

Datafication as regime:
The hermeneutic governance of UNCLOS in the Arctic

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Abstract

Owing to regional, international, and global transformations in the last several decades, the Arctic's relevance to politics has also seen a transformation and increase that is still unfolding. This paper examines the linkage between governance of the Arctic and emerging technologically-enabled methods of knowledge production: drawing on literature from Critical Data Studies (CDS) as well as the aesthetic turn in International Relations (IR), it is argued here that 'datafication,' which describes an epistemological, aesthetic, and increasingly software-driven practice entailing the empiricist ordering and analysis of the representations of worldly phenomena, also acts as a regime of transnational governance in its own right. This is especially evident in the Arctic, which, reflecting global trends, has particularly seen a growth in the number and extent of governance institutions since the 1980s. After setting out the geographical and geopolitical context of the Arctic, the paper draws from the literatures on transnational governance and the politics of aesthetics to elaborate the CDS concept of datafication as a regime that is global in scope and aesthetic in mode. Subsequently, the paper illustrates the theoretical dimensions of this in the form of a case study: the highly scientific process currently underway as per the United Nations Convention on the Law of the Sea (UNCLOS) by which several Arctic states have applied to the Commission on the Limits of the Continental Shelf (CLCS) to legally extend sovereign claim over resources in the Arctic Ocean. The paper concludes outlining potential directions for further research.

Introduction

In the Arctic¹ region, as elsewhere, data and the technologies and practices that enable their collection and analysis have become increasingly inseparable from techniques of formal governance. While Arctic states and Indigenous political organizations necessarily have roles governing territorial jurisdictions, governance also extends to the activity of transnational actors such as corporations as well as international and transnational institutions and actors such as the Arctic Council, the Inuit Circumpolar Council, and the United Nations Convention on the Law of the Sea (UNCLOS) as well as actors involved in resource extractive industries. Uses of data in the context of formal governance extends across a wide range of domains, from telecommunications, law enforcement, and shipping to diverse types of scientific research such as epidemiology, environmental monitoring, wildlife tracking, and geology, escalating in step with the Arctic's increase in geopolitical and economic significance.

The importance of data collection and scientifically understanding the Arctic generally is regarded as a given across academic literature, especially where formal governance is concerned; however, considering its international relevance, how does this assumed importance influence Arctic governance itself? This paper argues that 'datafication,' an aestheticizing epistemological process involving the transformation of perceptible phenomena into a specific kind of interpretational unit (data), has become a mode of transnational informal governance in its own right, meaning that this specific form of knowledge production and the ontological assumptions therewith constitute a classic concern of governance: "creating the conditions for ordered rule and collective action" (Stoker 1998, 17). It is conceivable that due to the globalizing tendencies of postmodernity such as in terms of transnational capital flows and digital communications, datafication is emerging as a genuinely global informal governance regime; however, this is also apt to have localized variations arising from the specific contextual interplay of politics, geography, society, economics, and linguistics. To this end, due to its recent rapid increase in international geopolitical and economic importance, the Arctic provides a particularly good case study for examining how datafication acts in a governing capacity because of how it prominently features in structuring political and economic activities currently underway in the region.

This paper analyzes the proceedings under the UNCLOS Commission on the Limits of the Continental Shelf (CLCS) by which several Arctic states are currently seeking to extend their jurisdiction in the Arctic Ocean; specifically, the current negotiations over the status of a bathymetric feature called the Lomonosov Ridge is considered here. While UNCLOS formally governs in the sense that it specifies the types of data required for making such claims as well as the rules and parameters that the claims are subject to, at an implicit and informal level, the broader process of datafication structures the CLCS process in that it offers a common rationale among participating and non-participating states alike, and a means for establishing epistemological, and thus political, legitimacy. After briefly addressing the relevant academic literature to date, the paper proceeds in several sections. First, it is necessary to describe the geographical and legal context in which this is taking place. Not only is the Arctic unique in many respects, but also, the elevated role of science in UNCLOS, especially where it concerns the legal delimitation of continental shelves through the proceedings of the CLCS, is notable in

¹ There are many ways of defining the Arctic. Additionally, there are conceptualizations of multiple different 'Arctics' in the circumpolar area due to their marked regional distinctions from one another. For the purposes of discussing Arctic governance, this paper assumes a conventional definition entailing the inclusion of all water and land masses north of the Arctic Circle, and thus uses the term 'circumpolar' fairly interchangeably in this context although they do not mean the same thing in other contexts.

