A NETWORKED NORTH? THE NORTHERN DIMENSION, ICT AND CIRCUMPOLAR GEOPOLITICS

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Introduction

Northern dimension foreign policies among the Arctic states have brought a basic agreement about the importance of developing a new discourse and new northern geopolitics. These must now include recognition of the need for environmental protection, the importance of traditional cultures, the need to support the development of vibrant civil societies among northern populations, and now, increasingly, the need to develop Information and Communications Technologies (ICT) networks which are responsive to the burgeoning civil society of the region.

The development of “northern dimension” foreign policy within the circumpolar north is an interesting phenomenon because it signals the intention of the Arctic states to respond to the globalization of Arctic issues at least partly, through the options available within the existing international system. Northern dimension foreign policy may be a relatively new and cooperative form of transnationalism, but it is predicated on an understanding that there is a functional division of domestic and foreign policies roles for the traditional state within Westphalian international system. In short, although northern dimension foreign policy within the circumpolar north is, arguably, creating new opportunities for unprecedented transnational cooperation, it remains situated within normative practices of international regimes. The latter are specialized arrangements that pertain to well-defined activities, resources or geographical areas and involve some type of subset of members of international society—in this case predominantly, but not exclusively, national governments. Indeed, the north is increasingly, although not exclusively a place where NGOs and indigenous peoples organizations are being incorporated into the structure of international for a such as the Arctic Council.

In recognition of this fact, this paper explores the idea of a networked North and the likely shape of regional boundaries in terms of the potential impact of virtual capacities on identity, citizenship, and social equity. It raises the question of whether regionalism and transnational cooperation developed within current northern international regime practices and foreign policy dimensions can support, or be expanded to include new structures and activities which promote both transnational and local forms of civil society. Can existing international regimes be linked to new forms of governance and sustainability, and new institutional capacities focused on the regional and local scale? The question is relevant in terms of the bigger question of the changing form and function of the state system in the late 20th and early 21st century and the broader assessment elsewhere in the literature about the impact of neoliberalism and other forms of ideological and structural change, upon the regulatory state under conditions of globalization. ICT landscape is a useful example to consider in this evaluation. Each

1 See Oran Young, International Cooperation: Building Regimes for Natural Resources and the Environment (Cornell University, 1989) p. 13, for a definition of international regimes.
circumpolar nation has identified an ICT plan, which, to some degree, furthers not just generic "region-building" in the circumpolar north, but also its own specific national agendas. The contradiction is, however, that although state subsidy is critical to development of ICT capacities, geographical conditions also demand cooperative transnational efforts and cooperation among the spectrum of northern governmental and non-governmental agencies. In recognition of this fact, this paper explores the idea of a networked north. Although preliminary, this exploration may have some implications in assessing the potential for the achievement of the broader goal of social equity, strengthened civil society and sustainable development.
International Regimes

The Arctic has become a region of renewed and heightened geopolitical interest to decision-makers in the post Cold War era. Despite continuation of traditional security concerns within the region, attention has recently begun to shift from militarily strategic security issues which have previously been tantamount to security within the region (for example, the creation for Distant Early Warning system or D.E.W. line) to the broader challenges of achieving human security, countering the risks imposed by global warming, and addressing the impact of new and pressing environmental threats upon circumpolar environments. In part, the new environmental agenda has resulted from the recognition of the growing impact of global sources of pollution, global warming, and military contamination upon the circumpolar north.

