AFTER SPACE UTOPIA
Post-Soviet Russia and futures in space

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Abstract
Since the early 2000s, new projects of space expansionism have emerged, including the commercial-, military-driven and scientific projects to colonize the Moon and Mars. The new space expansionism followed a period of comparatively lower attention to space in international politics, and it is sometimes called the New Space Race by analogy to the 20th century Space Race between the USSR and the US. With the first Space Race, outer space became explicitly politicized and served as a locus of futuristic utopian social and political imagination, not least in the USSR and the socialist bloc. In this dissertation, I investigate the possible ways of constructing alternative social and political futures in and through space in post-Soviet Russia. Drawing theoretically on postcolonial critique of space expansionism, the concepts of biopolitical production and of assemblage, and methodologically on narrative analysis, I argue that social and political futurism in and through space today presupposes changing attitudes to space and time in a way that challenges analyses from the angles of political science and IR. In this thesis, I highlight socially and politically futuristic practices which exist on the margins of political power and have greater autonomy from official discourse, arguing for the understanding of utopia in postmodernity as an assemblage.

Keywords: space, Russia, utopia, postcolonialism, assemblage.
A research project spanning over five years and tying together such broad topics as political futurism and space visions almost by necessity becomes a collective endeavor that interweaves multiple people and places, even if its cover page only presents the name of the author. There are many of you whom I would like to thank for making this book possible. While the space for expressing my appreciation is limited, please know that my gratitude to you is limitless, despite the formal necessity to point to only a few of you.

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Much of the insights displayed in the following pages emerged only due to the openness and the interest of my interviewees and other interlocutors in Russia. I am grateful for your participation and your generosity, sharing your insights with me while I had so little to offer in return. Moreover, for some of you talking to me could involve certain risks, either professional or personal, that you however still decided to take. As many of the interviews are anonymized in the text, I can only thank few by name, but by doing so I still have everyone in mind: Vera Alekseeva, Elena Malenkina, Igor Kovalev, Archie and Felix of USSR-2061 – thank you very much for being a part of this project!

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List of abbreviations

AI – Artificial Intelligence
ASAT – Anti-Satellite Technology
CFS – Critical Future Studies (interdisciplinary field)
COPUOS – the Committee on the Peaceful Uses of Outer Space (United Nations)
FSP – Federal Space Program
IR – International Relations (discipline)
IROS – Imaginary Reconstitution of Society (method)
ISS – International Space Station
OST – Outer Space Treaty
PCWP – studies in Popular Culture and World Politics (interdisciplinary field)
SF – Science Fiction
SSOS – Social Studies of Outer Space (interdisciplinary field)
STS – Science and Technology Studies (interdisciplinary field)
UNOOSA – United Nations Office for Outer Space Affairs
Common futures for humanity might seem difficult to imagine given the prevailing threats of nuclear apocalypse, new pandemics, geopolitical militarization, forced mass migrations, and ecological catastrophe. It could be argued that the point of no return from a dystopic future has already passed. In this thesis, I explore the possibilities of social and political futurism in an unsettled world of neoliberal globalization and a global wave of autocratization, where the utopias of modernity went awry. My investigation is limited along two axes. First, it is limited to the ways of constructing alternative social and political futures in and through space exploration. Second, it is limited to the case of post-Soviet Russia. Nevertheless, my investigation is also contextualized, both through connections between contemporary space expansionism and power structures in the globalized world, and historically through engagement with the developments of space exploration and of the Soviet space program specifically.

What interests me is how space exploration in post-Soviet Russia is (or is not) interwoven with the imagination and construction of new forms of common living and collective belonging. Through the course of the thesis, I will approach such imaginations by referring to social and political visions of space in post-Soviet Russia, or visions more generally. These visions indicate ways of making sense of space, and of making space to produce particular social and political meanings, embedded in the historical context of the Soviet space program and in the global context of space expansionism characterized by commercialization, militarization and commodification of outer space.

I hope to show that it is insufficient to look only at the official state discourse on outer space, especially since my concern is alternative social and political futures in and through space – alternative visions that might challenge, support, or be indifferent to official space policy discourse. Specifically, I want to go beyond an understanding of space visions as simply being in the service of public policy and the state, stemming from the geopolitical and ideological competition of the Cold War.

The urgent necessity to understand politics differently follows from the complex cultural condition of postmodernity, in which politics have been characterized in terms of a “futureless leadership”, unable to provide any positive futuristic program in the light of a complex and interconnected ecological, economic, social and political crisis (Fry and Tlostanova 2021, xiv, 24; Latour 2017, 18). Likely, contemporary radical movements that address these pressing global issues demand actions from both national and international political elites, yet commonly denounce political institutionalization (Kioupkiolis and Katsambekis 2014, 1–5). While the progressivist
utopias of modernity are abandoned, common futures have hardly ever been as much in need as in these times of “futureless leadership”. Against the almost endless apocalyptic imaginations of the coming future (Urry 2016, 31–4), critical voices are calling for new ways to revive politics as lived experience, as an exercise in constructing collective belongings and common futures. Arguably, these new politics should go beyond the conventional institutional frames, and they demand a novel political imagination (Fry and Tlostanova 2021, 134). In other words, it is necessary to at least try to imagine how common futures of the globalized postmodern world could be shaped politically without recourse to the totalizing progressivist ideologies of the past (Fry and Tlostanova 2021, 1, 10, 14; Latour 2017, 33, 39).

A new space enthusiasm for the future?

Through the 2000s and 2010s, a new wave of space enthusiasm hit the world, most clear in the resurgent ideas to colonize the Moon and Mars. Unlike the space colonization fantasies of the Cold War, imaginaries of the so-called New Space era were announced not only by state actors, including the US, China, Russia, and the UAE, but also space entrepreneurs, such as Jeff Bezos and Elon Musk. These imaginaries make full use of apocalyptic futures, arguing for a new, commercial-driven, expansion to space as a solution for Earthly ecological and environmental problems, or as a precaution for the possible end of civilization due to a collision with an asteroid (Deudney 2020, 11).

I think there are really two fundamental paths. History is going to bifurcate along two directions. One path is we stay on Earth forever, and then there will be some extinction event. I do not have an immediate doomsday prophecy, but eventually, history suggests, there will be some doomsday event. The alternative is to become a space-bearing civilization and a multiplanetary species, which I hope you agree is the right way to go.

(Musk 2017, 46)

Some proposals also suggest that expansion to space will nurture new forms of social and political organization, with extraterrestrial settlements arranged and governed beyond Earthly laws on the principles of self-management (Cuthbertson 2020).

However, any substantial social and political discussion beyond statements of difference and novelty, such as how an extraterrestrial settlement shall be governed and by whom, is absent from these projections. Neither is there any discussion on social and political effects, possible or desirable, of New Space projects on Earthly humanity beyond mere statements of the necessity to escape the Earth. Instead of systemic political change aimed at the future, contemporary space advocates propose an expansion to space as a viable and necessary alternative, a creation of the “reserve humanity” on other celestial bodies. In fact, the arguments of contemporary advocates of space expansionism fit well in the cultural logic of postmodernity that
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suspends temporality, characterized by “an increasing predominance of space over time” (Jameson 2015, 105).

Atemporality of such proposals manifests itself not only in their substitution of alternative political and social futures with spatial expansion, but also in their common use of arguments dating back to the late 19th–early 20th centuries, preceding the dawn of the Space Age and hardly applicable to our world today (Deudney 2020, 28). Together with their outdated arguments, space advocates bring forward colonial discourses and visions of space reminiscent of those applied to Africa and the Americas by European colonizers (Alvarez 2020, 27, 136–7, 145). Instead of imagining new common futures, in these fantasies we meet the worn-out pasts, now generously expanded to space frontiers in order to save our present through technological adjustments. Unsurprisingly, these visions are commonly rejected as cases of lunatic escapism rather than any actual possibilities for the future of humanity (Fry and Tlostanova 2021, 21, 40–1, 45; Latour 2017, 44, 67–70; 2018; Valentine 2012, 1062–3).

Yet, space imagination and proposals of human expansion to outer space have historically been connected to imaginations and hopes of alternative social and political futures. Developed through modernity in close proximity to colonialism, to ideals of technological progress and of objective science, they were invoked in different parts of the globe, often with effects of recasting progress, science and technology in unexpected ways. Space visions have interpolated with many other traditions of thought, with different social and political implications that have been shown in relation to, inter alia, African societies (Samatar 2017), the Islamic world (Determann 2021), Latin America (Johnson 2020), Europe (Geppert 2012) and, of course, Russia/USSR, the United States (Harrison 2013), and increasingly China (Li 2021). Through the Cold War period, space became widely politicized, put to the service of ideological competition in the world that appeared as divided in two camps. In the Soviet Union and the socialist bloc, at least through the first couple of decades following the launch of Sputnik in October 1957, space formed a utopian political horizon coinciding with the victory of communism (Siddiqi 2011, 283–5). The contemporary wave of interest in human expansion to space, indeed heavily promoted by states, corporations and space advocacy organizations in line with a wider accessibility of space technology, can be expected to draw no less public attention in the context of Internet-based network communication. Beyond the visions of extremely rich daydreamers, physically or metaphorically leaving the doomed planet behind, could ways be developed to see our common futures in and through space differently? Expansionist visions of New Space certainly provide imaginaries of escape from the Earth, but can they also facilitate the imaginaries of exodus from “futureless leadership”?

These questions and these possibilities indicate the broader context within which my study of Russian post-Soviet space visions have developed. My general disposition towards commercialized, commodified and militarized space expansionism summons that while critiquing escapism, one should not forget how “power is never as
secure and self-sufficient as it pretends to be” (Hardt and Negri 2017, xvii). The new turn of space exploration frenzy presents new obstacles and new power struggles, even if it majorly recycles the old tropes. Yet it also nurtures different alternative visions that can and should be approached as possibly hosting a new political imagination, furnishing politics as a lived experience and directing it to the no-longer-modern future.

Encountering a puzzling phenomenon of socially and politically “futureless” space expansionism in the globalized neoliberal world through the case of post-Soviet Russia, I make contributions to several fields of knowledge. First, I contribute to the emerging interdisciplinary field of social studies of outer space¹ by addressing the generally overlooked problems of political futurism in the context of an under researched case of post-Soviet Russia. The Russian case is beneficial for research on political futurism in and through space, as it follows from the failed, explicitly utopian, project of socialist modernity that carried clear symbolism of progress and marked overtly political futuristic imagination (Maurer et al. 2011, 4–8). The post-socialist condition has been described as a widespread loss of futuristic horizons, disbelief in progress and blossoming nostalgia (Siddiqi 2011, 299–300; Tlostanova 2012, 131; 2017, 1–22), and as such, post-socialist cases, including Russia, can be expected to provide important observations for the overall problem of “futureless” space exploration. Second, I contribute to another interdisciplinary field of critical future studies (CFS) by extending its critique to contemporary space expansionism. Third, I contribute to political philosophy by addressing the problems of utopia – seemingly no longer relevant to politics while largely rethought in utopian studies – in the context of postmodernity.

Research aims, questions, and plan of the thesis

I aim to investigate how Russian post-Soviet visions of space in policy and popular culture (dis)allow new political imaginations. My research towards this aim is guided by the following set of research questions:

• In what ways, if at all, do Russian post-Soviet visions of space in policy and popular culture foster a new political imagination in their approach to the possible or desirable social and political futures?
• How do Russian post-Soviet visions of space appropriate Soviet space utopianism in their possible futuristic articulations?
• How does social and political futurism in and through space in post-Soviet Russia approach the global context of new space expansionism, with regard to commercialization, militarization and commodification of space?

¹ See, for instance, an international research network of social studies of outer space: https://ssosnetwork.org/
As a compilation thesis, my study develops a general argument from the intersections of several separate articles on different topics related to Russian space policy and space culture, written across the span of five years. These articles shed light on divergent phenomena, and they also operate with different theoretical standpoints. While all of them contribute to the overall argument, to allow such contribution they should be reviewed in the light of one another, which is done in Part I of the thesis, to which this section also belongs. In Part I, I am concerned with capturing the separate accounts in which my study has developed into a coherent theoretical and methodological perspective in conversation with empirical findings. The five articles that build up an empirical core of the thesis are presented in Part II in the way in which they were published (Papers 1–3) or submitted for publication (Papers 4–5).

Following this Introduction, Part I presents sections on Past Research, Theoretical Approach, Methodological Considerations, and Summary and Review of the Research Papers followed by Conclusion and Discussion.

The sections on Past Research and Theoretical Approach develop the key considerations briefly presented in this Introduction. In Past Research, I unpack the implicit assumptions that ground my research puzzle. I tackle the ways in which social and political futures have been approached in critical literature, specifically in the interdisciplinary fields of future and utopian studies. Taking their latest accounts on possible ways of seeing social and political futures, as well as on the possible reformulations of and proceedings from utopianism, I present futurism in relation to space imagination and space exploration in Russia and the USSR. I then indicate the limitations of political science and IR analyses in relation to futures in space and argue for the development of a more critical approach on postcolonial grounds through engagement with the emergent interdisciplinary field of social studies of outer space.

The section on Theoretical Approach unites two bodies of theoretical literature that, combined, provide me with a lens necessary to reach the aims of the whole study and answer its research questions. The first of them is postcolonial theory, from which I develop a concept of mind de/colonization and relate it to the problem of futuristic imagination as well as to the recent postcolonial outlook on Russia as subaltern empire. I then specify the political inputs of mind de/colonization through the post-Marxist political economy, closely related to postcolonial theory, and specifically through the concept of biopolitical production. The second is a line of assemblage theory that continues Deleuze & Guattari’s analysis of desire. The concept of assemblage, developed by Ian Buchanan, offers an analytical framework that encounters the interconnected complexity of the contemporary world as processes of

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2 There are articulations of assemblage theory other than that of Buchanan; for instance see De Landa (2006). Discussion on differences between various approaches to the concept of assemblage, first introduced in the English translations of Deleuze & Guattari, is beyond the scope of this dissertation. My preference for Buchanan is based on his explicit interest in continuing the analysis of desire launched by Deleuze & Guattari as schizoanalysis and connected to the perceptions of time and space different to those of modernity.
production of desire not limited to human subjects. In this way, assemblage theory allows a political analysis that follows the critique of postcolonial theory and the post-Marxist political economy in their relation to space. It provides an opportunity to conceptualize space as itself actively engaged in the production of alternative social and political futures. On the basis of this framework, I suggest that assemblage theory allows a reformulation of utopia in postmodernity. Thus, a project striving for new political imagination, social and political futurism in and through space, would benefit from considering visions of space in terms of assemblages.

In Methodological Considerations, I reflect on the development of my project with respect to methods used. I explain how the gradual construction of the theoretical outlook outlined above has been intertwined with a likely shifting attention to methodology and specifically to my key method of narrative analysis. Starting with a thematic analysis of the official state discourse on space exploration, and with a narrative analysis of popular culture artifacts that juxtaposes them to that discourse, I gradually move towards an assemblage approach. In this section I discuss the limitations and possible adjustments of narrative analysis as a key method for analyzing the intersections of politics and popular culture, and suggest a perspective on its relations to the concept of assemblage.

The Summary and Review of the Research Papers section interweaves a perspective synthesized through the preceding sections with the five research articles that form an empirical core of my project. I concentrate mostly on the omissions in and additions to these papers, that appear clearer now at the end of my study. While providing a short recapitulation of each paper’s contents, my intention here is rather to show in which way it contributes to my overall research aim formulated above, and in which ways it can help to answer my research questions. I leave it to the reader to explore each paper in greater detail in Part II.

