet the climate crisis challenges. Approaching nature as a managed infrastructure, and among other aspects nurturing a planetary lens in urban scholarship, results in de-centering the human in urban discourses and practices. De-centered and tamed human subjectivity is to become an important element

<sup>22</sup> See more Mitchell, T. *Carbon Democracy: Political Power in the Age of Oil*. London & New York: Verso, 2011.

<sup>23</sup> See above all Demuth, B. *Floating Coast: An Environmental History of the Bering Strait*. New York: W. W. Norton & Company, 2019.

<sup>24</sup> See above all Gamble, Chr. N.; Hanan, J. S.; Nail, T. What Is New Materialism? *Angelaki*, 2019, Vol. 24, No. 6, p. 111–134, <https://doi.org/10.1080/0969725X.2019.1684704>.

of the search for the foundations of less confrontational relations between nature and culture / society. However, at the same time, like in the case of the Darwinian and Copernican knowledge revolutions, it puts more responsibilities on humans vis-à-vis natural environments. As nature has been increasingly considered and expected to be managed and supervised as infrastructures, humans turn out to be the tamed but critical elements of this process.

## 2. Vilnius Urban Forest As a Framing Of Human-Centered Urban Heritage

The potential of systematic blurring of the boundary between nature and culture and society is especially intriguing from the viewpoint of Vilnius, for more than thirty percent of its territory is forest.<sup>25</sup> This sets Vilnius apart from most of other cities in the world, where the scope of green infrastructures in general is smaller and where the other types of green infrastructures prevail. Such a distinction provokes a question about the historical lineage of Vilnius urban form. How has this extent of wild urban forest intertwined with the city's historical social processes and urban growth? From today's perspective, how have these urban conditions valorized in view of the city's historical heritage? In addition, this peculiarity makes Vilnius an intriguing field for experimental research and interventions regarding its future. What would it take for the society to further nurture these unique conditions in terms of social practices (similar to the processes of nurturing culture-driven urban development in the 1990s and 2000s, characterized by the projects of historical Old Town revitalization, new lifestyles, new urban identities, etc.)? In this part, I propose a conceptualization of values and logic behind the specific lineage of Vilnius nature in the context of modern urban growth.

In particular, in this part, I examine one of the most remarkable projects of Vilnius urban nature, the Karoliniškės Landscape Reserve established in 1960. One hundred and sixty-two hectares of mixed forest on the slopes of the Neris River separates the 1960s and 1970s Soviet neighborhoods, Lazdynai, Karoliniškės, Viršuliškės and Šeškinė (with up to 150,000 residents in total) from the pre-WWII Vilnius. Although the adjacent district of Lazdynai, awarded the Soviet Lenin Prize in 1974, has been widely discussed as a showcase of a housing estate of the period, organically integrated with the natural relief and landscape, the Karoliniškės Landscape Reserve's planning process and the outcome are rarely addressed. This is surprising, for the Reserve by no means was a blind spot in the 1960s and 1970s planning processes in Vilnius. The competition for the Reserve's planning scheme took place in 1974 (i.e., already after the residential districts were built), shortly afterwards, with the first prize won by the team of Liucijus Dringelis, Regimantas Pilkauskas and Ligija Vaičiaitė. Landscape architect Regimantas Pilkauskas in his later writings promoted the systemic approach to landscape in urban planning and advocated the sensitivity to landscape features in this process. In particular, he emphasized that the buildings' volume of urban landscape (the width and length of the buildings) should be coordinated with the properties of slopes as natural landscape's elements.<sup>26</sup> In this respect, the Karoliniškės Landscape Reserve should be considered a project of human-preserved wilderness where the knowledge of dendrology and landscape architecture has retained certain autonomy and decision-making potential in urban planning at large.

The planning scheme of the Karoliniškės Landscape Reserve was implemented by the authors' collective consisting of dendrologist Leonas Čibiras, architect Irena Daujotaitė and architect Algirdas Knyva. The transit scheme from the year 1974 (see Figure 1) shows that despite the preservation of the forest's wilderness it was granted a public recreation potential. The paths through the forest were envisioned already at that stage and were meant to connect the Reserve to Vingis Park across the river.

<sup>25</sup> See Vilnius Plan: Vilnius Green Framework. *Vilnius.lt*, 18 March, 2021. Retrieved from <https://vilnius.lt/wp-content/uploads/2021/04/01.-Gamtinio-karkaso-schema-2021-03-18.pdf> [accessed 29/07/2024].

<sup>26</sup> See more Pilkauskas, R. *Miesto želdynų plėtotė. 1 dalis, Miesto želdynai*. Vilnius: Lietuvos kraštovaizdžio architektų sąjunga, 2019.





**Figure 1.** *The Karoliniškės Landscape Reserve planning scheme. M1:2000. Transit Scheme. 1974.*

The planning scheme (see Figure 2, 3) allows us to understand the functional profile of the area. It demonstrates that the authors have considered a variety of functions attributed to the Reserve: places with the most interesting view, pedestrian bridges, water springs, places with rare protected plants, places of a recreation character, places suggested by the Reserve’s administration, projected water, etc. However, the Karoliniškės Landscape Reserve’s character of a wild forest rather than a cultivated park has been retained.



**Figure 2.** *The Karoliniškės Landscape Reserve planning scheme. M1:2000. 1974.*



**Figure 3.** *The Karoliniškės Landscape Reserve planning scheme. M1:2000. 1974.*

Despite the Reserve's planning scheme (see Figure 1–3) from the year 1974 suggesting that it was meant to be a resource for humans to use, it turned out to be not only human-centered (see Figure 4).