But the new post-war security agenda in the North has also been the result of a growing awareness of the need to apply the concepts of sustainable development which developed in the 1980s from forums such as such the Brandt Commission. Indeed, the latter is sometimes credited as the first international venue to publicly promote the idea of “comprehensive security.”3 In its discussion of “Common Security”, for example, the Commission urged the transformation of traditional military-based notion of security to include a broader focus on “human security.”4 Such transformation would require greater international cooperation, transparency, disarmament, and demilitarization. The impact of 9/11 notwithstanding, this new approach to the definition of security has had a catalytic impact upon the structure of international relations within the circumpolar North, as attention shifts from maintaining strategic control of territory to promoting environmental cooperation and multilateralism.5

The importance of this changing definition about security should not be underestimated. This is true not only in terms of its role in encouraging new forms of northern cooperation in foreign policy terms, but also in terms of its influence upon the structure and nature of Northern governance—at all scales. In recognizing new types of security threats beyond those associated with military security—including climate change, persistent organic pollutants (POPs) and other forms of environmental degradation—new ideas about comprehensive security and their geographical definition have both facilitated and demanded new forms of geographical definition of Northern security and northern regionalism (Figure 1). Northerness and remoteness, combined with regional physical characteristics which make the geographical area extremely vulnerable to environmental

3 Ibid. Olaf Palme, Swedish Prime Minister in the 1980s, was one of the first to coin the phrase “comprehensive security” to describe the comprehensive implications for three types of post-Cold War security needs: economic security, environmental security and human security.


change, have proven to be a real motivation for transnational cooperation in ways which are unprecedented in the south.

**Figure 1: The AMAP Area**

The northern dimension process began in the 1980s. When President Gorbachev called for cooperation among the peoples and countries of the Arctic states. In early 1990s, the Nordic countries such as Norway and Finland issued a similar call, when they respectively defined their version of northern policies. As a result of these events, a new kind of international process was started, the outcome of which was the signing of the Arctic Environmental Protection Strategy (AEPS) among all the eight Arctic states (Canada, Denmark, Finland, Iceland, Norway, Sweden, the USA and what was then still the Soviet Union) covering the northernmost parts of the globe defined as the Arctic (see Figures 1 and 2). The AEPS, initiated by Finnish diplomatic efforts, and with a content greatly influenced by Canada, met regularly after this, with the view in mind of crafting policies which would increase the protection of the Arctic environment from environmental degradation through a process of coordinated effort.

The AEPS was clearly an environment-focused initiative. Trans-boundary pollution, and the need for environmental protection in the North, were among the main reasons for this international cooperation, even as it extended across what were then the borders which

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6 Arctic Environmental Protection Strategy 1991.
divided the two major ideological blocs of the Cold War period. The cooperation was, however, expanded into other aspects of multilateral decision-making in the North, particularly through the Task Force on Sustainable Development. The momentum created by the AEPS consensus on resolving northern development challenges was also to contribute to the impetus for the formation of the Arctic Council (AC) in 1993. The AEPS Task Force on Sustainable Development was thus transformed into the Arctic Council’s Working Group on Sustainable Development (SDWG), while the Arctic Council assumed a new role in overseeing and continuing the work of the AEPS, but with a broader and continued focus on foreign policy. Indeed, it was the consensus on environmental strategies, forged by the AEPS that ultimately led to the establishment of an Arctic Council.

Contributing to this broader foreign policy focus was the fact that the development of the AEPS, the formation of the Arctic Council, and other similar northern initiatives (for example the establishment of the Barents Euro-Arctic Council in 1993), spurred the EU to develop its own “northern dimension” in foreign policy as a part of its external and trans-boundary policies (which we will discuss later). The EU’s “northern dimension” was to deal with issues specific to its “Arctic Eight” member states (Northern European countries such as Norway, Iceland, Sweden, Denmark, Finland), as well as with neighbouring Russia, Canada, and the US. In the late 1990s, Canada too developed a Northern Dimension foreign policy which was organized to orient Canada’s policy towards the north within context of a broader circumpolar region, and towards comprehensive definitions of human security which included self-governance, health, education and traditional knowledge, food security, environmental safety and a strengthened civil society for northerners.

While states are important actors and decision-makers in context of the Arctic Council, an international fora for promoting environmental security treaties, the regionalization of comprehensive security in Northern security discourses has proven to be a vehicle for cooperation across international boundaries because pollution and climatic change transgress borders irrespective of the national divisions imposed as lines on the map. Translational instruments such as the Arctic Council and its Arctic Environmental Protection Strategy, or the Arctic Assessment and Monitoring Program, are all designed to facilitate translational cooperation in the face of the new environmental threats which face circumpolar societies in the North. There are, nonetheless, clear limitations to this process which are important when we turn to broader definitions of cooperation within the North.

