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BIONOTE

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Articulating Threats/Threatening Articulations: The Discursive Impact of Persistent Organic Pollutants (POPs) on Local Systems of Meaning

Abstract

This paper deals with the threats posed by persistent organic pollutants (POPs) to Arctic populations. It does not primarily focus on the negative impacts these substances have on ecosystems and human organisms, but rather directs its attention to the potentially disruptive effects the *articulation* of these threats might have on Arctic communities and systems of meaning.

I employ the theoretical framework developed by Ernesto Laclau and Chantal Mouffe to conceptualise the articulation of threats as different forms of discursive interaction between politico-scientific and local discourses. In providing a close reading of three sets of scientific texts pertaining to POPs in the Arctic, I show that each of these implies a particular form of discursive interaction - overcoding, semiotisation, and interdiscursive translation - which entail widely different effects on local frameworks of meaning. Finally, I apply some of Foucault's ideas in order to direct attention to the particular form of politics underlying these forms of interaction between discourses.

Keywords

Discourse theory, biopolitics, Arctic ecosystems, persistent organic pollutants, indigenous culture, representation of threats

Biopolitics will derive its knowledge from, and define its power's field of intervention in terms of, the birth rate, the mortality rate, various biological disabilities, and the effects of the environment (...) Biopolitics deals with the population as a problem that is at once political, biological and scientific.

Michel Foucault, *Society Must Be Defended* (p.245)

From the point of view of a politics concerned with broadening the sphere of subjectification, (...) a critical approach to translation must displace a (...) science driven by a fantasy of delocalised or universally valid conceptual mastery.

Michael J. Shapiro, *Methods and Nations* (p.29)

I. Introduction

Since the 1970s, many scientific studies have established the presence of semi-volatile and insoluble persistent organic pollutants (POPs) in the Arctic environment. As research projects carried out under the auspices of for instance the *Arctic Monitoring and Assessment Program* (AMAP) or the *Northern Contaminants Program* (NCP) have shown, bioaccumulation and biomagnification of POPs in northern food chains pose a significant health risk to populations, which rely heavily upon traditional country food for their subsistence. However, as more recent studies have revealed, the material qualities of the contaminants in question and their impact on organisms and ecosystems are not the only sources of insecurity potentially threatening the well being of Arctic populations. As for instance Tyrell (2006), Gombay (2005), Myers/Furgal/Powell (2004), or Poirier/Brooke (2000) demonstrate, also the dissemination of information - the articulation of these invisible threats - can have severely disruptive effects on local communities and established cultural practices. This paper will direct attention to precisely such discursive impacts of threat articulations. However, instead of providing new empirical data concerning unintended and potentially negative consequences of

threat articulations on a particular northern community, I will introduce a theoretical apparatus, which allows for a conceptualisation of potential pitfalls inherent in such processes in general terms.

Firstly, I will introduce the theory of discourse advanced by Ernesto Laclau and Chantal Mouffe (2001) in order to establish the terminology necessary for a conceptualisation of the potential discursive impacts of different forms of threat articulation on Arctic communities. Then, I will provide close readings of three sets of texts pertaining to the impact of POPs on northern populations. Combining the theoretical concepts with my empirical material, I proceed to demonstrate that each set of texts implies a particular form of interaction between politico-scientific and local discourses. This interaction emerges as what I term *overcoding*, *semiotisation*, and *interdiscursive translation*. Finally, I will connect these concepts to Foucault's notion of biopolitics.

II. Ernesto Laclau's and Chantal Mouffe's approach to discourse

In their work *Hegemony and Socialist Strategy* ([1985] 2001), Ernesto Laclau and Chantal Mouffe frame their understanding of discourse in a "post-Marxist terrain" (2001:4). This means, they take classical Marxism as a point of departure, and rearticulate and recontextualise key concepts applied within this tradition. Their concepts and their terminology will serve as the basis for a later assessment of discursive interaction in the Arctic North and will, therefore, be introduced in some detail.

Laclau and Mouffe assert the "impossibility of the object 'society'" (ibid.:99). What they mean is not the impossibility of actual societies, but the impossibility of a final fixation, of a total suture of the social in an objectively discernable order. "Society and social agents lack any essence, and their regularities merely consist of the *relative and precarious forms of fixation* which accompany the establishment of a certain order" (Laclau/Mouffe 2001:98). This "certain order", which is originated through "relative and precarious forms of fixation" is what Laclau and Mouffe refer to as discourse.

Laclau and Mouffe extend the notion of discourse to encompass the social in its entirety. They deny the distinction between discursive and non-discursive practices and claim that “every object is constituted as an object of discourse” (:107). This does, however, not imply a merely cognitive character of discourse, or a denial of the material world. What is denied is merely the assertion that objects can constitute themselves outside discourse.

According to Laclau and Mouffe, “any discourse is constituted as an attempt to dominate the field of discursivity, to arrest the flow of differences, to construct a centre” (Laclau/Mouffe 2001:112). They proceed by terming the “privileged discursive points of this partial fixation *nodal points*” (ibid; emphasis by authors). Around nodal points occurs a temporary and partial crystallisation of meaning. The perpetuated sliding of signifying practices is brought to a temporary halt and an intelligible, yet contingent, order is established.

The authors deny objectivity and replace it by a notion of “partial and precarious *objectification*” (Laclau/Mouffe 2001:125; emphasis by authors). Hegemonic discursive practice aims at naturalising a contingent configuration of elements as objective. However, these hegemonic formations are always precarious and are constantly subverted by political practice articulating new elements from the field of discursivity. As a consequence, politics acquire “a constitutive and a subversive dimension” (Torfing 1999: 69), it takes the form of radical constructions and constant reconstructions of discursive spaces. Society emerges as ‘impossible’. It is replaced by perpetuated processes of *societing*, as one could argue.

