Chapter Title: The Global Land Rush and the Arctic

This chapter discusses the recent Arctic land rush from the viewpoint of the larger literature on the global land rush and land grabbing, little of which has focused on the Arctic. This global view on the Arctic offers theoretical-methodological insights from a burgeoning literature on notable land control changes in different parts of the world (but not the Arctic) and can offer valuable knowledge on two key global/Arctic dimensions.

First, looking at the Arctic from the viewpoint of scholarship on global land grabs can contribute to our understanding of world politics and the political economy of natural resources, since the land-grabbing research has not yet focused on the Arctic. Bringing together scholarship focused either on the Arctic/global North countries or the Tropics/global South countries has tremendous potential for a fuller understanding of their similarities and differences in front of a globally felt new focus on investing in resource extraction.

Second, studying the Arctic does not mean simply adding one more case study region to complete the global picture in the sense of no longer having any unobserved cases, logical remainders, in a quantitative database. Instead, the Arctic case, and similar other cases undergoing major and rapid climatic changes from icy to less icy environments, are special because of their natural conditions and their change trajectories, and can be therefore used to specify how a global process – the land rush – operates in a different context and dynamics. Are there differences and, if so, are there more or fewer differences than we could hypothesize? Accordingly, the Arctic case is a qualitative one that may be used to offer insights into a number of theories about socio-environmental and political economic change processes; for example, to see the extent to which they can or cannot be generalized. This is of interest to scholars of global issues, as well as to specialists focusing on the Arctic or, for example, on the Tropics, offering them understanding of their regions’ specificities.

In the present chapter, I focus on carving out some potentially fruitful avenues for investigation, offering a panorama of different research focuses, questions, and hypotheses, that researchers should pay attention to in future empirically grounded research. The research for this article included a review of the research on the global land rush, to see how the Arctic has been treated or not treated therein, and a review of the literature on the Arctic resource rush of the past years, with a focus on land areas rather than maritime areas. Particular attention was paid to the literature on Arctic mining and forestry. Some empirical cases that are illustrative of the phenomenon are also mentioned in order to direct future research attention towards them. Empirical research for this contribution included field research and participant observation on mining governance and expansion in Finland and Canada during recent years.
**The global land rush**

The world has seen a massive increase in land investment since 2007 (Borras et al. 2012), and considerable literature has been produced on the topic of land grabs to study the impacts of these land control changes in tropical countries (Edelman et al. 2013). The terms “land rush” and “land grabbing” refer here to “the large-scale acquisition of land or land-related rights and resources by a corporate, non-profit or public buyer for the purposes of resource extraction geared towards external consumers (whether external means simply off-site or foreign)” (White et al. 2012). To date, however, the literature has neglected the Arctic land rush, where the focus is on opening up new extractive operations. Furthermore, the reasons for the global land rush have been studied less than its impacts, which have been found to be typically negative.

The number of projects in the pipeline that aim to exploit Arctic resources indicates that the rush is gathering impetus. A huge iron ore mine was opened in August 2015 at the Mary River in Canada’s Baffin Island; powerful forces in Greenland are seeking to open up uranium and other rare-earth elements mines; and the Nordic countries are also witnessing a boom (Kröger 2015). Russia has placed Arctic resource extraction as its number-one developmental project, and US corporations are considering the possibility of opening up wilderness areas in Alaska for resource extraction. Many new mines have already been opened and new timber extraction concessions have resulted in increased wood harvesting: these changes in Arctic land use and control do not just present a discursively constructed land rush – they are actually occurring.

With this in mind, it is striking that none of the 98 papers in the seven special issues published in leading journals since 2011 regarding the global land grab deal with the Arctic (for a summary, see Edelman et al. 2013). The same is true for books on the global land rush. A rare exception is Hall’s (2013) *Land*, which includes notes on the Canadian Arctic. The existing, separate studies by Arctic specialists focus on climate change and geopolitics (Heininen and Southcott 2010), and consequently do not pay sufficiently rigorous attention to the new resource rushes penetrating the Arctic. More research is needed to fill this gap, and there is a particular need to produce a systematic study of the dynamics of the actually occurring land rush in the Arctic. To delimit such a broad research, focus could be given, for example, to the land areas above the Arctic Circle.

Approaching the issue from the perspective of the global political economy of the recent land rush and extractivism makes it possible to pay particular attention to theorizing the reasons for, and causes of, new resource rushes. The rise of commodity prices is often quoted as the principal driving reason behind land grabbing, but it alone cannot explain land investment booms. Therefore, enabling causes such as institutional contexts must also be studied.