For example, the approach taken by US decision-makers, at least those in Washington, with respect to the circumpolar north is distinctively different from that of Canadians and Europeans, although there is overlap with the European Union’s focus upon Eastern and Northern European states. The US has recently discarded the North European Initiative

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7. The AEPS included the following programs and working groups: the Arctic Monitoring and Assessment Program (AMAP) established in 1991 to “monitor identified pollution risks and their impacts on the Arctic ecosystem”, the initiative for protection of the Arctic Marine Environment (PAME), a program for Emergency Preparedness and Response (PERR), and an agreement on the need for the conservation of Arctic Fauna and Flora.

8. See Declaration on the Establishment of the Arctic Council, 19th day of September 1996 in Ottawa, Canada.
(NEI) in favour of developing an Enhanced Partnership in Northern Europe (e-PINE). At the state level, American policy-makers are less inclined to make policies which promote a formal relationship and linkages with the Arctic Circle, and indeed have secured an agreement from the Arctic Council nations that this will not be used as a binding policy-making forum. The US approach to participation in the Arctic Council is driven by a number of specific issues, rather than by a sense of geographical regionalism. Indeed, “national security, economic development and scientific research are important U.S. interests in the region”. According to the official political rhetoric a true U.S. Arctic policy “emphasizes environmental protection, sustainable development, human health and the role of indigenous people,” but this emphasis is specific to US peoples and places, not Pan Arctic indigenous organizations nor trans-national issues above and beyond environment. Consequently, it would be fair to say that theoretically, the US position towards the circumpolar region remains traditional, in the sense that it is based upon a state-centred agenda in which security and national interests are emphasized, although with recognition of the broader context of globalization.

In addition, there are very different understandings of what the North is in the US, as compared to other Arctic Council nations. Within the USA, for example, until very recently “northern dimension” foreign policy seems to have meant, strictly speaking, the Baltic States and “security” issues. The development in 1997 of a North European Initiative was designed to address the issues of a new geopolitical order in the wake of the Cold War and dissolution of the USSR. Indeed, the US approach to the international North can be understood as having two very separate sets of initiatives and policy directives, and is administered under two separate State Department programs. On the one hand, the NEI and e-PINE are steered towards foreign relations in which more general US policy goals of building democratic and stable society and promoting free markets are met. In both, there has been a focus upon the sub-national level, with a broadening out to include actors such as NGOs, TNCs, multilateral organizations and others, as well as a broadening out of the definition of security interests to include a broad-based concept of human security including “economic deprivation, energy shortages, weakness of democratic institutions, communicable diseases, environmental degradation, crime, corruption and loss of cultural identity”. On the other hand, a separate US State department program administers US participation in the Arctic Council, with virtually no overlap in personnel, program or policy development between the e-PINE and Arctic Council programs. There is no single 'northern dimension' to US foreign policy.

Figure 2: The Circumpolar North Divided by National Boundaries, Northern Dimension Policies and International and Translational Organizations
Indeed, in terms of foreign policy, it would seem that Washington is less interested in the dynamics of northern civil society today than in previous years. It also seems less interested in indigenous society or indigenous representation, than it is in the monitoring of Arctic environment, or the assessment of the potential for Arctic oil reserves. So somewhat ironically, while on the one hand its definition of broadening the basis of civil society has recently been modified to include private oil companies’ assessments of environmental issues in drilling for Alaskan oil, on the other hand, the USA is more interested in the strategic importance of the Russian North for traditional military but also energy security purposes. This is due to the latter’s huge oil resources, and this might implicate close energy cooperation between the USA and Russia—which correspondingly might be implemented by a dramatic increase of oil transportation from the Barents Sea area to North America and Central Europe.
At the level of state to state, the USA state approaches the circumpolar north from a position of hegemony, and an attitude of “what's in it for me”. Because of the state-centred focus, conceptions of a US northern dimension do not, by definition, consider cooperation with Canada beyond a narrow set of initiatives based upon environment and health. In this sense, the USA cannot claim to have a northern dimension to its foreign policy, nor does it recognize the need for a geographical approach to northern environments. Its concept of northern dimension remains an issue-based approach in which traditional security and strategic concerns dominate.