The notion of politics and discursive practice poses the question of agency. Following Althusser, Laclau/Mouffe (2001:115) make clear that “[w]henver we use the category of ‘subject’ (...), we will do so in the sense of ‘subject position’ within a discursive structure”. The notion of autonomous subject as locus of individual experience and productive of social relations is, hence, rejected. The subject emerges as determined by discourse.

However, in contrast to Althusser, Laclau and Mouffe treat the subject as fragmented and decentered; it is not positioned (interpellated) by only one discourse at a time, but is continuously

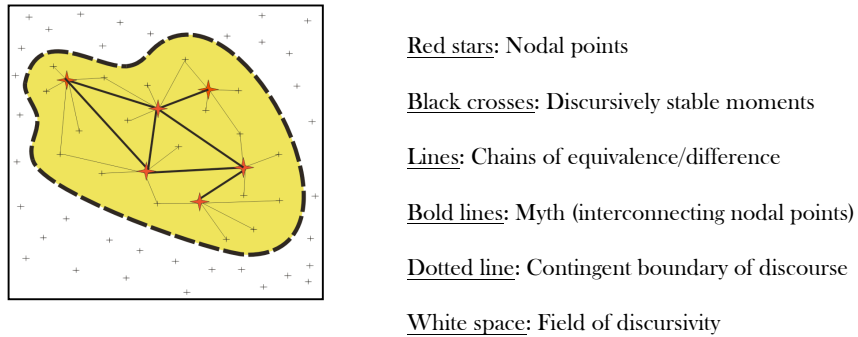
subjected to such positionings through different, and often mutually exclusive, discursive frames. Consequently, the subject is as overdetermined as is the social. Individual and group identities can never ultimately be established, but are always undermined by articulations changing the configuration of elements defining them: “The category of subject is penetrated by the same ambiguous, incomplete and polysemical character which overdetermination assigns to every discursive identity” (Laclau/Mouffe 2001:121). This ambiguity, this lack of wholeness, this impossibility of being finally positioned by only one discursive order opens a space for agency. The subject oscillates between different and often competing versions of social identity. “The subject is (...) the place of *lack*, an empty place that various attempts at identification try to fill”, as Laclau (1993:436) puts it with reference to Žižek’s thought.

Individual as well as group identities are merely temporarily stabilised through “the opposed logics of equivalence and difference” (Laclau/Mouffe 2001:129). These processes - the establishment, maintenance, and dissolution of chains of equivalence and difference to temporarily stabilise discursively positioned identities - emerge as the core of politics: “The production of this [discursive] framework, the constitution of the very identities which will have to confront each other antagonistically, becomes now *the first of political problems*” (Laclau/Mouffe 2001:134; emphasis by authors).

Chains of equivalence reduce the polysemical character of signification by discursively establishing analogies. The effect is disambiguation and leads to a simplification of politico-discursive formations. In their work on Laclau/Mouffe, Phillips/Jørgensen (2006:44) provide the example of all non-white people in Britain discursively subsumed under the category ‘black’ to illustrate this particular logic. *Chains of difference*, on the other hand, follow an opposite logic as they disrupt analogies and enforce differentiation. Following the example of Phillips/Jørgensen further, the category ‘black’ is criss-crossed by categories such as class, gender, or ethnicity, hence fragmenting social space and identity.

Sedimented and stabilised chains of equivalence, which interconnect nodal points and, therefore, assume the representation of a contingent structure as a fully sutured and naturalised totality are termed *myths* (Laclau 1990:61). Laclau (ibid.) states that “the effectiveness of myth is essentially hegemonic: it involves forming a new objectivity”, thereby temporarily arresting the flow of differences, precluding political re-articulations and establishing a naturalised discursive order.

Figure 1: The concept of discourse in Laclau/Mouffe



A *hegemonic formation* is achieved when chains of equivalence/difference become naturalised as myth. Particular subject positions and structures are, then, perceived as necessary, not contingent. A particular social order is successfully objectified around nodal points constituting a centre, as alternatives become unconceivable and even the positions apparently opposing the prevalent order become “defined by the internal parameters of the formation itself” (Laclau/Mouffe 2001:139). The sliding of signifiers is brought to a temporal arrest. The partial and contingent character of any discursive order is effectively veiled as the existing structure emerges as timeless necessity. A hegemonic formation manages to signify itself as a sutured totality; a “totalizing horizon” (Laclau/Mouffe 2001:144).

