

SLiCA: Arctic living conditions

Living conditions and quality of life among Inuit, Saami and indigenous peoples of Chukotka and the Kola Peninsula



Birger Poppel (ed.)



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Foreword



Greetings from Greenland and the Government of Greenland

The release of the Survey of Living Conditions in the Arctic (SLiCA) anthology finds the Arctic in a defining moment. The global marketplace is increasingly looking to the North, once untouched, to find and harvest natural riches – oil, water, rare earth minerals, you name it. The difference from past periods of natural resources exploitation, however, is that the right to self-determination has now been established in the Arctic. In Greenland the Self-Government Agreement of 2009 has fundamentally changed the constitutional setup for Greenland and what we can do ourselves. Elsewhere in the Arctic there have been similar developments, though none as far-reaching.

The good thing about the SLiCA programme is that it is a give-and-take endeavour. We've been waiting for a long time to see the anthology, but here it is. In my eyes, this is the first comprehensive survey of Arctic living conditions ever performed. As such, it is an achievement for all of us involved. I welcome in particular the overall picture of the state of living conditions and welfare priorities across the Arctic region. I think that they

will be useful in making the realities of the Arctic peoples known around the world.

The anthology addresses a number of current issues. The good news is that most of us in the Arctic make it. The bad news is that major social problems, such as unemployment, alcohol abuse, suicide, drug abuse, domestic violence and sexual abuse are still prevalent today. It tells me that we have to look beyond the way we used to think and perceive the world.

It is important to look forward. The anthology provides a solid socio-economic knowledge base about the living conditions in the Arctic and is a good foundation for policy making. The report deserves to get widespread circulation, so it can be of use also to other projects dealing with human dimension questions, such as the planned Arctic Human Development Report II. My hope is that it will serve as a source of inspiration for residents across the Arctic.

In closing, I would like to extend my gratitude to the principal investigators and the other team members. Also, I would like to thank the various SLiCA funding sources and the Inuit Circumpolar Council, the Saami Council, the Russian Association of Indigenous Peoples of the North as well as the Nordic Council of Ministers. From the very beginning, the Government of Greenland has played a role in putting the SLiCA project on the Ministerial agenda. I am therefore proud to see the fruits of our labours in the shape of this anthology.



Vittus Qujaukitsoq

Minister of Industry, Labour,
Trade and Foreign Affairs

Acknowledgements to contributors to SLiCA



The Survey of Living Conditions in the Arctic is a collaborative project of researchers and indigenous people.

The list of participants, partners and contributors to SLiCA below is not comprehensive; numerous other individuals have contributed to the project in many different ways but are not mentioned by name.

Members of the indigenous steering committees/advisory boards include

- (*Canada*) Roger Connelly, Brian Lyall, Charles Dorais, Brian Schnarch, John Merritt, Roy Wilson, Pitseolak Pfeifer, Maureen Baikie, Raurri Qajaaq Ellsworth, Derek Rasmussen, Alan Braide.
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- (*Chukotka*) Rodionova Natasha (ICC Chukotka) and chairmen of district Associations of Indigenous peoples.

Researchers contributing to the Survey of Living Conditions in the Arctic include

- (*Canada*) Gérard Duhaime, Peter Usher, Jack Hicks, Heather Myers, Nick Bernard, Alexandre Morin, Ned Searles, Andy Siggner, Brian McDougall, Richard Veevers, Tracey Bushnik, Marie Patry, Pierre Fréchette, Marcelle Chabot, Elizabeth Drescher, Roberson Edouard.
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- (*International experts in quality of life research contributing to the project include*): Valerie Møller, Heinz-Herbert Noll, Joachim Vogel, Ruut Veenhoven, and Michael R. Hagerty.

Over 300 northern residents in Canada, Alaska, Greenland, Chukotka, Norway, Sweden and the Kola Peninsula participated in SLICA as interviewers.

Statistics Canada staff under the leadership of Marie Patry processed almost 5,000 interviews contributing to the data reported in this report.

Creation of SLiCA database and compilation of data: Marg Kruse created the SLiCA international database and made country-specific versions for Chukotka and Sweden.

She, with Jack Kruse, subsequently wrote the thousands of lines of computer code necessary to bring all the national versions together in a single international data file.

SLiCA was funded by (in alphabetical order)

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The information contained in this report does not necessarily reflect the views of any of these funding organizations.

The indigenous peoples' organisations

The indigenous peoples' organisations representing the Inuit, the Saami and the indigenous peoples of Chukotka and the Kola Peninsula in the SLiCA survey regions have all been crucial to the development and the implementation of the survey: Inuit Circumpolar Council (ICC), Saami Council and the Russian Association of the Indigenous Peoples of the

North (RAIPON). Out of several insightful and helpful heads of these organizations Aqqualuk Lynge (President of ICC 1997-2002 and Chair 2010-2014) deserves a special mention, as he was supportive from the very beginning and instrumental in many aspects of the SLiCA process.

Arctic Council project

SLiCA was adopted as an *Arctic Council project* under the auspices of the Sustainable Development Working Group, SDWG at the Ministerial meeting in Barrow, October 2000 and has been included in the Sustainable Development Action Plans, SDAP 2004-2006, 2006-2008 and 2008-2010.

International Polar Year

SLiCA was engaged in the *International Polar Year* both as an endorsed IPY activity (IPY # 386) and as a partner in the Arctic Human Health Initiative.

Principal investigators

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Preface

The intention of this anthology *SLiCA: Arctic living conditions – Living conditions and quality of life among Inuit, Sami and indigenous peoples of Chukotka and the Kola Peninsula* is to give a flavour of the research process, some of the key findings and important experiences. It is, on the contrary, not the ambition to provide an all-encompassing and in-depth study of all aspects of processes and results in all phases and in all regions.

The SLiCA anthology probes into the theoretical and methodological background of the SLiCA project, the research design, the ethical principles applied and introduces examples of the wealth of information available on the livelihoods and living conditions of the Inuit, Saami and the indigenous peoples of Chukotka and the Kola Peninsula, measured with quality of life criteria they themselves chose.