What all of these “top down” northern dimension agendas do have in common is that they have brought some basic points of agreement on environment and basic human security to the discourse of the new northern geopolitics, there are limitations to the process, perhaps even contradictions. Parallel to the development of transnational environmental protection strategies under the auspices of the Arctic Council, the development of transnational “northern dimension” foreign policies of various Arctic states, as well as the European Union, there has been a consensus on the need to recognize the special problems of the north, and to develop cooperative and supportive policies to promote sustainable development and comprehensive security. But if the venue of international cooperation and new regionalism makes clear that if security is to be considered, it must recognize not only the need for environmental protection and traditional military security at the highest level of the international system, but the need for sustainability and comprehensive security at the local level. The latter means recognition of the importance of traditional cultures, the need to support the development of vibrant civil societies among northern populations, and now, increasingly, the need to develop lines of communication and ICT networks which are responsive to the burgeoning civil society of the region. This includes policies which support traditional cultures, vibrant civil societies among northern populations, and now, increasingly, the capacity for communication and ICT networks which are responsive to the burgeoning civil society of the region. The question is how whether the international regime can be viewed as a forum for the delivery of ICT Capacity—and if so, what new international actors are required and at what scale.

**ICT and the International Regime in the Circumpolar North**

We have seen that the circumpolar north is very much a testing ground for assessing the resilience of the international system under pressure from globalization. But while Europe has developed a common Northern Dimension to its foreign policy, which impacts largely on the policy orientation of its northern states, and its relationship with Russia, a clear lack of strategic northern dimension policy within the US restricts its ability to deal with unique problems within the circumpolar north in foreign policy terms. In such a case, it is clear that ICT remains a domestic policy issue within North America and Russia, but less so within Europe, where ICT capacities and their applications to civil society are better developed. It is also clear that the international regime which currently exercises a degree of influence over the circumpolar north must find a common ground and a way to identify ICT as a critical issue for international action. Traditional international regimes, with their clear division of internal/external and foreign/domestic roles are under pressure in the Arctic region to reformulate the rules of engagement across borders. Transnationalism requires
not only regional foreign policy adjustments, but adjustments to internal policies which have now become internationalized.

Funding for both education and technology infrastructure is critical in this respect. While there are programs for “remote” and “rural” initiatives within the circumpolar states themselves, it is clear that these programs are not necessarily targeted to the special demographic characteristics of the Arctic. Until recently, for example, many programs designed to promote economic development, health access, education, and ICT infrastructure have been more suited to rural or southern countries, while outside of the Arctic a business-oriented model has been preferred by many nations, to foster entrepreneurship in ICT and health delivery. The result is that the quality of education for circumpolar regions is not always equal to that of those outside the region, due to lack of resources, options and support. This means that, in the final analysis, the international regime which governs international relations among the Arctic states will have to be innovative. It will have to consider rethinking many issues that as part and parcel of the policy framework for an international regime, particularly those which have previously been designated as “domestic” concerns for state intervention, or fields of play for private sector development based upon consumer demand.

For example, in previous work, Heininen has shown that there has been tremendous growth and diversity in terms of the numbers of actors and NGOs who participate within the circumpolar region in the late 20th and early 21st centuries. Indigenous people’s organizations and intergovernmental organizations have been effective in bridging borders and linking the region from east to west. There are many organizations in North Europe which have transcended international borders effectively by building linkages both at the regional and at the local scale—one example is the North Calotte Committee for interregional cooperation between the northernmost counties of Norway, Sweden and Finland.