**Figure 4.** *The Karoliniškės Landscape Reserve path. 2023. Photo by Siarhei Liubimau.*

Professional biographies and the respective values of the authors' collective that implemented the planning scheme explain this deliberate planning of the forest ecosystem as part of urban landscape. Leonas Čibiras is considered to be the first Lithuanian architectural dendrologist whose ideas have been integrated into urban planning practice.<sup>27</sup> From 1960 to 1967, he worked as a Chief Arborist in the Urban and Settlement Landscaping Division of the State Committee for Construction Affairs and in the Ministry for Automobile Transport. Later, from 1967 to 1973, Čibiras worked at the Institute of Technical Aesthetics and was concerned with the formation of green areas in urban

<sup>27</sup> See Deveikis, S. Vienos neapgintos disertacijos pėdsakai – sumedėjusių augalų asortimento Lietuvos želdynams ir architektūrinės dendrologijos pradmenų aspektai. Dendrologo Leono Čibiro mokslinių įžvalgų analizė. *Darnios aplinkos vystymas*. 2022. Vol. 1, No. 19, p. 59–60, <https://doi.org/10.52320/dav.v19i1.212>.



surroundings. He also laid the groundwork for the establishment of architectural dendrology as a discipline in Lithuania. From 1973 to 1981, Čibiras was a Chief dendrologist at the Institute for Monument Conservation (Planning Institute for Restoration of Monuments) researching the valuable green areas (parks) in Lithuanian manors. His focus was on the landscaping of public green spaces and the range of suitable plants. The Karoliniškės Landscape Reserve played a significant part in Čibiras's career, as he was promoting the use of forest tree species in urban and natural environments in order to preserve the established character of Lithuanian landscape. The broader vision was the development of woody plant ranges to be maintained and cultivated in urban planning and landscape architecture in Lithuania.<sup>28</sup> In this respect, I would argue that the cultural meaning of Lithuanian urban landscapes and their features was a significant factor in defining the Karoliniškės Landscape Reserve's character as a wild urban forest.

However, the Karoliniškės Landscape Reserve lineage cannot be explained only by professional and disciplinary orientations within Lithuanian dendrology and landscape architecture of the 1960s and 1970s. In a broader geographical scalar framework, the Reserve is a crucial element of the imagery of natural morphological edging of urban composition of Vilnius historical Old Town and its suburbs. Irena Daujotaitė, one of the authors of the Karoliniškės Landscape Reserve's planning scheme implementation, together with her co-author Giedrė Laukaitytė-Malžinskienė, has developed a systematic argument on the mutual influence of Vilnius natural morphological structure on the one hand and urban composition of its historical core on the other hand.<sup>29</sup> According to them, the composition of Vilnius city center is organically connected with the natural properties of the Neris valley basin and the Karoliniškės Landscape Reserve as its element. Architectural objects of Vilnius historical center belong to natural urban system, which is one of the measures to define the volumetric urban development of the city center. They emphasize the visual dimension of this interconnection and show that any changes in natural landscape will affect the entire visual space of Vilnius. They argue that the steep slopes of the Neris River valley should be protected and treated as important axes of nature conservation and urban development framework.

Architect Algimantas Mačiulis makes a similar argument. He uses the terms “topographic heritage” and “system of natural forms” to depict the basis of Vilnius cityscape formation over time.<sup>30</sup> According to him, the natural basis of Vilnius consists of the valley of the Neris and Vilnelė rivers, which slopes form Kalnai Park and further west, the slopes of Taurakalnis, Šeškinė, Karoliniškė, as well as Vingis Park. Mačiulis argues that the structure of greenery made by the green hills surrounding Vilnius Old Town determines not only visual panorama but also the original structure of vegetation.<sup>31</sup> However, his approach, in a similar way as the Daujotaitė and Laukaitytė-Malžinskienė's approach, regards Vilnius nature's features (in terms of morphological structure, hydrology and dendrology) primarily from the perspective of heritage and preservation. According to their reasoning, the Karoliniškės Landscape Reserve is valuable first as a visual context for the historical center of Vilnius, with the Castle Hill as its core. It is considered as part of the Neris River valley, which is the compositional axis of the historical center and the basis for the formation of the city's socio-cultural public space. Such approaches to heritage are overtly human-centered rather than nature-centered: a cultured human gaze on the Old Town serves as the lens in approaching Vilnius urban forest.

Current researchers in architecture, Dalia Dijokienė and Aurelija Paškauskienė, follow the same logic (and even strengthen it) of Daujotaitė and Mačiulis who participated in Vilnius development planning in the 1960s and 1970s. they approach Vilnius urban nature from the perspective of visual consumption,

<sup>28</sup> For the given context, see *ibidem*, p. 54–67.

<sup>29</sup> Daujotaitė, I. M.; Laukaitytė-Malžinskienė, G. Vilniaus miesto centro urbanistinei kompozicijai turintys įtakos Neris slėnio gamtinės morfostruktūros ypatumai. *Urbanistika ir architektūra / Town Planning and Architecture*, 2003, Vol. 27, No. 4, p. 155–162.

<sup>30</sup> Mačiulis, A. Vilniaus miesto savitumas: gamtos ir architektūros darna. *Acta Academiae Artium Vilmensis*, 2006, Vol. 40, p. 7–16.