Thematically, the SLiCA anthology ranges from theoretical and methodological issues to regional and country specific analyses of different living conditions dimensions: spanning *from* the introduction of a new research design to do comparative living conditions studies among indigenous peoples (chapter 2) *via* discussions on sampling methods, representativity and the SLiCA database (chapters 2 & 3) *to* analyses of “suicidal thoughts” in Norway, Greenland and Alaska (chapter 4); impacts of oil development on living conditions and quality of life in Northern Alaska (chapter 5); economic stratification in Arctic Canada (chapter 6); objective and subjective living conditions in Nunavut (chapter 7); the development of the level of education in Greenland (chapter 8); gender based differences in productive activities in Northern Alaska (chapter 9), and impact of a rapid societal development in Greenland on men’s and women’s perceptions of their most important contributions to their households (chapter 10). Finally, a number of living conditions in the Swedish part of Sápmi – for instance factors affecting migration, identity and ethnicity, and herding rights are discussed (chapter 11).

The anthology has been in the pipeline for a couple of years. The field-work, the actual interviewing started in Canada in 2001 and was not finished in Norwegian, Swedish and Kola Peninsula parts of Sápmi until 2008. The reporting on living conditions in Inuit Nunaat, the Inuit homelands, took place in 2007 (see chapter 1) and parallel to the questionnaire development, the implementation of the interviewing, the subsequent data processing, database construction, website development and analyses and until today roughly 50 peer reviewed articles and book chapters have been published, five doctoral dissertations and several masters and bachelor projects, based on different aspects of SLiCA (including theoretical and methodological approaches), have been successfully completed and close to one hundred presentations have been given at research and public conferences, seminars, workshops and town hall meetings. So the research process has been going on for a while and has been very productive and disseminated through a number of other activities as well.

From the very beginning, the Survey of Living Conditions in the Arctic has been a concerted effort and the SLiCA anthology that you are now reading, mirrors both the journey and the diversity of the project, “measured” in several ways: by participants, individual professional and personal backgrounds as well as geography, the development of a new research design, the multifaceted questionnaire and the research themes.

The diversity is also reflected in the funding of SLiCA, the many different sources – a patchwork funding – ranging from smaller amounts to the contributions from National Science Foundation (that also included field-work in Chukotka), Statistics Canada, Greenland Government, Nordic Council of Ministers and the Scandinavian research councils.

Both the Greenland Government and the Nordic Council of Ministers supported the SLiCA project from the very start with seed money that made it possible to start developing the project and create the foundation for applying for funding at the national research councils. This SLiCA anthology, one of the results of the joint efforts, is co-funded by the Foreign Department of the Greenland government and Nordic Council of Ministers’ Arctic Co-operation Programme. In a way – at least funding wise – one might say that the wheel has come to full circle.

A number of individuals and organisations – including the indigenous peoples organisations: ICC, Saami Council and RAIPON are specifically

acknowledged (se pp 11–14) but many more that made important contributions to the progress of the SLiCA project have not been particularly mentioned. Everybody can be sure, though, that their efforts have been acknowledged and appreciated. That also includes a number of research projects that SLiCA collaborated with – like the Arctic Human Development Report (AHDR), the Economy of the North (ECONOR) and Arctic Social Indicators (ASI).

SLiCA offers insights into theoretical and methodological aspects, into inter- as well as cross-disciplinarity and not least into the creation of creative partnerships between researchers and indigenous peoples and their representatives.

It probably goes without saying that partnerships, professional skills, local knowledge, dedication, teamwork and funding are necessary preconditions for making a multifaceted project like SLiCA work. We learned a lot and, hopefully, the gained experience will be “recycled” in other projects and contexts and, maybe, in a SLiCA version 2.0.

On top of the preconditions just mentioned it should be noted that there are other necessary elements to secure momentum in a large research project like a continued networking and an ongoing dialogue within the project organisation (researchers and representatives of the indigenous peoples/local residents) as well as with stakeholders and researchers outside and a supportive and encouraging environment. An encouraging environment might include, apart from the already mentioned financial support, institutional back up and last but not least supportive families and friends.

Researchers and statistical institutes in the Nordic countries developed indicators to measure impacts of different policies in the Nordic welfare states in the 1960s and 1970s considering the development of indicators as a part of the democratic process. In recent years, an increased focus on inequalities at global as well as regional and national scales, on the impacts of global warming and the quest for sustainable development has – parallel to a widespread discontent with Gross Domestic Product (GDP) as the predominant indicator for national and international growth – resulted in research into alternative ways of measuring human development, subjective well-being and quality of life. United Nations, OECD but also Bhutan, a country with a population of only 700,000 people has provided examples of hu-

man development indicators and measures of happiness. In the Circumpolar North, the Arctic Human Development Report (AHDR 2004 & AHDR II forthcoming) and the Arctic Social Indicator project (a follow up project to the AHDR) (ASI 2010 & ASI II forthcoming) offers both insight into human development in the Arctic and indicators that will make it possible to assess impacts of a rapidly changing Arctic to the citizens of the Arctic. Establishing and maintaining the important and necessary indicator clusters demands a coordinated effort including governments, NGOs, researchers, regional and national statistical institutes and other stakeholders. The perceptions, attitudes and subjective evaluations might still be missing in quality of life equation, though.

SLiCA provides insight into livelihoods and living conditions of indigenous peoples of the Arctic. It focuses on both material and non-material living conditions and on people's perceptions of their living conditions and, most important, it focuses on their evaluation of their lives: how satisfied people are with different aspects of their lives and of their lives as a whole. One of the major achievements of SLiCA – embedded in the vision of project and implemented through partnerships between researchers, Inuit, Saami and the indigenous peoples of Chukotka and the Kola Peninsula – was that the focus of the research effort was on priorities that the indigenous respondents defined themselves. This achievement has also been phrased as a conclusion: *Human development shall be measured in ways that reflect subjective well-being; thus partnerships with the respondents – in SLiCA the indigenous peoples of the Arctic – is key to study and understand living conditions and welfare priorities* (chapter 1:55).