In the 1990s several counties, among them Lapland in Finland and the Komi Republic in Russia, created their own regional ‘foreign’ and economic policy. In northern Europe the idea of a ‘Europe of Regions’ and trans-boundary regionalism via the model of Euro-Regions includes east-west cooperation across the national borders between the counties of the Nordic states and Northwest Russia. This kind of cooperation like Haparanda-Tornio has also promoted integration across the national borders among the Nordic countries, and it has been used as a model for inter-municipal cooperation in North Europe, and further, EUREGIO Karelia in the context of regionalism can be seen as a realistic possibility to provide both cooperation and development in Northwest Russia. This point of view of ‘Northernness’ can be interpreted to represent some sort of rise of northern regional and local actors into international cooperation per se, and also to see it as a result of the fact that northern issues have infiltrated into political agendas of the Arctic states. 9

To what extent has the idea of sustainability infiltrated the political agendas of Northern states to the degree to which delivery of other issues such as northern health and

9 (Heininen 2005).
education services have become key social goals, or that ICT is regarded as an important vehicle for their delivery? What are the implications of this reality upon the development of ICT networks within the North? What are the kinds of policies and actions which might be required to deliver on the goal of sustainable development, particularly in areas which would be heavily impacted on by ICT? In addition to interviews of key decision-makers, actors and educators within the region, this study relies upon two important sets of texts which we can use to help identify the potential answers to these questions. One is the assessment of ICT and distance education in the north prepared by the University of the Arctic, which explores the relationship between education, ICT and foreign policy. The other is a set of tests produced by the Arctic Council’s Committee on Sustainable development, which has explored the need for ICT capacity to deliver upon the goals of access to health, education and environmental assessment within the North.

These documents suggest that while institutional capacity for environmental cooperation is well developed within the north, and it is possible to speak of a circumpolar region in terms of the instruments, ICT proves to be a different story. The nation-state and the international regime has not been an effective conduit for the delivery of ICT capacity, infrastructure and quality internet resources. Indeed, its delivery is highly localized because the development of communications infrastructure is not perceived, by national governments, as being a transnational project in the same sense that environmental assessment and environmental treaties might be seen. For example, in their analysis of ICT and Distance Education in the Arctic, Pekkala et.al. argued that while electronic communication systems might be the solution to overcoming barriers to education and other services which are currently challenged by distance and remoteness in the North, there is a lack of comprehensive data on infrastructure, applications and policies. These remain highly nationalized or even regionalized. Moreover, there is no readily available single data base which can identify the availability of ICT technology to northern peoples. In its 2006 draft report to the Arctic Council on Sustainability, the AC Working Group on Information and Communications Technology observed that: “In discussions on information and communication technology in a global context, there is a need to bear specific regions in mind. This includes the Arctic. Small remote communities, long distances and a general lack of effective infrastructure and communication characterize life in most of the circumpolar region.”

ICT networks are thus critical to the delivery of comprehensive security in an internationalized context, yet it is clear that the delivery of ICT remains the domain of the traditional international – i.e. state system. Pekkela’s matrix (Figure 3) suggests that the region, although unified in the desire to develop a networked north, is clearly divided. This is true for in terms of strategies, goals, focus areas and implementation of higher education applications of ICT. It is true, as well, in terms of the infrastructure and governmental policies which sustain technology programs.

10 Leo Pekkala et.al On Top of It, Overcoming the Challenges of ICT and Distance Education in the North. University of the Arctic Press, No. 1, Rovanieme, 2004.


12 Arctic ICT Assessment (AICTA) and Development of Practical ICT Projects “0” DRAFT Feasibility Study. 2006, p.1
Yet it remains unclear whether it is really infrastructure or policies which divide. It is within this context of governance and transnationalism that substantial differences emerge in explaining the relationship between foreign policy, traditional definitions of security, sustainability and international cooperation. The Arctic Council’s goal, for example, is to help Arctic governments and people develop the skills and tools required to live in the Arctic environment. In context of this goal, the promotion of ICT has been considered, rather clinically, as "capacity building." As such the international regime considers the issue as one of infrastructure for scientific and educational purposes rather than for broader purposes of governance or comprehensive security.