<sup>31</sup> See *ibidem*, p. 9.

primarily as the background of the Old Town panorama.<sup>32</sup> They metaphorically depict Vilnius Old Town as a “bowl” surrounded by green slopes. In broader sense, this feature of Vilnius is meaningful to them from the perspective of the city’s identity made relevant by the processes of globalization. In their approach,

*urban identity should be perceived as the entirety of multi-layered factors that shape the territory, distinguishing one particular territory from others.*<sup>33</sup>

Vilnius urban nature is an indispensable element of the city’s heritage ensemble; whereas the natural urban system is regarded as the one that provides a pattern to the area. Therefore, it must be protected in order not to destroy the volumetric and spatial structure of the historical center’s cityscape. It is apparent that just like Mačiulis, Daujotaitė and Laukaitytė-Malžinskienė, Dijokienė and Paškauskienė perceive the historical Old Town as the major pattern and tenet for the wider natural morphological environment, including the Karoliniškės Landscape Reserve situated on the Neris River slopes.

This lens of heritage and preservation valorizes Vilnius urban forest in a certain historical context and defines a longer-term approach to and discourse on Vilnius urban nature. One can hypothesize that this lens on urban nature is prioritized due to the peculiarity of the 1990s and 2000s transitional socio-economic urban processes in Lithuania, characterized by re-establishment of private property and market-driven urban development. It is noteworthy that according to Mačiulis, the trend of domination of private developers and private investors in the urban development process—instead of city planning specialists—is a risk that could lead to imbalance between the natural morphological structure and urbanized territory of Vilnius.<sup>34</sup> As he puts it, in order to protect the Old Town not separately but together with its natural surroundings, one needs the “aristocratic mindset” as opposed to “consumer mentality.”<sup>35</sup> A similarly reserved attitude to business-dominated approach to urban development, characteristic to socio-economic and political transition of the 1990s and 2000s in Lithuania, is found in Daujotaitė and Laukaitytė-Malžinskienė’s works. They write about the need for preservation of the current composition of the valley, specifically in the context of the 1990s and 2000s urban growth dominated by the interest groups connected to construction business.

This established view on Vilnius urban nature as a heritage asset to be protected is only one of the dimensions in the Karoliniškės Landscape Reserve lineage. In addition to the already discussed organic values shared among the community of the 1960s and 1970s Lithuanian planners and their deliberate intention to protect the visual panorama of the historical center of Vilnius, one should recognize the absence of land market and hence, the absence of private property in the period in question. One of indirect outcomes of the socio-economic regime in the USSR was larger open spaces in comparison to urban growth under capitalism. Major forest areas in Vilnius are located in the city parts largely urbanized during Soviet socialism. At the same time, in the 1990s and 2000s, Vilnius urban nature was not a priority for urban development. On the contrary, it was rather a blind spot, while most of the attention was paid to socio-economic reinvention of the historical center and the development of suburbia. It is quite common in the former socialist context at large. As Dagmar Haase, Diana Dushkova et al. show, green infrastructures were not the priority of transformation after socialism.<sup>36</sup> Moreover, the practice of treating urban forest in the USSR as a security resource constituted yet another additional factor in

<sup>32</sup> Dijokienė, D.; Paškauskienė, A. Identity of Historical Areas of a City: Interaction Between Nature and Man. *Landscape Architecture and Art*, 2022, Vol. 20, No. 20, p. 12, <https://doi.org/10.22616/j.landarchart.2022.20.01>.

<sup>33</sup> *Ibidem*, p. 12.

<sup>34</sup> Mačiulis, A. *Vilniaus miesto savitumas: gamtos ir architektūros darna*, p. 15.

<sup>35</sup> See *ibidem*, p. 14.

<sup>36</sup> Haase, D.; Dushkova, D.; Haase, A.; Kronenberg, J. Green Infrastructure in Post-Socialist Cities: Evidence and Experiences from Eastern Germany, Poland and Russia. In: *Post-Socialist Urban Infrastructures* / Eds. T. Tuvikene, W. Sgibnev, C. S. Neugebauer. London: Routledge, 2019, p. 120, <https://doi.org/10.4324/9781351190350-7>.

the Karoliniškės Landscape Reserve lineage. In the plans of Vilnius districts in the 1970s, the forest was considered a destination for the population to escape in case of the destruction caused by war. The security dimension has been gaining a new meaning in the context of the climate crisis and the role of green infrastructures for the cities to adapt to climate change.<sup>37</sup>

### 3. Opening Vilnius Urban Forest: The Civic Dimension of Biodiversity

Current urban development challenges, brought about by the climate-related strains, require reinvention of the urban environment in terms of both practices and discourses. One of the major value horizons for this reinvention is nurturing planetary lenses on urban processes, or, in other words, nurturing greater sensitivity to the planet's biosphere. Transforming Vilnius urban forest from either a blind spot or a back-drop to a cultured human gaze into the center of experimentation looking for the new ways of researching, designing and inhabiting the city is one of the most intriguing entry points to the city's planetary futures. Therefore, it is productive to practice Vilnius urban forest beyond its primary function, i.e., as framing for historical architectural heritage of the city center. De facto Vilnius forest constitutes a green belt, which divides two distinct materialized layers of urban growth—a pre-WWII layer (which after the end of the Soviet occupation has been narrativized as the major source of Vilnius identity and development), and a Soviet socialist layer. In the case of the Karoliniškės Landscape Reserve, this division is graspable in terms of both the qualities of the divided landscapes and their uses. Approaching the Reserve as a boundary between the two historical materialized layers of urban growth is useful as it draws attention to and opens the question of political and socio-economic conditions that have defined each of these layers. Furthermore, such approach offers room for the experimentation not only in terms of its immediate purpose, but also in terms of its civic and political potential amidst the prevalent urban development agendas.