Finally, Conclusion and Discussion returns the text back to where it began, trying to answer the research questions. Here, I also discuss implications of my study and reflect over the choices that guided it, outlining possible paths for further research.
Past research

Political futures

Critical future studies (CFS) explore and interrogate “ways in which society thinks, imagines and talks about the future – not the future singular, but possible futures” (Godhe and Goode 2018, 152). CFS can be seen as a response to and a development from future studies, futurology, anticipation studies or prognostics as disciplinary fields of applied knowledge, stemming from the Western modernity after the end of WWII. Introducing scientific methods to various speculatory techniques through the 20th century, since the 1990s future studies have been observed to align with neoliberal political discourses that promote capitalist growth, further introduction of market logic and efficiency of social systems in terms of their profitability as the dominant way to comprehend, anticipate and construct common futures (Son 2015, 123–9). This approach to future can be summed up as “foresight” that allows an extrapolation of individual or institutional futures by analysis of the present trends and an unquestioned acceptance of the globalized capitalist order and a market-oriented future society, neglecting the problems of whose interests are promoted in such futures – and whose downplayed. As a developing interdisciplinary field of research in humanities and social sciences, CFS counter the foresight approach, criticizing the capitalist global order, colonial pretensions to common futures and their positivist underpinnings (Godhe and Goode 2018, 152–3; Son 2015, 129). Instead, CFS strive for a multiplicity of participatory futures, bringing in the normative, ethical and political agenda to contemporary neoliberal futurism.

Thus, CFS in their historical development clarify that contemporary “futureless leadership” implies not so much the absence of political futures per se, as their severely limited range. The narrowness of contemporary political futurism both stems from and contributes to global power inequalities, ignoring the multiplicity of interests held by different groups and communities. Global institutions, transnational corporations, and national governments commonly approach possible futures scenarios, but do so in a manner of extended present (Son 2015, 128), without questioning the premises of the present condition that rely, inter alia, on power and economic inequalities, and on colonial legacies of the international system in the globalized world. “Futureless leadership” thus highlights the lack of radical futures that could question, deconstruct and reshape these premises by showing their possible alternatives.

“Futureless leadership” of contemporary international politics can also be approached from the point of view of utopian studies, an interdisciplinary field that has been developing in parallel to CFS. Utopian studies challenge the relegation of
utopia to the “pre-futurist” period, highlighting how the concept of utopia has been widely reconsidered since the 1970s–1980s. A brief recapitulation of the changing attitudes towards utopia clarifies how neoliberal futures with no alternatives gained prominence in the globalized world.

Utopia is commonly understood as a blueprint of perfect society, a relic of modernity that is both impossible and totalizing. Both lines of criticism derive from a well-observed ambiguity of the term that comprised a latinized neologism of two words of Greek origin at the same time: οὐτοπία (non-place) and εὔτοπία (good place). In the case of impossibility, criticism of utopia refers to its designation as a non-place, and it can be traced to the rejection of “utopian socialism” by Marx and Engels, who argued that such fantasies distracted the proletariat from actual class struggles (Levitas 2013, 4, 67). In the case of totality, the “goodness” of utopia is questioned, owing to the post-WWII anti-socialist movements that hold much responsibility for using accusations of utopianism to seal off the possibilities of social transformation (Levitas 2013, 7). In short, utopia generally appears as a non-word for both the political Right and the political Left.

The apologetic reworkings of the concept of utopia, which took place through the second half of the 20th century, connected utopianism to political transformation, indicating the real investments of utopian fantasies and highlighting how utopian thought shapes subjectivities and educates desire. Consequently, these reformulations were taken up by an account of utopia as a method of the Imaginary Reconstruction of Society (IROS). The appearance of IROS can be seen as a response to the “dystopian turn” of the late 20th–early 21st centuries, marked equally by the perceived impossibility of imagining a better future and by the appearance of critical utopias and critical dystopias, manifesting a desire for a better way of being (Ågren 2014, 7–14; Levitas and Sargisson 2003, 14–5; Levitas 2010, 8–9). IROS brings forward a cultural practice that grounds political futurism, manifested locally and open to deliberation (Levitas 2013, 16).

Countering the accusations of impossibility and totality in relation to utopia, IROS does not address the problem of utopia’s place of possibility or τόπος. As social and political systems of modernity were based on the association of power with space, preconditioning territoriality and finality necessary for modern utopias, utopia can be seen to lose a place of possibility in the postmodern globalized world characterized by displacement (Bauman 2003, 12). Modern utopia could be placed within the frame of the nation-state, internationally or in a futuristic global state, but power in the globalized world is located everywhere and nowhere, following a multiplicity of
divisions along different identities, of which national is only one. In this context, the place of utopia is occupied by retrotopia, which looks into the “lost/stolen/abandoned but undead past” (Bauman 2017, 5). Retrotopia appears as a manifestation of postmodern preoccupation with space as an ever-increasing displacement, which closes the possibility of new futuristic horizons and replaces them with hopes of repetition of the past. Thus, political futurism of retrotopia, while bringing up different possibilities for the future, identifies their difference in a similar way through reproduction of some image of the past in which the future, allegedly, was possible. A likely futurism has been approached as a post-utopian practice of restorative nostalgia, in which the contemporary imaginations of an unproblematic, “golden age” past are obsessively brought for reconstruction through nationalistic upheavals and, in the most extreme cases, conspiracy theories (Boym 2001, 41; Robbe 2020, 218–21). In this way, retrotopia and restorative nostalgia allow to see how the so-called “authoritarian backlash”, observed in relation to the demise of liberal democratic regimes and previously to the autocratization in post-socialist societies such as Russia, might signify the limited possibility of imagining political futures in the neoliberal globalized world. The critique of “backlash” in this sense misses the point as it takes for granted the return to the past that such projects and regimes narrate themselves. Instead, they should be seen as futuristic, as novel constructions that build on imaginations of selected glorified pasts, yet firmly embedded in neoliberal globalization as a context within which they can take shape. Neoliberal globalization and the wave of autocratization are thus better seen in the cycles of mutual reproduction of “empty futures” (Peck and Theodore 2019, 262).

Seen from the point of view of political imagination, or “imaginative processes by which collective life is symbolically experienced and this experience is mobilized in view of achieving political aims” (Glăveanu and de Saint Laurent 2015, 559), the problem to which CFS, IROS and retrotopia commonly point appears to be the seeming impossibility to ground any alternative visions of political futures in the ways time and space are experienced in postmodernity shaped by globalization. Political futures seem to presuppose the experience of space as fixed and bordered territory, and the experience of time as a progressive movement of successively gulped instances, at each moment identifiable as past, present or future – while both time and space are rather experienced as a constant flux. Effectively, these approaches to futurism in postmodernity try in different ways to restore the lost order of time and space, at least partially. IROS operationalizes the concept of utopia, while basing its outlines of possible alternatives on social critique and thus broadening their scope. Retrotopia highlights the attempts to actualize the political imagination of modernity in postmodern contexts, that eventually serves to maintain the status quo of power inequalities in the globalized world. A new political imagination, in contrast, should start from a recognition that perceptions of time and space, grounding any political projects, have changed from those of modernity.
Such recognition can be found in at least two approaches, related to the tasks of CFS and utopian studies, respectively: imagination of futures as decolonial aesthesis (Fry and Tlostanova 2021, 163–7), which I will further refer to as decolonial futurism, and grounded utopia. Uniting them is a critique of the universalizing legacy of Eurocentrism, which prescribes time as linear progress and space as a container that either hosts social and political arrangements, or functions as a canvas for identity-building.

Decolonial futurism builds on the idea of relationality, or the primacy of relation (between subjects, signs, places, and others), that emphasizes an irreducible complexity of the contemporary world and the reduction of this complexity that underlies neoliberal politics and foresight futures. This futurism is embodied and localized; consequently, it can only exist in a negotiated multiplicity of futures and not in an overarching structure that dominates futuristic visions, such as that of the progress of European modernity. An emphasis on that modernity’s inner inconsistence, following its erased connections to and appropriations from a multiplicity of cultures and traditions of thought, is also important for this way of approaching futures, especially in the light of transition to postmodernity. The end of unilaterally progressive time and the rise of postmodern obsession with imagined pasts is compared here to co-existing indigenous concepts of cyclical or spiral time, and of the past as a co-present realm of spirits and ancestors. The latter conceptualizations are approached as reaching beyond the postmodern perceptions of time, which are capable of debunking the progressivist assumptions but are still incapable of conceptualizing them differently (Fry and Tlostanova 2021, 163–4).

Likely, grounded utopia seeks political futurism different from “power trips” of “seeing like a state”, in other words different from projections of reason and progress over places, times and communities (this obviously includes not only state, but any other hegemonic structure). Grounded utopia presupposes a “fullness of time and space” (Davis 2021, 572), where “past and future intersect in the specificity of place” (Davis 2021, 570). In this way, grounded utopia can be seen to encounter the place of possibility of utopia, or τόπος, as a space that has an agency in a process of sense-making. This account points to the possibility of approaching spatial practices of utopia as not only making sense of space either in its territory-container modern variation, or identity-projection postmodern variation, but as a process in which space itself has an active role. In a closely related account of utopia that directly approaches it as a place, space and place are understood as relational not only between humans, but also between humans and non-humans (Bell 2017, 104, 119).

In relation to my aims and questions, projects of decolonial futurism and grounded utopia show the reconsiderations of space and time necessary for a political futurism alternative to neoliberal foresight in the postmodern globalized world.
These projects can be seen as reciprocal. Decolonial futurism rejects the idea of time as progressive development, highlighting pasts and futures rather than present: “The future is not empty. Rather it is filled by all those things that have been thrown into it from the past, as they come towards us and we travel towards them” (Fry and Tlostanova 2021, 178). In this approach, multiple presents co-exist depending on their spatial contexts, and none of them are holistic or exhaustive while all host a significant share of unknowns unfolding in the course of events (Fry and Tlostanova 2021, 179–88). In this way, the problem of political imagination appears as an actualization of not gone, but omnipresent pasts in pursuit of particular futures, rather than as a prognosing from unilaterally perceived, even if fragmented at each of its applications, present. In its turn, grounded utopia problematizes the instrumental view of space as a container of social and political arrangements together with its later refurnishing as a social and political construction. In grounded utopia, space itself obtains agency as that with which these arrangements are constructed.

Space futurism in Russia

Research on Russian space imaginaries and on the Soviet space program has significantly advanced through the post-Soviet years, in part due to the relative accessibility of archival sources. Perspectives stemming from the geopolitical and ideological competition of the Cold War, emphasizing the political-military control over the Soviet space program and the propagandistic use of space culture, have been complemented and partially challenged by the new studies in space history, space anthropology and space culture. Their novelty resided not only in the analyses of the previously unavailable material, but also in the changing attitudes to power relations: what was previously seen as an almost exclusively state-military-driven project sharpened for international competition, now appeared as a much more complex and heterogenous phenomenon with multiple stakeholders. The history of the Soviet space project and Soviet space culture has been approached from a narrative perspective as a development of the state-sponsored master narrative of Soviet space and its gradual overcoming in the last Soviet decades by the counter-narrative that satirized the space program in the light of economic troubles and degradation of state institutions (Siddiqi 2011, 294). The master narrative presented a coherent development of the space program from the early Bolshevik emphasis on science and modernization; in this way, the Soviet successes in space were provided with a suitable past that conflated the establishment of the Soviet state with its plans to reach to outer space. The master narrative also provided an explicitly utopian futuristic horizon, in which space colonization coincided with the social and political victory of communism. Developing consequentially from the past through the present to the future

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5 Although decolonial futurism generally rejects utopianism, continuing the critique of totalizing “blueprints”, uninformed by the developments in utopian studies.
in a subsequent manifestation of scientific and technological progress, and expanding to the previously unreachable territories in order to build better and perfected societies, the state-sponsored master narrative of Soviet space was explicitly modern in both its temporal and spatial logics. In this sense, the Soviet state and Soviet people were reaching for the stars in order to achieve the perfection of humanity through means of science and technology.

The development of a non-controversial and consequent master narrative of Soviet space was possible due to the centralized and institutionalized censorship (Siddiqi 2005, 98–9), which left aside many controversial social and political visions of space that developed prior to the Sputnik launch of 1957. Through censorship, Russian space imaginaries were used selectively in the construction and maintenance of the master narrative, and many earlier visions of future in space became silenced. In this light, the emergence of a master narrative and its official futurism is better understood not as a particular breaking point that this narrative provides itself, but as a partial appropriation of preceding space visions and space collectives, developed from the late imperial period onwards. Ideas of reaching out to space grew in Russia through the appearance of Western and later development of Russian science fiction and popular science magazines (Banerjee 2013, 52–8). The imagined entrance into outer space was juxtaposed with the anticipation of upcoming revolutionary social and political changes, revolutionary futurists were involved in the proliferation of space fantasies, and space functioned as a suitable location for future societies marked by fraternity, high technological development, and communism (Smith 2014, 105–33). These developments, in their turn, should be placed in the context of Russian imperial governments investing in the openings of public observatories and in the rise of public interest in astronomy (Ivanov 2008). Space became a key element of Russia’s introduction to and peculiar appropriation of Western modernity, together with electricity, railroads, airflight and other major fantasy-laden extrapolations of science and technology (Banerjee 2013, 10; Smith 2014, 6). Outer space allowed a negotiation between space and time frames of Western modernity on the one hand, and the local specifics of Russia’s position within it on the other. The early space futurism contributed to the appearance of engineering collectives such as Gas Dynamics Laboratory and Group for the Research of Reactive Movement, which in their turn prepared the future cadres for the Soviet space program (Smith 2014, 251, 280).

The Soviet space program, largely driven by military needs, geopolitical and ideological competition with the US, and the master narrative of Soviet space may be seen as paying a double-edged service to Russian space futurism. On the one hand, they formalized and politicized that futurism by appropriating it for the sake of ideological and military competition of the Cold War. On the other hand, they did so at the expense of radical suppression of the multiplicity of futuristic imaginations that preceded the Soviet space program. On a par with the “chief designer” of Soviet space Sergei Korolev, and the first cosmonaut Yuri Gagarin, the master narrative exten-
sively promoted the “grandfather of Soviet space”, eccentric provincial school teacher experimenting with flight, Konstantin Tsiolkovsky. However, at the turn of the century Tsiolkovsky also wrote extensively on social, political and philosophical issues, publishing (most often with no funding) small brochures on the organization of the Universe, the place of humanity in it, and speculating on the changes in human civilization that would be possible through the entrance to outer space. Tsiolkovsky’s writings on the “living and thinking Universe” and meticulously calculated, sometimes with references to eugenics, utopian projections of scientifically organized living, were adjoined by those of Nikolai Fyodorov, Alexander Chizhevsky, Vladimir Vernadsky and others. Fyodorov developed a “philosophy of common task”, projecting a future where through space exploration the universal brotherhood of humanity would pursue the unifying goal of cancelling death and reaching immortality (Groys 2018, 4). Chizhevsky executed quasi-scientific studies of “helio-biology”, or the effects of solar cycles on Earthly geological, biological, and social systems, while Vernadsky fostered the idea of “noosphere”, or the sphere of human reason that would merge with and develop from “biosphere” (Young 2012, 145–71). Soviet censorship also formed a perception of a unified space program, while relationships between engineers, cosmonauts and officials were much more complex. Space practitioners often utilized the Cold War context for their own aims and visions, potentially developed from their earlier affiliations (Gerovitch 2011, 88–91). For instance, some studies suggest that at some points Korolev could be seen as an actual decision-maker in the space program, with the Soviet bureaucracy playing a rather formal and following role (Gerovitch 2015, 36–7). Space culture in the Soviet Union and the socialist bloc, while state-sponsored and put to political use, was also locally developed (Maurer et al. 2011, 6–8). In short, the appropriation of space visions on behalf of the Soviet leadership should not distract one from the space enthusiasm in socialist societies that existed on different levels and had social and political implications, at least partially challenging the idea of a top-down political control.