the context of international law. The subsequent section develops the concept of datafication relative to international relations: elaborating the definition to foreground the aesthetic, representational emphasis in the political utilization of data (both phenomenologically and rhetorically) enables insight into how it functions as a mode of governance. An example of how datafication figures as such is elaborated in the last section; while differences over the accuracy and interpretation of data pertaining to the Lomonosov Ridge are centrally playing out in the CLCS submission process, it is the aesthetic of data that provides the legitimating force in the proceedings, shaping assessment and decisionmaking regarding state claims and, ultimately, political maneuvers.

Background

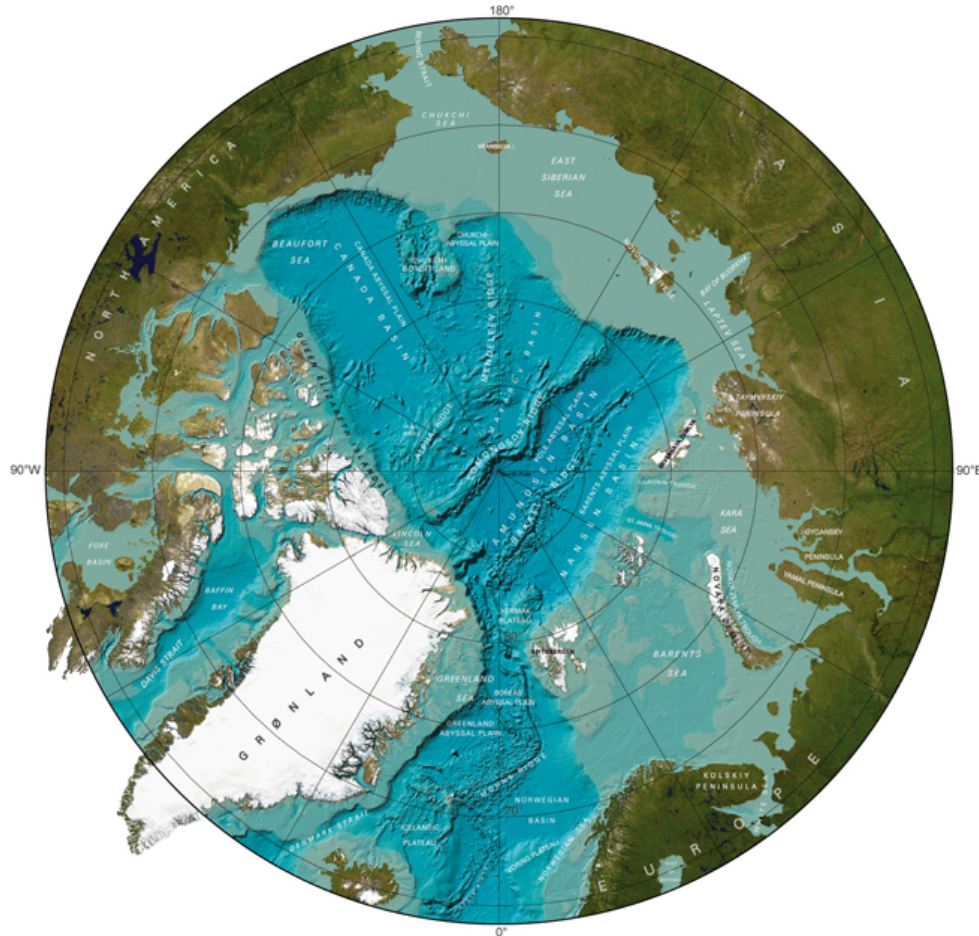
This paper draws from both International Relations (IR) and Critical Data Studies (CDS) literatures to investigate the role that a particular epistemological practice, datafication, has in governing the Arctic region. As will be discussed in further detail below, the Arctic has been steadily growing in international importance; combined with geopolitical, technological, and economic shifts over the last three decades that fall under the general umbrella of globalization, the increased relevance of the Arctic has been met with a proliferation of governance regimes, made possible and desirable in part due to its geostrategic and economic importance to states as well as the continued political mobilization of circumpolar Indigenous peoples.