To pursue this idea, it would be fruitful to juxtapose the opening of Vilnius urban forest in terms of the new modes of researching, designing, and inhabiting the city with the opening of the urban areas in place of medieval cities' defensive walls. The latter opening belongs to the modern urban growth, where the mobility and exchange become more important than defense and containment in the urban-scale socio-economic processes. What is common here is that in both cases the opening means that the boundary or the isolation belt is regarded as a potential site for a new development paradigm. In the context of Vilnius, the connection between the former defensive walls and the potential of green infrastructures has already been recognized in the research. When commenting on Vilnius green spaces, Dijokienė and Paškauskienė refer to other cases where

*one way to form a structural boundary between the old town and historical suburbs is to create green public urban spaces outside the defensive wall in the place of the former defensive field.*<sup>38</sup>

When applying it specifically to Vilnius, they see the potential outside the former city gates to form local public spaces that would connect natural areas surrounding the Old Town in the east and in the west.<sup>39</sup> However, in terms of both extent and transformation potential, the most interesting boundary is not the literal Vilnius Old Town's defensive walls, but the forest that divides the pre-WWII Vilnius from the part of the city largely developed during the Soviet socialism.

It would be just to hypothesize that Covid-19 and the lockdown have changed the perception and uses of the green belt in Vilnius. Due to partially restricted access to the habitual public spaces, it has

<sup>37</sup> Cf. Misiune, I.; Kazys, J. Accessibility to and Fragmentation of Urban Green Infrastructure: Importance for Adaptation to Climate Change. In: *Human-Nature Interactions: Exploring Nature's Values Across Landscapes* / Eds. I. Misiune, D. Depellegrin, L. E. Vigl. Cham: Springer, 2022, p. 235–246, [https://doi.org/10.1007/978-3-031-01980-7\\_19](https://doi.org/10.1007/978-3-031-01980-7_19).

<sup>38</sup> Dijokienė, D.; Paškauskienė, A. *Identity of Historical Areas of a City: Interaction between Nature and Man*, p. 12.

<sup>39</sup> See *ibidem*, p. 12.



gained a new value and purpose. This is demonstrated by the Google mobility reports during the pandemic, from February 17 in 2020 to October 15 in 2022.<sup>40</sup> The Google mobility reports focus on the uses of specific types of spaces (parks and green spaces, retail spaces, transit spaces, etc.) in the cities in comparison to the baseline before the pandemic. The uses are defined by both individual visits and the duration of stay. Especially for the parks and green spaces this is not the ideal statistics, as the baseline period is January and February 2020, i.e., the winter time, when the parks are not used the most. Nevertheless, it shows that Lithuania is one of those countries where the use of parks and green spaces has grown the most. Specifically, the increase of the use of Vilnius parks and green spaces was seventy percent in comparison to the baseline. Despite the limitations of the data, acknowledged by the data owners themselves, one could recognize a certain tendency when comparing Vilnius to the cities in the region, like Riga (excluding its seaside suburbs) or Helsinki, where the uses were one percent in comparison to the baseline. This tendency could be explained by the fact that almost all residential areas in Vilnius have access to urban forest. In the situation of hindered mobility, it had become a precious resource, of which the society was much less aware before the pandemic and the lockdown. In my own observation, based on regular visits to the Karoliniškės Landscape Reserve from 2018, it was one of the Vilnius forests that started to be used significantly more actively from the beginning of the Covid-19 pandemic in 2020. Should one expect a gradual cultivation of the new types of public spaces triggered by the pandemic and the lockdowns but not reduced to these factors only?