Rather than a broad study of all economic sectors, a focus on new mining or forestry in some parts of the Arctic (such as Finland) would also allow deeper investigation of industry-specific factors than prior studies by restricting analysis to the sectoral specificities of mining and forestry. This is because a general study of all sectors involved in land grabbing in a single area cannot go beyond a limited view of new land and resource-controlling companies and states – the focus of prior study of the subject. The role of technology firms and other supporting industry-system actors that benefit from new resource-extracting investments has not been considered, while the new land-controlling companies and states have been framed as the major actors. I do not believe that this is the case, as capitalism goes much deeper than the soil, or even the subterranean level, cutting across varying geographical scales from the point of production to the world system, and is also based on political economic changes in social and symbolic spaces, not only the physical. Utilizing the global land rush-framework makes it possible to examine these scales and spaces and track down the causes of the Arctic land rush through a theoretically encompassing methodology, thereby bridging a large number of
remaining gaps in the land-grabbing literature and also in broader theorization on the role of new resource frontiers in political economy.

The study of the reasons for land control changes offers particular methodologies and data choices, which could also be used in the Arctic. The causalities of post-2005 investment cases could be tracked and their parallels and specificities combined via in-depth interviews with key power holders. This line of inquiry begins by probing the path of the causal conditions that led to the investments, and continues downstream to the investment project areas (conducting field research at selected points of, for example, new timber and mineral extraction), thereby illustrating both the meaning of land control in the current global historical conjuncture and the changed political dynamics with regard to the new deals. Combining these studies through systematic comparative analysis would lead us closer to a minimal formula that explains the causal configurations under which the Arctic resource rushes have occurred, and also to examining whether there are multiple causal pathways. Once such an Arctic analysis and database on causalities have been created, it would then be possible to compare the findings with the bulk of theorizing elsewhere.

**Examples of the already-happened Arctic land rush, and speculation about the future**

There has been a notable increase in resource extraction since 2005 in the Arctic. Accordingly, while there is no need to speculate whether the Arctic land rush will take place or not, it has not occurred everywhere in the region, and not always in the same manner. There has been an increase in the volume of extracted natural resources and in the extent of land and landscapes being converted, existing nature and physical space being transformed into extractive operations, as well as a notable qualitative change in the style of extraction.

Considering the change in the pace of extraction, “the volume of metallic ore and waste rock mining in Finland increased from fewer than 5 million tons to 46 million tons, mostly through the inauguration of four large mines in the east and north of the country” (Kröger 2015: 543).

Causes of the qualitative change include mining becoming less focused on underground mining, and more on massive open-pit mines meant to excavate the lower-grade ores from a much larger land area. This qualitative change can be considered even more dramatic than the quantitative one, particularly for its larger use of land and wasteful transformation of landscapes and nature. In Finland, there was a 26-fold increase in waste-rock mining: “Illustrating the peak of the mining boom when new mines, particularly open-pit mines, were being opened, waste-rock mining in metal mines reached over 26 Mt in 2010, rising from only 1 Mt in 2005” (Kröger 2015: 547). Examples of new large mines that were opened in Lapland include the Canadian Agnico Eagle’s hugely profitable gold mine in Kittilä, which has expanded rapidly; and FQM Kevitsa Mining’s rich mixed-metal mine in Sodankylä, both of which have massive tailing ponds with at least some reported environmental problems (Kröger 2015). There has also been a massive increase in mining exploration, with one-third of Finnish Lapland being reserved for mining in one or another way. Resistance to the prospectors’ increased nature-changing activity has been common and visible in overhauls such as drilling in nature reserve areas for uranium deposits by the Mawson company in Rompas, which has already destroyed important nature according to environmental officials; AngloAmerican’s major Sakatti mining project on top of a Natura environmental resource; and many other projects in their exploration or other pre-mining phase (but already with veritable changes in physical space, and land control – both crucial aspects in land grabbing).

Besides these greenfield projects, the Arctic has also witnessed a major expansion thrust in existing extractive operations, with a prime example being the Swedish state’s Kiiruna iron ore mine expansion requiring the removal of the old city center. Both the greenfield and brownfield expansion need to be studied, and possible differences in their political and political economic dynamics highlighted. I would hypothesize that there is a major difference between the two, also considering the socio-environmental impacts, old and underground
mining sites being potentially so distant in their dynamics from the new open-pit greenfield sites that their study as one “mining politics” would distort the reality more than bring light to it. Thus, I suggest starting the exploration of any land rush study by looking at the investment style, and differentiating the compared projects to different segments, and then studying quantitative factors (extraction volumes) along these comparable lines.

Besides mining, there has already been a veritable increase in deforestation of taiga forests of different types in the Arctic. For example, there was a downturn in deforestation in Finnish Lapland in the late 2000s due to the peace agreement between Greenpeace and other resistance actors such as the reindeer herders and the forestry companies, which ended the long-lasting “forest wars”. However, deforestation has increased again in the present decade, and massive new production facilities are being built in Kemijärvi (both for pulp and lumber) and close to the Arctic circle, and the continued high felling prices and high global pulp prices have led to expanded harvests that are no longer sustainable (Kröger 2016; Kröger and Raitio 2016). The case of pulp and forestry tells of a larger and important dynamic related to global commodity prices that needs to be assessed as a potential driving explainer of the Arctic land rush.