These trends have for the most part been well-documented from an international/transnational/global standpoint, and to a lesser extent, from a relatively small but expanding Arctic IR scholarship such as Byers (2009, 2014, 2017), Huebert (1998), and Young (2005, 2010) and in political geography such as Dodds (2010). While research on the ways in which governance is being transformed by software and digital technologies is quickly expanding, such as Bonenfant et al. (2013), Bratton (2015), and Campbell-Verduyn (2018), the same attention has not been given to how this is factoring in the Arctic context. This is significant because as a depopulated and difficult to access region that is on the whole experiencing rapid ecological, economic, and social changes, the global technological advances in computation and telecommunications are of arguably greater consequence for how the Arctic is understood and governed than other areas. Towards this, work being undertaken in CDS towards understanding the increasing prevalence of data-driven technologies from a social and political perspective can help further research agendas in IR that aim to track these developments; conversely, the rich IR literature on matters of governance provides added contextualization for the processes that CDS tracks.

Contextualizing governance in the Arctic

Politically, geographically, ecologically, environmentally, and geologically, the Arctic is a diverse region. There are eight Arctic states, defined as having territory north of the Arctic Circle. While the Arctic Ocean, and especially the sea ice covering it and the North Pole, has been the object of considerable European exploration since the 19th century, the sustained economic interest in the region on the part of circumpolar (and even non-Arctic) states is a relatively recent development. As shown by the bathymetric map, its seafloor is composed of a variety of features. While the North Pole lies in a deep portion under about 4300 metres of water, immediately adjacent is the Arctic Ocean's most prominent feature that is the subject of overlapping state territorial claims: the Lomonosov Ridge. An underwater mountain chain that is an average height

of 3000 metres, the Lomonosov Ridge stretches for 1800 km from north of the New Siberian Islands in Russia to near Ellesmere Island in Canada (Pharand 1973, 152).



This map, with 90° N at centre, shows the major bathymetric features of the Arctic Ocean and surrounding areas north of 64°. The Lomonosov Ridge is the prominent elevation appearing at a diagonal in the centre of the map. Source: International Bathymetric Chart of the Arctic Ocean initiative

While much of the Arctic Ocean is covered in sea ice for a substantial part of the year (although recent decades have seen a decline), the ice itself is complex: not a homogeneous mass, it is in constant motion, consisting of multiple floes of varying thickness, age, and speed, which are separated by ‘leads,’ or areas of open water (Pharand 1973, 153). Nevertheless, the enduring presence of the ice combined with the particular political and geographic arrangements meant that the Arctic was formerly an important and highly strategic theatre during the Cold War for particularly US and Soviet submarines; reflecting the anxieties of the day, Theutenberg (1984) notes that the Arctic at the time had become “one of the most militarized areas in the world”

(Theutenberg 1984, 26). Nearly 30 years after the end of the Cold War, amid a lessened, albeit still active, military presence in the region, the Arctic is now notable not for being a theatre of war, but for the remarkable stability of peaceful interactions between the Arctic states: even when political controversies have erupted elsewhere, such as between the US and Russia over Crimea in 2014 (Byers 2017). What gradually supplanted the militarized, adversarial Cold War paradigm in what Oran Young has termed a “state change” in the 1980s-1990s (Young 2010, 168) is a complex arrangement of international and transnational institutions, both formal and informal, that govern the Arctic’s states, people, wildlife, and resources.

Before elaborating on this, an aside on what governance entails—and how governance continues to transform—will be helpful in further clarifying the picture. Theories of governance generally hold it to refer to interests that seek to create some form of order and facilitate the ability for certain groups to act. The remit of governance is not limited to governments; as has been increasingly the case in recent decades, non-governmental actors also act in governance capacities. As Stoker notes, a common thread in the governance literature identifies a “blurring” between public and private domains through the emergence of new styles of governance (Stoker 1998, 17). In addition to this tendency to unseat fast distinctions between public/private as well as local/transnational and inside/outside, the literature also identifies an autonomous, networked quality to governance, consisting of interconnections between governmental and non-governmental actors and institutions: and as governance networks have to do with the establishment of relatively stable formal and informal partnerships, collaborative arrangements, and agreements that facilitate their ability to act (Stone 1989, 4). Along these lines, Ruggie (1998) describes differing degrees of what he terms “institutionalization,” which is a conceptual framework that models the process of international organization that is to one degree or another based upon the agreements struck by multiple parties (Ruggie 1998, 53-54). Ruggie defines three levels of institutionalization, which can be mapped onto a continuum of formal to informal. The most concrete of the three levels are the organizational institutions such as those described above; next, like Stoker (1998), he identifies regimes as sets of mutual expectations, rules, regulations, and plans; and the least concrete, and most informal, in Ruggie’s typology are the more explicitly cognitive-based structures of epistemic communities (ibid., 55).