III. Discursive interaction: Contaminants and northern communities

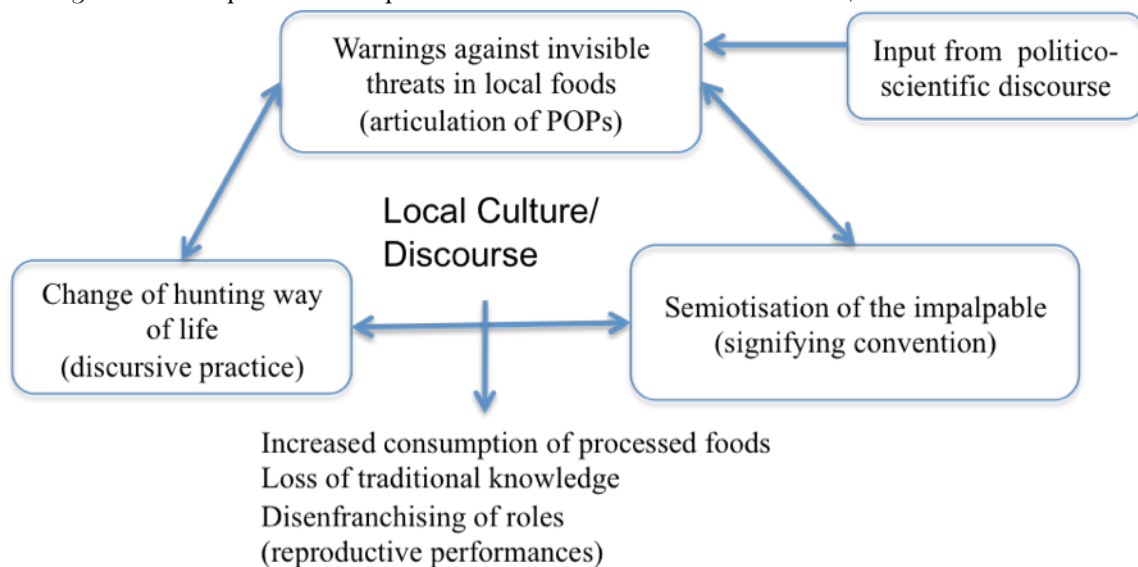
1. The discursive impact of contaminants

In the early 1980s concerns grew regarding the concentration of potentially poisonous substances in Arctic food chains. To begin with, the source of this form of pollution remained an unsolved

question. No local sources for contamination were found and, yet, the concentration of dangerous substances in human and animal tissue was growing. 13 years of meticulous research finally established the source of the toxic chemicals; persistent organic pollutants (POPs), produced in the industrialised countries and transported over long distances with sea and air currents bioaccumulated and biomagnified in Arctic ecosystems and posed a grave threat to human and animal life in the high North. Reports published by the Arctic Monitoring and Assessment Program (AMAP) and the Northern Contaminants Program (NCP) in 1997 lead to quick international action and a global ban on the production and use of a number of different chemical substances.

However, the POPs already emitted into the atmosphere were still accumulating in food chains in the North and concentrations in the tissue of large sea mammals were still on the rise. Whales and seals provide an important part of the regular diet of - mainly indigenous - local groups. As top of the food chain Arctic inhabitants were exposed to dangerous concentrations of toxic substances also after an international ban had been put into place. This situation required sustained programmes of action to inform local communities about these invisible potential threats in traditional foods and to induce changes in dietary habits. Some of these campaigns had devastating effects as they severely disrupted local communities (figure 2).

Figure 2: Example for the impact of contaminants on local discourses/cultures



It has repeatedly been argued that a culturally insensitive form of risk communication entails problematic consequences for local communities (Poirier/Brooke 2000, Myers/Furgal/Powell 2004, Tyrell 2006). As a consequence, new and more culturally sustainable forms of communication have been recommended (Powell/Myers/Furgal 2004, Tyrell 2006). In this paper, I will conceptualise such risk communication as different forms of discursive interaction.

Laclau/Mouffe (2001) assert the materiality of discourse. Material objects exist. However, their “*specificity as objects*” (:108; my emphasis) is constituted through discursive processes. This means that an object is first constituted when it has been discursively articulated. As such, one could argue, that the whole of the material world is included within the field of discursivity as a surplus of - potentially subversive - meaning. Once articulated, such an object might entail disruptive effects on the system of meaning within which it has been articulated. Contaminants, such as persistent organic pollutants (POPs), are such objects which, once articulated within a local discourse might entail disruptive effects, the consequences of which might prove more destructive for their local communities than the predicted biological impacts of the substances in question. In other words, POPs do not only have a destructive effect on local ecosystems, but also on local systems of meaning.

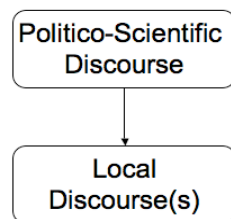
In the following, I will deal with distinct discursive formations pertaining to the Arctic; politico-scientific and local ones. I will not provide a fully blown discourse analysis of the discourses in question, but will use the framework introduced by Laclau/Mouffe to conceptualise their interaction in relation to the contaminant issue as they surface in three different sets of texts. Focus is on how interventions from a politico-scientific discourse impact local frameworks of meaning. I conceptualise these discursive interactions as overcoding, semiotisation and interdiscursive translation.¹

2. Overcoding

The term *overcoding* refers to processes by which a dominant discursive formation disrupts and subverts a competing one through a hegemonic intervention. The dominant discourse articulates a contingent element from the field of discursivity and constitutes it as a fixed moment of the affected discourse. This articulation of a potentially subversive surplus of meaning is effectuated by subjects that are overdetermined by both competing frames, and sets into motion again the temporary and precarious stabilisation of the target discourse. Hegemonic rearticulations create ambiguity through the disruption of chains of equivalence/difference and subvert the preestablished order by reasserting the contingency of nodal points as potentially empty signifiers. This form of discursive intervention is only possible if the dominant discourse manages to signify itself as a totality inclusive of the affected discourse to the overdetermined subjects. Only then can its framework of meaning effectively assume definitional power over nodal points and restabilise the affected structures in a new configuration, or dissolve them altogether.

This is exactly what took place during the early phases of the struggle against contamination in the Arctic where local systems of meaning and culturally important practices were disrupted in an attempt to provide locals with the knowledge necessary to protect themselves from what was framed as an invisible, yet threatening, process of slow poisoning.