There was a global commodity super-cycle between 2007 and 2014, with the bulk of price increase in commodity indices coming from the high-volume and high-value oil price peak; falling oil prices led to a seeming end of this super-cycle by around 2014. The super-cycle gave massive windfall gains to many resource-exporting companies, and led several governments in the global South to increase export tariffs on commodities, which led to “resource nationalism” becoming the major fear for global mining bosses when moving from 2008 to 2012 (Kröger 2015). Some investment analysts even talked of a possible change in the global economic paradigm, where higher value-adding manufactured goods have increased their value over raw materials’ valuation over the past century, towards a new “commodity paradigm”, where this would again return closer to situation at the turn of 20th century, where resource extraction gave notable global advantages and inflows of capital and was a real strategy of wealth creation (the agricultural export giants of the time, Argentina and Uruguay, being the world’s fourth and fifth wealthiest economies at that time). Commodity prices have generally come down and the commodity paradigm-change hypothesis seems to be an exaggeration, caused by the one-time buying of massive resources to build the budding multipolar world order of China and other rising powers, which required large amounts of base metals and resources for building infrastructure and military. Despite this, the prices of many commodities have not dropped and have in fact continued to rise. Nature and natural resources are limited and consumption is increasing rapidly. For example, pulp prices have not come down and energy wood prices have increased, which means for the Arctic that the demand for particularly pine-wood plantations will increase, leading to deforestation and conversion of forests into pine-fiber tree plantations. Making cardboard for e-commerce packaging and other high-demand paper products requires both the global South’s eucalyptus or acacia-based fiber, as well as the pine-based fiber, to make the right mix. The Nordic pine-pulp has some of the best global qualities in this production value web. Thus, the land grabbing taking place to increase the size of eucalyptus plantations in the global South has also led to a sizeable impact in the global North and the Arctic, where there is now a market possibility, and a need, to increase the production of pine-pulp.

Due to these tendencies, I would expect a marked and rapid expansion of deforestation and tree plantations, for example in the Finnish Arctic, but also in other countries where there are governments and companies seeking to onboard the ongoing commodity super-cycle and unification of global value webs in the forestry sector’s bioeconomy. In the mining sector, I expect a major rise to continue in the extraction volume of rare earth minerals, gold, oil, and gas in some places, as well as in many other minerals and metals, but not in all. For example, although iron ore has seen a major extraction volume increase via the Kiiruna mine expansion,
and possibly via the Mary River mine expansion in the Baffin Island, it is likely not to continue at the same pace. This is because the massive iron ore boom between 2008–2014 led to wave of huge investments in new extraction capacities, which are taking effect now, new operations starting and pushing the price downwards, cutting out smaller and less profitable mines with higher costs (such as those in the Arctic). There is no reason why nickel production would not remain high and even increase, given the rising military spending in the rising economies and even among Arctic countries: other strategic minerals such as uranium are also likely to see price increases due to the wave of building new nuclear plants and nuclear weapons.

However, these are just speculative prognoses based on the current tendencies, and might change quite quickly through world and local politics, such as decisions in international negotiations and successful resistance by local populations, as well as new regulatory frameworks curbing extractivism at national and regional levels by states. The study of these enabling conditions is essential for understanding how the drivers of high prices and demand are affecting the land rush and making or not making it a reality.

Besides the forestry and mining sectors’ increased land use, there has also been the reservation of land for new tourism, increased reindeer herding, military, and strategic or diplomatic international relations, which have already occurred. An example is the rise in Chinese and global South’s interests in joining the circle of decision-making and land control in the Arctic; one such case is Chinese actors buying land in the Arctic for unclear purposes, and being the major capital investors in the new Finnish forestry investments particularly in the Arctic. These land use changes have already led to either a delimitation of land use possibilities and land control by some local populations that traditionally enjoy usufruct or other communal use rights over the targeted lands, or have led through a successful resistance process to a heightened sense of the already high consideration for indigenous and other local land control need among the locals. If and when the Arctic land rush continues, I expect there will be many clashes between local communities, environmental groups, and states and companies in their diverging views on how to use resources and land.

In the (unlikely) scenario of a dramatic downfall in global demand for resources, I would still expect some notable and even major land rushes to take place in the Arctic, both because its rapidly changing climatic conditions making some valuable deposits accessible in a manner that has never been possible, and because there are so few people and far fewer resource nationalists there than in the other parts of the globe. In this sense, what happens in the Arctic is, from a global perspective, defined even more by what has already happened in terms of resource governance in the global South and elsewhere than by what happens in some “isolated” Arctic politics. Commodity frontiers are becoming or are already closed in much of the global South, such as the Amazon, where massive destruction of biodiversity and nature and human rights abuses – virtual ethnocides – are now occurring in order to expand the commodity frontiers (to existing indigenous reserves, for example, as is occurring right now in Ecuador and Brazil; see Kröger and Lalande 2016), which means that while the Arctic may be more expensive, it might be considered by some global capitalists as a more ethical or accessible resource extraction point.