Space visions that were largely left out by the Soviet censorship only became available to the general public following the glasnost reforms of the 1980s. With the fall of the USSR, the abandonment of censorship and the open reinstalment of a capitalist system, the amalgam behind the facet of the Soviet space program went public in the form of market competition of commodified memories (Siddiqi 2005, 104). Different groups fostered their own accounts of Soviet space history, concentrating on different personalities and institutions, and making connections to different visions, social, political and philosophical underpinnings. The promoted personalities and institutions began to function as brands, open for political and economic capitalization. Before the early 2000s, Soviet space legacy was mainly maintained and utilized on the local level, with federal authorities paying limited attention to Soviet space history (Jenks 2014, 256, 278; Jenks 2012, 144–45). The end of the Soviet project and the failure of its picture of modernity involved the
dismantlement of a progressive space utopia. Not surprisingly, space exploration became one of the areas of public imagination where the condition of “defuturing” has been most vivid through the post-Soviet years. By far, it has been dominated by nostalgia, or longing for an imagined past in which the future seemed possible (Siddiqi 2011, 299–300). Contributing to nostalgia has also been a clear deterioration of the Russian space program, suffering through the 1990s from the lack of funding and cancellation of the Soviet projects, and generally characterized as in “turmoil” (Twigg 1999, 75–6; Harvey 2007, 5–10). While the Russian space program was recently reported to still lack forward-looking visions and to concentrate primarily on the preservation of existing capacities (Aliberti and Lisitsyna 2019, 18), space nostalgia since the 2000s has been extensively used at the federal level to legitimize Russian domestic and international policies, also suggesting a way of economic capitalization for private actors (Engström 2020, 62; Gerovitch 2015, 165).

Space nostalgia adjoins reappropriations of space visions previously silenced by the Soviet censorship, that present multifaceted mixtures of scientific endeavors, Orthodoxy and revolutionary struggles. An invented tradition of “Russian cosmism” claims the legacy of Tsiolkovsky, Fyodorov, Chizhevsky, Vernadsky and other late imperial and early Soviet thinkers and scientists. Importantly, a shared perspective of “cosmism” originates instead in the late Soviet and early post-Soviet attempts to integrate disparate writings of thinkers who did not commonly refer to themselves as “cosmists” (Siddiqi 2016, 138–43, 153; Bernstein 2019, 66, 89). However, the cosmist movement successfully promotes an eclectic combination of philosophical, theological, social, scientific and occult writings and worldviews, partially appropriated by state-affiliated actors in the support of conservative discourses related to neo-Eurasianism (Bernstein 2014; Engström 2020, 62–8). Periodical inclusion of nationalistic, xenophobic and sometimes racist arguments in some of these texts facilitates such appropriation. However, it does not exhaust the possibilities that cosmism provides – as is clear, for instance, in relation to the cultural, educational and artistic initiative Institute of the Cosmos, which

Through a combination of art projects, films, texts, and discursive events, […] reflects on the current understanding of our biological and social conditions, and maps vectors

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In particular, Tsiolkovsky, following his ideas of the monistic Universe and “happy atoms” that strive to always be parts of more perfect systems, advocated a socially administered perfection of humanity through methods such as sterilization, where the “lazier” and in other ways not appropriate individuals would not have a possibility to reproduce (Tsiolkovskii 2017a, 2017b, 2017c). Occasionally Tsiolkovsky also uses “aboriginals” (ρυάκημα) in a derogatory sense as suitable for hard labor. There is also a well-spread article that accuses Tsiolkovsky of open racism through uttering his superiority to “negroes” (Salakhutdinov 2005); however, it lacks references and my extended search for that particular quote gave no result. Some further web publications that refer to that article through my investigation proved to misappropriate their sources, such as in the case of attributing to Tsiolkovsky the equalization of “laziness” with particular nations or races, that in fact was pronounced by his interviewer and not explicitly supported by Tsiolkovsky (while not resisted either) (Tsiolkovskii 1933). If anything, the struggles around Tsiolkovsky’s appreciation of eugenics and racist theories reflect the ongoing politicization and ambiguity of cosmism in the Russian public sphere.
of our future development inspired by the history of cosmist thinking and the speculative practices that sustain it. The Institute seeks to unlock the hidden potential of radical imaginaries across multiple fields and histories of knowledge.

(Cosmos.art 2019)

Recent studies in space anthropology have also documented a manifold of local practices in Russia that approach futures through space exploration and imaginaries of space. Such cases show how space can be approached in different scales, and how the understanding of global from national perspectives is uneasily combined with the understanding of global from the positions of multiple localities, also facilitated by the New Space emphasis on democratization of space exploration (Sivkov 2019b, 31–2). The researched cases include, inter alia, the amateur launches of satellites, stratospheric objects and "pet cosmonauts", as well as amateur spacesuit modelling and the organization and maintenance of local community space museums which exist in dozens around Russia. Such cases present the localizations of space futurism in daily lives:

[...] the local scale in the anthropology of space and cosmonautics allows one to reconfigure one’s optics of research and to see that the study and development in this area can be part of everyday life and the business of ordinary people, and not only and not so much of nation-states or of all mankind. In that sense, projects of amateurs can be considered as local practices of mastering space exploration in the near future.

(Sivkov 2019a, 70, translation mine)

In relation to my aims and questions, recent studies clearly place space among the key reference points for imagining alternative social and political futures in Russia, in which scientific and progressivist assumptions would find resolutions not exactly coincident with the projections of colonialist and imperialist capitalism. They beneficially explore the development of Russian space visions before and through the Soviet space program in a narrative perspective, which emphasizes their international and historical contexts. Characterizing the post-Soviet space culture and politics by post-utopian nostalgia, they highlight the “excess” of space imagination that was neglected as politically unimportant in light of the Cold War narrative of the Soviet space program, investigating its economic and political appropriations. At the same time, the research on possible futures in and through space orients more towards local and grassroots initiatives.

Political science, IR, and futures in space

Generally, social and political futurism is of rare interest to the analyses of space exploration from the angles of political science and IR, in contrast to historical and cultural studies. The key focus of IR and political science in relation to space exploration has relied on the analysis of how political factors – such as interstate
rivalry, ideology and identity-making, geopolitical competition – have shaped activities in space (Deudney 2020, 28). The dominant idea of political investigations of space activities is that they reflect terrestrial international politics, rather than manage to transcend them (Sheehan 2007, 1). In this, IR and political science can be seen to continue the reasoning around competition and cooperation in outer space that itself emerged as a product of the Cold War and the Space Race. Two outlooks dominate the international studies of outer space from a political perspective: realist and liberal (Newlove-Eriksson and Eriksson 2013, 278). Through the realist lenses, activities in space should be seen as a competition for power and as further attempts to ensure state hegemony in international affairs (Sheehan 2007, 7). In this way, the political trajectories of the US and China have been described as a “collision course” of a New Space Race (Hilborne 2013), and commercial enterprises are seen as explicitly or implicitly allowing to execute overall political strategy by means not available to states directly, such as in case of the US (Penent 2011). In contrast, the liberal outlook emphasizes cooperation in space and successful international projects that shape the behavior of key spacefaring nations (Sheehan 2007, 12–6), such as the Outer Space Treaty (OST) and the International Space Station (ISS). In this perspective, the development of complex space economies, contributing to globalization, highlights the primacy of cooperation that spills over to the political domain from economic applications. Private space enterprise is granted with its own agency, contributing to the wider access to space and fostering innovation (Galliott 2015, 1–2). For decades, the ideal of liberal space politics has been a World Space Organization – a form of global space governance not currently realized, and criticized by realists as utopian, despite the existence of the UN organization for space governance, COPUOS-UNOOSA, which, among other responsibilities, oversees the OST (Martinez et al. 2019, 31; Yakovenko 1999, 365). Future in space from a liberal standpoint is connected to further development of international space institutions that ensure common regulation, cooperation, and mediation of potential conflict. A planetary security approach to space exploration calls for the further strengthening of existing agreements such as the OST, and for the radical limitation of expansionism beyond that which is necessary for environmental protection and economic development on Earth (Deudney 2020, 30–1, 242). From realist standpoints, future in space is approached through power competition, with its military-material dimension and potential wars in space greatly emphasized (Lambeth 2003, 112). A proposal on “classical geopolitical” grounds, for instance, suggested that the US could take the lead in militarizing space, thus protecting the democratic proceedings of space politics in the future of upcoming expansion (Dolman 2002, 172). Thus, the futuristic proposals on behalf of both major IR theories can be seen to follow the logic of foresight, providing assessments of the current state of affairs and projecting them forward.

Space exploration has also been approached from the constructivist IR angles. Constructivist analyses, too, concentrate on the interplays of competition and
cooperation, focusing on the key Cold War-inspired risk of war in or through space. However, they conceptualize power projections in space in terms of state and national identities, discursively and materially constructed. In this line of reasoning, international prestige that serves as a continuation of “hard”, predominantly military and territorial, power through realist lenses, becomes a crucial factor for space exploration. In particular, space exploration has been approached as one of the key contemporary markers of technological development signifying the “standard of civilization” (Stroikos 2020, 715, 728–9).

Critical post-structuralist approaches to politics and visions of space exist within political science and IR but are less developed (Sheehan 2007, 17–9). At the same time, some political scientists and IR theorists criticize both realist and liberal IR approaches to future in space for their inherent or overlooked imperialism, observing that space poses significant challenges for political theory, for instance by uncoupling the notions of state, sovereignty and territory (Havercroft and Duvall 2012, 50–2). In this view, contemporary space expansionism might ground an unprecedented domination of space empire, which, however, is not countered by possible ways of alternative development beyond the concerns already noted in the liberal IR outlook on space (Havercroft and Duvall 2012, 56–7).

Thus, there are potential ways of including more critical approaches, for which a critique from the emergent field of social studies of outer space (SSOS), often related to postcolonialism, provides fruitful grounds. Intersections between space exploration and colonialisms had already been considered in the OST of 1967, one of the key premises of which was to prevent a new form of colonial competition in space (Vidaurri et al. 2020, 4). Critical accounts point out the peculiar use of terminology in space expansionism, including “colonization”, practically inapplicable to any other contemporary political discourse (Redfield 2002, 797). They observe frequent comparisons of expansion to space to the American westward expansion, sustained by American-originated “Manifest Destiny”, “Californian Ideology”, and “Frontier Thesis”, and the framing of the Moon as the “eighth continent” of Earth, an empty territory ready for appropriation and exploitation (Alvarez 2020, 4, 135).

Importantly, the key justification for expansionist projects is resource extraction, with Lunar resources proposed as possible fuel for the further expansion to Mars (Patel 2020), and Lunar territory as a suitable place for Earthly industries, the relocation of which would protect the Earthly environment from pollution and the unfolding ecological disaster (Liberto 2019). Furthermore, the connections of private space corporations to state actors show ambiguity comparable to the historical colonial enterprises that contributed to exploitation of resources and future gaps in development (Hasani 2021, 28). While both state and private actors majorly avoid the discussion on ways of governance and social organization in extraterrestrial settlements, only rarely emphasizing “self-governing principles” (Cuthbertson 2020), a vast amount of analyses suggests unprecedented possibilities for control and domination in space, stemming from the need to produce and distribute the basic
substances necessary for human survival, such as air and water, and to ensure protection from space radiation (see, for instance, Cockell 2019; Krichevsky 2021; Schwartz 2017a, 2017b; Szocik et al. 2016; Szocik, Wójtowicz, and Braddock 2020). In this way, space expansionism clearly refurnishes colonial discourses in relation to space, and critical analyses of SSOS allow a better grasp of what constitutes the space empire coined by the critical political science and IR scholars.

While not properly placed within analyses from the angles of political science and IR, interdisciplinary postcolonial critique points towards the reproduction of power inequalities in and through space expansionism, explicitly connecting it to the problem of common futures:

[…] recent developments in the rhetoric and policy of the USA towards outer space have the potential to both challenge central values of important global commons regimes and to pose an unjust threat to those states whose economic and societal development has been impeded by colonialism. The move by the USA towards the commercialization and militarization of outer space means that we are at the very early stages of a politics that could see the human species determine the fate of the natural and political environment beyond our planet and, in the process, determine the nature of the relationship between all human beings (including future generations). The glimmer of hope, held out by global commons regimes, that we might do so in an ordered, environmentally sustainable, and just manner is dimming as neo-liberal economics and realist foreign policy reassert their dominant place in public policy discussions.

(Sutch and Roberts 2019, 1291–2, emphasis added)

The relevance of postcolonial approaches to political studies of outer space is further emphasized by indigenous scholars speaking on behalf of the communities excluded from the development of space exploration since the late 19th–early 20th centuries. Their accounts remind us that the key figures and tropes of the space rush in fiction and science do not exhaust the ways in which space has been imagined and experienced on Earth. The previously silenced and marginalized groups raise their critical voices against the New Space expansionism, claiming equal rights for space imagination and practice on a par with projects that developed from the early Space Age and the consequent Space Race. Such rights can be seen in accordance with the regime of space as commons, established by OST and proclaiming outer space “the province of all mankind”, formally still in power (UNOOSA 1966). Indigenous criticism reaches far beyond that of political science and IR as it does not follow the logic of foresight but questions the very grounds on which space enters political debates, such as in case of claiming the spirituality of space as a basis for indigenous social and political structures, violated through plans of expansion and resource extraction (Mitchell et al. 2020, 2–3). In this way, approaching outer space projects and visions from postcolonial angles should include a revision of what is considered politics and political. Such an approach would necessarily question the state and
corporate pretensions to power, focusing on parts that are excluded from politics and political histories of space. In the next section, I will begin the construction of one such possible approach, explicitly concerned with the ways in which contemporary space expansionism is connected to common futures, through postcolonial theory seen in the light of the post-Marxist political economy, and assemblage theory that is based on the analysis of desire.
Theoretical approach

Postcolonial theory and post-Marxism: mind de/colonization and biopolitical production

Following the multifaceted critique of space expansionism on postcolonial grounds, which is explicitly concerned with problems of futures and of commons, and which can be seen to specify and localize the “space empire” coined by critical political science and IR analyses, postcolonial theory seems a clear point of entry into a political analysis that is concerned with futures in space.