All things considered (see chapter 1) the large majority of the Inupiat of Northern Alaska, the Inuit of Greenland and the Saami in the Swedish part of Sápmi reported that they were very or somewhat satisfied with their lives – despite often harsh conditions and facing a number of social problems. A majority in these regions as well the indigenous peoples in Arctic Canada as well as in Norway answered that they were very or somewhat satisfied with quality of life in their communities. These findings were contrasting sharply with the indigenous peoples of Chukotka and the Kola Peninsula. The country and region-based analyses provide more insight into why people evaluate their lives as they do and also some indications of differences. The first SLiCA survey gave an important base

line for circumpolar comparisons. But as one of the conclusions of chapter 1 tells: *The value of a major international research effort like SLiCA can be augmented by conducting follow up studies using the SLiCA findings as the base line for studies of rapid social change in the Arctic* (Chapter 1:55).

When the Senior Arctic Officials were presented for the final SLiCA report (in Thorshavn, 19–20th October, 2010) (see chapter 1, Annex 6) the SAO-meeting agreed that the project provided “*a solid knowledge basis about the living conditions in the Arctic and an excellent foundation for policymaking.*” The SLiCA report included a suggestion “*that the AC consider running a benchmark study like SLiCA every 10 years*”.

The publication of this anthology might serve as an opportunity to repeat this suggestion – encouraged also by the interests shown in conducting a follow up study.

22nd February, 2015

Birger Poppel

Project Chief, SLiCA

Ilisimatusarfik, University of Greenland

1. Introduction to SLiCA –

Survey of Living Conditions in the Arctic: Inuit, Saami and the Indigenous Peoples of Chukotka and the Kola Peninsula – From Research Question to Knowledge: Why? What? How? & Some Main Results

Birger Poppel

Survey of Living Conditions in the Arctic: Inuit, Saami and the Indigenous Peoples of Chukotka and the Kola Peninsula – From Research Question to Knowledge: Why? What? How? & Some Main Results

Inuit, Saami and the indigenous peoples of Chukotka and the Kola Peninsula have lived and survived in the Arctic through millennia as hunters, fishermen and herders. Rapid social change has characterized the livelihood and living conditions of the indigenous peoples of the Arctic for the last decades and not least since World War II.

Despite the often harsh conditions, and the rapidly changing conditions many indigenous people still seem to prefer living in smaller towns and settlements than migrating to the larger southern centers. The question “why?” was one of the reasons for commencing a survey of living conditions among Arctic indigenous peoples. To answer this question, we sought to map peoples’ welfare priorities, probing for the elements constituting “quality of life”.

Statistics Greenland initiated the SLiCA project in 1997. The initiative was supported by the Greenland Home Rule Government and grew over the next couple of years into an international collaborative research effort with established partnerships between researchers, indigenous experts and organisations representing the Inuit, Saami and the indigenous peo-

ples of Chukotka and the Kola Peninsula. The whole project has been fuelled by dedicated visions, pioneering enthusiasm and hard work. It was at all made possible by research councils and funding institutions that had confidence in the research team and our partners.

The ambition of this introductory chapter is to sketch the process commencing from the research question to a vision of a research project, and then to its implementation.¹ The process included establishing partnerships and getting funded, developing a new research design, doing field work, processing data to finally being able to analyse data and disseminating results in a way that is accessible and useful to the indigenous peoples of the Arctic. The intent was to increase the knowledge of their own and other indigenous peoples' history and living conditions and at the same time improve the basis for policy planning and implementation. Finally, this first chapter presents some of the main results of the survey.

The remainder of this SLiCA Anthology probes into the theoretical and methodological background of the SLiCA project, the research design, the ethical principles applied and introduces examples of the wealth of information available on the livelihoods and living conditions of the Inuit, Saami and the indigenous peoples of Chukotka and the Kola Peninsula, measured with quality of life criteria they themselves chose. Furthermore the anthology provides samples of analyses – including comparative and contextual studies – that can be accomplished using SLiCA data.

¹ The intention is to give a flavour of the SLiCA research process and not an all-encompassing and in-depth study of all aspects in all phases and in all regions. That means that individuals and organisations that made important contributions to the progress of the SLiCA project may not be mentioned. Everybody can be sure, though that their efforts have been acknowledged and appreciated.

1.1 Why SLiCA? The point of departure

In the spring and summer of 1994, Statistics Greenland (SG) conducted a nationwide representative survey of the living conditions in Greenland² at the initiative of the Greenland Parliament. This was the first nationwide study of living condition since the introduction of Home Rule in 1979. Prior to Home Rule, and following a number of censuses in Greenland in the colonial times³ from 1834 to 1976, a living conditions survey had been conducted by the Danish National Institute of Social Research: “*Social Problems in Greenland. Living Conditions and Social Problems in West Greenland*” (From *et al.* 1975).

The 1994 living conditions study was primarily developed according to what is commonly referred to as the Scandinavian model of measuring living conditions that aims at developing social indicator time series to support social reporting. The approach was not designed to enable analysis of causal relationships (see Andersen & Poppel 2002 – included as chapter 2 in this Anthology). Using conventional social indicators, the 1994 survey revealed, among other things, that individuals and households in the towns/cities within the “measured” dimensions of living conditions (housing, employment, unemployment, education and income),

² Based on a decision of the Greenland Parliament, Statistics Greenland conducted a survey that included 1,500 randomly selected individuals (18 years and over). Respondents were asked 147 questions regarding housing, education and economic conditions, income, consumption and leisure. In addition two special surveys were completed in the municipalities of Ammassalik and Upernavik to ensure a particularly thorough knowledge of the population living in outlying districts. Eleven reports based on the 1994–Living Conditions Survey – all in Danish and some in Greenlandic – were published by Statistics Greenland on the following topics (all publications are included in the Reference list): Living conditions – an overview (No. 1); Newspaper reading habits in Greenland (No. 2); Living Conditions in Fishermen’s and Hunters’ Families (No. 3); Living Conditions among families in Greenland (No. 4); Living Conditions in the Settlements (No. 5); Housing Conditions in Greenland (No. 6); Work and Unemployment (No. 7); Development of Language Abilities in Greenland 1984–1994 (No. 8); Report on Incomes in Greenland 1993 (No. 9); Consumption in Greenland (No. 10); Primary Education, Secondary Education and Vocational Training in Greenland 1994 (No. 11)