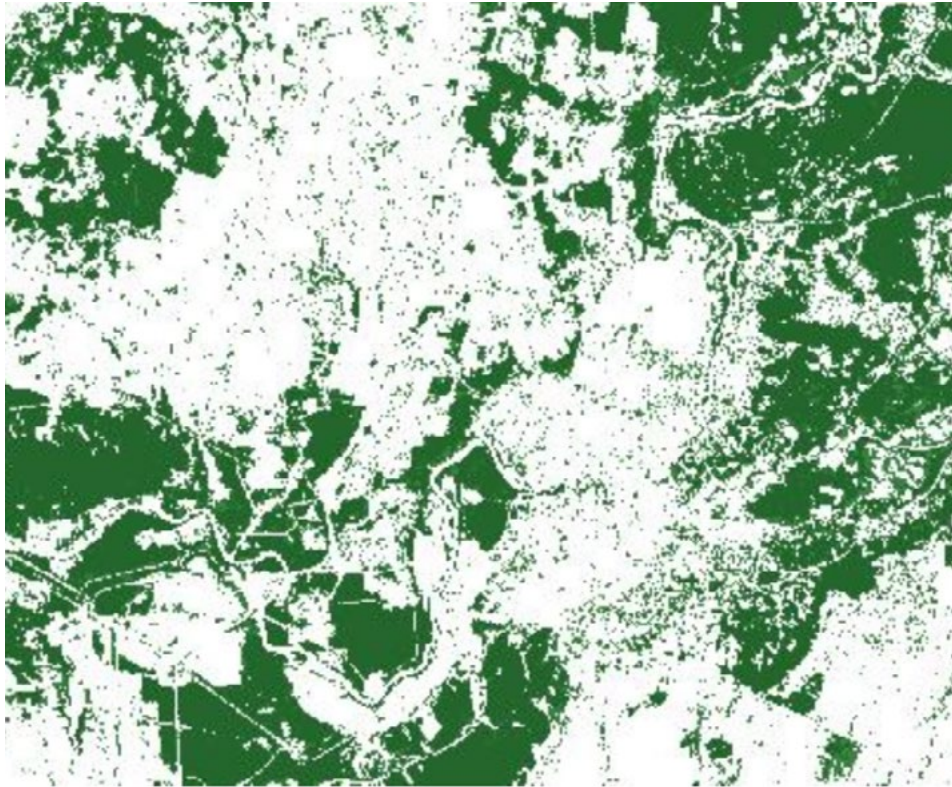
The growing interest in Vilnius urban forest can be compared to earlier urban development imaginations where the opening of the boundary was exploited as an opportunity. Moreover, a certain continuity of ideas and values could be traced when comparing the earlier reinvention of the areas of defensive walls in European cities and the reinvention potential of Vilnius urban forest. In this regard, Vienna's Ringstrasse, approximately five-kilometers-long boulevard developed in place of medieval walls, which is widely perceived as an epitome of modern urban development in terms of integrating public functions that foster social mix, underlying modern infrastructures and urban furniture as well as green spaces, serves as particularly interesting and relevant reference. Ringstrasse is not only one of the central sites of infrastructural transformation of medieval cities into modern cities, it also plays an important role in Europe's political history as a site of nurturing republican egalitarian society in civic and economic terms. Moreover, the Ringstrasse project, emerging from the isolation belt that has been used as a resource for growth, has triggered a discussion of what modern urbanism could and should be in terms of its development goals and values. One of the most active participants of this discussion was Camillo Sitte, whose influence on Lithuanian modern architecture is well documented<sup>41</sup> and whose ideas have influenced Lithuanian architectural education, which in many ways has been defined by the 1960s–1970s community of architects and planners. Sitte criticized the actual Ringstrasse project and at the same time, advocated nature in the city in the form of enclosed green spaces, i.e., confined natural areas instead of alleys open for unhindered mobility. This was part of his organic and spontaneous city development plan.

Sitte's influence on Lithuanian architectural tradition makes it meaningful to locate the post-WWII Vilnius green belt—a confined urban forest, and the Karoliniškės Landscape Reserve in particular, that surrounds the historical city center—in the longer history of architectural and urbanist ideas of organic development of the cities in Europe. In this history, Sitte's imaginary late nineteenth-century Vienna plays a special role—as an organic metropolis with the parks and open spaces that could have been part of Ringstrasse. At the same time, if one to examine the Vilnius forest map (see [Figure 5](#)),

<sup>40</sup> See How Your Community Moved Differently Due to COVID-19. *Google COVID-19 Community Mobility Reports*, October 17, 2022. Retrieved from <https://www.google.com/covid19/mobility/> [accessed 29/07/2024].

<sup>41</sup> See Laurinaitis, P. T. *Formation of National School of Urban Planning in the First Republic of Lithuania (1918–1940): [Summary of Doctoral Dissertation: Humanities, History and Theory of Arts (H 003)]*. Kaunas: Kaunas University of Technology, 2020. Retrieved from <https://epubl.ktu.edu/object/elaba:71481751/> [accessed 29/07/2024].

the Karoliniškės Landscape Reserve is not only part of the green belt conceived by humans but also a wild nature corridor where seeds, insects, and animals migrate between the forest areas in the south-west and in the north-east.



**Figure 5.** *Vilnius tree cover density map.* Source: *Forest Information System for Europe*. 2015.

This adds another, more abstract dimension to the reference to Sitté's imagination of what a properly organic Ringstrasse could have been. Ringstrasse is a functional monument of the opening—a public space for modern, republican and hence much more egalitarian society, where access to space is a convention and a value. As a result, it has become a widespread economic, technological, power and aesthetic model for building a modern infrastructure instead and beyond the city walls in industrial, capitalist, and democratizing societies. Under current urban development challenges and in the current value context, the green corridors in the cities can be expected to become another emerging tendency. In this instance, it is the opening of non-human-centered public space for cultivating biodiversity, nature-based solutions, and green citizenship at large. Vilnius is so remarkable because the robust infrastructure for this new opening has existed since the 1960s and 1970s.

Given that biodiversity is one of the central values today, one should expect the prioritization of spaces in the cities where a variety of species can be enhanced—through the creation of wildlife zones and planned disruptions in the experience of the human-made urban environment. Which notions could guide this process and help to develop a strategy of nurturing non-human-centered public spaces?