Figure 3: Overcoding



A politico-scientific discourse signifies itself as a totality inclusive of the target discourses. Reference to the exact nature of Western empirical science makes it a dominant method of

producing knowledge accepted as objective. Competing knowledge systems are implicitly rejected as vested in superstition or as providing non-reliable data. We see here, that the politics of negotiating and renegotiating of the social, the contingent processes of “partial and precarious *objectification*” (Laclau/Mouffe 2001:125; emphasis by authors), have been replaced by a static and allegedly timeless notion of objectivity, which sediments structures and excludes alternatives. This state of objectivity is hegemonic in nature as it implicitly includes even what is opposed to it. Also the ethical imperative to act emerges from a totalising principle. Connected to the acquisition of supposedly objective knowledge is the power and the moral prerogative to intervene on behalf of those perceived as unaware and unable to protect themselves.

I will now look at how discursive interaction as overcoding of various local by a hegemonic politico-scientific discourse surfaces in two texts pertaining to POPs in the Arctic North: *Northern Lights against POPs* (Downie/Fenge 2003) and *Long-Range Transport of Information: Are Arctic Residents Getting the Message About Contaminants?* (Furgal/Myers 2005).ⁱⁱ

Northern Lights is an edited volume on the issue of POPs in the Arctic North. I will in particular focus on the introductory chapter written by Downie & Fenge. Even though this chapter raises the expectation that the authors attempt to provide space for an indigenous discourse to surface in their collection of texts, it quickly becomes apparent that indigenous voices only appear after they have been positioned by the hegemonic politico-scientific discourse.

Downie/Fenge state, for instance, that “POPs (...) are not solely environmental or public health issues: they are threats to long-enduring cultures...” (:xvii). This statement is followed by a list of rhetorical questions regarding the POP threat to traditional indigenous life styles: “If eating Muktuk (...) laced with POPs is injurious to health (...) should Inuit abandon this age-old practice, and in doing so relinquish their hunting culture?” (ibid.) This rather wide question, however, is immediately reduced to a problem of risk assessment: “What are the risks of eating country food compared with the risks of modifying or even abandoning this diet? What are the risks of abandoning one’s cultural heritage?”

As mentioned above, these questions are merely rhetorical in character as the reader is not provided with possible answers. On the contrary, as will be shown later, the answer emerges as implicitly given from the outset. Downie/Fenge proceed by presenting Inuit as “guardians of the environment” (ibid.). They explain this view with the fact that “[n]obody is better equipped to warn of environmental changes with potentially global impact than Indigenous peoples drawing upon first-hand information and traditional knowledge” (ibid.). In other words, indigenous voices matter in that they improve the data set for a politico-scientific discourse assessing global threats, not as the source of competing, and potentially disruptive meanings.

Downie/Fenge then state that “[t]he POP story is partly about translating science into policy (...) [and] of Arctic Indigenous peoples defending their cultures and economies in international negotiations among states” (ibid.). Pointing towards the doubtlessly important question of collective agency in a globalised political environment, the authors nevertheless implicitly reveal the mechanisms of exclusion at play in the politico-scientific discourse: “*Taking their place* in a rapidly globalizing world, Arctic peoples have begun to use advocacy to address new international agreements and economic activities” (ibid.; my emphasis). First after having been positioned by the hegemonic discourse - after having taken *their place* - indigenous voices become relevant. The reason for them being heard is not an interest in a different (and potentially disruptive) surplus of meaning vested in a competing discourse,ⁱⁱⁱ but the incorporation of that discourse, the assimilation of it into a hegemonic one. The suggested measures to improve the situation in the North are, consequently, framed as follows a sentence later: “...increase scientific research and monitoring and (...) turn political attention to this huge and still poorly understood region.”

The answer to the rhetorical questions posed above, hence, emerges as implicitly given from the outset: Scientific knowledge constitutes an objective base upon which policies are based. The role of indigenous voices is not to potentially challenge this objectivity of the hegemonic discourse and reveal it as the result of precarious and contingent processes of objectification, but to

manufacture local consent to the measures prescribed by the politico-scientific discourse with reference to objectively assessed threats to the well-being of Arctic inhabitants.

The composition of the edited volume as a whole is a good illustration for this. Of the in total 12 chapters of *Northern Lights*, 5 are dedicated to empirical POP science and even though the term indigenous recurrently appears, local inhabitants figure as little more than a sample group for the assessment of POP levels in human organisms.^{iv} The remaining chapters deal with the high echelons of global POP policy. Only two of them specifically address indigenous issues. These chapters, however, limit their focus on the role indigenous organisations and individuals play in large-scale international negotiation processes.

Even though Downie/Fenge throughout the introductory chapter repeatedly assert the importance of including indigenous voices into the discourse pertaining to contaminants in the Arctic, only one of the in total 23 contributors of *Northern Lights* is indigenous. In addition, the position of this contributor is narrowly framed throughout the introduction chapter: It is claimed that she “reflects on the role of individuals of good will who respected and gave weight to Indigenous peoples’ efforts and interventions” (:xxi). This statement effectively frames indigenous agency as dependent on the voluntary support of particularly open-minded individuals. In a style reminiscent of a teacher content with achievements of a pupil the introduction further states: “We note the certainty and steadfastness with which she [the author of the chapter in question] (...) approached the issue, understanding its importance to the environment and public health of Inuit”. In the light of the claim made earlier that Inuit, as *guardians of the environment*, are better equipped to understand the nature in the Arctic than anyone else, this statement seems odd. It, however, clearly reveals the mechanisms of exclusion at play in the politico-scientific discourse which is brought to surface during the chapters of this volume: She is only allowed to speak, when it is made perfectly clear that she has been adopted into the hegemonic discourse and that her

subjectivity has been sufficiently positioned by this discourse. The lines quoted above, emerge as nothing less than her official admission to this discourse.