The wider scientific importance of the Arctic Case

While Arctic scholars agree that most of the drivers behind the Arctic resource rush come from outside the region (Smith 2011; Arbo et al. 2013), they have not linked this claim to the increasingly sophisticated methodologies of land grab researchers (see, e.g., Scoones et al. 2013) explicitly studying this new global land rush (e.g., Edelman et al. 2013). In recent years, the translocal flow of land control has cut far more deeply than existing theorizing on past commodity price booms would suggest (Klare 2012). Comprising a new phenomenon, the contemporary global land rush has placed resource geopolitics in the limelight of world
politics (Borras et al. 2012). Land is no longer an arcane subject with minimal relevance to theories of economic growth, governance, or political economy (Hall 2013), which means that land rushes are a timely and important research topic for the social sciences, the humanities, and environmental studies. Furthermore, all the Arctic states are powerful members of the global North, which adds a vital and fascinating element to the bulk of theorizing: how is it that land grabs can also occur in these countries and not just in the global South? There is land grabbing in all the Arctic countries, but not in all their territories and not in exactly the same way.

The present contribution draws on my own land-rush field research in Finland (Kröger 2015) and Canada for future research. It would be important to analyze the Arctic countries separately as parts of the Arctic region because they have similar characteristics in terms of climate, resources, and supra-national governance through the Arctic Council. However, there is also a need to compare different levels of democracy, welfare, civil society development, land tenure, class hierarchy, and transparency, among other political economic conditions – and differing biophysical and political ecological relations – on the assumption that the way these factors influence the land rush in the North is likely to differ from the role they play in the global South.

The main impetus for and argument in studying the Arctic as a case of global land grabbing is that the presumed global North/global South difference in terms of institutional contexts (such as democracy, welfare, and transparency), where the North is seen as more “developed”, misses a key element in recent political and economic changes that can be made visible through an empirical investigation of the Arctic land rush. The alleged superiority of Northern political systems over their Southern counterparts has become highly problematic given that land grabs can occur even in supposedly democratic and transparent countries such as Finland and Sweden, or in Canadian First Nations’ land tenure arrangements, which are considered comparatively advanced in terms of indigenous land rights. The appearance of the new resource frontier is a symptom of changed world-political and intra-national power relations and the rise of new powers. For example, the Russian government recently rented 1 million ha of forest to China (although this happened somewhat South of the region typically considered to part of the Arctic); in Finland, publicly owned mineral deposits worth billions of Euros have been given practically free to multinational companies or private entrepreneurs for export. There are currently several major forestry investment projects in Finland, focusing on Lapland and Northern Finland, funded by Chinese capital and aiming to dramatically increase the use of trees growing (presumably faster and faster) in the Arctic to produce fuels, energy, fibers, feed, and other wood products from them (for example, the Kaidi project in Kemi and the biorefinery project in Kemijärvi; see Kröger and Raitio 2016). The empirical study of the causal paths leading to the new Arctic resource frontier is a tool with which to analyze how and why the world political and national power structures and political games have changed, as well as the currently unfolding political economy whose reality has not yet been grasped by decision-makers, the public, or even social scientists.

Therefore, changes in land use and land control in particular – which are no longer arcane subjects but centerpieces of politics and power relations – can reveal larger, unperceived globalizing changes that have made the world a flatter place in terms of institutional frameworks that could regulate capitalism’s negative socio-environmental impacts. I suggest several hypotheses through which to explore this overarching argument.

**Key research questions and hypotheses about the Arctic land rush**

The existing land-grabbing literature has missed some political causalities due to an overly strict focus on land and resources. Little attention has been given to the roles played by companies and countries that provide machinery, technology, logistics, and diplomatic
support for actors visibly engaged in the land rush. The result of this neglect has been that these players – central in the sense that, without their technologies, large-scale mines or wood-energy tree plantations, for example, would be much harder to establish – often fall outside the parameters of discussion. Therefore, there is a strong need to investigate the role of supporting companies, an analysis that complements the current, horizontally-focused literature, in order to produce not only a geographically more encompassing, but also a deeper, examination of the global land grab in vertical terms. Different industries have varying chains of operation, corporate agencies, and relations to contingency – for example, the availability of choices and the scale of independence from natural endowments inherent to the requirements of mineral-specific and general forestry-resource using companies – resulting in different industry systems.