The notion of *Umwelt*, developed by Jacob von Uexküll in the 1930s, indicates a surrounding environment enacted by the perceiving subject (not necessarily human). This notion was meant to grasp the reality produced by simultaneously the perception and reaction of a living being.<sup>42</sup> In Mikhail Lotman's

<sup>42</sup> See more von Uexküll, J. A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds. In: *Instinctive Behavior: The Development of a Modern Concept* / Translated and edited by C. H. Schiller. New York: International Universities Press, 1934. p. 5–80. Retrieved from [https://monoskop.org/images/1/1d/Uexkuell\\_Jakob\\_von\\_A\\_Stroll\\_Through\\_the\\_Worlds\\_of\\_Animals\\_and\\_Men\\_A\\_Picture\\_Book\\_of\\_Invisible\\_Worlds.pdf](https://monoskop.org/images/1/1d/Uexkuell_Jakob_von_A_Stroll_Through_the_Worlds_of_Animals_and_Men_A_Picture_Book_of_Invisible_Worlds.pdf) [accessed 29/07/2024].

view, who compares Yuri Lotman's and von Uexküll's approaches, *Umwelt* vis-à-vis the environment is like Einstein's spatiality vis-à-vis Newton's spatiality.<sup>43</sup> Today, this very constructivist notion of space is widely re-read as a research foundation for the multi-species society principles beyond the discipline of biology, because in this approach, different species enact different spatialities.<sup>44</sup> The supposition that not only humans enact their surrounding space makes the notion of *Umwelt* the foundation of a critique of anthropocentric research lenses on the world. In this perspective, *Umwelt* is also a key to radicalize the practice of public space—as non-human-centered, as a result of co-existence of different, not always friendly, *Umwelts* (von Uexküll's primary example of a non-human *Umwelt* is a tick). Planetary lenses on urbanism suggest the prioritization of spaces in the cities where a variety of *Umwelts* can be nurtured and cultivated.

How to make *Umwelt* a unit of urbanism? It is hard to embrace the idea of nurturing a tick's *Umwelt* in the city, especially that today some arguments about the non-human-centered projects can be framed as anti-human. The notion of *Umwelt* in the context of historical analogy is helpful, for it allows viewing the current de-centering of a human as part of the longer lineage of opening-up projects. In history, one can observe a backlash against Ringstrasse as an opening-up project. Should we compare it with the current cases of backlash against green urbanism? On the one hand, the notion of *Umwelt* suggests that the richer perception, the richer action; and the other way around. On the other hand, it could be used as a solid foundation for political agenda of resetting the modes of coexistence on the planet. One of the major elements of redefining the relations between culture and nature today is the realization that there is no outside. We can no longer externalize nature as a resource; on the contrary, we have to learn how to internalize it. This invites a much broader circle of stakeholders of human action. This way, it not only tames but also refines a human action and makes it much more universal and rule oriented. In this sense, the non-human-centered public space is not about humans who surrender to ticks but about humans who invent and practice nature as infrastructure with an increasing number and variety of participants. Hence, in the current project of opening up, nature is becoming the matter of *polis* not of *oikos*.

At the same time, there is a question of whether the notion of *Umwelt* is compatible with the notions depicting cultural, social, and economic distinctions among the actors interacting in urban settings. Are human *Umwelts* differentiated according to income, education, taste, etc.? Can a certain *Umwelt* be learned, or vice versa unlearned? Nazis in the 1930s were using von Uexküll's notions in order to ground their political decisions in biological terms.<sup>45</sup> Von Uexküll's observation that the reciprocal processes of perception and reaction create the environment can be translated into a historically localized social critique too. In particular, it could become part of the dialogue about the recent portrayals of neoliberal sociality as a set of socio-spatial bubbles.<sup>46</sup> In such socio-economic and cultural circumstances, human social researchers, as a distinct species, are able to analyze the relations among those different bubbles as well as the structure of bubbles themselves. For not belonging to any bubble destabilizes researchers' relations between perception and reaction (the same way as one's reflection and reflexivity can be a destabilizing factor for one's course of action). The constructivist social urban research in the 1990s and 2000s was largely focused on the spaces' performative character with underlying purpose to make the movements of information, identities and lifestyles, capital, etc. faster and more efficient. The current social urban research faces the need to understand also the properties and dynamics of distinct spatialities in order to better manage societies' environmental impact and cultivate more sensitivity to the planet's

<sup>43</sup> Lotman, M. *Umwelt* and Semiosphere. *Sign Systems Studies*, 2002, Vol. 30 No. 1, p. 33–34, <https://doi.org/10.12697/sss.2002.30.1.03>.

<sup>44</sup> See more Schroer, S. A. Jakob von Uexküll: The Concept of *Umwelt* and its Potentials for an Anthropology Beyond the Human. *Ethnos*, 2021, Vol. 86 No. 1, p. 132–152, <https://doi.org/10.1080/00141844.2019.1606841>.

<sup>45</sup> See more Stella, M.; Kleisner, K. Uexküllian *Umwelt* as Science and as Ideology: The Light and the Dark Side of a Concept. *Theory in Biosciences*, 2010, Vol. 129, No. 1, p. 39–51, <https://doi.org/10.1007/s12064-010-0081-0>.

<sup>46</sup> For more information about this dialogue, see Klauser, F. R. Splintering Spheres of Security: Peter Sloterdijk and the Contemporary Fortress City. *Environment and Planning D: Society and Space*, 2010, Vol. 28, No. 2, p. 326–340, <https://doi.org/10.1068/d14608>; Sloterdijk, P. *Bubbles: Spheres Vol. I: Microspherology* / Translated by W. Hoban. Cambridge: MIT Press, 2011. Retrieved from <https://archive.org/details/sloterdijk-bubbles-spheres-1/page/n1/mode/2up> [accessed 29/07/2024].

biosphere. These issues are part of the bigger discussion of how climate-related strains are interacting with economic, political, and cultural path dependencies and on which units of observation and under which principles this interaction could be managed.