Overall, while postcolonial theory can be invoked in the argumentation within a particular discipline such as IR, its insights are necessarily built on the intersections from a variety of angles (Morozov 2015, 16). Postcolonial research follows the specificity of experiences that are always contextual and provide paths for situated critique (Epstein 2012, 296). In this light, it is perhaps more suitable to talk about postcolonial theories, and it is necessary to specify their conceptual scope in a particular case of application. Following the relations of domination and subalternity, which form a kernel of postcolonial research in the context of international politics, I present the concept of mind de/colonization, which focuses on the instances of coloniality of knowledge production and of colonial imagination, imposed through these relations. I relate mind de/colonization to the perceptions of space as dead and uninhabited, sustaining its commodification, militarization and commercialization. I then show how the Russian case can be included in a postcolonial perspective on futures in space through the recent account of subaltern empire that can be seen in proximity to mind de/colonization in its mapping of Russia’s discursive dependence on the Western core. Postcolonial theory allows me to show how the construction of alternative social and political futures in and through space is limited by the exclusive attention to states and corporations, neglecting a manifold of complex experiences of space stemming from below of space-related practices and imaginations. It also allows me to show how in the Russian case the ambiguity of subalternity and domination could ground the analysis of the appropriation of space visions. I then develop the problem of appropriation and focus on subalternity and domination from the perspective of labor as it is reformulated in the post-Marxist political economy, following the connections of postcolonialism to post-Marxism. Labor, as it is approached by Hardt & Negri (2017), in the globalized postmodern world is structured along immaterial and affective production, and it allows us to grasp politics in terms of the perpetual production of subjectivities, ways of living and forms...
of collective belonging. These processes are summarized in the concept of biopolitical production, or production of life itself. Post-Marxist political economy focuses specifically on commons seen from a critical perspective on neoliberal governance, and it is explicitly concerned with the ways of producing social and political futures, which makes it relevant to my research questions. With the concept of biopolitical production, political stops being seen as a separate field of social life; instead, new forms of social and political organization are produced continuously on the intersections of what in liberal political theory is seen as separated political, cultural, social and economic spheres.

In its application to IR, postcolonial theory suggests that European colonizations of what was later labelled the Third World laid the foundations of the contemporary international political system (Epstein 2012, 294; Seth 2011, 174). Thus, colonial relations cannot be overlooked in attempts to understand the international politics of the globalized world. Within IR, postcolonial theory can be seen to deepen the identity perspectives of constructivism with an emphasis on historically developed and withstanding relations of domination and subalternity (Epstein 2012, 294, 298–300; Morozov 2015, 38). In this view, reciprocal identities, formed through European colonizations, laid the ground for Orient as well as Occident self-images, with the construction of Europe, the West and Western modernity critically dependent on the constitution of various Others (Said 2003). Postcolonialism marks a particular set of relations of power rather than a specific historical period that follows after (de)colonization:

It would not be an exaggeration to state that the postcolonial is co-dimensional, and even co-substantial, with modernity as such: the colonial Other inheres in the European Enlightenment, all modern identities are therefore hybrid, and it is only our choice to see or not to see them this way.

(Morozov 2015, 8)

Postcolonial outlook suggests a specific attention towards subalterns, following the early works of the subaltern studies collective. Subaltern is limited in modes of representation and agency by a position that it occupies in the social order, typically characterized as being “spoken for”. The term has been applied to particular social groups and classes, and through the case of Russia also argued as beneficial in application to identity formations within the international order, such as those including and representing states (Morozov 2015, 10–1). Focus on subalterns and on

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7 Morozov emphasizes that “Russia”, when appearing in postcolonial scholarship, does not relate exclusively to the Russian state or political regime accredited to it. Rather, it refers to a manifold of practices of identification that together produce an identity of “Russia” and “Russian” in particular times and spaces in relation to various Others. The Russian state is, in such view, both a part and a product of these practices. This perspective can be seen as complicating constructivist approaches: one can speak of a state in relation to particular experience in particular context, but hardly about a state in general, in terms of the international order being constituted by states.
possible ways of overcoming subalternity suggests a way of looking on power from below, and on political struggles from the perspectives of lived experience. In relation to social and political futures, postcolonial scholarship can be seen in proximity to decolonial futurism and CFS, observing who is included and who – excluded from the different futurisms, as well as based on whose perceptions of time and space particular futures are formed.

Historically, postcolonial critique developed a theoretical apparatus aimed at deconstructing imperialist assumptions, and empowering marginalized groups, such as women, people of color, indigenous and LGBT+ people. Following the national and political decolonization of the former European colonies, postcolonialism shifted attention towards the remnant colonial relations of power that permeate international as well as intra-national politics in the globalized world, in which both the historical colonizers and the historical colonized are involved in the co-construction of inequalities (Morozov 2015, 13–4, 21–2; Tlostanova 2020, 166–7). On a par with formal political decolonization, an important locus of critique became knowledge production in connection to agency and subjectivity: coloniality of knowledge and coloniality of being (Tlostanova 2012, 133) – highlighting epistemological and ontological stakes of postcolonial critique that underlie its political stakes. While coloniality of knowledge and coloniality of being should certainly be related to power structures in the globalized world, from the position of subaltern they might be better approached as mind colonization. Mind colonization points at the internalization of colonial discourses and practices by those previously colonized or never colonized at all, reproducing as well as being reproduced by the relations of domination and subalternity in the globalized postcolonial world (Tlostanova 2012, 131–3; Tlostanova 2015, 51). In my view, mind colonization is a concept better suited to the investigation of alternative social and political futurisms as, in difference from coloniality of knowledge, it does not invoke the separation of epistemic from affective and thus can include practices of imagination necessary for alternative social and political futurisms (Fry and Tlostanova 2021, 157). In this way, mind colonization highlights the simultaneous co-existence of different experiences of time, space and the political, which are, however, subject to power struggle and domination, and it obtains a perspective of subaltern, highlighting the possible ways of overcoming the relations of domination and subalternity from below.

What we can talk about is the end of the imposed normativity of the Euromodern imagination as the only legitimate one and the re-emergence of other imaginations woven into a complex dialogue with each other and with the Euromodern exhausted normativity […] Various models of time, space, and subjectivity do not exist

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*I omit here the discussion within postcolonial studies on differences between postcolonialism and decolonial option, that I understand as majorly related to the degree of activist position of postcolonial scholars. For the description of these differences from the point of decolonial option, see Tlostanova (2020).*
separately, isolated and apart; on the contrary, they are always interacting and changing.

(Fry and Tlostanova 2021, 156)

Thus, in relation to ways of knowing and ways of imagining, decolonization focuses on the ways of understanding and perceiving societies, space and time differently than from the dominant paradigms of Western modernity by elucidating the marginalized and suppressed worldviews that developed with and against a construction of that modernity as unequivocal, self-sufficient and uncontroversial. I will use “mind de/colonization” to refer conceptually to the problems of coloniality of knowledge and of imagination seen in light of the possibilities of their overcoming.

Following mind de/colonization, postcolonial critique of contemporary space expansionism should elucidate possibilities to relate to outer space, to practices and visions connected to it, in ways that would challenge the existing global power inequalities rather than reproduce them. Focusing on marginalized groups and disempowered communities, postcolonial critique successfully brings to light the perspectives of those directly affected by space projects, such as communities living nearby launching sites. However, on the level of discourse this task is more problematic, as space is generally perceived as “dead” and “uninhabited”. Such perception allows for claiming space colonization as “good”, not followed by domination and exploitation of any marginalized population. In fact, the proponents of the Moon and Mars colonization through resource extraction and ambiguous public-private partnerships eagerly take up the issue to highlight how space colonization is actually a correction of mistakes of the past, uniting humanity in colonizing the uninhabited space (Plant-Weir 2021). In this way, space expansionism calls for a more substantial engagement with mind de/colonization – or for the development of alternative understandings of space, time, social and political arrangements. Postcolonial critique responds to this challenge by engaging with indigenous cosmologies, trans- and posthumanist thought. As noted before, indigenous cosmologies that include outer space and celestial bodies as ancestral and spiritual realms may claim their political rights, challenging the idea of a “dead” space (Mitchell et al. 2020, 9). Encounters with posthumanist thought, and specifically with the Latourian line of science and technology studies (STS) that advocates the agency of Earth in Gaia framework in an attempt to make political sense of physical phenomena (Latour 2012, 41–74; 2017, 38–45), ground possible articulations of non-human agency (Alvarez 2020, 159). Through transhumanism, the idea of individual human subject is perplexed by challenging the instrumental and functionalistic view of technology and recognizing human-technology relationships as always complex and reciprocal (Damjanov 2018, 20). In these different ways, critical researchers of space try to overcome the limitations of the individual human subject and to establish the agency of space itself and of space technology. In the next subsection, I will address the
problem of non-human subjectivity in relation to space visions with a focus on political analysis.

Attention to subalternity through mind de/colonization also allows us to see the case of Russian space visions as a part of the global postcolonial critical project, following the recent theorization of Russia’s position within the globalized world as a subaltern empire (Morozov 2015). The subaltern empire paradigm takes up the constructivist emphasis on identity as a key factor of international politics that developed in the analyses of Russian international policies following the dissolution of the USSR (see, for instance, Hopf 2002; Leichtova 2016; Neumann 2017; Tsygankov 2012) and places it within the frame of hegemonic power relations characteristic of the postcolonial world. In this way, the subaltern empire paradigm shows how the Russian identity politics of Putin’s period, employing the discourses of Russia as a great power (Neumann 2008, 146; Oldberg 2007, 13), as a winner of WWII and the liberator of Europe (Morozov 2008, 159), and as a “true Europe” in opposition to the contemporary morally corrupt actual Europe (Morozov 2015, 119; Neumann 2017, 174), signify the discursive and normative dependency characteristic of subalternity. However, Russia’s subaltern position within the globalized world, observable normatively as well as materially, combines with the imperialist identity in a clear case of postcolonial hybridity where the positions of dominance (Master-colonizer) and subalternity (Slave-native) are co-constitutive, mutually dependent, and hardly possible to separate strictly:

Having (seemingly) adopted the knowledge of the Master, the native is not only complicit in its reproduction but also simultaneously misappropriating and perverting its meaning, thereby circumventing, challenging and refusing colonial authority.

(Morozov 2015, 22–3)

The ambiguity of Russian identity is related to Russia’s late introduction to capitalist modernity, through which Russia never managed to become assimilated in Western international society. Attention to the relations of subalternity and domination, structuring Russian identity politics, allow two important additions to the observations from the constructivist standpoints. First, the limits of Russian identity become elucidated, highlighting how the discursive repertoire of identity-making available to Russian elites at any time is limited by their historically and structurally conditioned subalternity.9 Second, the subaltern empire paradigm highlights how a

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9 It may appear that Russia today presents a case of opposition to the global hegemony, and it is indeed a perspective that Russian officials promote themselves in the context of its invasion of Ukraine. However, and in accordance with paragraphs on the “authoritarian backlash” in the previous section, that is not the case if neoliberal governance is approached as a political rationale or governmentality. Global hegemony in this sense does not amount to a hegemony of a particular state such as the US, as it would be with realist or constructivist analyses, although Morozov’s analysis clearly indicates the remaining dominance of the West in international relations. More importantly, global hegemony should be seen as a domination of neoliberal governance and the expansion of free market logic to social and political relations, which are fully internalized by the Russian elites.
position of subaltern, from which Russian elites speak internationally, masks their full incorporation in the world hegemonic order and their colonial oppression towards “Russian people”\(^{10}\) as well as towards Russia’s perceived periphery. “Russian people, which is continuously de-subjectified and silenced by the empire” (Morozov 2015, 12), and in whose name the empire speaks internationally, appear as actual subaltern within this paradigm. As Morozov notes, in this situation the only subject of Russian politics appears to be the imagined West itself (2015, 6), which can be related to, first, the mind colonization of Russian elites claiming to speak on behalf of the “Russian people”, and second, the mind colonization of the “Russian people” internalizing the Eurocentric paradigm of the elites.

Combined with the postcolonial critique of space expansionism, the view of Russia as a subaltern empire suggests that the possible visions of common futures in and through space should be approached from below Russian space policy and culture, from a manifold of situated practices related to space that exist in an uneasy relation of domination, appropriation and substitution with state and capital-sponsored policies and representations. At the same time, it indicates that no such practices should be appraised uncritically, as Russian identities, constructed among other discourses through the ones on space and space exploration, are apparently ambiguous in terms of domination and subalternity. In other words, an explicit criticism of the commercialization, militarization and commodification of space, of what was called “space empire”, on behalf of the Russian officials can well serve Russia’s own imperialism, while a criticism of space empire and/or Russian imperialism from the point of lived experience and situated practice might mimic the domination of the Master-colonizer on a closer look. In short, in encountering space-related practices

Hegemony in the subaltern empire framework in this way can be seen as closely related to mind colonization and the dominance of a particular way of comprehending social and political interactions, no matter by which particular state, social group or community they are expressed. In a similar way global hegemony was previously conceptualized in Hardt & Negri’s framework of Empire (2000), later updated to include cases of what appears as an imperialist resistance to it (Hardt and Negri 2019). On connections between neoliberal policies in Russia and the invasion of Ukraine, see also Yudin (2022).

\(^{10}\) I omit here a discussion on the proper political subject in different post-Marxist approaches. It can be seen as problematic, since Morozov’s subject of “people”, drawn on the accounts of Mouffe, Laclau, Žižek and Rancier among others, contradicts Hardt & Negri’s subject of “multitude”. However, the differences between “people” and “multitude” are less important for the aims and questions of my dissertation. In my view, Morozov’s insistence on “people” is a rather weak point of his account, as it signifies a subject itself complicit with nationalist and imperialist Eurocentric identities. This problem further leads to Morozov’s ambiguity in relation to the possibility of decolonization on behalf of the subaltern in the Russian case. Arguably, such a choice reduces the heterogeneity of this subaltern, the practices of identification that not only stem from different positions in power structures, but also happen in different languages, cultural, ethnic, linguistic and religious localities. In my view, a reformulation of subaltern empire in line with Hardt & Negri’s subject of multitude is possible, and would involve the conceptualization of subaltern-imperial ambiguity as imperial-imperialist one. However, Hardt & Negri’s approach was not, to my knowledge, applied to postcoloniality in the Russian case, and I therefore rely on Morozov. While such compromise seems applicable to the aim of examining alternative political futurisms in and through space, as differences between “people” and “multitude” are rather overshadowed by a focus on power structures from below, a study that puts the formation of political subjects in focus would have to engage with them more substantially.
from the position of lived experiences and practices it is necessary to view them as instances of mind de/colonization in order to discern imaginations challenging coloniality and producing alternative social and political visions.

Mind de/colonization in relation to social and political imagination can also be approached through the concept of biopolitical production of the post-Marxist political economy, affined to postcolonial theory. This perspective broadens the problem of commons, central to postcolonial critique of space expansionism, from common resources to common belongings and common futures, subjected to appropriation by existing power structures to reproduce the relations of domination and subalternity. Biopolitical production builds on Foucault’s concepts of biopower and biopolitics, which traced the conversion of life into an economic category that is administered by neoliberal governance replacing sovereign rule (Wilmer and Žukauskaite 2016, 3–9), and it presents a transformation of labor from a process of production of commodities into the process of production of life itself. In the globalized world, labor produces “[...] communications, affects, discourses, new forms of subjectivity” (Wilmer and Žukauskaite 2016, 7), or commons seen as both socially shared identities and ways of comprehending social and natural resources through the construction of social institutions (Hardt and Negri 2017, 97). The produced commons become commodified through the biopower of neoliberal governance and thus ingrained in the existing structures of power. Commodification is not seen as a separately economic process; it is political, following Foucault’s notion of life administered as an economic category. Post-Marxist political economy approaches neoliberal governance as inherently undemocratic as, in the context of the labor’s autonomy from knowledge provided by management and capital owners, accumulation of capital is ensured through the dictatorial rule of pure command. In this, it is complicit with the critique of neoliberal foresight futurism, and it specifically highlights the appropriation of future commons through the financial instruments, commodifying social production that has not yet happened and tying it to the schemes of measurement available in the present (Hardt and Negri 2017, 171, 213). This perspective offers a critical addition to the views on commercial spaceflight that see it as a mere expansion of state power by different means, since corporate governance changes the relations in which that power is executed, narrowing the scope of its possible alternatives.