Returning to the way governance was described earlier in this section as relating to ‘interests that seek to create some form of order and facilitate the ability for certain groups to act,’ epistemic communities in this sense would certainly qualify because they exist by virtue of mutual agreement: in this case, the agreement concerns some form of intersubjective understanding. However, it is also increasingly the case that what constitutes a subject and agency in the context of governance is itself complex being that it is encompassing the agency (or actancy) of nonhumans: governance networks include networks of discourse and epistemological claims (Djelic and Sahalin-Anderson 2006, 7), and virtual assemblages such as algorithms and blockchains have also been identified as playing a growing role in governance (Campbell-Verduyn, Goguen, and Porter 2017; Campbell-Verduyn 2018). How these latest movements in transnational governance towards increasingly virtual, assemblaged, networked, and nonhuman regimes reflect what Young, writing in a different context, had identified earlier as a second Arctic state change underway, a “new Arctic” (Young 2010, 168), is thus the task set out here. The concept of datafication captures an essential aspect of this emerging direction, and it is to this, and how it features in Arctic governance, that this paper now turns.

Datafication as regime: Managing the sensible

Datafication is a concept that has been recently developed by scholars associated with Critical Data Studies (CDS). Different authors tend to define it in different ways, but it is generally taken to be a process of empiricist knowledge production, ordering, and analysis inherently bound up with epistemological and ethical problematics that reflect a social reality which is increasingly co-constituted with digital technologies and decentralized, diffused modes of control. For example, with the context of technocratic urban planning in mind, Mattern's (2013) definition of datafication is nevertheless broad: accenting the positivist and empiricist aspects of data, it refers to "the presumption that all meaningful flows and activity can be sensed and measured" (in Kitchin 2014, 181). On the other hand, this contrasts with van Dijck's narrower account of datafication in its being "the transformation of social action into online quantified data" that allows for the "legitimate" accessing and understanding of human activities as well as for their tracking and prediction (van Dijck 2014, 198). While critiques in both of these accounts echo the long-standing debate in the social sciences around quantitative versus qualitative methodologies and the ontological presuppositions that are embedded in each, the concern with datafication is also more than a '2.0' version of a skepticism of positivism. The reason for this is because data, the basis around which datafication is possible, represent a particular form of knowledge that holds a specific relationship with social context. Kitchin's "data assemblage" model is instructive here: what are considered to be data are not neutral or even necessarily objective, being the product of the enmeshing of *a priori* ontological assumptions and technological capabilities in the first place, but are situated at a nexus of intersecting and mutually reinforcing processes spanning social, economic, philosophical, and political modalities (Kitchin 2014, 24). Thus, data are, conceptually speaking, something more than simply empirical facts (although empirical facts can certainly be data), but specifically refer to the datum's particular style of representing knowledge as it exists in relation to material and political forces.

While datafication and the concern around it thus clearly draw from a Foucauldian sensibility of a power-knowledge nexus, an important distinction resides in the intrinsically *aesthetic* process involved in the creation of data that articulates it with political and economic forces. While this point is not so elaborated in the CDS literature, the connections between politics, knowledge, and aesthetics have been central to the work of Jacques Rancière as well as scholars connected to the 'aesthetic turn' of critical IR such as notably Bleiker (2001, 2009, 2017). A key insight here is that representation, whether art, a graph of data points, or a bathymetric map, cannot be taken at face value or assumed to be a necessarily authentic and accurate analogue of the reality it is depicting. Bleiker depicts this discrepancy as a "gap" between the representation and the represented: because ways of knowing the world are inherently bound up with sociolinguistic practices, "habits of knowing," and political processes, epistemological assumptions structure the representations that are used to understand reality (Bleiker and Leet 2006, 722-3). This means that the degree to which the fullness of reality is knowable is but partial; however, this also means that the way that reality appears (i.e. through sensory perceptions calibrated by linguistic categories) and is made to appear (i.e. in terms of deliberate depictions of any variety) is also inextricably bound up with the political.