This new agenda in social urban research coincides with the profound restructuring of knowledge producing actors and knowledge infrastructures due to massive digitalization. In the course of digitalization of urban nature (primarily of digitizing and quantifying trees canopy), one distinct tendency is that trees and greenery are valorized and thus becoming crucial factors of socio-economic stratification in the cities. One could already analyze the services, such as the US developed i-Tree software suite that calculate the canopy's financial asset.<sup>47</sup> In particular, the suit's tool, the i-Tree Canopy, converts into annual monetary value a given area's canopy's capacities of carbon dioxide uptake, storm water mitigation and air pollution removal. Furthermore, the suite relates this data with the census data on the area's household statistics (the number of households, the types of households and families as well as the status of ownership). The use of this data in the US housing markets and beyond poses a risk of stratification turning into segregation, where less well-off residents would be systematically deprived of access to greenery and exposed to the main hazards of climate crisis. This, in combination with the climate-related strains, access to healthcare, and affordability of certain elements of interior (for instance, air conditioning) in terms of the design items themselves and the electricity to use them, could become another crucial factor of biopolitical inequality and alienation.

This software suit's example should be taken seriously to predict and analyze the socio-spatial implications of fostering biodiversity in the cities. Should one expect that the Karoliniškės Landscape Reserve is to become a potential green commodification frontier in Vilnius, with the value of canopy being integrated into the property and land valuation process and thus gaining a potential to transform socio-economic profile of the area over time? How to predict the political outcome of digitalization of urban forests (calculation, measurement, assessment, and turning nature into an asset) in particular locations? For example, in the US, [in the cities] there is a tendency already of giving a higher monetary value to the trees with the wider canopy. Can one thus expect the rise of several distinct and politicized or ideological notions of biodiversity and its implications in urban scale development and planning? How to combine both quantitative and qualitative value of urban greenery and to make sure that monetization does not turn it into a publicly inaccessible asset?

The notion of *Umwelt* is helpful in the context of digitalization [of nature] too, as it allows grasping and cultivating a multi-sensorial perception of the environment. Smartphones constitute a technological *Umwelt* that destabilizes the boundaries of humans as species, and gives access to quantifying both one's own body and the surrounding environment. The principles of a smartphone linking one's individual body with the wider environment are profoundly (bio)political in terms of access and usage of generated data, and in terms of socio-economic stratification impacted by this data.

As preservation and heritage lenses on nature are currently the prioritized instrument of maintaining nature's status and is considered a common public good, values and principles behind this type of heritage define the future of biodiversity and its different political implications. How to cultivate a multi-species and multi-*Umwelt* heritage? Can one say that forest by definition cultivates a variety of *Umwelts*?

An emerging study field of ecosemiotics approaches pre-linguistic meaning making, or "semiotic processes" in the environment. *Umwelt* is the key notion to describe and analyze this semiotic process. In this approach, forest as a distinct semiotic model consists of very local place-specific ecological codes as communicational conventions, where these codes constantly change (for a human, in every step) and have no single centralized "background system."<sup>48</sup> It is crucial that in the forest, the decaying layers are

<sup>47</sup> See A Tree Canopy Assessment Tool. *i-Tree Canopy*. Retrieved from: <https://canopy.itreetools.org/> [accessed 29/07/2024].

<sup>48</sup> See Maran, T. Deep Ecosemiotics: Forest as a Semiotic Model. *Recherches sémiotiques / Semiotic Inquiry*, 2019, Vol. 39, No. 1–2, p. 294, <https://doi.org/10.7202/1076237ar>.



visible and have potential of forming new semiotic knots, which means a greater degree of knowledge and sensitivity to the historical course of a site. The radical side of ecosemiotics lies in the fact that forest—and not the architectural heritage or transport infrastructure—is taken as a semiotic model in order to analyze other objects. In this sense, forest as multi-*Umwelts* heritage is essentially a de-centering experience, which tames a human as a subject of semiotic activity—“the acceptance of or submission to meanings tends to outweigh the outbound semiotic activity of the subject.”<sup>49</sup> Specifically for social scientists, it is crucial that forests are a context where “distributed agency” [in assemblages of humans, artifacts, and non-humans] is to be nurtured and cultivated.<sup>50</sup> This means that not only humans are the stakeholders, even though, they retain the role of “instigators and moderators, but not ... masters of nature.”<sup>51</sup>

The peculiarity of green Vilnius is that forest literally makes the environment richer not only in biological but also in semiotic and societal dimensions. Despite the recent growing interest in Vilnius forest, its vast potential seems not recognized enough yet. For instance, on the municipal interactive digital maps, green Vilnius is mainly approached through the streets’ greenery<sup>52</sup>, i.e., the forest is not yet considered and practiced as the city’s infrastructure asset with a certain civic dimension. In the case of the Karoliškiškės Landscape Reserve, a rather definite spatial border between the residential area and the forest constitutes a potential for treating the latter as something radically different from conventional human-urban experience and thus as a field for cultivating more-than-urban, de-centered heritage. The question is how to manage more-than-urban heritage—through the observation of life and decay in the natural environment in order to be more sensitive to urban history and futures as not only human made?