The concept of biopolitical production allows a better conceptualization of space as commons from the perspective on power from below, presented as a perspective of labor. While in liberal political and IR analyses commons signify a legal regime of property, defining rights and responsibilities as terra nullius (where everything can be owned) or res communis (open to all but owned by no one) (Hasani 2021, 29), in terms of the post-Marxist political economy, space is first of all produced as commons through practices of labor related to it. Primary for analysis from this perspective become the manifold of space-related practices and lived experiences, while their appropriation in forms of legal regimes and political decisions comes second. In this
light, contemporary space expansionism can be seen in line with other occasions in which global financial capitalism has emerged through the intensifying extraction of the commons. Such perspective on commons from below can also be seen as intersecting with some liberal IR analyses that claim the global commons regime of space is rather a result of historical interaction of space practitioners than a result of particular political decisions (Davis Cross 2022, 385).

Biopolitical production points towards the production of social and political alternatives in and through space as a routine function of affective and immaterial labor, claiming the impossibility to separate the political as a special sphere of social life. In this view, the lived experience of space-related practices should be approached as directly political, without a necessary recourse to political decisions and official discourse, as it produces forms of collective belonging and networks of action. In particular, biopolitical production blurs the division between political and cultural, which is important in relation to the material that I have investigated. Instead, the construction of social and political alternatives in this perspective implies resistance to the appropriation of biopolitical production by the biopower of neoliberal governance, which should proceed along the reappropriation of fixed capital, increasingly manifested today in digital algorithms, identities, and know-hows, contributing to “general intellect” (Hardt and Negri 2017, 111–20). This can be seen as an advocacy for the agency of labor in affinity to the agency of subaltern, advocated in postcolonial theory, and a view on mind de/colonization from the perspectives of production and appropriation. As postcolonial critique of futurism and space expansionism increasingly engages with post- and transhumanist thought, arguing for the recognition of the agency of space itself and of space technology, so does the post-Marxist political economy locate this resistance in the recognition of “machinic subjectivities” that transgress the individual human subject:

[…] the machinic appears clearly in the subjectivities that emerge when fixed capital is reappropriated by labor-power, that is, when the material and immaterial machines and knowledges that crystallize past social production are reintegrated into the present cooperative and socially productive subjectivities.

(Hardt & Negri 2017, 122)

Thus, both postcolonial theory and the post-Marxist political economy emphasize the perspective on power from below in relation to the construction of future social and political alternatives in and through space. Postcolonial theory presents this as a  

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11 There is a significant discussion between the post-Marxist political economy and the post-foundational political theory on the possibility of such an approach to the political. I omit it here not to complicate the theoretical framework of the thesis, but at its extreme points it can be summed up as the following. Post-foundational political theory sees Hardt & Negri’s approach as denouncing the political as such, failing to provide a framework for collective action and public resistance; in their turn, Hardt & Negri accuse post-foundational political theorists of replicating the structures of hegemony and domination. See Kioupkiolis and Katsambekis (2014).
perspective of the subaltern that is, however, engaged in mind de/colonization related to social and political imagination. In its critical application to the contemporary space expansionism, postcolonial theory emphasizes post- and transhumanist accounts of the non-human agency as possible ways of overcoming subalternity. Post-Marxist political economy presents this perspective as a perspective of labor in the context of biopolitical production, or production of life itself, and in a likely way emphasizes the autonomy of labor through machinic subjectivities.

Assemblage theory

Postcolonial theory and post-Marxist political economy allow to reformulate the problem of social and political futures in relation to the contemporary space expansionism: through these accounts, future alternatives are possible with space rather than in space. Space itself, ways of identifying with it, and technologies implied in its exploration should be seen as co-constitutive actors for such futures. This insight poses a significant challenge to political theory thoroughly based on human subjectivity, and this challenge can be seen as ontological and epistemological in relation to the complexity of politics in the postmodern globalized world, which I addressed in the introduction. In this context, what kind of political analysis can allow one to grasp a new political imagination with space, accommodating the possibility of alternative social and political arrangements, opening up different common futures? Here, I present assemblage theory as a possible framework for such analysis. In relation to my aim and research questions, I introduce the concept of assemblage as a possible alternative to various attempts of partial resurrection of modern utopia in postmodernity, inattentive to τόπος, or utopia’s place of possibility.

Assemblage theory is based on the thought of Deleuze & Guattari and specifically on their project of schizoanalysis (2004a, 2004b). Assemblage has emerged as a concept that allows understanding of contemporary “messy” reality as processes of production of desire (Buchanan 2021, 1–6). In this way, assemblage theory addresses precisely the type of complexity and interconnectedness that has been observed in relation to contemporary global crises. As a concept, assemblage offers a certain way of problematizing appearances rather than a claim of any “objective” reality. To see some phenomena in terms of an assemblage means to apply a particular conceptual apparatus that allows us to make sense of a particular situation (such as the COVID pandemic, or war in Ukraine, or the commercialization of space, or me writing this text) as a process of production of desire that is observable in a certain outcome of interest (such as reinstated regimes of border control, or the increasingly nationalistic rhetoric in different European states, or transformations of the space commons regime, or the inclusion of assemblage theory in these paragraphs). Following Deleuze & Guattari, desire in assemblage theory is not restricted to humans, and the production it enables takes place through machines, or complex interactions of different elements and expressions, in assemblages. In assemblage theory, a critical
question that is pointed at production processes and that guides political analysis is what kind of machine should have been in operation for things to become as they do (Buchanan 2021, 45). In this way, assemblage theory is complicit with post- and transhumanist approaches to subaltern and indigenous agencies of postcolonialism, as well as with the machinic subjectivities of post-Marxist political economy. In relation to space futures, assemblage theory allows us to grasp the construction of alternative futures through human and non-human interactions as they unfold in lived experiences or are expressed in accounts such as cosmism, addressed in the previous section and touched upon in some of the included papers. Before relating the concept of assemblage to my project, I should try to briefly unpack the complex apparatus of assemblage theory and indicate the novelty it brings into understanding politics.

Desire and production are the two key words for tackling the ontological ground on which assemblage theory rests: the world as we see it is a product of desire (Buchanan 2021, 55–7). Desire in Deleuze & Guattari’s thought is understood affirmatively, in contrast to theories grounded in psychoanalytic notions of desire as lack. With respect to desire, both classical (liberal) political theory and post-foundational discursive approaches can be seen as based on the understanding of (exclusively human) desire as lack (May 2005, 124–5). Desire as lack can be traced back to Hobbes as a lack of security and predictability, necessary for the functioning of society, which leads to the appearance of Leviathan of the state. In Lacanian reformulations, lack is approached as producing desires in a way of constant striving for that which can never be fulfilled, resulting in contingent social and political structures (see, for instance, Stavrakakis 2012). In contrast, for Deleuze & Guattari lack functions neither as a basis for social and political systems, nor as a primary source of desire. Instead, lack is presented as a particular repressive apparatus that is constructed socially through the structures of power, while desire is understood affirmatively as a principle of differentiation, continuously integrating what appears incompatible (Buchanan 2021, 38).

In this way, desire is understood as the basis of all behaviour: human and non-human, – and it is only apprehensible through the production it enables in its machinic form, or assemblage (Buchanan 2021, 56, 62). The machinic form of desire can be seen to ground machinic, more-than-human subjectivities of the post-Marxist political economy addressed earlier. Machines are approached as combinations of different elements and expressions that allow a particular process of production, and assemblage theory provides a framework that comprehends such combinations and such processes. Emphasis on desire is a crucial difference of Buchanan’s theory from other approaches to assemblage that see it as a combination of diverse elements in an additive way, relations between which define a given outcome (see Bennett 2010; De

12 Although, of course, Deleuze & Guattari’s framework could be criticized from this perspective as yet another facet of Western knowledge – albeit not put, so far, to extensive political utilization.

13 Which is not surprising, considering the extensive use of Deleuze & Guattari by Hardt & Negri.
Landa 2006): “Desire is primary; it is desire that selects materials and gives them the properties that they have in the assemblage” (Buchanan 2021, 56, emphasis original). As Buchanan highlights, the problem with approaches which omit the analysis of desire is that their lists of elements can be continued endlessly, resulting in no insights into how the production process happens and which role humans play in it (2021, 113–22). In this way, assemblage theory becomes rather pointless for social and political analysis, and it can provide an impression that, as a concept, assemblage merely approaches complexity in a metaphorical way (see Little 2012), hardly adding to already existing concepts such as a system.

In the affirmative approach to desire, the idea of subjectivity is transformed. Buchanan’s (2021) account transgresses the limitation of desire to human subject but does so in a way different than if trees, the Moon or my keyboard also had desires. This would mean to simply project the picture of desiring human subject to what is presupposed as matter-object; this can also manifest mind colonization discussed earlier in relation to postcolonial theory. Rather, it is the division between subjects and objects that becomes transgressed and contingent: desire always produces through combinations or machines, and assemblage that presents desire in its machinic form performs a function of particular production that cannot remain the same if something is added to it or subtracted from it (Buchanan 2021, 188).

Following Deleuze & Guattari, the basic composition of assemblage, or desire in its machinic form in which it can be apprehended, includes form of content (the material realm), form of expression (the ideational realm), principle of unity (what Deleuze & Guattari also call abstract machine), conditions of possibility (what they call body-without-organs), and lines of flight (Buchanan 2021, 55–84, 121). In line with the assemblage theory, this underlying composition should be a focus of analysis (Buchanan 2021, 66, 71). Desiring production takes place in an assemblage through the yoking of forms of content and of expression together in accordance with a particular principle of unity (how they are yoked together, the architecture or a diagram of an assemblage providing a view of its connections), in particular conditions of possibility (why they are yoked together, the power of selection explaining the choice of elements and expressions). Lines of flight refer to parts of an assemblage that make connections to something beyond it, which cannot be fully captured by its established production process: they show that forms of content and of expression cannot overlap exactly. Lines of flight indicate potential ways of disruption of the production process of an assemblage and a possibility of its redirection. In the terms of Deleuze & Guattari, an established assemblage is territorialized, it produces and sustains a liveable order (Buchanan 2021, 85). Following lines of flight leads to deterriorialization of an established assemblage, the outcomes of which can be different. Along with the establishment of a new assemblage (absolute positive deterriorialization) it can proceed by struggling between cooptation and radical change (relative positive), the appropriation of lines of flight and the reproduction of the existing assemblage (relative negative), or by
rejection of any assemblage and dismantlement of the process of production as such (absolute negative) (Nail 2017, 34). For instance, the recognition of various minority rights in Western democracies can be seen as relative negative deterritorialization, since it presents cases of appropriating the alternative ways of living and relating to the world, and their incorporation in existing state structures (Nail, 34–5).

Although a combination of non-discursive elements and discursive expressions is perhaps the most common way of comprehending assemblage’s forms of content and of expression, it is not a necessary one, as follows from Deleuze & Guattari’s approach to materialism. From their perspective, real is not distinguished from imaginary: all products of desire are considered real. Instead, the distinction between actual and virtual is brought into the assemblage theory; actual points towards that which can be comprehended as an object of thought in available categories of language, while virtual – towards that which currently cannot. The virtual gets actualized not in terms of ideas and imaginations becoming things, but in terms of forming a comprehensible object of thought (Buchanan 2021, 58–9). In this way, Deleuze and Guattari address language as a “collective assemblage of enunciation”. The individual words – elements of content – can be seen as yoked to particular performances – expressions – allowing a social production of language. For instance, the phrase “you are guilty”, uttered by a judge to a newbie convict, produces social reality beyond semantics, while not turning “idea into a thing” (Buchanan 2021, 102). A concept of assemblage is applicable to discursive production that is not considered less real than a non-discursive one.

Which difference does assemblage theory make to political analysis, and how can it complement mind de/colonization and biopolitical production in conceptualizing the ways of social and political futurism in and through space? Buchanan’s approach to the formation of policy highlights that assemblage theory moves beyond human intentions and ideologies as the foundation of politics, accepting their importance only as parts of exact processes of production conceptualized as assemblages. Policy from the perspective of assemblage theory cannot be understood in terms of intentions and outcomes, a sequence of “formulation-implementation-reformulation”, in which ideas exist in causal relationship with policy proceedings. In a critical manner, policy can be understood in terms of a production process that desire enables in its machinic form of an assemblage, for which decisions, ideas and ideologies function as elements and expressions on a par with other elements and expressions, human and non-human. In their turn, political decisions and ideas can also be analyzed as assemblages – which is important for my empirical work, that includes only the discursive practices related to space and not any hands-on involvement in space projects.

Assemblage theory equips the perspective on power from below, common to both postcolonial theory and the post-Marxist political economy, with a conceptual apparatus to grasp the exact processes of the construction of social and political alternatives. It can also be seen in affinity to their central claims. The view of policy
from the perspective of assemblage theory shows a non-teleological approach to political projects: policies lack both clear beginnings and clear endings, based on a “foundational opacity”, not capable of delivering “blueprints for the future” (Buchanan 2021, 124–6). Instead, policy includes, simultaneously, different foundations and hosts different outcomes – it invokes different pasts and different futures, actual and virtual, unfolding in a perpetual process of production through their actualization. In this way, assemblage theory allows us to analyze politics in accordance with decolonial futurism and grounded utopia. In this logic, when approached as assemblage, utopia is detached from both predefined ends and guiding intentions. To reformulate Levitas, utopia as an assemblage is based not on the “desire for a better way of being”, but rather on desire which is productive and affirmative, not restricted to humans and non-teleological, but which can be interrupted and captured.

The distinction between actual and virtual, both of which are considered real, makes assemblage theory suitable for political analysis from the point of view of biopolitical production. The concept of biopolitical production involves a non-separation of the political from other spheres of social life, claiming the construction of social and political alternatives a routine function of labor that is increasingly coalescent with life itself in postmodernity. Seen through the lens of assemblage theory, biopolitical production not so much rejects the classical (liberal) and post-foundational accounts of politics, as much it relegates them to specific cases that are theorized through specific lenses. These accounts operate with actual, or with that which is comprehensible as political in the existing categories of language – in other words, they operate with identities. Politics of machinic subjectivities, which are opened up through the concept of biopolitical production, largely point at that which cannot be comprehended in terms of identity, or at the virtual that marks excess, enfanning the actual experience (Widder 2012, 38). Deleuze & Guattari address the distinction between actual and virtual in political terms by pointing out that “every politics is simultaneously macropolitics and micropolitics” (Deleuze and Guattari 2004b, 235). The difference between “macro” and “micro” here is not the scale but the attention to what makes sense in current political categories or to what does not currently make such sense. Both macro- and micropolitics can be conceptualized on different levels of analysis, concerning states, individuals, pre- or supra-individual connections. Macropolitics is defined by the attention to comprehensible identities of the actual, while micropolitics – to the excess of the virtual. Micropolitics thus point to the excess of biopolitical production and to the politics of machinic subjects: “[macropolitics] fails to see that people are connecting in ways that cut across traditional political categories” (May 2005, 130).