³ In 1721 Greenland was colonized by the Danish-Norwegian Realm. The colonial status was formally changed in 1953, as Greenland became a constituency in the Danish Realm. In 1979 Greenland Home Rule was established and legal and administrative authority was gradually transferred to the Greenland Parliament from the Danish State for a number of policy areas. Thirty years later – in 2009 – Greenland Self-Government replaced the Home Rule. The Act on Greenland Self-Government was an extension of powers enacted in the Home Rule Act from 1979 (www.naalakkersuisoq.gl; accessed 6th February, 2015).

were better off than individuals and households in the settlements⁴ – see table 1 for a few examples.

Table 1. Some conventional living conditions indicators for individuals and households in towns and settlements. Greenland 1994. Greenland Living Conditions Survey

		TOWNS	SETTLEMENTS
HOUSING	m ² per household	79,3 m ²	54,6 m ²
	% of housing units with > 1 person per room	36,1 %	56,1 %
EMPLOYMENT/ UNEMPLOYMENT	Employed	68 %	58 %
	Unemployed	12 %	21 %
EDUCATION	No vocational training	47 %	68 %
INCOME	Gross household income	241.000 DKK	143.000 DKK

Source: Statistics Greenland, 1995.

The 1994 study design became a comprehensive and independent target for a future living conditions study to reveal whether there were priorities of living conditions in the settlements – and if so, which – that would be considered preferable to a higher standard of living in the towns. (Poppel 2006a, 2006b). Or, phrased differently: What didn't we grasp? What didn't we ask about? The 1994 study could not itself answer this question.

Since the 1994 study had some limitations as mentioned above, Statistics Greenland initiated an extended survey of living conditions in 1997 that would focus on respondents' welfare priorities and include other lessons learned from the 1994-study. This effort was from the very start supported by Greenland's Minister of education and research as well as the research administration.

⁴ Before the municipal reform in 2009 Greenland was divided into 18 municipalities. Each municipality had a regional centre, a town, and a number of settlements (from one and up to ten). There is no distinct definition of a settlement but a significant difference in the level of service and access to different kinds of public goods. One town has a little less than 500 inhabitants and one settlement has a little more than 500 inhabitants. Other than those all towns have populations larger than 500 and all (roughly 60) settlements have populations less than 500 (based on population figures by 1st July, 2014. www.stat.gl, data bank: Matrice BEDSTM4 – accessed 28th January, 2015).

Deciding to develop a new research design to study living conditions, welfare priorities, subjective well-being and ultimately quality of life relevant to an indigenous peoples (the Greenlanders)⁵ caused several deliberations, probing efforts and decisions. For a number of reasons societal development in Greenland and the impact on individuals had not only usually been measured in the colonial period by Danish standards but also most often by Danish standards after the introduction of Home Rule. Furthermore, comparisons at the individual level were usually made with Danish and other Nordic citizens, not with other indigenous populations in the north. Not only was the 1994-study of living conditions in Greenland unable to reveal important causal relationships between living conditions, perceptions and attitudes, its results were also outdated not least due to a change in discourses reflecting more self-reliance among the indigenous peoples of the Circumpolar North. This change was reflected in the creation and influence of the Inuit Circumpolar Council (then: Inuit Circumpolar Conference and under both names the ICC), and other indigenous peoples organisations. These new institutions helped in changing perceptions of standards and “what mattered”. For a research initiative like SLiCA this meant that not only the research design but also the comparative elements had to be re-thought.

As a first step, comparing living conditions with peoples with a parallel historic development and living conditions seemingly more like the Greenlanders became an objective that set the stage for what might be condensed to “the SLiCA project development process”. This process included both the partnerships between researchers and the indigenous peoples of the SLiCA survey regions, the questionnaire development, the data collection and the research themes that were first addressed.⁶ These

⁵ The Greenlandic part of the SLiCA project included the non-indigenous population, mainly immigrated Danes, too. The survey results in this chapter are based only on the Greenlandic Inuit.

⁶ Based on proposals from some of the indigenous participants in the international research team five international comparison research themes were chosen: (1) The importance of social relationships and the standard of living to settlement patterns; (2) The importance of a mixed cash- and harvest/ herding- based economy to living in the Arctic; (3) Relationships between social problems and other dimensions of living conditions; (4) The influence of educators and missionaries; (5) The influence of policies on living conditions.

research themes are all analysed in the SLiCA Overview article (Kruse *et al.* 2008; and www.arcticlivingconditions.org).

Sometimes even the most determined planning cannot match “pure luck” or “coincidence”. The first funding for SLiCA – apart from what was initially granted by the Greenland Home Rule Government – had that character, as the Nordic Council of Minister’s Arctic Co-ordinator visited Greenland in 1997 and was presented for the idea of a new research design comparing living conditions of Greenlanders and other Inuit. The idea was well received and Statistics Greenland was granted seed money for a scoping workshop as long as the Saami peoples were included in the survey.

Before a major workshop could be convened Statistics Greenland had to do substantial “homework”, though. In an article presenting the background for the SLiCA project and the first results and analysis based on interviewing in the Inuit Homelands, Kruse and co-authors describe the preparatory process:

By 1997, Birger Poppel (the then chief statistician, SG) and Thomas Andersen (international project coordinator, SG) had consulted with researchers, research institutions, indigenous organizations, and governments in Canada, Norway, Sweden, Finland, Russia, and the United States about the idea of an international comparative study of living conditions in the Arctic. In 1998 the Inuit Circumpolar Conference (ICC) passed Resolution 29 (Section I) in support of the study: “Rapid social change characterizes all indigenous peoples of the Arctic. There is a need to document and compare the present state of living conditions and development among the indigenous peoples of the Arctic.