How are the frontiers of resource extraction expanded? This key question can be divided into three key research tasks: investigating why, how, and when land rushes occur across different contexts, scales, and industries. The Arctic focus provides a particularly fruitful approach to answering these questions, one greater than the simple addition of another geographical case to the study of global land rushes. This is because the Arctic constitutes an example that diverges in critical dimensions from the cases on which the bulk of existing theories are based, thereby offering a theoretically insightful field of research. The radically different landscape, extremities, and cold of the Arctic can breathe new air into the theories of resource frontiers, and the role of land use and control in political economy, political dynamics, and social power relations.

An initial factor to be considered is that profitable extraction of resources in Arctic climatic conditions is no easy feat. The failure of pioneering projects can quickly change sentiments about the receptivity of the Arctic, and thus have a remarkable causal effect on investment in potential future projects. Secondly, the Northern governments and their populations, which are seen as receptive to new large-scale investments, might ultimately be a much more contentious force than investors anticipate when predictable problems and conflicts inherent to land control changes start to surface. While the tropics have previously been subject to large-scale projects of the current magnitude, the Arctic has not: for example, huge open-pit mines and so billion-euro, wood-based bio-refineries are novelties. People are just starting to grasp what these enterprises entail, and it is beginning to affect prior, enthusiastic attitudes towards such investment.

As a consequence of the initial boom years (2005–2013), the politics of the new projects are currently unfolding as a much more conflictive and complex mesh than was expected. In Contentious agency and natural resource politics (Kröger 2013), I demonstrated how social-movement strategies can influence investment outcomes, even in unlikely contextual settings where there is strong corporate and government support for land investment. The toolbox of contentious politics research would be useful for grasping the dynamics of controversy in the Arctic. Furthermore, by using previous expertise on the South as a backdrop, scholars could bring fresh viewpoints to Arctic politics.

In terms of current Arctic expertise, the innovative aspect of looking at the Arctic based on what has been learned by the global land rush is to highlight the importance in studying similarities and dissonance between Arctic countries, and sector-specific land rush phenomena, from the perspective that the Arctic is possibly not as discrete as has been portrayed (e.g., Heininen and Southcott 2010). A novel approach is to link the forces of land use transformation in the area to global tendencies rather than considering them as unique (there is a lot of Arctic exceptionalism ongoing in the current literature, as well as Arctic hype). Therefore, one thread that is important to maintain is the parallel between Arctic and global dynamics and if, where, and why they diverge.

A new resource frontier can be studied in many ways. If I were to focus on its impacts, I would start by scoping local divergences through in-depth case studies; but when attention is
directed towards tracking down causes and their dynamics, it makes more sense to start from examination of similarities across broad case units, and then proceed to specificities.

Next, I suggest several hypotheses that should be assessed in doctoral and master’s theses, and broader collaborative research projects. The hypotheses include the major geographical scales from the point of production to the world system, considering both world-political and local drivers. This is a rarely seen research design, and a research area that needs methodological innovation.

Hypotheses 1 and 2 below are drawn from the substantial literature on land rush in the global South; there is a need to test whether these causes also apply to the Arctic situation:

1. Land and resources have been perceived as a good investment alternative since the 2008 global financial crisis and rise in land prices. However, the rise in land investment is linked with, and dependent upon:
   1a) A long history of land grabbing in the investment area;
   1b) Legal contexts giving the extractive operation stronger land use rights than competing land claims;
   1c) The support of labor;
   1d) Government policies driving and/or impeding the development of capitalism; that is, the gradual separation of workers from their means of production, especially land (Hypotheses 1a–1d are drawn from Edelman et al. 2013);
   1e) A free international investment regime whereby the mutual interest between recipient governments and investors is not constrained by third parties’ key interests or by international investment banks; and
   1f) A clear majority of locals who do not oppose increased resource exploitation.

2. Resource frontiers, in that they comprise physical space changes, can be expanded more quickly by making correlating changes in power relations in social and symbolic spaces, such as in class relations and by legitimating discourses (Kröger 2013; 2015). More specifically:
   2a) Extractive operations must be preceded by changes in power relations in physical, social or symbolic spaces;
   2b) The boom has been based in all settings on a simultaneous social space hierarchization and symbolic capital enjoyed by capitalists; and
   2c) The trust and honor that the (new) capitalists enjoy as wealth- and job-creators in the pre-boom symbolic space cements the transformation of physical space.

The study of the roles of ideology and symbolic power exemplified in this hypothesis, building on Bourdieu’s (1991; 1998) conceptualization, has been absent in prior studies on resource frontiers, particularly on the Arctic. Hypothesis 2 would make it possible to complement spatial analysis with a deeper theorization and, thus, fuller analysis of the role and changes in symbolic power. Hypothesis 3 is suggested by my research on global (including Arctic) tree-use increase (with new, multiple and flexible deployment; for example, for biodiesel) (Kröger 2014; 2016), and mining booms and governance in the Nordic countries (Kröger 2015). The validity of Hypothesis 3 with regard to the rest of the Arctic needs to be assessed.