Thus, a political analysis that aims at locating ways of constructing social and political alternatives in line with postcolonial theory and the post-Marxist political economy should concentrate on micropolitics, or on that which is refused the label of “political” in terms of liberal and post-foundational political theories, operating
with available categories of language. It should concentrate on lines of flight present in the production processes of established assemblages, assessing the ways of transformation that they can lead towards. In application to the contemporary space expansionism, rather than rejecting it altogether on grounds of its inherent imperialism, reproduced structures of domination and continued extraction of the commons, assemblage thinking looks for lines of flight from space empire. Observed to allow “a novel kind of utopian political thought that is neither Marxist nor liberal” (Patton 2012, 216) – in other words, no-longer-modern – and thus potentially serving the task of reclaiming space exploration for the construction of new common futures, assemblage theory points towards what escapes the contemporary discourse of space expansionism as not comprehensible in political terms. It allows a way of grounding politics in lived experience, that also constitutes biopolitical production but is appropriated by the biopower of neoliberal governance.
Methodological considerations

The research papers presented in Part II employ a variety of methods, including thematic analysis, semi-structured interviews and narrative analysis. As my work on this dissertation started with a focus on the official state discourse on space exploration, Paper 1 is organized around a thematic analysis of the official documents and public appearances of Russian leadership and space sector management. Paper 2 approaches popular culture through narrative analysis, while relying on the mapping of the official discourse presented in Paper 1. Paper 3 focuses on a specific artifact – an amateur artistic and political project – again through narrative analysis, but with significantly more attention to utopian studies and significantly more detailed investigation of particular artworks.

My approach to methodology has reflected the shift in theoretical attention from analyzing the power structures from above, or from political discourse that gives a picture of power from a position of power itself, to analyzing the power structures from below, or from lived experience and practice. While the use of narrative analysis in Paper 3 already highlights their importance, in Papers 4 and 5 lived experience and practice are given priority. Paper 4 is based on semi-structured interviews with Russian space experts and advocates, through which I investigate their own understanding of their political roles in relation to their practices, elucidating the problematic points of two partially competing approaches to the politics of expertise. In Paper 5, I rework narrative analysis in line with the concept of assemblage, providing a political analysis of Russian imperial SF set in space in accordance with the previous studies to then show how an assemblage approach allows its disruptive reading from a perspective of a reader that is given priority.

The key method of my study, following the conceptualization of space history, politics and culture in Russia in terms of a master narrative and its remnants, has been narrative analysis. In this section, I discuss the limitations of narrative analysis in approaching power structures from below, from a perspective pointed out by postcolonial theory and the post-Marxist political economy. I also offer a reflection on how these limitations could be transgressed through a reformulation of narrative analysis in light of the analytical tools of assemblage theory.

Narrative analysis is one of the key methods used in the interdisciplinary field of popular culture and world politics (PCWP), which presupposes both politics and culture as sets of interconnected texts that exist in the exchange of representations, or in intertextuality (Kiersey and Neumann 2015, 77; Weldes 2003, 13; Weldes and Rowley 2015, 19). In this way, political representations are reworked in cultural artifacts, and cultural representations shape political discourses, on the practical level
even possibly suggesting particular changes in policies or political decisions (Weldes 2003, 2–3). Political discourse and official representations depend on “cultural resources” (Weldes 2003, 7), which in particular allows SF to be seen as politically significant. SF has been theorized as a certain laboratory of political and social thought due to its generic characteristics of cognition and estrangement (Moylan 2000, 24–8, 44; Suvin 1988, 37).

In PCWP, narrative is seen as an act of representation that rests on a certain structure, the organization of events into a plot (Robertson 2017, 124). In my analyses of Russian space culture artifacts, I employ Robertson’s (2017, 126–7) conceptualization that divides narrative into components of story (what) and discourse (how). While both story and discourse comprise multiple elements, the employment of narrative analysis can be selective, and narratives need not include all the elements identified by structuralist theorists (Robertson 2017, 27). Methodological rigor in this case amounts to an ability to show that the analyzed material contains some interconnected narrative components and can thus be analyzed as a narrative. The employment of narrative within IR can be seen to sometimes radically transgress the structuralist boundaries, often presenting narrative as synonymous to discourse, story, frame or theme that can be postulated without any inquiry into what actually makes them narratives.

In my employment of narrative analysis, I attempt to both recognize the limitations of structuralist schemes and to avoid the equalization of narrative with discourse. My analyses certainly do not aim at uncovering objective meanings, but they strive to elucidate the strategies and available possibilities of building meanings in-between texts (widely understood, thus including movies, TV series and museum exhibitions) and their readers, while emphasizing certain elements of narrative structure and narrative conventions at work (such as those widely recognized by European audiences: romance, comedy, tragedy and satire). In this way, my employment of narrative analysis is akin to close readings of texts whose narrative construction, together with its effects, is made explicit.

A problem with such use of narrative analysis in juxtaposition to the theoretical framework presented in the previous section is that it approaches power from above (from the position of power itself) rather than from below (from a multitude of lived experiences and interactions that are appropriated and extracted). In PCWP, narratives are made sense of politically by the imposition of discourses already claimed political, overseeing the political investments of what exceeds them. In this way, narrative analysis can be seen as implicitly based on the post-foundational claim of the primacy of the political, grounding critical discourse approaches with which it partially intersects (see Glynos and Howarth 2007, 120, 155; Marchart 2007, 48–51). However, this claim runs counter to postcolonial critique of space expansionism and to the concept of biopolitical production that emphasize, respectively, subaltern agencies and the primacy of labor. In this way, approaches to narrative analysis in PCWP might be seen as replicating colonial domination on the analytical level,
reproducing the coloniality of knowledge; political discourse’s reliance on “cultural resources” (Weldes 2003, 7) appears differently in this light. In fact, some recent accounts of narrative methodology in its application to politics seem to recognize this problem. It was suggested that political analyses of narratives critically depend on what is seen as political in the first sense, with attention to master narratives contrasted to what emerges as political from lived experience (De Fina 2018, 236) – in the case of popular culture, the experience of reading and co-producing a text. Equally, Deleuze & Guattari’s rhizomatic ontology (that grounds, in particular, assemblage theory) was suggested as one of the possible ways to encounter narratives analytically (Kim 2016, 62–4).

The analytical division of three strategies of reading a text, present in narrative methodology – explication (standing under), explanation (standing over), and exploration (standing in for) (Czarniawska 2011, 60–75) – highlight the methodological differences of observing power from above or from below. These strategies work simultaneously but are emphasized differently in accordance with the aims of analysis. Exploration, in this respect, is a way of reading that concentrates most on the agency of a reader, whereas analyses of PCWP typically present a combination of explication and explanation.

Encountering a literary piece, a movie or a museum exhibition, and through narrative analysis establishing its political relevance and function that could be articulated in relation to previous research, my key curiosity relies in finding those elements of narratives, either in terms of form or content, that seem to transgress the political functions of narrative as a whole. In this way, I am “standing in for” the text, trying to find ways to subvert its meaning-making, either author-intended, objective or expected through conventions shared by author and readers. My intention is to probe what else a particular text can offer beyond interpretations firmly grounded in research. In Paper 2, I offer a limited reflection on the possible futuristic projections of narratives that in different ways appropriate Soviet space culture in contemporary Russian context. This perspective is further stressed in Paper 3, where I provide an analysis of problems associated with futurism in the amateur project USSR-2061, elucidating the potential ways of their overcoming. The clearest focus on exploration exists in Paper 5, where I actively seek ways of subverting Russian imperial SF set in space by pointing to its intersections with critical space scholarship. Paper 5 also explicitly operates with assemblage theory, employing its analytical toolbox. In my view, there are significant benefits in encountering narrative analysis from the point of view of assemblage theory. A reworking of narrative analysis from the position of assemblage theory challenges the implicit assumptions of political-cultural inter-relations in PCWP, since the understanding of politics in terms of both micro- and macropolitics, discussed in the previous section, disallows the primacy of the political. Juxtaposition of cultural artifacts with already established political discourses only points at macropolitics, while it misses the micropolitics of excess or virtual, that may indicate possibilities of radical transformation. Considering that the tasks of
PCWP embrace a rather activist position in relations to politics – which at least seems to be the case for SF studies – it might be beneficial to consider the analytical toolbox of assemblage theory.

Whereas it is common to refer to narratives as assemblages, no accounts of intersections between these analytical concepts seem to exist. Rather, within narrative theory and methodology, assemblage is invoked to point towards narratives combining different elements. However, just as narrative demands not any combination of discursive elements but such which forms a plot structure, assemblage is defined by its production process and cannot be applied to any set of divergent elements. In both cases, a process of selection is in operation: in the case of assemblage, it is made explicit through the principle of unity and conditions of possibility, while in the case of narrative – through plot and its connections to the context. Further similarities between the two approaches can be discerned. Assemblage’s form of content and form of expression, on the linguistic and social levels, may be seen as corresponding to narrative’s story and discourse. Likely, both approaches emphasize that it is only through the interaction of these parts, the border between which is always blurred and rather invoked for analytical purpose, that these conceptions allow a production of meaning. Placed in this way, the association of narrative with assemblage should not be taken metaphorically, but rather literally: narrative is a specific case of assemblage, an assemblage of discursive production. The concept of narrative is narrower, since assemblages are open to combine discursive and non-discursive elements. Through such juxtaposition, one can also see a part of the conceptual frame of assemblage that is missing in narrative analysis: lines of flight, or ways of potential deterritorialization and transformation. It is my methodological assumption that the inclusion of lines of flight into narrative analysis allows this method to be reshaped for the observation of power from below rather than from above, limiting the imposition of presupposed political discourse.
Summary and review of the research papers

The combined perspective outlined in the previous sections has developed over time through different engagements with Russian space policy and culture placed in their global and historical contexts. These engagements are manifested in the five research papers that form an empirical core of this thesis and constitute Part II of my dissertation. In this section I put them together, providing summaries, revisions and additions to reach my research aim and answer research questions.

Paper 1: Official discourse on space exploration

Paper 1 contributes to the thesis by identifying five core themes of the official discourse as manifested in space policy documents and public appearances of Russian leadership and space sector management through the post-Soviet decades. This is a paper co-written with my main supervisor, Johan Eriksson, to which I contributed with the selection and analysis of material. Taken together, the five themes appear as instances of reactionary policy formation from the perspective of constructivist IR, and Paper 1 specifically highlights the absence of any futuristic vision in the official discourse comparable to that of the Soviet master narrative. Historical legacy as a great space power, international cooperation, modernization, militarization of space and independent space capacity together allow us to see how the struggle for Western recognition is followed in an equally obsessive manner through both competition and cooperation. While not providing any future-oriented explanation of why Russia joins the New Space Race, official space discourse commonly appropriates the Soviet space rhetoric.

Instead of presenting the space program as a way to futuristic social and political visions, such as the victory of communism in Soviet times, Russian leadership and space managers explicitly express desires for non-political space exploration. The empty place of future visions is taken by a fascinating amalgam that includes spiritual dimensions of space akin to the Russian nation, underdeveloped religious or esoteric justifications, “romantic halo”, “special historical mission” that “we” have perceived, and dreams of conquering planets and star systems. These are grounded in the images of a glorious past characteristic of retrotopia.

While the theme of historical legacy of a great space power provides the most obvious case of appropriation of the Soviet past in the official space discourse, other themes might be seen in this light as well. Insistence on modernization and development through space exploration can be connected to the rhetoric of Soviet catch-up modernization, for which the space program, in its short decade of the “space firsts”, was a high time. Similarly, an interplay of promoting international cooperation in
space and allegedly opposing its militarization can be compared to the Soviet rhetoric of 1970–1980s, when they were partially invoked to conceal the military applications of the Soviet space program itself (Sheehan 2007, 56). Moreover, the problems of cooperation beyond the West, related to the separation of "cooperation" from "obligations", may be linked to the Soviet Intercosmos program, which functioned partially as a disciplinary mechanism, manifesting the relations of dependency (Sheehan 2007, 60–1).

While official discourse avoids social and political futurism, it is not necessarily opposed to the dominant neoliberal foresight approach to future. The appropriations of Soviet space are brought to promote Russia’s position in the context of the neoliberal global market. Paper 1 clearly shows how Russian leadership and space management generally accepts and internalizes commercial space; in some instances, American space enterprise is even accused of unfair market competition. This observation follows other studies that researched political uses of space, but did not examine official documents, speeches and appearances of key policymakers in relation to space policy (Engström 2020; Gerovitch 2015).

Postcolonial theory and the post-Marxist political economy, not present in Paper 1, allow further insights into appropriations of the Soviet past for the sake of maintaining and prolonging positions of power in the neoliberal present. Seen as manifestations of subalternity and domination, ambiguously intertwined in the case of Russia, the awkward placeholders of the non-existent futuristic master narrative of space and references to the Soviet past show the discursive dependency on Western, and specifically American, space rhetoric. The subaltern empire paradigm elucidates how Russian elites are limited in the modes of representation available to them, which can also be related to mind colonization. At the same time, however, these articulations of space policy function as hegemonic oppression towards visions and understandings of space circulating in Russia. The oppressive character of official discourse is especially clear in the de-facto monopolization of public debate on space exploration by the Russian space corporation Roscosmos. In 2021, after Paper 1 was published, repressive legislation was adopted that limited possibilities for public debate on the Russian space program.14 Through the lens of biopolitical production, these oppressive practices manifest the appropriation of Soviet space rhetoric in a process of value extraction from the commons that embed the narratives of Soviet past as much as the visions of possible futures. In this way, the post-Soviet official discourse appears not as any natural development from the Soviet master narrative, which is impossible to replicate in the context of neoliberal globalization, but as a reinstation of extractive capitalizing practices previously executed by the master

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14 In 2021, the so-called “law on foreign agents” was extended to the publication of information on the Russian space program. While it is formally aimed at spreading military and scientific information, it also includes charges for activities that could “hinder” the interests of Russian space corporation Roscosmos. How and by whom such “hindrances” would be judged is not specified, and many in the Russian space community considered the extension of repressive legislation an attack on public debate on the space program.
narrative of Soviet space. Both Soviet official utopianism and post-Soviet official retrotopianism of space are totalizing in terms of future: the former by censoring futures that would not fit official communism, the latter by limiting visions of future in and through space to foresight extensions of the present through mainly economic (but, as the 2021 law reminds us, where necessary also political) control over their production. In turn, this theoretical perspective calls for a closer investigation of a production of commons that has become appropriated.