Long-Range Transport of Information, the publication by Myers/Furgal (2005), throws light upon the issue of discursive overcoding from a different perspective. This journal article explicitly deals with the translation of scientifically assessed knowledge concerning potential health impacts of POPs into policies directed towards largely indigenous communities in the Arctic North. Here, the principle of overcoding comes to light in a clearer fashion.

Long-Range Transport of Information reports on surveys carried out in four communities in Canada's Arctic North with the objective "to evaluate the degree to which public information about contaminants has been received, absorbed, interpreted, and acted upon by residents" (Myers/Furgal 2005:48). In reducing the problem of discursive interaction to one of assessing the necessary conditions for successful communication of unambiguous information from a producer to a receiver makes it possible to refrain from perceiving the other as a subjectivity positioned by different and often competing discourses. The other is implicitly positioned within the own discourse from the outset, as this latter one is signified as a sutured totality. The text in other words reveals a subject position determined by an objectified politico-scientific discourse.

Myers/Furgal set out and assert that "in all communities [which were studied], production and sharing of traditional food are also very important (...) for social and cultural reinforcement" (:48). Instead of further specifying this significance of rituals connected to country food they use the rest of the paragraph to list the nutrition value of the various foods consumed by local inhabitants. Cultural and discursive processes connected to country food are put off with three words, while a whole paragraph is dedicated to its content and nutrition value. Focus is, in other words, entirely directed on *what* people consume and not on *how* or *why* they do so. This, of course, makes changes in consumption patterns predominantly a problem of nutrition values and minimises the importance of the potentially severe impacts on local systems of meaning.

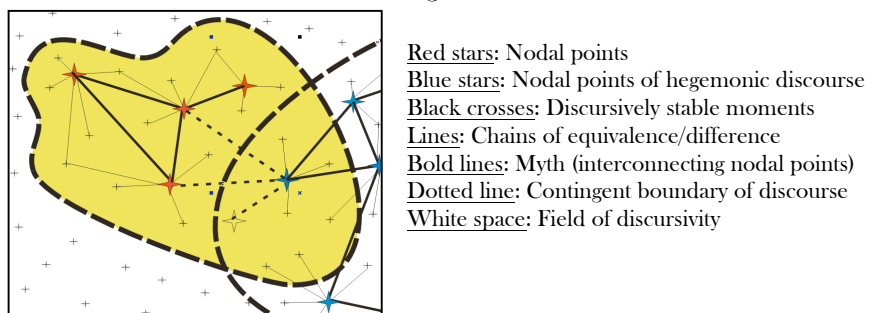
When assessing problems of communication, the authors, firstly, deal with the issue of language. They rightly assert a “language gap” (:48) between traditional ecological knowledge and Western science. They quote Powell and Leiss asserting an “inaccuracy of terminology available in Inuktitut and [a] resulting confusion” (:48). It clearly emerges here, that indigenous language is marked as inferior and not sufficient for the required task of conveying beneficial scientific facts. This marking of the other as the one to improve becomes particularly clear when the authors approach the problem of science a paragraph later. Where Inuit language is treated as simply insufficient, scientific uncertainties are presented as due to the fact that “science itself is uncertain and *constantly improving*” (:49; my emphasis). This uncertainty of science is not due to some elementary flaw, but caused by the fact that “new compounds” are constantly identified and “ever smaller amounts can be measured with increasingly precise equipment” (:49). Potentials for development are, as such, only assigned the politico-scientific discourse and its language, not to local frameworks of meaning.

To overcome the obstacles created by language incapacities, a lack of “trust”, and the presence of “suspect” (:49) among Northerners regarding information disseminated from the South, the authors suggest to “design information programs for Northerners, in the hope that better information would support individuals’ decisions making about healthy consumption of country foods” (:49). They assert an “ethical responsibility to communicate and educate in ways that are accessible and understandable to the population” and maintain, in addition, that “the current contaminants issue may challenge the very way in which traditional knowledge systems understand phenomena”, implicitly acknowledging overcoding of traditional meaning systems as a necessary consequence of effective communication of allegedly unambiguous content over cultural and language barriers.

Throughout the previous sections it became apparent that, what the authors of *Long-Range Transport of Information* term successful risk communication, in reality, rather resembles a process

of interdiscursive overcoding, where local meaning systems are treated as little more than obstacles to the communication of objectively assessed threats. To improve communication we have to learn how to effectively convey objective information across a gap to *them*, hence enabling them to take the decisions necessary to improve their health conditions. The politico-scientific discourse here obviously signifies a totality to itself; it emerges as an objectified hegemonic sedimentation of meaning, which deploys strategies to co-opt the potentially subversive surplus of meaning emerging from a competing discourse, hence, ensuring its own precarious stability in the field of discursivity.

Figure 4: Discursive interaction: Overcoding



The hegemonic politico-scientific discourse overdetermines the merely temporarily sutured identities of local communities. ‘Country food’ is an important nodal point of local indigenous discourses. Its production and consumption determines social roles, as well as political structures, and provides status and necessary means of subsistence. Its ritualistic representation establishes chains of equivalence/difference important for the achievement of a partial and temporal fixation of social identity.