Kruse *et al.* 2008:108⁷

1.2 Establishing the foundation for SLiCA

The first SLiCA gathering was, as mentioned, made possible by seed money from the Nordic Council of Ministers as well as from the Greenland government. The workshop was held in May 1998 in Slagelse, Denmark with the

⁷ The referenced ICC resolution is included in Annex 1

purpose to “*establish the theoretical, methodological and organization basis for a Survey of Living Conditions in the Arctic*” (McDougall 1998:1).⁸ The group of 23 persons that met in May 1998 was diverse in many respects, with different national, ethnic, cultural and professional backgrounds. Participants included women as well as men and more than a generation between the youngest the oldest participant. The discussions were multifaceted and intense. Despite – or maybe because of – the diversity and a simultaneous ambition to develop a new research design for comparative studies among indigenous peoples of the Arctic, in three days the group made decisions that together framed the SLiCA process from questionnaire development to data analyses. These major decisions focused on methodology as well as indicators and not least on defining “living conditions”:

“Methodological decisions

- A quantitative survey based on qualitative studies.
- A comparative study based on a common survey.
- Survey data must be combined with regional “system reports”.
- One core of common questions-additional with regionally specific questions allowed.
- Three levels (a) inter-regional level, (b) regional level and (c) community level (depending on local funding).
- Geographical limitation: Inuit and Saami living in the Arctic.⁹
- Units of sampling: Inuit and Saami households (1) random individual + the most knowledgeable person regarding household production).
- Units of analysis: Individuals and households.
- Age 16+.

⁸ The detailed “Draft Proceedings Report” (McDougall 1998) contains both decisions and the arguments and points of views leading to the decisions.

⁹ From the very beginning the intention was to include both Chukotka and the Kola Peninsula but following the discussions on the Slagelse meeting it was decided to include other indigenous peoples in the two Russian regions. This resulted in expanding the title of the SLiCA project with “... the indigenous peoples of Chukotka and the Kola Peninsula”.

Decisions regarding indicators

- The research design must mirror the life forms and welfare priorities of the respondents.
- The aim is not only to map living conditions – but also to identify forces for social, economic and cultural change as well as consequences of change.
- Theoretical and model deduced selection of living conditions indicators (The household production model (a.o.)).
- Coherent set of indicators. Measuring both descriptive as well as cumulative measures are employed.

Definition of Living Conditions

‘Living conditions are constituted by: individual control over resources that can be employed in different arenas.’”

(www.arcticlivingconditions.org → Project History → Slagelse, Denmark: May 1998; accessed 7th February, 2015)

Part of the International SLiCA team, meeting in Murmansk, Russia. February 2003



Photo: Birger Poppel.

1.3 The SLiCA objectives

Based on the joint decisions in Slagelse the objectives to be operationalized were further fleshed out:

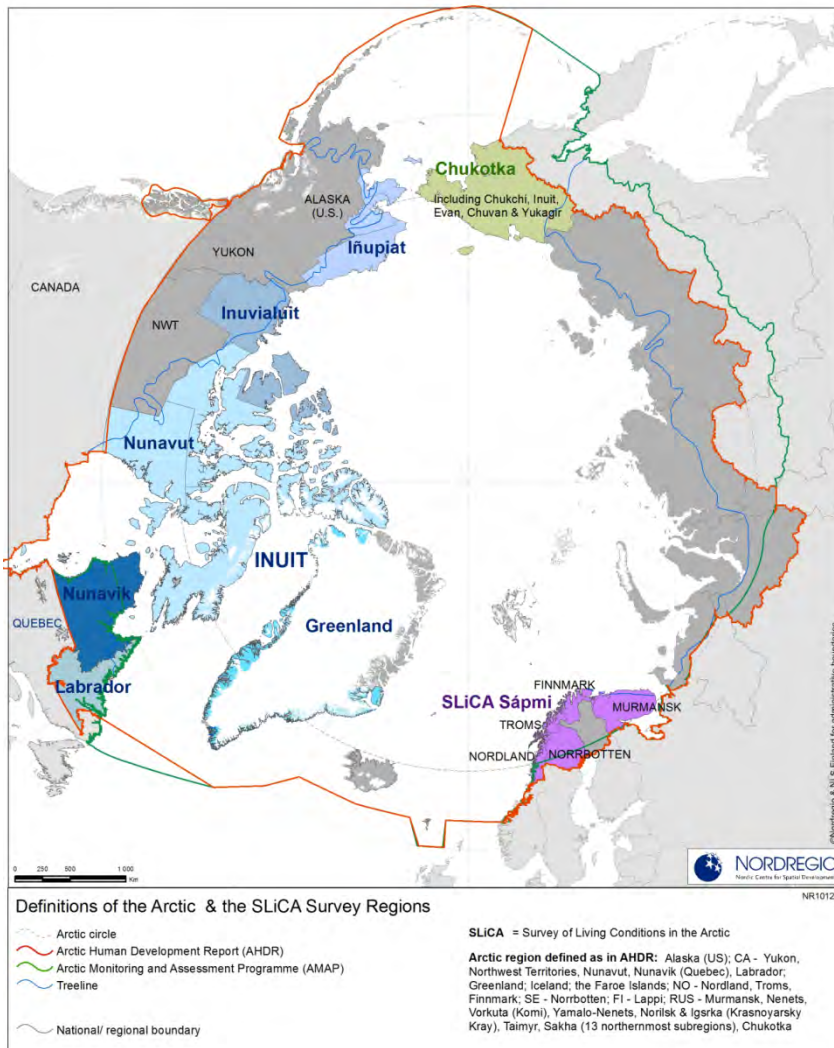
- To develop a new research design for comparative investigations of the living conditions of the Inuit and Saami peoples in the Arctic. This included developing partnerships between researchers and the respondents and their organizations.¹⁰
- To map the living conditions among the Inuit and Saami and the indigenous peoples of Chukotka and the Kola Peninsula in the Arctic.
- To conduct a comparative dynamic social analysis of the causal relations between different individual resources and between individual wellbeing and different political, economic, cultural and technological settings.
- To improve the basis for decision-making in relation to policy planning and implementation.
- To establish an interdisciplinary network of researchers and research institutions engaged in living conditions research in the Arctic.
- To increase the knowledge among the indigenous peoples of their own and other indigenous peoples' history and living conditions.
- To educate and involve post-docs, PhD students, candidates and undergraduates in the SLiCA project. (Andersen and Poppel 2002).^{11, 12}

¹⁰ These are: the Inuit Circumpolar Council (ICC), the Saami Council and the Russian Association of Indigenous Peoples of the North (RAIPON).