Since the publication of Paper 1, significant shifts have occurred in Russian space policy, and international policy more generally, that should be addressed. Apart from the so-called “law on foreign agents” that forecloses public debate on the space program (Shiryaev 2021a), the unprecedented intensification of economic sanctions following the 2022 military invasion of Ukraine cancelled Russia’s cooperation with the West in space almost entirely, continuing the “political deadlock” observable since 2014 (Khokhlov 2022; Vidal 2021, 39–40). While recently Russian officials announced a course on closer cooperation with China, that was also prominent before in the key theme of independent space capacity (in particular, the construction of Vostochny cosmodrome was promoted as a “turn to the East”), such announcements are thoroughly problematic. On the one hand, “our Chinese friends” were mentioned already in 2011 then-president Medvedev’s speech that, in a typical for Russian space policy reactionary manner, publicly announced Russian ambition to join the Moon race (Kremlin 2011). On the other hand, China was not seen before as a partner in specifically “cooperation”, and the historical account of Soviet-Chinese relations in space as well as more generally shows significant lack of mutual understanding (Mathieu 2010, 357–8). Overall, China has historically been seen by Russian elites in a dubious way, invested with a sense of fear and lack of trust (Aliberti and Lisitsyna 2019, 71–2). A possible end of the stable international partnerships developed and maintained by the Soviet and later Russian space programs, and the currently observable self-enclosure actualize the concerns of space wars and weaponization of space that stand at the center of political analyses of space activities. Keeping in mind that Russia is still the third space nation in the world, and a nuclear power that possesses ASAT capabilities, its enclosure should be taken as a major risk for international space politics. Russia’s proclaimed resistance to the militarization of space, following the footsteps of the Soviet space program, is based on a perception of threat. If cooperation on space disarmament appears impossible, this resistance can equally find its resolution in competition, as both logics fit well with the Russian identity of a great space power. At the end of 2021, Russia performed a new test of ASAT capabilities (Shiryaev 2021b). Elsewhere, I contributed to a publication that observes cooperation with the so-called “rogue states”, Iran and North Korea in particular, as a possible way of developing of the Russian space program internationally (Vidal and Privalov forthcoming.)
Paper 2: Appropriations of the Soviet past in Russian space culture

Paper 2 presents three key narratives in which Soviet space legacy and the remnants of the master narrative of space are appropriated in post-Soviet Russian culture. I label these narratives as neo-heroic, globalized Soviet SF and futurist realist. The first refers to mainly state-sponsored attempts to appropriate Soviet space heroism, incorporating the satirical criticism that was applied to it from the late Soviet decades onwards, in space historical blockbusters and museum exhibitions refurnished through the 2000s–2010s by centralized efforts. The second unites attempts, both state- and private-sponsored, to review Soviet SF in the context of a globalized world and to promote possible positions of Russia within it. The third refers to practices of the amateur project USSR-2061 that seeks to reestablish a vision of a new USSR through references to the Soviet space culture. As I observe, none of these narratives that I specify for analytical purpose are self-substantial; instead they are intertwined and dependent on each other. Political futurism through the legacy of Soviet space needs space heroism reinstated, but neo-heroic stories equally pose a question of absent futuristic projections. Neither are any of them unproblematic; neo-heroic narrative is probably the clearest in this regard, since its incorporation of private dimension of space exploration characteristic of satire towards the Soviet master narrative limits possible utilizations for the legitimation of current Russian political regime.

It was suggested previously that while the memory of the Soviet space program became fragmented and commodified, the post-Soviet narratives of the Soviet space program were competing for a new mastery (Gerovitch 2015, 158–9). My analysis shows how the missing master narrative, represented in nostalgia in relation to the Soviet one, functions as an important reference point for cultural practices in post-Soviet Russia. This is true not only for historical accounts researched previously, but also for appropriations that aim at the future. Generally, cultural producers occupy an ambiguous position of, on the one hand, disapproving the Soviet institution of official censorship, while, on the other hand, seeing a unified and uncontroversial narrative as the way for their works to obtain political and social effects. As one of my interlocutors tellingly described, a new master narrative should appear out of “letting all flowers blossom”.

Through the lens of biopolitical production, however, the emergence of a new master narrative that ensures hegemony over public imagination of space is both hardly possible and unnecessary in the context of biopower and neoliberal governance. The extraction of value from cultural practices, that is facilitated through relations of power, critically depends on a relative autonomy of production. In other words, it is not a new master narrative per se, but the promise of such a narrative which is never fulfilled, that sustains hegemony in the ways space is imagined socially and politically. In this context, the nostalgic search for a new master narrative on
behalf of cultural producers can be seen as a manifestation of the mind colonization, since it replicates the relations of domination. Instead, in line with the post-Marxist political economy, the cultural production of narratives of space could be approached as political practice even without them ensuring any hegemony, since in a post-industrial context they offer new subjectivities, collective forms of belonging and networks of action. In Deleuzian terms, this production should be approached in terms of micropolitics rather than macropolitics – as virtual rather than actual – which, however, does not make its social and political input less real. The establishment of a new master narrative, on the other hand, would refurbish the colonial relations of power that are formed on the coloniality of knowledge and of imagination.

However, the researched appropriations of the Soviet past in Russian space culture diverge in their relation to the macropolitics of state and capital. As emphasized further in Paper 3, the organizers of the USSR-2061 note that even if the project does not obtain any significant political influence, its results in terms of community building are enough by themselves. They also mention that the development of the project should proceed along the ways in which community production unfolds. Such claims, however, should also be approached critically, following the ambiguity of subalternity and domination highlighted by postcolonial outlooks on Russia. I offer such a critical view in the following subsection. Paper 2 also shows important differences in the narrations of the three key state space museums. In the two most well-known and heavily funded by the Russian state and the state corporation museums that are both located in Moscow, expositions try to stitch the representations of the Russian post-Soviet space program in a globalized context to the master narrative of Soviet space. Comparing my observations from different years, I also show how at least in one of them the narration closely follows the changes in international partnerships of the space corporation and changes in Russian international policies more generally. The third museum in Kaluga, which is the oldest among the researched cases, largely connected to the legacy of Tsiolkovsky but also rather of regional importance, presents the most open-ended narration that tries to incorporate the futuristic visions related to cosmism. While the practices in this museum also unfold within the relations of power and domination, as obvious for instance in the wide inclusion of the materials from the space corporation in its exhibitions, its rather regional importance can be seen to provide greater autonomy. This is obvious also in the interviews with museum practitioners responsible for the content of the exhibitions. In Moscow, the exhibition’s function in building public opinion in favor of the Russian space program was emphasized. In contrast, in Kaluga the political function of the exhibition was described in a more ambiguous way: “this museum exists for one person”.15 On the one hand, it might suggest the total political control

15 I did not include this particular quote in Paper 2 at the point of its publication; however, through the gradual construction of theoretical and methodological approaches, its significance became obvious.
over the cultural production – which would be an interpretation of power from the position of power itself. In this case the museum exists, brusquely, for Putin. However, as my interlocutor proceeded to explain, this “one person” is in fact impossible to name, as this person is whoever. In her view, the museum exists for whoever can make something out of its exhibition – or, bringing in the post-Marxist political economy, for an unknown machinic subject arising from the public interaction with that exhibition.

Finally, whether cultural producers obtain a perspective on power from above or rather from below does not seem to correspond to whether they receive state or private funding. Both perspectives are present in all of my interviews and in all of the artifacts that I have researched. Their inclusion varies somewhat in response to a relative degree of autonomy of production, that is not necessarily greater for private-sponsored projects than for the state-sponsored ones. This observation also corresponds to the findings of Paper 4 on Russian space expertise and advocacy, discussed below. Among my interlocutors in Paper 4, the closest to a perspective from below appears a high-ranking manager of a key state space institution. In other words, mind de/colonization in my cases does not seem to vary in relation to state or private sponsorship, which accords with the CFS critique of neoliberal foresight and ways of imagining social and political futures in the context of neoliberal globalization.

Paper 3: Utopian reconfigurations in amateur appropriations of Soviet space

Paper 3 sets an amateur futuristic project, USSR-2061, in focus, examining its relation to utopianism. The project presents artistic practices – the publication of short stories and graphic art contributed by the participating public – that should, according to its organizers, together narrate the appearance of a new USSR in the future. USSR-2061 thoroughly uses the legacy of the Soviet space program in its futuristic projections, with the logo of the project being a picture of Sputnik-1 and a vast amount of its publications being related to space exploration. As I describe in the paper, the project’s relation to utopianism is utterly ambiguous. On the one hand, the project despises any descriptions of perfect future society, and its organizers reject the idea of utopia, calling USSR-2061 “futurist realism” instead. There is also an insistence in both project guidelines and in my interview with the organizers that the project is artistic before political and should provide engaging narratives rather than political manifestos. On the other hand, at the very core of USSR-2061 is an explicitly political description of the future extrapolated from the present, to which the narratives should somehow comply. I argue that this very detailed description actually represents the political dimension of the project that is downplayed by its organizers while it subordinates the cultural production. The emphasis made on realism – understood as an aim at “real” social and political changes – further contributes to the ambiguity as it questions how much of an artistic project USSR-2061 actually is.
Despite the rejections of utopia, I observe that USSR-2061 follows an early criticism of utopia as a “blueprint for the future”, while its practices are well complicit with the postmodern reformulation of utopia in IROS. The project helps to bring to light the problematic points of IROS, related to the insistence on realism that makes a division between real and imaginary, in the case of USSR-2061 manifested as political and artistic. This division leads to the subordination of cultural production to political aims, radically narrowing the possible political imaginations that it is supposed to foster. Within the publications of USSR-2061 that I analyze, these problems are obvious in otherwise unexpected intersections with the official conservative discourses, but also in suppressed or overlooked connections that are mainly observable in graphic art. In particular, I show how some of the posters winning the project’s competitions can be interpreted as attentive to space in relational way, as that with which, rather than in which, the futuristic social and political construction is possible. These possibilities could be developed in connection to cosmism, which is however rejected on par with utopia as not “real” and incapable of bringing social and political change.

As an amateur project that encourages community production and allegedly adheres to Marxism, USSR-2016 clearly can be seen in light of the post-Marxist political economy. The concept of biopolitical production highlights the impossibility of separating the political as a particular sphere of social life; instead, labor itself produces new forms of collective belonging and networks of action on a constant basis. The separation of the political masks processes of appropriation and extraction, operating through the biopower of neoliberal governance in the context of biopolitical production. Through such lens, the “realism” of USSR-2061, imposed by its organizers, appears as just such a practice, while the production of the project clearly exceeds what is being appropriated. The imposition of political frame in accordance with Marxist ideology can also be seen as domination in postcolonial terms, where the actual producers of cultural artifacts appear in a position of subaltern. At the same time, the “excess” of cultural production in USSR-2061, represented by the non-actualized connections of some of its artifacts that reach beyond the imposed political frame, can be seen in terms of the reappropriation of fixed capital on behalf of the labor. The fixed capital in this case includes the project infrastructure, but also the appropriations of the Soviet past and common narratives produced through it. While the organizers of USSR-2061 express a desire for the project to continue as a horizontal network of community production, emphasizing the role of the authors, they equally add that the project should adhere to Marxist ideology in its development. In this way, the reappropriation of fixed capital necessarily involves a power struggle. From the point of view of postcolonial theory, the relations between the project organizers and community provide a view of ambiguous domination and subalternity, highlighted by postcolonial outlooks on Russian politics, and they can be related to mind de/colonization. Coloniality of imagination is relevant both to the organization of the project, which presupposes
domination and hegemony as necessary for the construction of social and political alternatives, and to its cultural production that often slides into convenient conservative discourses of power.

The conceptualizations of post-Marxism and postcolonial theory appear intertwined, if the utopianism of USSR-2061 is understood in assemblage terms, although assemblage theory is not included in Paper 3 as it entered my project at a much later stage. Analysis from the point of view of assemblage could start with a question that would problematize the appearance of the project: how does a project that is, allegedly, developed to deliver socially and politically alternative futures, manage to produce visions often coincidental with the official conservative discourses? Paper 3 offers an elaborated analysis of some parts constituting assemblage analysis: the principle of unity (abstract machine) that is described in terms of ambiguous artistic-political structure based on a relation of domination; and conditions of possibility (body-without-organs) that are present in descriptions of social, political and historical context of the official conservative discourses in their relation to the Soviet past. Form of content and form of expression, on the other hand, are not sufficiently investigated. The views of the contributors to the project are overlooked, as well as the processes of actual organization of contests, including people, places, and communications involved. This is a clear shortcoming for offering a perspective on power from below. On the side of expression, while offering a selection of different artifacts present in USSR-2061, I immediately trace them to the discourses of Soviet space and do not take into account a variety of possible perceptions both from within the project and from the general public. Still, even with these shortcomings in terms of assemblage theory, Paper 3 provides a view, if limited and less elaborated, of lines of flight that could lead to the deterritorialization of USSR-2061. These are alternative configurations of space, not fitting exactly with the project’s imposed political frame and potentially making connections to cosmism. More generally, in relation to USSR-2061, space as such could be seen in terms of line of flight. Rejection of utopianism in the case of USSR-2061 goes all the way down to the rejection of space exploration as its key topic, underlined in both my interview with the organizers and the contributions guidelines. Plainly, a project that imagines the construction of a new USSR specifically a century after Gagarin’s flight of 1961 supposedly does not have space exploration as its key expression. The recognition of the role of space provides a possibility of deterritorialization of the USSR-2061’s assemblage through lines of flight that are parts of it. Papers 2 and 3 suggest such possibility in terms of considering that the future might not be Soviet.. The power struggle involved in the reappropriation of fixed capital and in mind de/colonization shows how power opts for its own reproduction by coopting possible change and reproducing the already established assemblage.
Paper 4: Russian space expertise and advocacy between official discourse and global context

Paper 4 puts Russian space experts and advocates into focus, concentrating on their relations to politics and power. Through interviews, I find out how my interlocutors form a number of critical positions towards the official discourse of space policy, and how their perceptions of the global context, characterized by commercialization, militarization and commodification of space, varies. Some of my respondents, specifically those involved in space advocacy and commercial space enterprises, show an almost unquestionable acceptance of the global trends, while others develop a limited criticism, considering them undesirable yet inevitable. All of the experts and advocates that I talked to express skepticism towards Russian post-Soviet space program, observing a likely possibility of Russia “falling out” of international space exploration. In their view, Russia would need to follow the global development, either welcomed as offering new possibilities in line with accepting commercial space or tolerated as a necessity in line with not seeing any possible alternative. However, Russia moves along a different course of self-isolation, as space exploration is not seen as a priority for the Russian state, which concentrates on its momentary economic, political and military utilization. These views are juxtaposed in Paper 4 with the ways in which experts and advocates approach power and politics, and the ways in which they understand their activities politically. While my interlocutors agree that their political influence is largely negligible in the decision-making of the Russian space program, not all of them see it as non-existent. Experts active during the period of reforms in the early 1990s demand institutionalized expertise that should be publicly funded and have a clearly outlined influence and responsibility towards political decision-making. Experts currently active in the space program, and affiliated with space institutions, instead consider independent expertise an oxymoron – all expertise in this view is always already necessarily partisan. Therefore, they seek not the institutionalization of expertise, but an incorporation of experts into decision-making of the space program, up to the point of space practitioners being the decision-makers.

In their criticism of the Russian space program, its official discourse, and the global context of commercialized, militarized and commodified space, some of my interlocutors employed arguments coinciding with either the postcolonial critique of space expansionism, or with the post-Marxist approach to power in the globalized world. Obviously, these arguments were not put under such labels, and they were combined with other positions in eclectic ways not characteristic of theoretical precision. However, their presence is important for putting the Russian post-Soviet case into a global perspective of postcolonial critique on space expansionism. These arguments included, inter alia, skepticism towards claims of political independence on behalf of commercial space enterprise, problems of global inequality in access to space and a lack of any global political body that would address them, and limited
revolutionary hopes in relation to space exploration globally – aspirations that expansion to space might be a way to transform the global system of inequality and exploitation. These arguments, however, were applied to Russia only to a limited extent.

A connection between how experts and advocates approach Russia’s position within the global context of space expansionism, and how they approach politics, can be seen through the lens of postcolonial theory. Russia is seen as having no agency to shape the global development, which is both desired and denied; experts and advocates have no agency in the political process that is equally desired and denied. Both positions can be seen to mark subalternity, a situation of being “spoken for” and being limited in access to resources of representation. There seem to be, however, attempts to overcome subalternity – at least towards the political leadership of the space program. These include efforts of the currently active experts and advocates to formulate their political influence in ways different to an exact influence on decision-making, such as in terms of public support or establishment of space-related communities. At the same time, the “old guard” experts, while insisting on a narrow understanding of the political and, correspondingly, on the independence of the institutionalized expertise, see their public and educational activities in a philosophic rather than political way. From the point of view of biopolitical production, activities of space experts and advocates that happen either in their professional environment or in the public sphere, are necessarily political, but refused influence in order to maintain their appropriation and extraction of value. Political subjectivation of expertise and advocacy is connected to the reappropriation of fixed capital in detachment from state and corporate powers. Here I should mention that especially following the February 2022 Russian invasion of Ukraine, some experts and advocates left the ambitions of influencing state policy and proceeded as both critical to the Russian state and developing their own projects in disconnection from it. The clearest example is given by Vitaly Egorov, a top space blogger.  