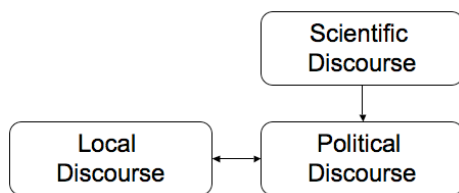
The assessment of invisible threats connected to this nodal point, and the material introduction of competing food, effectively empty the signifier ‘country food’ and refill it with meaning derived from within the frames of a politico-scientific discourse. A whole subset of moments from this discourse are thus included into local discourses effectively stabilising their elements in new configurations or dissolving them completely. This activation of a subversive surplus of meaning *can have* destructive effects on community structures, which might equal the long-term impacts of contaminants on human organisms and should, therefore, be taken seriously.

3. Semiotisation

Semiotisation refers to processes by which discourses increase or decrease their conceptual horizons. Either, elements from the field of discursivity are articulated and integrated into established chains of equivalence/difference without disrupting those and without subverting the structural function of nodal points - the discourse expands (semiotisation); or, temporarily fixed discursive moments are opened up and become subjected to a renewed sliding of signification without, however, destabilising wider frameworks of meaning - the discourse contracts (desemiotisation). Both processes are often interrelated as the semiotisation of one field of knowledge often implies the desemiotisation of another. Semiotisation refers to mechanisms of change and adaptation internal to discourses. However, articulations emanating from subjects that are overdetermined by competing discourses often facilitate these processes.

As such, the interaction between political and local discourses concerning contamination in the North can, under certain circumstances, be conceptualised as semiotisation. This view leaves the totalising character of a hegemonic scientific discourse in tact. However, on the basis of objectified empirical evidence, a political discourse enters into a dialogue with local discourses to facilitate intradiscursive changes (semiotisation). This view surfaces in the article *Digesting the Message About Contaminants and Country Foods in the Canadian North: A Review and Recommendations for Future Research Projects* by Furgal/Myers/Powell (2004).⁵

Figure 5: Discursive interaction - Semiotisation



Digesting the Message presents a culturally and socially comprehensive study concerning risk communication concerning POP contamination in country foods in the Arctic North. The authors of the journal article, for instance, assert that the “exposure to and the *knowledge* of these

contaminants in traditional foods poses risks to the *physical, social, and mental* health and well-being of Northerners” and claim that “determining the risks and benefits of country food consumption in the face of environmental contamination requires the explicit consideration not only of the type and amount of foods consumed, but also of the *sociocultural*, nutritional economic, and *spiritual* benefits provided by these food sources” (Furgal/Myers/Powell (2004):104; my emphasis). Risk communication across language and cultural barriers thus emerges as a central concern as the “disruption of country food production, sharing, and consumption patterns can have serious effects on health and society in Northern communities” (:104).

In *Digesting the Message* Myers/Furgal/Powell further assert that “[f]orms of knowledge in northern communities are different from knowledge systems found in the South” (:104) and that this makes it difficult to grasp scientific findings as these concepts “are layered onto an entirely different worldview and mode of understanding” (ibid.). These statements by the authors concerning “Inuit *Qaujimajatuqangit* (...) Inuit ways of knowing, ways of being, and worldview – past, present and future” (:104-5), entail an acknowledgement of local/indigenous discourses as entirely valid and concise views on reality, which have to be taken into account as important and valuable when attempting to communicate risks in a beneficial manner. Together with the many examples the authors present for the disruptive effects of previous interventions in local communities to change consumption patterns, semiotisation is brought to emerge as a preferred way of discursive interaction.

In the case of *Digesting the Message*, a political can be distinguished from a scientific discourse pertaining to ecological threats in the North. While the scientific discourse remains a totalising and hegemonic overarching framework for the assessment of objective facts, the actual implementation of measures is recommended to rather take the form of an interdiscursive dialogue between centralised and local frameworks of meaning.

The aim of this form of discursive interaction is to articulate new material objects carrying a potentially subversive surplus of meaning (contaminants) without disrupting crucial signifying structures (nodal points, chains of equivalence/difference) of local target discourses. The discursively unfixed elements are, hence, turned into moments, which integrate into the wider structure altering it only moderately. As a consequence, the discourse increases its conceptual limits. The disruptive impact of excessive meanings from the field of discursivity is contained, by interlocking the system in a new (precarious) stability.

Figure 6: Discursive interaction: De/Semiotisation

discourse	<u>Red stars:</u> Nodal points
	<u>Blue stars:</u> Nodal points of hegemonic
points)	<u>Black crosses:</u> Discursively stable moments
	<u>Lines:</u> Chains of equivalence/difference
	<u>Bold lines:</u> Myth (interconnecting nodal
discourse	<u>Dotted line:</u> Contingent boundary of
	<u>White space:</u> Field of discursivity

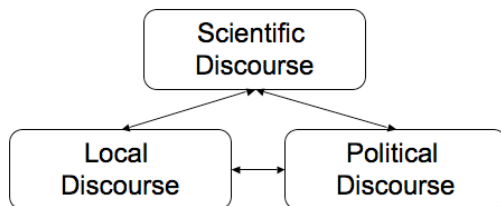
Discursive interaction as semiotisation entails changes in the conceptual universes determinate of target discourses. These changes, however, are attempted executed internally without disrupting meaning systems as a whole. In the case of contaminants in the Arctic, also the processes of semiotisation taking place between a centralised, political and various local discourses rest on the implicit assumption of an elevated position of Western empirical science as providing a privileged point of view enabling universally valid conceptual mastery. The scientific discourse, in other words, remains a determinate hegemonic totality. First the third mode of discursive interaction - *interdiscursive translation* - attempts to position local or indigenous discourses as fully equal to politico-scientific ones. This mode of interaction is based on a reappraisal of traditional indigenous knowledge systems and an acknowledging of a subversive surplus of meaning vested in

indigenous frameworks of meaning, which might disrupt and subvert the hegemonic totality of a politico-scientific discourse.