This distinction is important in terms of the geopolitics of the North, particularly is the structure of problem definition within the Arctic international regime as it presently exists. While US state department decision-makers, for example, argue that while education and health care delivery are mandates which they can comfortably support within the context of a circumpolar north institutional forum (the Arctic Council), support of indigenous empowerment, self governance or cultural diversity, are not. The limitation of the vocabulary of ICT development to "capacity building" is thus a critical geopolitical strategy which correlated the goals of this Arctic Council initiative to a broader circumpolar project comparable to environmental assessment. This point is critical and important to establish at the outset. The concept of a networked north is nested within the current structure of circumpolar transnationalism – or even lack of transnationalism in some cases. This is evident when looking at two aspects of ICT development within the north—the structure and importance of ICT for education, human health and scientific research, and the strategies of national governments to further develop ICT capacities.

The end result has been that although there has been consensus and treaties across the Arctic countries to develop cooperative environmental and science programs over the past decade, there has been less attention paid to the delivery of broadband internet capacity with which to facilitate human security needs. The result has been what Smith has called a widening gap in technology currency within the North. Most explicitly this gap expresses itself in terms of hard limitations in broadband capacities for interactive multimedia, conference and distance education. It presented equally challenging limitations when considered in terms of human and economic capacities. It is not just the need for technical support for distance education or institutional applications, as well as the necessary capital to support needed technologies. Smith argues that the potential revenue for providers requires a sound business case to provide incentives to the providers to invest the necessary capital to support needed technologies but critical services such as distance education. In many cases the problem has been resolved by government subsidy for health and education development to underserved or unserved communities—but these in turn "stovepipe networks" across communities and facilities and may leave others without access. Moreover, he notes that in places like Alaska, "should the health or education subsidies for Internet connections cease, the carriers would most likely be unable to

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14 Steven Smith, Technological Perspective On Infrastructure Needs In Distance Education in the North, in Leo Pekkala et. al., On Top of It, Overcoming the Challenges of ICT and Distance Education in the North. University of the Arctic Press, No. 1, Rovanieme, 2004.
continue the service of the schools and health clinics would not be able to afford the true cost of rural connectivity.\textsuperscript{15}

It is one of those ironies of globalization that in promoting uniqueness, cultural diversity and local traditional knowledge, ICT and a networked North provides the very conditions for discussion of the issues which are relevant and resonate throughout the broader circumpolar region. The boundaries of a networked North may well prove to be quite different from the boundaries of a circumpolar North defined by the AMAP or Arctic Council process, or by the process of Northern Dimension foreign policy which sees international boundaries as the prerequisite for development of different "internal/domestic" and "external/foreign" policy goals. This is clearly important when it comes to understanding the orientation of the political landscape with respect to its goals of ITC within the North. ICT itself is a metaphor for the ability of new types of human and comprehensive security to thrive within a international forum which is still cross-cut or even undermined by Westphalian state centered norms of traditional security. However, to argue that there is a comprehensive structure through which the North has become a networked social, cultural, economic, political and cultural region would be inaccurate. While there is a comprehensive treaty structure and series of agreements which define the circumpolar North, this comprehensive structure is restricted essentially to environmental issues which are strategic and empirically defined by scientific measures, or to interest in accessibility to health and education. In essence, the link between foreign policy, ICT and geopolitics is essentially limited to issues which are considered universal, incontrovertible and objectively defined.