### Paper 5: The inconsistencies of the Russian space empire

Paper 5 comes back to cultural production to explore the worlds of Russian imperial SF set in space. In terms of academic attention to the futuristic projections in and through space, imperial SF far outruns any other fiction, such as an almost neglected in the shadows of space empire USSR-2061. Imperial SF was also shown to have direct connections to Russian conservative political discourses. Paper 5 confirms these

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16 Egorov explains his motivations in this video (Russian): https://www.facebook.com/100003974108201/videos/1141122833402780/
observations and shows the mutually reinforcing connections between imperial SF set in space and the dominant conservative discourses. However, it proceeds to the view on power from below – in this case, from reader experience. My concern, following the aim of this thesis, is not so much to observe and explain the conservative political inputs of the imperial SF, as to outline the lines of flight that could allow the transformation of Russian space imperialism embedded in “space empire”. Paper 5 is the only one that explicitly relies on assemblage theory. In Paper 5, I concentrate only on discursive production, asking how space empire is produced in Russian imperial SF and what are the possible ways of its deterritorialization. I do not take into account either the economy of imperial SF, or its reception by the audience. Thus, Paper 5 does not provide an assessment of how and which lines of flight are being taken by the readership, but only maps them and shows their possible connections to postcolonial critique in the context of Russian space visions.

I indicate that previous studies of imperial SF are largely applicable to the analysis of space empire in Russian SF from the point of view of assemblage theory. They can be used to identify forms of content and expression, conditions of possibility and principles of unity of this assemblage. However, previous studies tend to overlook the inconsistencies of Russian imperial SF, thus downplaying its complex connections to the context within which it appears, that in terms of assemblage theory are manifested in lines of flight. I locate several such inconsistencies in the appropriation of indigenous subjectivities and representations of non-human agency that underpin the production of space empire and Russian imperialism in the analyzed texts. I then problematize these inconsistencies by relating them to the postcolonial critique of space expansionism. In this way, I show the possibility of disruptive reading of such texts, concentrating on the agency of a reader and their own imagination in relation to mind de/colonization. I conclude that such disruptive reading can be extrapolated to broader appreciation of space expansionism, highlighting possible alternatives that are suppressed in it. In this way, political futurism in and through space can be

17 Such a study would indeed be very interesting, and it would need to involve the academic practices of analyzing imperial SF. Analyses that claim its great political influence typically base their claims on two observations: the great circulation numbers of such literature, and the connections of its authors to Russian political elite. The former immediately leads to the great interest in imperial SF across Russian society, and the latter to the ideological standpoints of decision-makers. At least on the first point, following the interviews with cultural producers that I have made for other papers, I have significant doubts. Several times it was pointed out to me that the great circulation numbers of imperial SF are outcomes of investments that are made specifically in it by state and corporate capital, rather than of any great demand. While futures in space are sometimes parts of museum exhibitions, museum practitioners considered imperial fantasies marginal and not worth their attention. Equally, none of the imperial SF works appeared on the screen despite several movies and TV productions dealing with space futures: one producer specifically pointed out that they consider such sources of no interest to their audience. In this light, otherwise critical analyses of Russian imperial SF might actually be considered as involved in the reproduction of imperialism and space empire in particular, greatly overestimating its influence and contributing to the picture of society replete with imperialist aspirations. Studies on Russian imperial SF, in other words, might appear as practices of capitalization and extraction of value on behalf of the academic community.
approached as utopian in assemblage terms, or as a construction of social and political alternatives \textit{with} space.
Conclusion and discussion

In the Introduction to Part I, I presented several research questions that guided my study. Here, I would like to return to them and try to provide possible answers from the theoretical and methodological standpoints that I employed and empirical analysis that I presented.

• In what ways, if at all, do Russian post-Soviet visions of space in policy and popular culture foster a new political imagination in their approach to the possible or desirable social and political futures?

In this dissertation I show how a new political imagination in and through space in the case of Russian post-Soviet policy and culture is impossible in the way it was approached in (Soviet socialist) modernity. The desires for and attempts at the reestablishment of a master narrative of space exploration are easily appropriated by existing structures of power to uphold and prolong the political status quo of the present, allowing a colonial practice of “speaking for” and speaking in the name of the subaltern. A comprehensive and non-controversial political program in relation to space is not necessary to Russian post-Soviet elites, state and corporate capital, maintaining their positions of power through appropriation of a relatively autonomous biopolitical production. Russian post-Soviet official discourse on space exploration largely omits social and political futurism, extrapolating the present status quo to the future in a manner of a dominant foresight approach, characteristic of neoliberal governance. As noted in Papers 1, 2 and 4, for the official discourse, space exploration and space culture serve as ways to legitimize Russian domestic and international policies. Neither is any hegemonic political imagination formed by cultural producers, space experts and advocates, who reject the possibility of Soviet-times censorship and control. A large part of space culture, especially that which is heavily promoted by state institutions such as recent space blockbusters, aligns with the official discourse of glorious past and present as its heritage, rather than formulating any future alternatives.

In this situation, it is initiatives from below that do not proclaim or cannot uphold an explicitly coherent political program that can function as sources for a new political imagination in and through space by focusing on producing new communities, forms of collective belonging and networks of action. In the Russian post-Soviet space culture, problems of possible futures appear locally, and they are the more prominent the further cultural production is located from the centers of power. These observations align well with the postcolonial theory, and postcolonial critique of space expansionism more specifically. The local emergence of space futurisms does
not entail their full autonomy from the structures of power, however, as they are equally prone to the appropriation and inclusion into economic and political capitalization, as cosmism clearly shows. Nevertheless, such appropriation does not exhaust their possible social and political influence. The last point is especially clear in relation to grassroots and amateur projects, in my study exemplified by an amateur project *USSR-2061*, museum exhibitions that diverge from the official discourse, aiming at offering disruptive experiences for their audiences, the artistic and educational project *Institute of the Cosmos*, projects and communities studied by Russian space anthropologists. Importantly, none of these cases should be approached as unproblematic, as they exist within the same context of appropriation and extraction as the rest of the material I have examined. These projects should be approached as fields of ongoing political struggle; however, not around that which already makes sense as political, but around that which *could* make sense as political in the future.

- How do Russian post-Soviet visions of space appropriate Soviet space utopianism in their possible futuristic articulations?

Following the dissolution of the USSR and the end of the Soviet space program, a master narrative that connected the future conquest of space with the realization of communist utopia has dissolved into a manifold of competing narratives based on different commodified memories of the Soviet space program. Simultaneously, the promise of the master narrative has never been given up: the new narratives compete for a new mastery. While official utopianism, claiming a future perfection of society, has been transformed into retrotopianism, claiming the past in which futurism was possible, this transformation should not be approached as orientation towards past, as is frequently assumed. Rather, it performs a radical narrowing of possible futures in line with the foresight approach, based on the constant promise of a master narrative that is never fulfilled. In Russian post-Soviet space culture, a desire for a new, future-oriented master narrative is ambiguously combined with the rejection of Soviet-times official censorship that functioned as a key institution upholding that narrative. From the point of view of the post-Marxist political economy, the retrotopian orientation of the official discourse, and aligned with it major state-sponsored cultural production, masks the processes of appropriation and extraction of new subjectivities and forms of belonging that are produced on a constant basis in the context of biopolitical production. From a point of view of postcolonial theory, the conflation of the appearance of a new master narrative on behalf of the cultural producers with the political influence of their practices marks the withstandling relations of domination and subalternity, specified as mind de/colonization. At the same time, as some of my material shows, cultural production can also be open to political and social futurism without necessarily constraining it to the necessity of political power. In its part related to future visions, this production is better understood not in terms of modernist utopia or postmodernist retrotopia, but in
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terms of utopia as an assemblage, open to production of communities and looking for possible ways of transformation or deterritorialization. Largely, such production operates from below, on the margins of political power, more autonomous from the processes of appropriation and extraction, although in no way immune to them.

- How does social and political futurism in and through space in post-Soviet Russia approach the global context of new space expansionism, with regard to commercialization, militarization and commodification of space?

Russian official discourse on space exploration does not challenge the global trends of space commercialization and commodification; instead it tries to fit Russia, with its over-present state-controlled actors and underdeveloped commercial sector, as a part of it. From a point of view of the official discourse, there is no alternative to these global trends; rather there is a problem of finding an appropriate position for Russia on the global space market. The themes of militarization and historical legacy of Soviet championship in space are especially indicative in this sense. Resisting the militarization of space for decades in its international rhetoric, Russia simultaneously performs military tests in space and keeps a significant part of its space program under military control. Pointing to the grandeur of early Soviet achievements, Russian leadership omits their future-oriented social and political dimensions, which were promoted as the construction of communism. Instead, the official discourse repacks Soviet rhetoric in a way that would promote Russian services as competitive products on a global space market, as incorporated in the reemergent space expansionism but bound to a position of a declining space power. As Paper 1 shows, Russian leaders and space managers on several occasions expressed desires for space to be unpolitical, and on this basis even accused American commercial space enterprise of unfair competition.

Russian space experts and advocates are divided in relation to the global context of space expansionism, which they see as a factor for Russia’s future development in space perhaps more important than Russian activities themselves. Space expansionism will develop “with or without” Russia, and there’s a feared possibility of Russia “falling out” of a New Space Race. A division of experts and advocates, especially those themselves involved in commercial space initiatives, welcome global trends as a way of aiming space exploration at the future. Others, especially those most active through the reformist period of the 1990s, consider them dangerous and contributing to global power inequalities. Alternatives to space expansionism are generally considered in ways similar to the liberal IR critique, but there is also a position that sees changes in approach to space possible as coming from below if the global interest in space exploration develops.

Within space culture, surprisingly as it may seem, imperial SF is explicitly critical of space expansionism. When approached through the postcolonial lens, this criticism presents a practice of domination or of “speaking for” the subaltern. This practice interweaves imperial SF with the official discourse. Nevertheless, it also
opens possible ways of disrupting both the global context of space expansionism and Russia’s involvement in it. When experienced with an aim of constructing futuristic social and political alternatives, the connections imperial SF makes to postcolonial critique clearly show its inner contradictions and ways of transformation that could counter colonial imagination akin to mind de/colonization. Major state-sponsored cultural productions, such as space blockbusters or the exhibitions of two key space museums in Moscow, align with the official discourse in their approach to global space expansionism, trying to stitch the legacy of the Soviet space program to post-Soviet Russia’s attempts at being a part of a global space market. Less known, more distanced from central power, amateur and grassroot projects rarely counter global space expansionism explicitly. However, their more open concern with social and political futures can be seen as a challenge for the dominant foresight approach in line with the concept of biopolitical production.

These answers and perspectives allow the paving of several paths for further research, related to the necessary choices – and omissions – I have made throughout my study. As assemblage theory entered my research at a later stage, but has shown a broad range of applicability, a more in-depth study could approach space practitioners and cultural producers, through their experiences encountering state policy and state-promoted utilization of space culture. In line with assemblage theory, such a study could address the following question: how does it happen that space, loaded with so many dreams and aspirations for the future, in post-Soviet Russia only seems to invoke nostalgia for the glorious past? It could also investigate space-related practices and lived experience after the major changes in Russian domestic and international policies, marked by intensified repression and competition following the invasion of Ukraine. Attention to the materiality of space-related practices could foster further research on assemblage terms, complementing my account that is thoroughly focused on discursive production. Such attention, however, would probably focus only on amateur and cultural practices, as research in space institutions in connection to the space corporation demands separate technological expertise, and is often subject to secrecy. Grounded in Deleuze & Guattari’s analysis of desire, assemblage theory also allows a different perspective on nostalgia, the concept used only to a limited extent in this dissertation. Nostalgia, following the Lacanian perspective on desire, is understood either as a hindrance or as insufficient grounds for political futurism. Elsewhere I have briefly suggested that in terms of Deleuze & Guattari, such understanding might be too narrow, and that the severely limited deployment and appropriation of space nostalgia by the Russian regime might suggest that it holds a disruptive potential for the current constellations of power (Privalov 2022b). Finally, cultural practices of space in Russia should be further researched in their embedment in international contexts such as postcolonial critique of space expansionism. As some studies indicate the international development of cosmism (Bernstein 2014;
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2019; Goertzel 2010), investigation of its effects on space visions in Russia could offer significant insights into ways of imagining a different future, socially and politically, with space.
Sammanfattning (Summary in Swedish)

Sedan början av 2000-talet har nya expansiva rymdprojekt utvecklats, inklusive kommersiella, militära och vetenskapliga projekt för att kolonisera månen och Mars. Den nya rymdexpansionismen följer en period av jämförelsevis lägre uppmärksamhet kring rymden i internationell politik. Ibland kallas denna nya rymdexpansionism för den nya rymdkapplöpningen, i analogy med förra seklets rymdkapplöpning mellan Sovjetunionen och USA. Rymdverksamhet blev således politiserad, vilket bidrog till futuristiska och utopiska sociala och politiska visioner. De nya rymdpjekten uppfattas dock snarare som eskapism i en osäker tid som präglas av geopolitiska mobiliseringar, ekologiska katastrofer, växande globala ojämlikheter och det som kom att beskrivas som ”migrationskriser”.

Avhandlingen utgår ifrån kritik av etablerade sätt att förstå politik och undersöker möjligheter att föreställa sig alternativa sociala och politiska framtider i och igenom rymden med fokus på det postsovjetiska Ryssland. De samtida officiella ryska rymdpjekten och rymdvisionerna har tillskansat sig de utopiska berättelserna från det Sovjetiska rymdprogrammet och den Sovjetiska rymdkulturen utan att visa intresse för alternativa politiska framtider och visioner. Det postsovjetiska Ryssland utgör således ett lämpligt fall för att undersöka de nutida ”framtidslösa” rymdvisioner som utgör mycket utav världens rymdpolitik idag.


Nyckelord: rymden, Ryssland, utopi, postkolonialism, assemblage.


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Since the early 2000s new initiatives for space exploration have emerged. They include the commercial, military, and scientific projects to colonize the Moon and Mars. With this, space politics has powerfully reentered the international agenda. During the Cold War, the Space Race between the Soviet Union and the United States contributed to the politicization of space, fostering futuristic and utopian, social and political visions. The New Space Race by contrast is rather perceived as escapism in an uncertain time characterized by geopolitical mobilizations, ecological disasters, growing global inequalities and the so-called “migration crises”.

This thesis puts forward a critique of established approaches to understanding politics. It examines possibilities to imagine alternative social and political futures in and through space with a focus on post-Soviet Russia. Contemporary official Russian space projects and space culture appropriate Soviet space utopianism, yet they show little interest in alternative political futures and visions. Post-Soviet Russia thus constitutes a suitable case for examining the contemporary “futureless” space visions that make up much of the world’s space politics today. Harnessing postcolonial and post-Marxist critique, and concentrating on the novelties that assemblage theory brings into political analysis, this thesis highlights space-related practices carried out at a relative distance from the official Russian state space discourse, including the practices of cultural producers, space amateurs, and experts. While not regarding such practices as completely autonomous, and emphasizing their selective use for the legitimization of the Russian regime in general and the Russian space program in particular, the thesis suggests that applications of assemblage theory can enable a broadened understanding of politics and a more nuanced understanding of the content and meaning of space visions within which concrete futuristic practices can emerge politically.

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