Relative to these considerations, in relation to data, issues of aesthetics appear to be twofold, involving the question as to whether and to what extent they are an accurate representation of reality, and relatedly, questions around the extent to which the form of knowledge in question resembles something recognizable as legitimate 'data.' To this latter consideration and in reference to the former, in the creation of data, it is also the case that the

worldly phenomena being datafied must, *a priori*, be recognized 1) intelligibly, i.e. in terms of pre-existing concepts, and 2) as something capable of being expressed in terms of data. While this does concern methodological and technological capabilities, at stake is also a complicated interplay between language, perception, cognition, and otherwise the socially, materially, and historically contextual elements that influence the subjective experience, and hence interpretation, of phenomena. Or, more succinctly, any form of knowledge that claims mimesis—that the ‘gap’ between representation and represented can be closed—is nevertheless still subject to its own aesthetic as well as the forces of politics (Steele 2017, 208).

If datafication is an epistemological practice entailing the empiricist ordering and analysis of worldly phenomena, it is thus also inherently an aesthetic practice of representing the world; therefore, it is also intrinsically bound up with the political insofar as politics inform the ‘shape’ of the space between the representation and its object, making this a potential site of further political leverage. It is also in these ways that datafication acts as a governance regime, given governance’s central occupation with the creation of order and the regulation of conduct. Datafication, like any epistemological system, strives to manage the sensible world by applying a transformation to it, converting it to be legible in the terms of pre-established conceptual categories. Within this hermeneutics, the ‘transformation’ here is a work of politics active in Bleiker’s ‘gap,’ requiring decision or at least intention on the part of the transforming agent, i.e. political actor. Thus, the ‘governing’ of epistemological order is not the smooth process it appears to be, but rather consisting of numerous fault lines and potentials for rupture.

However, in the particular case of datafication, there is additionally a second order of governance at work rendered by the transformation’s final product: data. Specifically, ‘Big Data,’ which boyd and Crawford note, has as much to do with extremely large data sets as it does a “computational turn in thought and research” (boyd and Crawford 2012, 665). The paradigm of datafication, in other words, is transforming the meaning of knowledge; data are becoming established as not only *an* important conceptual/aesthetic regime, but *the* preeminent one because their ubiquity and proliferation support the presumption that they offer the most complete representation of the world: imbuing them with power (Iliadis and Russo 2016, 1). This is not without its own associated problems: Floridi describes an “epistemological challenge” in data’s profligation alongside the rhetorical issue of ‘big data’ not having a clear meaning as to what it refers to (Floridi 2012, 435); Kitchin likewise identifies multiple types and sources of data, also noting that the way data is defined can depend on the perspective taken (Kitchin 2014, 4). This bewildering diversity, abundance, and *disorder* of data being the case, from a political perspective, what is relevant is how and for what purposes the imaginary of data is utilized. That is: for the purposes facilitating and structuring political action, the phenomenology of data is as important as the legitimacy it bestows upon political action by virtue of being ‘data.’ The final section will describe how this occurs by way of the CLCS claims in the Arctic Ocean.

Governing the negotiation of sovereignty

The development of the continental shelf as a preeminent site of deliberation arose from insufficiencies and politics related to what became known as Exclusive Economic Zones (EEZs), which crystallized as a legal concept as such only as recently as 1982. In 1945, responding to industrial interests, the US Truman Proclamation initiated the expansion of state sovereignty into the seas in earnest, declaring that all coastal states had the right to exploit the resources present in the areas offshore of their territories (Byers 2013, 93). Subsequently, in 1947, Chile declared that it should have a zone of “national sovereignty” extending to 200 nm; in 1952, Peru and Ecuador