3. The Arctic countries are not only witnessing a material/territorial expansion of capitalism in the form of land rushes, but are also embarking on national industry development based on increased extraction-technology sales. In decision-making, the existence of this industrial-production-promoting dynamic trumps the weight of 1f (grievances concerning the land rush), even if the conditions identified in hypotheses 1a–1d are also present in the causal configuration. (Tracking down technology chains to investigate possible motives by domestic machinery and consulting companies to push extraction is a helpful methodology for pursuing this hypothesis.)
Based on a review of the existing literature explaining the historical drivers of Arctic resource rushes, I have also formulated the below claims and hypotheses that require further testing. I suggest the following hypotheses for the study of the global/Arctic land rush, with the goal of testing the extent to which they apply across the Arctic:

4. Costs of extraction in Arctic resource frontier regions have been found to be especially high and therefore particularly sensitive to price fluctuations (Haley et al. 2011). Thus, (4a) long-term price expectation has been the key driver in all cases. Alternatively, as evidence from the Finnish mining boom suggests (Kröger 2015), other reasons, such as (4b) (expected) changes in legislation, (4c) job creation discourses, (4d) sudden increase in access to geological information, and (4e) the nature of the exploration system, are more important and precise explainers of booms than commodity prices.

5. An increased number of shipping lanes in the Arctic areas have encouraged investments.

6. The greatest challenges to expansion are still the local social conditions, such as the absence of a skillful/willing local labor force and regional social backing (these not enabling investments), rather than Arctic climate or geopolitics (Avango et al. 2014 argued that this has been the case historically).

7. The breaking of existing Arctic “historic natures” – for example, the human ecologies of indigenous peoples that rely on hunting or herding – creates a new labor force and support for large-scale projects. The new “lived environments” of post-2005 Arctic mining and forestry expand comparatively faster in places that lack socially, symbolically, and physically rooted traditional human ecologies. (See Taylor 2015 for the helpful concept of “lived environments”, which he originally coined as an alternative of political ecology to the problematic adaptation/resilience concepts, which assume a Cartesian nature/society dualism).

8. The absence of existing infrastructure or its high cost are no longer a bottleneck, as there is (8a) global surplus financial capital, and (8b) very strong industry lobbying that has secured subsidies.

9. The investment-area’s (9a) political autonomy, (9b) fiscal capacity, (9c) institutional independence, and (9d) state’s industrial policy (for example, the state performing the role of custodian, demiurge, midwife, and/or husbandry for industrial transformation; see Evans 1995) have a weighty causal impact.

10. Political instruments for managing conflicts are considered by the industry to be more developed in the Arctic than in the global South. Such instruments encourage investment (Haley et al. 2011).

11. The evolving situation of multiple global crises, such as resource scarcity and climate change, have a strong causal relation, but are invoked in a radically different way depending on the stakeholder.

These hypotheses could be studied separately, but most benefit would be gained when they are studied in conjunction, as possibly forming causal condition configurations that illuminate specific situations, combinations of drivers and enablers in which land rushes occur. For example, the function of enabler 1e (free international investment regime) may be rendered ineffective if 1d (capitalism-supporting government policies) becomes inactive (as happened, for example, in Greenland in the 2013 elections, when a government critical of China was elected).

The research agenda I have sketched and recommended here, through elaborate research questions and specific hypotheses that could be tested and thus further specified, would offer us a broad and deep understanding of how and why a global land rush is (or is not) taking place in the Arctic.
The Importance of Studying the Global/Arctic land rush