4. Interdiscursive translation

The idea of interdiscursive translation is based on the notion of true two-way interaction between discourses. This means more than the undoubtedly beneficial form of communication advocated in *Digesting the Message* (Myers/Furgal/Powell 2004), which aims at getting the contaminant message across in an efficient and non-disruptive manner and entails recurrent feedback loops to constantly assess impacts, as well as different culturally and socially sensitive forms of dissemination using various channels and languages. True two-way communication would mean a form of communication, which not only aims at informing local communities about previously unconceivable threats in a sustainable manner, but, in addition, to insert new meanings and concepts into the hegemonic politico-scientific framework. In doing so, both discourses would become targets for each other's interventions - for contingent articulations of potentially subversive surpluses of meaning vested in the field of discursivity. As such, "translation (...) as a component of a politics of interpretation, offers itself as a mode of critical self-reflection" (Shapiro 2004:27). It is a means of "challenging the authority of privileged loci of enunciation (...) [and] to politicize the question of meaning" (:28). Translation as such a mutually politicising form of discursive interaction, surfaces in *Inuit Perceptions of Contaminants and Environmental Knowledge in Salluit, Nunavik* (Poirier/Brooke 2000).⁴

Figure 7: Discursive interaction - Interdiscursive Translation



Inuit Perceptions aims at contributing to “the development of a ‘trans-cultural discourse’ (...) on the issue of contaminants” (Poirier/Brooke 2000:78). Besides this task, their text also provides a deep insight into the local indigenous discourse in Nunavik, Canada.

The authors claim that they “seek ways to bridge the gap between the Inuit knowledge system, and that of Western science” (ibid.:79). This seems to be a theme familiar from attempts to ensure viable condition for interdiscursive semiotisation treated in the section above. However, Poirier/Brooke immediately widen the scope of their approach and effectively situate indigenous discourses on the same level as a politico-scientific one: “[B]oth knowledge systems [indigenous and Western science] are value-laden, both are authoritative in their own cultural context, both are constructed in terms of their own cultural objectivity according to different ontological and epistemological principles” (ibid.:79). This statement reveals both discourses as contingent structures reproduced through precarious processes of objectification. It effectively precludes the politico-scientific discourse’s aspiring to signify itself as a sutured totality. This implicit notion of any discourse as a merely partial, temporary and contingent fixation of meaning is the precondition for any form of interdiscursive translation or the establishment of a “trans-cultural discourse”.

However, what has been said so far does not imply that the acceptance of an autonomous indigenous ontology and epistemology precludes any form of communication, or that the issue of contaminants should best be left alone. On the contrary, it facilitates interaction, but “on equal footing” (ibid.:89), where indigenous knowledge is not treated as an “object for science [but] (...) as a system of knowledge that could *inform* science” (ibid.:79; my emphasis). Consequently, in *Inuit Perceptions* Poirier/Brooke dedicate significant attention to the ways local discourses account for changes in the environment and on how these accounts can be related to the issue of contaminants.

The form of interdiscursive translation, or cross-cultural dialogue, sketched out above today still remains unrealised. Poirier/Brooke (2000) themselves assert that: “In addition to the structure of differences, questions of power and authority necessarily come into play” (:89). In spite

of the authors' articulation, the totalising signifying structure of the politico-scientific discourse very much remains in tact and indigenous voices "continue, within the issue of contaminants, to be considered as knowledge of secondary importance, as being in no way as reliable or tangible as biomedical knowledge" (ibid.).

IV. Biopolitics in the Arctic

Underlying the different forms of discursive interaction described above is an understanding of power as dispersed and inherently productive. According to Foucault (1982), power is not wielded by distinct agents. It is inherently relational and figurates amongst subjects systematically reducing possibilities for individual as well as collective performances. For this enquiry the form of power underlying Foucault's concepts of biopolitics becomes particularly relevant.

Foucault (2007:1-11) distinguishes between three mechanisms of power: the legal system, disciplinary mechanisms, and security apparatuses. The legal system is vested in binary distinctions between allowed and prohibited, between legal and illegal, and relies upon coercion and punishment to maintain order. Disciplinary mechanisms still maintain forms of coercive punishment, but supplement those with a logics of surveillance - "supervisions, checks, inspections, and varied controls" (4) to avoid potential future crimes - as well as "penitentiary techniques" (ibid.) to correct perpetrators. Both the politico-juridical and the disciplinary mechanism are "essentially centered (...) on the individual body" (2004:242) and serve to exercise control over subjects as individuals. Security apparatuses, on the other hand, aim at regulating populations. Foucault (2004) claims that "after the first seizure of power over the body in an individualizing mode, we have a second seizure of power that is (...) massifying, that is not directed at man-as-body but at man-as-species." (243). As a consequence, practices of incarceration, discipline, and control are supplemented by regulatory regimes vested in statistical assessments of risks to populations and their potential cost-benefit ratios. According to Foucault (2004), the sovereign power "to take life or let live" is thus complemented by the power "to 'make' live and 'let' die" (241).