¹¹ The article is reprinted as chapter 2 in this volume.

¹² For more thorough descriptions and comments see the project web site: www.arcticlivingconditions.org and McDougall 1998; Andersen and Poppel 2002; Andersen 2004; Kruse *et al.* 2008; Poppel 2010; Poppel 2014; Eliassen *et al.* 2012.

Map. Definitions of the Arctic and the SLiCA Survey Regions¹³



¹³ For the sake of meaningful comparisons all population data are aggregated at different levels: “country” meaning: *Chukotka; Inuit settlement regions in Northern Alaska* (abbreviated: “Northern Alaska” or “Alaska”; *Inuit Settlement regions in the Canadian Arctic* (abbreviated: “Northern Canada” or “Canada”); *Greenland; Norwegian part of Sápmi* (abbreviated: “Northern Norway” or “Norway”; *Swedish part of Sápmi* (abbreviated “Northern Sweden” or “Sweden”); *Kola Peninsula part of Sápmi* (abbreviated: “Kola Peninsula”), and “regions” are further defined in www.arcticlivingconditions.org and in Annex 2.

1.4 Around the survey – SLiCA related activities in brief: developing and expanding partnerships and networks

Based on the decisions from May 1998, a number of activities – all necessary to achieve a major joint circumpolar effort within the Arctic social sciences in partnerships between researchers and indigenous peoples of the Arctic – were initiated. And because of the number of partners, other collaborators and fora interested in the SLiCA research effort, part of the commitments of the project team was to formalize partnerships, present and discuss the project idea, the ethical, theoretical and methodological considerations, the research design, the on going progress and, later on, findings and analyses at different gatherings and occasions for indigenous peoples, researchers, political and other decision makers – in as well as out side the Arctic. The following exposition reflects the variety of partners, stakeholders and interested audiences including examples of funding institutions:

1.4.1 *Partnerships – Indigenous participation in the SLiCA project development*

Indigenous participation has from the very beginning been seen as crucial to the success of SLiCA. The main idea was to create a new list of living conditions indicators, which mirrors the life forms and priorities of the indigenous peoples in focus of the survey: the Inuit, the Saami and the indigenous peoples of Chukotka and the Kola Peninsula. This could only be done in a non-paternalistic way by including and actively involving both indigenous organisations and researchers in all stages of the research process and at all levels. The Inuit Circumpolar Council (ICC) – including national and some of the regional branches – the Saami Council, representatives from some of the Saami Parliaments as well as the Reindeer Herders Association and the Russian Association of Indigenous Peoples of the North (RAIPON) were approached in the summer of 1997 and in early 1998 meetings were held with representatives from regional Inuit organisations in the three Inupiat settlement regions of Alaska: the North Slope, Northwest Arctic, and Bering Straits regions, as well as with the

Alaska ICC and the Alaska Native Science Commission. A similar consultation took place in Canada, involving representatives from the Inuvialuit, Nunavut, Nunavik, and Labrador Inuit regions. Meetings were held with leaders of the organizations and, as the project idea was well received, more detailed discussions took place with regional representatives as well as with research institutions in all SLiCA survey regions. Letters of intent were drafted and so were agreements on cooperation.

In June 1998 ICC Greenland hosted the ICC General Assembly and the ICC President Aqqaluk Lynge welcomed a proposal for a SLiCA resolution. The resolution adopted by the 1998 ICC General Assembly especially stressed the common conditions for the indigenous peoples of the Arctic and the rapid social change characterizing these peoples. Furthermore the resolution focussed on the necessity for documenting and comparing living conditions for the indigenous peoples in the Arctic, developing indicators reflecting their resources, needs and priorities and the local participation in the research process. The resolution concluded in supporting the Survey of Living Conditions in the Arctic, SLiCA – e.g. in the funding process and in seeking the endorsement by the Arctic Council.^{14,15}

Eventually, a large number of international, national and regional organisations and associations representing indigenous peoples became project partners or associated participants and partnerships were established at the regional, national and international level between researchers and indigenous organisations.¹⁶ For example, in Alaska, the Inupiat director of the Alaska Native Science Commission, Patricia Cochran, joined the project team as Co-PI.

In all SLiCA survey regions – based on the partnership agreements – SLiCA working groups/focus groups were formed locally and regionally. These groups included indigenous representatives and experts with a broad background and experience from the region contributed to setting

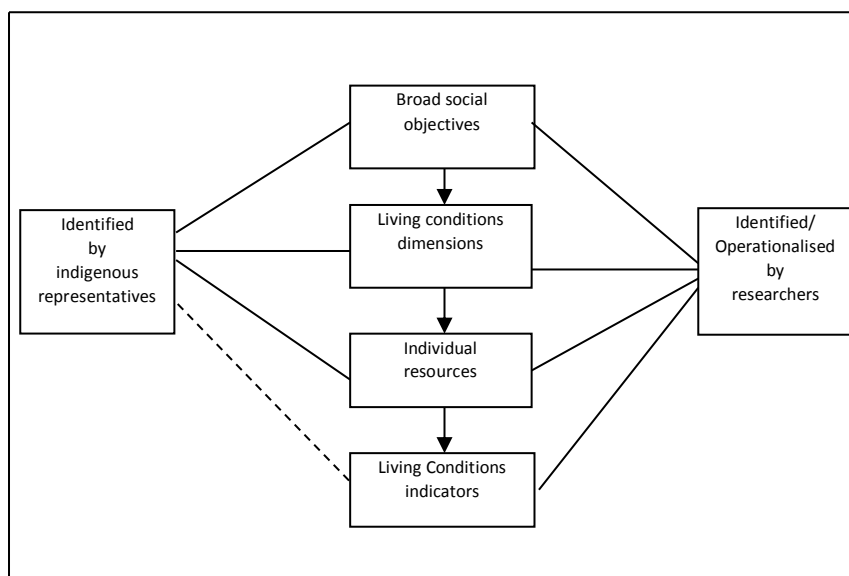
¹⁴ See the ICC resolution in Annex 1.