Studying the global/arctic land rush (and its potentiality) is both vital and timely for a number of reasons. Firstly, considering that the area north of the Arctic Circle comprises 15 percent of the earth’s land, and is currently undergoing a resource boom (Borgerson 2013) the absence of rigorous and systematic study of the phenomenon is a striking gap in the literature on global land rushes. Secondly, there is increasing concern for the future of the Arctic among Arctic specialists, visible in the number of publications on the subject (see Arbo et al. 2013; Bruun and Medby 2014), although most of these largely lack the critical attention, methodological rigour, and global theorizing that the research questions and hypotheses identified above would make it possible to employ. Historical studies of the Arctic’s long trajectory of land grabs and colonization (e.g., Sale and Potapov 2010; Stuhl 2013) and resource extraction (e.g., Massa 1999) are useful for contextualizing current events, but cannot explain their dynamics. There is much to be learned for those studying the Arctic in the work of land-rush scholars in agrarian political economy and critical agrarian studies. Peluso and Lund (2011) argued that the global land rush (the large-scale acquisition of land or land-related rights and resources leading to notable landscape changes) comes in many forms and consists of a range of differing drivers and enablers that facilitate shifts in de jure and de facto land control. Most of the study of extractivism has focused on Latin America, where it has been identified that de jure and de facto ethno-territorial rights have undergone major changes during the past decade (often, but not only or everywhere for the worse), and that these two do not often overlap (local populations often have either de facto or de jure land rights, and the role of governments play out differently based on what the constitutional rights are) (Kröger and Lalander 2016). Those taking a broader perspective have argued that, taken together, contemporary land-rush moves constitute a new enclosure of commons (Borras et al. 2012), while Klare (2012: 15–16), in a rare study of both the Arctic and the tropics, argued that the global land rush is “the race for what’s left”. In Klare’s view, the “invasion of the last frontiers” represents a drive without true precedents as “virtually all accessible resource zones are now in production”, there being nowhere else to go except for extreme areas such as the Arctic. In their review of the literature on Arctic futures, Arbo et al. (2013) argued that trans-arctic shipping routes and offshore oil and gas exploration have already received substantial scholarly attention; therefore, there is a need to study industries that have not been at the core of existing theorizing, such as mining and forestry. This would accord with current scholarly thinking that calls for expansion of the parameters of empirical and theoretical inquiry into land rushes (Borras et al. 2012).

When conducting research on this topic, it is also important to confront the literature critique that many publicized global land-rush deals have not materialized, although assumptions have been made on the basis that they have (Edelman et al. 2013); thus, in order to provide a valid study of causalities, those investments that have been realized, rather than merely projected, should be examined. This is particularly the case when considering how widespread the “Arctic hype” has been, and knowing how, in extractive investment projects, the announcement of resource reserves in itself generally constitutes a source of wealth. For example, Talvivaara mining company’s Pekka Perä managed to obtain over 2 billion euros by pronouncements of ore deposits in Finland for global investors, which proved to be exaggerations; mining experts such as Mauno Vilminko have told me that the Talvivaara mine will never be profitable since there is no ore (due to low-grade minerals). As both the Arctic and the mining sector thrive on spectacular rumours of wealth – similar to the myths of Eldorado that drove the Spanish conquistadors in their loot of the Americas, of which those after the Aztec and Inca exploits proved to be catastrophic “investments” as no such blunders were to be found – research should use actual profit as a baseline to separate cases of real and imagined land rushes. When profit/loss is used as a baseline, it is possible to compare the extent to which the new Arctic extractive projects have been profitable or not. For example, I
found that less than one-third of the Finnish mineral mines were profitable; most made massive losses and were unable to produce cheap resources (due to the Arctic conditions of hard operating environments and not-so-rich deposits) (Kröger 2015). The profitable and unprofitable new investments should also be studied and compared separately to see whether their causal dynamics differ (the drivers and enablers making them possible in the first place, and their subsequent life and possible expansion), and also to determine how their political economic and ecological impacts differ. Besides the profitable/unprofitable making ventures, we should also study, as a separate category, the anticipated and imagined but as-of-yet not realized projects, for their investment dynamics. What politics do they entail? This category of anticipated project, which has not (yet) been realized, can be accompanied by studies on how and why were those projects discontinued (for the time being). This makes it possible to answer the many open questions on land grabs that did not occur. Usable cases could involve, for example, studying Yara’s Sokli phosphate-uranium-niobium mining project in Finland’s Sokli (which was discontinued), comparing this to a similar project in Canada, and many more. The Arctic provides ample opportunities to study how the global dynamics of creating expectations and capturing investors’ attention based on rumours is a source of wealth creation in today’s world.

**Concluding remarks**

Currently, what we know about global land rush causalities is based on empirical evidence from limited geographical and sectoral studies: large-scale plantations in sub-Saharan Africa ensuring food security in East Asian and Middle-Eastern states; animal feed production to service increased consumption of meat (Gotula 2012); the expansion mechanisms of tropical mining capitalism (e.g., Kirsch 2014) and its conflicts (e.g., Bebington and Bury 2013); and conflicts connected to tropical industrial forestry expansion (Kröger 2013a; 2013b; 2014a). New research into land grabbing in some parts of Europe has commenced (but not in the Arctic countries) (Franco and Borras 2013), and there is excellent new research on land grabbing in Ukraine and Russia (Visser et al. 2012). However, there is an absence of interdisciplinary studies on the drivers of new exploitation projects in the Arctic (however, see Haley et al. 2011 for an analysis of pre-2010 mining drivers from the perspective of economics), and no experienced Arctic-focused scholars among the land-grab research networks. These lacunae should be filled.

I would suggest that mining and forestry are key sectors to be studied (of course, oil and gas is also of crucial importance). Mining is a resource interest that capital has found geographically extant and politically enabled by Arctic governments. Massive reserves of minerals in the Arctic are expected (Borgerson 2013) and exploration investment in the region has peaked in recent years. Historically, this has been a predecessor to extraction booms – that is, to the establishment of resource capitalism (Moore 2014) – and studies should examine whether this also applies to the Arctic, mapping the new projects and the paths leading to them.