joined Chile in the Santiago Declaration in elaborating this concept (O'Connell 1982, 553). The rationale on the part of these latter states for proposing an extension of their sovereignty was based on geological considerations unique to the western coast of South America involving a very narrow continental shelf that plunges into a deep abyss: the states argued that extant precedents limiting sovereign control of resources to the continental shelf would be insufficient for their exploitation and protection (ibid., 555). One effect of the Santiago Declaration was, therefore, that it helped to establish a "nexus" between international law and scientific context, particularly concerning the nature of the continental shelf (ibid., 555). Originally, it was argued that the new 200 nm rule only applied in specific circumstances such as those of Chile, Ecuador, and Peru; later, in the early rounds of the Third United Nations Law of the Sea Conference (1973-1982, out of which the present UNCLOS treaty emerged), the 200 nm zone tended to apply irrespective of the size of the continental shelf. While this was favourable for states that did not have large continental margins like the signatories of the Santiago Declaration, it put other states with margins larger than 200 nm such as Canada and Australia at a disadvantage; consequently, the large-margin states argued and successfully negotiated for the preservation of the "continental shelf doctrine" in cases where it extends beyond 200 nm (ibid., 579).

The history of the EEZ starting in the mid-20th century is important for understanding that it represented a transformation in international law that has continued to develop into the present day in the form of the CLCS. On the one hand, the international legitimization of the concept of the EEZ represented a decisive shift towards the primacy of the individual state actor and away from the collectivism imbuing the concept of the freedom of the seas (O'Connell 1982, 1; 552). On the other hand, the innovative science-based method for determining extended continental shelves per UNCLOS gave state delegations opportunities to develop customary international law (Attard 1987, 43; 284-5). It is worth noting here that the largely resource-driven expansion of state jurisdiction in the seas has entailed the need for an ability to precisely determine the nature and extent of the resources present in a body of water as well as its soil and subsoil, but this ended up having implications for international law. The increased knowledge concerning the wide diversity of resources and differential distribution of them among coastal states meant that the EEZ concept eventually came to be insufficient as a way to provide jurisdiction over mineral and fishery resources simultaneously; where the former came to be concerned, the concept of the continental shelf acts as a "redefinition" of the EEZ because of the nature of geological considerations (O'Connell 1982, 552).

In this way, scientific geological knowledge has become foundational to determining the extent of state jurisdiction in the Arctic Ocean. While the procedures for this determination are set out directly by UNCLOS, especially Article 76, what is nevertheless striking is the manner in which the collection and analysis of data is essential to this process: suggesting that beneath a 'first order' of formal governance, an informal 'second order' concerned with the creation of data and the legitimacy and structure this bestows on political action. For example, the delimitation of the outer limits of the continental shelf proceeds in two basic steps. First, using formulas that are derived from the morphology of the seafloor and the thickness of its sediment, the breadth of the continental margin is determined. Next, the continental shelf is delimited from the seabed by 'constraint lines' that are derived from the distance from the territorial sea's baseline and ocean depth (ABLOS 2010, 96). As there are a variety of methods available for determining the borders, states are able to select the ones that best suit their advantage. The determination of the outer limits of the continental shelf is, in addition to being highly technically complex, also very data-intensive. To this end, a technical guide on submissions to

UNCLOS advises that software capable of performing geodesic calculations should be used, as “sufficient accuracy for most requirements can only be obtained by computation” (ABLOS 2010, 95).