Indeed, in the early 21\textsuperscript{st} century the Arctic Council, a major international regime responsible for promoting transnational cooperation within the circumpolar states, has drawn attention to the deficit in the deficit in ICT capacity at the local level, and the growing gap between the Arctic and the south. It has related this gap to the probably difficulty of delivering upon sustainable development—particularly in the area of access to education, economic development and health. While there has been consensus and treaties across the Arctic countries to develop cooperative environmental and science programs over the past decade, there has been less attention paid to the delivery of broadband internet capacity with which to facilitate human security needs. The result has been what Smith has called a widening gap in technology currency within the North.\textsuperscript{16} The ICT working group of the Arctic Council recently elaborated on this issue, with specific

\textsuperscript{15} The second reality is that the region is incredibly diverse. Indeed, in some ways it is impossible to understand the circumpolar north as a single region, because of its cultural, linguistic, geographical and historical diversity. Yet it is one of those ironies of globalization that in promoting uniqueness, cultural diversity and traditional knowledge that ICT and a networked North provides the very conditions for discussion of the issues which are relevant and resonate throughout the broader circumpolar region. The boundaries of a networked North may well prove to be quite different from the boundaries of a circumpolar North defined by the AMAP or Arctic Council process, or by the process of Northern Dimension foreign policy which sees international boundaries as the prerequisite for development of different "internal/domestic" and "external/foreign" policy goals. This is clearly important when it comes to understanding the orientation of the political landscape with respect to its goals of ITC within the North. ICT itself is a metaphor for the ability of new types of human and comprehensive security to thrive within a international forum which is still cross-cut or even undermined by Westphalian state centered norms of traditional security.

\textsuperscript{16} Steven Smith, Technological Perspective On Infrastructure Needs In Distance Education in the North, in Leo Pekkala et. al., On Top of It, Overcoming the Challenges of ICT and Distance Education in the North. University of the Arctic Press, No. 1, Rovanieme, 2004.
applications to telecommunications in the north. The need for regulatory analysis, and application rather than technology driven proposals for infrastructure development were highlighted—as were the broad differences in types of approaches and capacities across the board. These include needs-based assessment and funding programs targeted to local populations, as well as funding mechanisms which serve users as well as providers. The University of the Arctic and the UN's global virtual university are initiatives which try to fill these gaps—but again; they are dependent upon the state of technological infrastructure and the ability to deliver appropriate and relevant materials to a northern audience.

So on the one hand we have an the international state system with its international borders increasingly criss-crossed by foreign policies which look to international agreements to achieve transnational border cooperation, and on the other hand we have a heightened importance of the local level at which this new degree of political globalization is played out. We have, then, two rather contradictory assessments: one the movement of the North towards greater levels of civil society and sustainability, through rounds of transnational cooperation and changing problem definition; and that of a North were international regimes continue to dominate the landscape while gaps in human security widen.

These viewpoints are not irreconcilable, however. Building on the work of Pekkala et. al., it is clear that ICT capacity and infrastructure, particularly in terms of its inclusion in technology and program policies linked to institutionalized education and distance learning, has become an important priority for the international system. Swedish and Finnish initiatives, for example, attempt to incorporate not only Saami worlds, but to address gender gaps within the digital gap. States remain important actors in this process, incorporating issues of ICT into the framework of international regimes within the circumpolar North, but educational models, such as the Arctic University which operates throughout the eight Arctic countries, are possible venues for building capacity and infrastructure. In this sense, the development of ICT within the domain of the international regime currently characterizing cooperation within the circumpolar north is a very real possibility: Smith suggests that for groups of users to aggregate demand to provide carriers is an attractive anchor tenant with a sustained income stream. But as Smith observes, most of the infrastructure needs of the region are similar for education, health, and government and public service systems. Aggregate demand requires, however, aggregate population, and as Smith observes the low population densities and remoteness of the region may require more formal sharing among Arctic nations on information communications and technology (ICT), perhaps in the form of an Arctic Telecommunications Users group, along the lines of the Pacific Telecommunications Council (PTC) which is a collaboration between government, the private sector and education among the Pacific Rim countries.

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17 Steven Smith, Technological Perspective On Infrastructure Needs In Distance Education in the North, in Leo Pekkala et. al., On Top of It, Overcoming the Challenges of ICT and Distance Education in the North. University of the Arctic Press, No. 1, Rovanieme, 2004. p. 125.