Meanwhile, Arctic forests have not only gained profile in the bio- and green economy strategies of companies and governments (Kröger 2014b; 2013a; Kröger and Raitio 2016), but are also facing increased harvesting pressure to serve wood demands (for example, that of China on the Siberian Taiga), to make space for mineral, oil, or gas extraction projects (for example, in Alaska, Yukon, and Lapland). Environmentalists have started to talk about the current deforestation in the Taiga as being as brutal as the devastation of the Amazon rainforest, and Greenpeace has been mobilizing forces to push for a new boycott of Finnish wood products, for example. These are understudied trends, along with the recent Russian–Chinese timber flow, the retreat of the boreal tree line northward caused by climate warming, and new wood-using investment aspirations. This explains why I suggest industrial forestry expansion as a sector to be studied as well as mining (naturally, the tundra and permanent
ice-cover regions such as Greenland and Baffin Island cannot be studied for forestry expansion). There are important benefits in comparing the two sectors. For example, the identification of key causal conditions shared by the projects across the differing sectors of mining and forestry can show how institutional contexts, politics, and political economy impact the way commodity frontiers expand.

Prior Arctic studies have emphasized the region’s specificity (Heininen and Southcott 2010), but I suggest the novel approach of studying the forces of Arctic land use transformation as being largely shared with global dynamics rather than unique: beginning with similarities and proceeding to specificities. Such an approach better links Arctic studies and scholars that have so far been isolated to wider global discussions and theoretical developments, escaping the somewhat skewed notion of Arctic exceptionalism (which I consider a less applicable category in today’s world, given the global land rush).

The literature on new extractivism – which largely overlooks the Arctic – charts governmental recognition of the primary sector as a key growth element in the economy after decades of theoretical assertions that extractive economies lead to underdevelopment (Bunker and Ciccantell 2005).

There is a need to explain the spread of the phenomenon of extractivism, even to political economic contexts that could be assumed to resist the lure of pursuing capitalist growth via the creation of their own domestic “Cheap Natures” – a term that refers to new extractive projects wherein profits accrue primarily to foreign or limited actors, but costs are high and unevenly shared, with negative socio-environmental impacts being born locally (Moore 2014). Research that has tracked down causalities in the fast advancing capitalization of Arctic natures has made it possible to re-assess both the truly global expansion of the capitalist project of creating cheap natures, and the role of natural endowments in political economic transformations.

Pursuing all the hypotheses and research questions suggested herein simultaneously will result in multi-scalar and interactional analysis of spatial changes. This would make it possible to study how land rushes occur, in exact detail, which is of key importance and goes far beyond including an “Arctic case” to the global land rush studies. There is also a need to conduct this study by looking at the multiple geographical scales through which they take place, which include:

1. The point of production: case studies of key new mining and forestry projects;
2. Regional political economies: comparing the land areas above the Arctic Circle in all the macro-regions with differing political economies, such as the Nordic Countries, Canada, and Russia;
3. The position of the larger production zone in the world system: how the Arctic is being rendered a new periphery, an ultimate resource frontier for global capitalism;
4. The world economy’s historic conjunction: studying how the Arctic land rush epitomizes (a) a global move to a new commodity paradigm where the time of Cheap Natures is ending (thus testing this theoretical proposition by Moore 2014), and (b) an extractives super cycle that augments the scales of production, raises costs, and consolidates production in the hands of the largest producers (testing the global applicability of the claim that the current era is in such a cycle made by Bebbington and Bury 2013).

A change in any of the above scales tends to lead to changes in the others, and these inter-scalar dynamics need to be taken into consideration.

To answer the question of how the land rush has occurred, I suggest analyzing the political, ideological, and symbolic acts that are used and required “to map, code, survey, quantify and otherwise identify and facilitate new sources of cheap nature” (Moore 2014: 4) in the Arctic, in all of the four above geographical scales. Recently, Arctic governments have issued many strategies and mineral policies to attract investment, which downplay the economic, socio-environmental, and cultural value of existing land uses by, for example, indigenous people. It
will be essential to compare the role of such discourses and framings, visible in official documents, identifying their causal role in land rushes by contrasting the official policies with new primary data, thus examining how the new lived environments of the Arctic are being created.

Bibliography

Borgerson, S. 2013. The Coming Arctic Boom: As Ice Melts, the Region Heats Up. Foreign Affairs: 76–89.
Franco, J. and S. Borras. eds. 2013. Land concentration, land grabbing and people’s struggles in Europe. TNI.
Moore, J. 2014. The Capitalocene II. Available at: https://jasonwmoore.wordpress.com/