¹⁵ The close collaboration with the Inuit regional/national and international organisations developed during the project period and in 2002 the SLiCA project plan was presented to the ICC General Assembly in Kujjuuaq.

¹⁶ See list of organisations/associations representing indigenous peoples of the Arctic in Annex 3.

the stage for the questionnaire development. These groups, in collaboration with the regional/national research teams developed the input to the international SLiCA steering committee based on which the international questionnaire was developed and furthermore most often also participated in the pretesting of draft questionnaires and thus, in all phases of the process from defining broad social goals to indicators provided invaluable insights and guidance (see figure 1¹⁷).

Figure 1. The process of defining indicators of living conditions



Kruse and Hannah 1998, Andersen, 1999, Kruse and Poppel 2008.

¹⁷ A similar figure is presented in Andersen & Poppel 2002 (chapter 2 in the SLiCA Anthology). The 2002-figure reflects the original assumption that “living conditions indicators” (and thus the actual questions) would be developed by the researchers. As indicated above also this part of the process became a joint effort.

Ethical guidelines

The SLiCA project - including national and regional teams – committed itself to the ethical guidelines stated in IASSA's Guiding Principles for the Conduct of Research in the Arctic, 1998 and to the Declaration of Helsinki. Furthermore the project team worked according to the guidelines of National Science Foundation (NSF) and – as SLiCA became an IPY project – also according to the principles of the International Polar Year. One of the important principles was that all respondents were informed in writing as well as orally before asked for consent. Another key principle was the safeguarding confidentiality including anonymity of the respondents. The projects, basic commitment to an inclusive research practice is dealt with in more detail above.

1.4.2 Establishing the research team and developing research and other collaborative networks

The researchers participating in the SLiCA start-up meeting in May 1998 had all been asked to join the project because of their research expertise and backgrounds in different social science disciplines and not least their experience and collaborating with indigenous people in the Arctic.

Following the start-up meeting research teams – including an international steering committee – of qualified and engaged researchers and indigenous experts in Alaska, Canada, Greenland, Norway, Sweden, Finland¹⁸ and Russia were shaped. More than 20 research institutions were affiliated with SLiCA.¹⁹

Living conditions and Quality of Life research is rooted in different disciplines that are also influenced by national and regional societal contexts. It has been important for the SLiCA team to learn from the different traditions (see Andersen and Poppel 2002 and Kruse *et al.* 2008) and at the same time keep a focus on the Arctic realities in shaping the SLiCA research design.

¹⁸ Due to lack of funding the Finnish SLiCA activities never resulted in interviewing and consequently the Finnish Saami are not included in the SLiCA results.

¹⁹ A list of SLiCA affiliated research institutions is included in Annex 4.

From the very beginning of the “SLiCA-journey” members of the SLiCA-team have participated in different fora.²⁰ It goes without saying that the regional and country based teams consisting of researchers and indigenous representatives and experts in different fields were key to defining adequate indicators from broad social goals, but in addition to the work of these teams a number of venues have particularly contributed with feed back, input and inspiration to the SLiCA process ensuring a continuous “review process”.

Research conferences

Research conferences have to a large degree been employed for the presentation of ideas and results and to get feed back – not least from colleagues from different disciplines and with different research backgrounds. Two examples should be mentioned:

- The triennial International Congress on Arctic Social Sciences (ICASS²¹). These congresses are organised by IASSA, the International Arctic Social Sciences Association and gather researchers, indigenous experts and policy makers – primarily from the Arctic. These gatherings have thus excellent fora to challenge and to be challenged with different methodological, theoretical and ethical approaches.
- The International Society for Quality of Life Studies (ISQOLS) Conferences²² usually take place every 18 months focussing on quality of life studies both concerning subjective well-being and the quality of life of society and selected groups. Participating in these conferences has provided excellent support and feed back to our research undertaking that in many respects were new to the Arctic – especially because it was possible to build professional networks. This

²⁰ More than 100 SLiCA related presentations have been given on conferences, seminars etc.

²¹ SLiCA sessions and presentations were arranged at the following ICASS'es: Copenhagen: May 1998; Fairbanks: May 2004; Nuuk: August 2008; Akureyri: May 2011; Prince George: May 2014.

²² SLiCA sessions and presentations were arranged at the following ISQOL conferences: Girona, Spain: 20–22nd July, 1998; Washington DC, USA: 29th November–1st December, 2001; Frankfurt, Germany: 20–24th July, 2003; Grahamstown, South Africa: 17–20th July, 2006; San Diego, USA: 6–9th December; 2007; Firenze: 19–23rd July, 2008.

opportunity was taken to host a workshop in Nuuk, April 2001 that brought together experienced researchers from different “Quality of Life” research traditions with the indigenous partners in SLiCA and the SLiCA research team.

Flags of some of the Arctic Council’s Member States and Permanent Participants (the Indigenous Peoples’ Organisations). AC Ministerial Meeting, May 2011. Nuuk, Greenland



Photo: Birger Poppel.

Arctic Council

The delegation of the Danish Kingdom (Denmark, Greenland and the Faroe Islands) presented the *Survey of Living Conditions in the Arctic* to the Arctic Council (AC) during the Canadian chairmanship and SLiCA was adopted as an Arctic Council project under the auspices of the Sustainable Development Working Group (SDWG) at the Ministerial meeting in Barrow, October 2000.²³ SLiCA was included in the Sustainable Development

²³ As the Arctic Council has no funding instruments the endorsement had no direct economic implications for the SLiCA project.