This change in the mechanisms of power initiates a transition in politics from “an anatomopolitics of the human body” to a “biopolitics of the human race” (Foucault 2004:243), that will “derive its knowledge from, and define its power’s field intervention in terms of, the birth rate, the mortality rate, various biological disabilities, and the effects of the environment” (ibid.:245). Biopolitics, as such, draws upon phenomena that are accessible merely through statistical approaches generating forecasts and estimates. What at an individual level remains aleatory and unpredictable (such as the actual life-span of an individual, or the number of children a particular woman will give birth to) becomes accessible and exhibits constants on a collective level. In this idiom, death is replaced by mortality rate and actual births by rates of fertility. This form of statistically acquired knowledge enables interventions “at the level of their [phenomena’s] generality” (ibid.:246) with the aim to “establish an equilibrium, maintain an average, establish a sort of homeostasis, and compensate for variations” (ibid.).

In biopolitics two techniques of power effectively conflate. A disciplinary variant aims at producing productive and docile individual bodies through such mechanisms as drill, exercise, and surveillance, while the biopolitical component aims at regulating random events – predicting their occurrence, assessing and compensating for their effects to achieve an “overall equilibrium that protects the security of the whole [population]” (249). The notions of risk as such acquires major importance – a statistical risk posing a generalized threat to a population as a whole, that is met with techniques of statistical assessments, securitization and medicalization.

In the case of POPs in the Arctic environment, many politico-scientific interventions into local discourses follow a biopolitical trajectory. Local communities are discursively constructed as populations exposed to a risk, that only figures as impalpable statistics measuring overall tendencies. The established body of knowledge then activates a security apparatus that implements emergency measures to mitigate the invisible threat. These measures imply a generalized medicalisation of populations through constant health assessments concerning nutrition values and/or POP concentrations and, subsequently, recommended changes to diet and everyday

practices. The articulation of statistics and measurements and the deployment of science-backed procedures to mitigate the predicted risk are biopolitical measures in the sense of Foucault to regulate “a population of living beings to optimize a state of life” (2004:246).

In Foucault’s thought power, biopolitical power included, is not evil. It is simply a social fact. This means that any critique of a biopolitical conduct does not with necessity imply the presence of sinister particular interest subjugating populations for the sake of their own cause. However, power has implications and to understand these implications is of the greatest importance for critical research. What Foucault’s thought entails is not so much a general skepticism to power, but rather an awareness of the absolute necessity to understand its techniques, mechanisms, and regimes to be able to resist it, and mitigate or avoid negative implications of potential misuse.

The communication of POP science to Arctic communities can be seen in a similar light. Even though biopolitics in this case emerges as a set of hegemonic interventions emanating from an objectified, politico-scientific discourse, which signifies itself as a sutured totality, it is deployed with the best intentions to mitigate a threat that, though invisible, poses real risks to individuals as well as populations. The texts discussed in this paper, however, predominantly exclude local knowledges pertaining to the environmental conditions in the North when building up the knowledge base for biopolitical interventions. As has been shown above, even in texts purporting to be both culturally sensitive and politically inclusive alternatives, local discourses remain largely unarticulated and are frequently overcoded. Also in these texts, local systems of knowledge remain “of secondary importance” (Poirier/Brooke 2000:89). They are predominantly treated as what Foucault (2004) refers to as “subjugated knowledges (...) knowledges that have been disqualified as nonconceptual knowledges, as insufficiently elaborated knowledges: naive knowledges (...)” (7).

The implicit and explicit exclusion of alternative (and potentially subversive) discourses in many cases led to an overcoding of local systems of meaning and to an effective disruption of social and cultural communities in the Arctic. In these cases, the articulation of invisible threats entailed devastating effects to local systems of meaning – often as devastating as effects of material pollutants

on local ecosystems. As such, through discursively insensitive measures, an ecological threat to human security in the Arctic was complemented by a discursive or representational threat that might lead to equally grave challenges to the sustainability of local communities. To understand the functioning of biopower in this case might have facilitated inclusive approaches aiming at discursively sensitive forms of interaction between incommensurable discourses.

Only one form of discursive interaction, sketched out in this paper entails a critical and potentially subversive reassessment of established power-knowledge configurations of the politico-scientific discourse; interdiscursive translation. To employ Shapiro's (2004:29) terminology, only this "critical approach to translation" might really "displace a (...) science driven by a fantasy of delocalised or universally valid conceptual mastery" and sufficiently broaden "the sphere of subjectification" to empower subjects of local discourses in a way that their actions might structure the field of possible actions enunciated from the politico-scientific discourse.

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ⁱ It goes without saying that the different forms of discursive interaction sketched out in this paper are not clear-cut entities, but resemble more locations on a scale. The implicit contents of the mentioned texts correspond only to a certain degree to the concepts introduced.

ⁱⁱ Downie/Fenge (2003) will figure as *Northern Lights* and Furgal/Myers (2005) as *Long-Range Transport of Information*

ⁱⁱⁱ At this point, I have to point out that I am *not* of the conviction that indigenous discourses are with necessity disruptive as they might be attributed some form of more direct access to a metaphysical real (e.g. the notion of nature and the natural), but because they represent a different configuration within the field of discursivity.

^{iv} This in itself is not a problem. Indigenous peoples form the majority group of local inhabitants, so they are an important sample group for doubtlessly necessary research. What the appearance of the term indigenous in these texts *not* does, however, is to frame indigenous people as subjectivities positioned by an own discourse.

^v This text will figure as *Digesting the Message*.

^{vi} This text figures as *Inuit Perceptions*.