The ongoing situation with overlapping potential claims to the Lomonosov Ridge also further illustrates how datafication is governing political proceedings. Denmark, Norway, and Russia all have submissions presently under review by the CLCS with respect to the Arctic Ocean, consisting of scientific evidence collected by each state that supports their respective submissions. With respect to the Lomonosov Ridge, as Canada’s submission is expected to be forthcoming in early 2019 (Sevunts 2018), Denmark and Russia are currently the only countries that have CLCS submissions arguing for the Lomonosov Ridge to be regarded as an extension of each state’s continental shelf beyond the current 200 nm territorial sea. At present, there is an overlap between the Danish and Russian submissions, and between the Russian and projected Canadian submissions. While the ultimate decision rests with the Commission, and while a high amount of information sharing and cooperation between states in face characterizes the gathering of scientific data, the submissions themselves are also subject to diplomatic disagreement on account of the territories themselves in question as well as any aspect of the science behind the claim submissions, such as data completeness and analytical methods used, as well as the legal definitions issuing from such data and its interpretation. Like other undersea features, the Lomonosov Ridge, which is classified as a seafloor high, has a particular legal status: but its legal status is dependent upon the data that is collected on it and how this data is interpreted within the context of state interests. Article 76 identifies three types of seafloor highs: oceanic ridges, submarine ridges, and submarine elevations. Whereas oceanic ridges are, as their name would suggest, defined as features of the deep ocean and are likewise definitionally unable to be argued as part of a continental margin, submarine ridges can be regarded as extensions of the continental margin but for technical reasons only if they are less than 350 nm from the shoreline; submarine elevations, on the other hand, can legally extend the limit of the continental margin beyond 350 nm (Basaran 2015, 6-7). As it happens, pursuant to their own national interests but on the basis of disagreement over the analysis of data, different Arctic states are in dispute over the Lomonosov Ridge’s legal definition. In 2001, the Russian Federation made its submission to the CLCS and argued that according to their analysis of the scientific data, the Lomonosov Ridge was an extension of the Russian continental margin on the basis of its being a submarine ridge. The United States, as a non-party to UNCLOS, disputed the claim, arguing that it was “a freestanding feature...and not a natural component of the continental margins of either Russia or any other State” (Basaran 2015, 13; 15). The CLCS’s decision regarding Russia’s claim was not to deny it outright, but to ask for more data; Russia has since been conducting scientific studies as part of a revised submission to argue that the Lomonosov Ridge is not a submarine ridge, but a submarine elevation, which, if successful, would in theory strengthen its claim to extend its continental margin (Basaran 2015, 15).

What is evident in this brief example from the proceedings is how contestation over representation (the legal status of the Lomonosov Ridge) as well as the representation of knowledge (the accuracy of the data used and the analysis thereof) is presided over by not only the formal institutions of UNCLOS and the CLCS, but also implicitly and informally by the epistemological authority of data. In the CLCS proceedings, the quality and interpretation of data is ultimately the crux upon which the validity of state claims lie: but, the assessment of the claims proceed according to the legitimacy afforded to them by not the intrinsic content of the data or how they are processed, but by *data as an aesthetic value*.

Conclusion

In many respects, a paper such as this that places multiple fields in conversation leaves behind more questions behind than answers. One intriguing issue suggested here concerns the relationship between politics and the very flexible, malleable signifiers known as ‘data’ and ‘Big Data.’ Previous research, e.g. Dixit (2013), into the way political actors can exploit semiotic instability such as in the case of the term ‘terrorist,’ reveals how closely interwoven power and language can be. However, both ‘terrorist’ and ‘data,’ while multivalent and affectively resonant terms, are so in different ways and for different reasons. How do the politics of empty signifiers feature for data? What is data called on to represent, when is it asked to do so, and why? Research such as this could be accomplished relative to a given context such as the Arctic, which features widely differing levels of economic development and resident access to computer technologies, social services, and infrastructures.

Regarding datafication as governance, there are many directions that could be explored. As alluded to here, there is a tension between the political and governance: while both can be thought of as projects that have achieving some kind of order as an end, the methods tend to differ considerably. At the same time, politics and governance frequently exhibit a complex and mutually constitutive relationship. The introduction of datafication into this field complicates the picture even more. What does it mean to have a practice that is so intrinsically constituted by politics be something that is also a governance regime? Another element left necessarily unelaborated here (due to space, but also scope) is a closer development of how data, software, and technological assemblages all transform governance in the context of datafication; in a larger project, Actor Network Theory could be a useful approach. Less theoretically, while the brief examination of the CLCS claim submission process here does suggest that datafication does offer an informally governing structure to the proceedings, further research into how it figures in other contexts, especially ones that have less connection to formal governance institutions, would be helpful in clarifying how prevalent datafication is in this capacity. In a not altogether different vein, focusing on the CLCS process limits the analysis to the activities of elites working in the capacity of states; how does datafication govern the actions of non-state, non-elites? How do Indigenous communities experience datafication’s governing capacities?

As should be clear from the discussion, it is not the case that the use of scientific methods to assess state claims, the implication of representation in politics, or even data, are especially novel. On the other hand, what does appear to be emerging is the particular combination of these elements into a flexible and informal governance structure of global scope that interlaces with other governance regimes. How will this continue to develop as data-intensive practices and forms of governance become more widespread? How will this shift the space of possibility for political contestation and dissent? Perhaps the Arctic’s high politics seem removed from these latter, immediate concerns: but the diffused, decentralized nature of a regime such as datafication suggests otherwise.

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