In this part, I argue that placing Vilnius Karoliškiškės Landscape Reserve and entire green belt in the longer-term history of the projects of infrastructural and civic opening-up in the cities (mainly with the reference to modern redevelopment of the areas of medieval walls) would be a fruitful approach. This allows translating the challenges emerging from climate-related strains into a positive emancipatory civic and political agenda, in which human species are both tamed and gain greater power, knowledge, and instruments to intervene in natural processes.

## Conclusion

The article analyzes Vilnius urban forest in the context of the city’s potential to embrace a less confrontational relationship between nature and culture / society. The need to cultivate this new mode of relations is justified by a growing popularity of the forest theme in both Lithuanian and international urbanist research and practice, the cultural sector’s repertoire, and institutional frameworks such as the European Green Capital title. On a more abstract level, it is also justified by the conceptual discussion on planetary lens in the social urban research as a response to climate strains. The notion of planetarity, as opposed to globalization, invites urban researchers and practitioners to cultivate greater attention to the planet’s biosphere by regarding the city not as a finished form but as a process made possible by the entanglements of different modes of spatiality that exceed the boundaries of a distinct urban settlement. Globalization horizon is about the competition-driven mobility around the globe and the elimination of institutional and cultural barriers that hinder this mobility. In contrast, planetarity horizon is about the enhanced sensitivity to the planet’s natural processes and the humans who are tamed and granted a greater responsibility vis-à-vis nature as the infrastructure to be managed. The planetary lens on urban settings and urban nature in particular, have regional specifics, defined by historical cultural, political, economic, and material path dependencies.

<sup>49</sup> *Ibidem*, p. 294.

<sup>50</sup> See above all Herrmann-Pillath, C.; Hiedanpää, J.; Soini, K. The Co-Evolutionary Approach to Nature-Based Solutions: A Conceptual Framework. *Nature-Based Solutions*, 2022, Vol. 2, p. 2, <https://doi.org/10.1016/j.nbsj.2022.100011>.

<sup>51</sup> *Ibidem*, p. 10.

<sup>52</sup> See Žalasis Vilnius. *Vilnius.lt*. Retrieved from [https://maps.vilnius.lt/zalasis\\_vilnius#layers](https://maps.vilnius.lt/zalasis_vilnius#layers) [accessed 29/07/2024].



The Karoliniškės Landscape Reserve in Vilnius and the entire city's urban forest is analyzed as a phenomenon of post-WWII planning, combining several logics and wills. The Reserve's current character is defined by the specificity of urban growth in Soviet Lithuania, marked by the absence of private property. In those circumstances, which constituted a certain niche, the Reserve's project was driven by the values of organic development and the harmony between natural and built environments shared among the community of the 1960s and 1970s Lithuanian planners, as well as their intention to deliberately protect the visual panorama of the historical center of the city. Vilnius urban forest can thus be retrospectively regarded first, as the framing of the architectural heritage of the Old Town and the natural basis of the city's growth, and second, as the embodiment of cultural qualities of the Lithuanian landscape, characterized, among other things, by the use of forest tree species in urban environments. In this regard, the Karoliniškės Landscape Reserve is the case of the 1960s and 1970s hybrid natural space—cultivated, including human-scale leisure functions and having a character of a human preserved wilderness. However, in terms of urban practices, apart from being part of natural morphological edging of the Old Town's urban development, it was rather an underused resource for Vilnius residents in the context of post-Soviet transformations.

In this article, I approach the Karoliniškės Landscape Reserve and the entire Vilnius green belt beyond the human-centered cultured gaze on the historical Old Town. I raise a hypothesis that the COVID-19 pandemic and the lockdowns have triggered Vilnius residents' interest in exploring its urban nature as a new type of public space in the city. More importantly, in the context of growing popularity of the measures of rewilding, biodiversity and nature-based solutions in urban settings, the Reserve makes a highly interesting context for new experimental modes of researching, designing and inhabiting the city with the aim of opening it to the broader range of not only human actors and stakeholders. As rewilding, biodiversity and nature-based solutions are not purely technical but profoundly civic agendas aimed at changing the relations between humans and environment, I propose to regard the opening of Vilnius forest in the longer-term political history of urban change. In particular, I compare the potential of reinvention and opening of Vilnius Karoliniškės Landscape Reserve to the cases of opening the urban areas in place of medieval cities' defensive walls in Europe. I discuss and interpret the latter ones as not purely infrastructural reinventions but as civic projects that nurture new types of more egalitarian societies with better accessible resources of public spaces.

The Sitté's ideas of organic urban development, which prioritize enclosed and confined green spaces in the cities as opposed to the valleys that are open for unhindered mobility (these ideas had been influential in the historical formation of Lithuanian national urban planning and inspired by Ringstrasse as the project of reinvention of Vienna's isolation belt of protective walls), are helpful in explaining the phenomenon of Vilnius green belt. On a more abstract level, these ideas inspire seeing the two historical kinds of reinvention and opening within one lineage of translating and embodying egalitarian principles in the material environment of the cities. In the earlier instance, the principles were about the creation of public spaces for modern, republican and hence much more egalitarian society. In the latter instance, they are about the creation of non-human-centered public space for cultivating biodiversity, nature-based solutions, and green citizenship at large. In order to depict the possible paths of Vilnius green belt reinvention in the mode of egalitarianism through nature-based solutions and rewilding, I introduce and interpret von Uexküll's notion of *Umwelt* as a unit of urbanism. This notion is the key in conceptualizing Vilnius Karoliniškės Landscape Reserve as more-than-urban heritage, non-human-centered public space, and a potential "green" commodification frontier.

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