18 Steven Smith, Technological Perspective On Infrastructure Needs In Distance Education in the North, in Leo Pekkala et. al., On Top of It, Overcoming the Challenges of ICT and Distance Education in the North. University of the Arctic Press, No. 1, Rovanieme, 2004. p. 126.
But we face again the problem we began with: This may prove difficult in the sense that aggregate use is restricted by the degree to which Arctic states both subscribe to a philosophy of governmental subsidy in the delivery of goods and services, and subscribe to the internationalization of domestic communications capabilities. Moreover, there are fundamental differences in ideas about the role of civil society, indigenous peoples and social welfare, as we have discussed in a previous paper. The lines demarcated by nation states seem resilient, notwithstanding the progress in foreign policy made by international regimes within the region. As Agnew has suggested for the 21st century international system in general, that fundamental divisions in the function of states inside and outside of borders is a longstanding and resilient tradition.19

Conclusions

The goal of the new international Arctic regime is to build international cooperation, through common policy approaches to the circumpolar north, and to develop a consensus with respect to resolving some of the critical issues. Initially, most attention was placed upon the globalized nature of environmental risks and hazards (such as POPs, nuclear waste or global warming) and the need to build transnational institutions to facilitate international cooperation. Many issues, such as global warming, have become more pressing over the past decade or so, as increasing levels of globalization bring new challenges and new opportunities to the region. But part and parcel of this reassessment of security issues, then, has been consideration of quality of life and standards of living for northern peoples, as well as a growing emphasis upon traditional knowledge and self-governance. These include the visible gap between standards of living and environmental quality, access to education and health, the resiliency of traditional cultures and the available venues for civil society. Indeed, there are new modes of governance in northern counties, provinces, municipalities and other sub-national governments (together with non-governments organizations) which now attempt to become present and more visible in different circles—essentially networking from the bottom up. Many are important actors with respect not just to local issues, but also within the international arena.

The ICT issue is critical for developing civil society, but not just because of linkages to education and health care. If a system is to be delivered from the perspective of meeting the needs for those who live in the north, then the focus of telecommunications, education and other networks must be necessity be focused on delivery systems which are not restricted only to business or entrepreneurial models. The project requires the support of states and international fora. It regimes some innovative policy which overcomes traditional divisions between the foreign and domestic functions of states within the international regime, and reexamination of problem definition of what is meant by civil society in much the same way that environment and security have been reviewed. ICT is not restricted in application just to the strengthening of civil society, but is clearly constrained its ability to contribute to civil society in the North in large measure by those policies reinforce fundamental divisions inherent in the Westphalian international order. This means that in the future, rather than being "frontiers" in the sense of being peripheral to the system, the "frontiers" of the Arctic states may prove to be among the first to

experience significant restructuring of foreign/domestic and international/internal relations.

Moreover, the issue is not unrelated to environmental concerns. As a recent meeting on global warming and the circumpolar north highlighted, there was identified a major policy gap in terms of programs of indigenous adaptation to climatic change which is presently occurring. How are northern communities to deal with the issue of being on the frontline of such change? Who will make decisions about policies to promote adaptation, accommodation and change? How will ICT and education contribute to this?

While the research in this paper is preliminary, it we have seen how, as an outcome of the current international landscape, it major international boundaries have been constructed between the North America countries, and also between North America and Europe. Perhaps, as Scott has remarked elsewhere about transboundary cooperation in Europe, institutionalization of transboundary cooperation at the local or even regional level, is not so much an idealistic goal as an essential precondition in resolving the ecological, economic and social problems effecting everyday life in border regions or transnational spaces: "ultimately, transboundary cooperation can only develop if nation-states mutually agree to suspend sovereignty over certain aspects of domestic policy". In the final analysis, the relationship between northern peoples and northern policy makers is to a large extent tied up in the potential for an international agenda which allows for indigenous participation and regional specificity. It remains a challenge to the status quo within the international system, and requires some reworking of international regimes to create both the leadership and infrastructure to develop capacities at the local level.

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