Action Plan (SDAP) 2004–2010. As an AC/SDWG endorsed project the SLiCA leadership reported regularly about project progress to the Sustainable Development Working Group (SDWG), and occasionally to the Senior Arctic Officials (SAO). The first reports were provided during the US chairmanship 2000–2002 and the final report was delivered at the SAO meeting in Torshavn in the Faroe Islands 19–20th October 2010²⁴ and thus included in the SAO Report to the Ministerial Meeting in Nuuk, May 2011. The reporting and the opportunities these regular meetings provided opportunities to discuss with key stakeholders like representatives from Arctic countries, Permanent Participants (the indigenous peoples' organisations), Observers to the Arctic Council and AC working group members gave valuable feed back to the SLiCA process. These meetings also initiated and facilitated collaboration with other AC/SDWG endorsed projects like Arctic Human Development Report, (AHDR²⁵); Arctic Social Indicators (ASI²⁶); Economy of the North (ECONOR²⁷); ArcticStat;²⁸ Arctic Human Health Initiative (AHHI²⁹) – just to mention a few prominent projects that SLiCA as a research project and SLiCA team members have had close collaboration with and contributed to.

Furthermore, a workshop co-organised with Arctic Council/SDWG focussing on preliminary SLiCA findings held in Copenhagen in September 2006 gave useful input to the first public reporting of results from the Inuit settlement regions held in March 2007 in Anchorage. This presentation was accompanied by a workshop discussion of results with indigenous partners.

Presenting and discussing SLiCA – an ongoing review process

Participation in national and international workshops, seminars and conferences to present and discuss SLiCA's development from interesting research questions to a new research design for studies of living condi-

²⁴ The extract from the Report of the SAO-meeting including the SLiCA presentation is included in Annex 6.

²⁵ Arctic Human Development Report (AHDR) 2004; Arctic Human Development Report II (AHDR II) 2015.

²⁶ Arctic Social Indicators (ASI) 2010; Arctic Social Indicators II (ASI II) 2015.

²⁷ Economy of the North (ECONOR) 2006; Economy of the North II (ECONOR II) 2008

²⁸ ArcticStat: www.arcticstat.org/

²⁹ Arctic Human Health Initiative. See for instance: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3749855/>

tions, subjective well-being and quality of life among indigenous peoples of the Arctic.

The International Polar Year 2007–2008 – a window of opportunities

In the beginning of the new millennium the idea of a fourth International Polar Year (IPY), was launched and concluded in a decision of an IPY in 2007–2008. As the fourth IPY had a significant focus (contrary to the previous IPYs) on Arctic peoples, people and communities/societies (Krupnik *et al.* 2011) it became relevant to have SLiCA included in this process. The international SLiCA research team developed a specific IPY project proposal that was accepted as an IPY project (IPY #386). Due to lack of funding this project was only partly carried out.

The International Polar Year provided a large number of venues to present research projects and experiences from different kinds of research collaboration and not least to create and develop networks with colleagues, partners and stakeholders. The SLiCA project presented the first SLiCA findings publicly at the IPY opening event in Copenhagen on 1st March, 2007 and hosted the official IPY opening event at University of Alaska Anchorage launching SLiCA Results on 22nd March, 2007 (see below). The conclusion of the fourth International Polar Year efforts was commemorated at two major conferences in Oslo (8–12th June, 2010) and Montreal (22–27th April, 2012) respectively. At both research gatherings finding from all SLiCA survey regions were presented to an international audience.

1.4.3 Funding an Arctic social science mega project

As indicated above the seed money provided by the Greenland Government and Nordic Council of Ministers was decisive to at all start the SLiCA process but following the seed money a large number of applications to ensure the funding necessary for a social science mega-project were developed to national and international research councils and funding institutions.

The pattern of SLiCA funding – with different funding combinations for each participating country – reflected the way in which social science is normally funded, that is, to investigators through their respective national

research organizations. The resulting funding can be characterized as “patchwork”. However, the combined funding included contributions from a large number of funding institutions (alphabetically ordered): Barents Secretariat; Canada Social Sciences and Humanities Research Council (SSHRC); Commission for Scientific Research in Greenland (KVUG); Danish Research Council for the Social Sciences; Government of Greenland; Joint Committee on Research Councils for the Nordic Countries; National Science Foundation (NSF); Nordic Council of Ministers (NCM); Nordic Arctic Research Program (NARP); Norwegian Department of Municipalities; Statistics Canada; Swedish Research Council for the Social Sciences.

Due to different funding procedures and arrangements part of the funding – especially in Canada where support was supplied “in kind” (via collaboration with Statistics Canada) as well as in dollars – is estimated, but overall the (direct and indirect) funding granted to regional and national branches of the SLiCA project in the period from 1997/98 to 2012 is estimated at USD 8.4 million.^{30,31}

A few funding examples

As mentioned above the *Nordic Council of Ministers* was instrumental at the very beginning of the SLiCA scoping process by providing seed-money and thus adding to the basic funding from the Greenland Government. The Nordic Council of Ministers also provided funding for the actual research activities in the Nordic countries through the Nordic Arctic Research Program, NARP and generally for the international SLiCA research co-ordination and for publishing SLiCA results through the Nordic Council of Ministers’ Arctic Co-operation Programme. The awareness among the Nordic countries about the SLiCA activities has resulted in a number of meetings and presentations to both the Nordic Council of Ministers (Min-

³⁰ The exchange rate applied is per 10th May, 2007.

³¹ Whereas an amount of this size spent on a social science project is a rare thing it might, for the sake of comparison, be mentioned that “Total Healy [research icebreaker] costs are approximately USD 20 million annually, or about USD 100,000 per day, at sea.” Dr. Arden L. Bement, Jr., Director, National Science Foundation, 26th Sept., 2006.

isters for Co-operation),³² different Nordic Council Committees³³ and Nordic associations.³⁴ Further the Nordic Council of Ministers' conference "Arctic Changing Realities" in Copenhagen 26th May, 2010 provided an opportunity to present SLiCA findings in a broader context.

SLiCA originated from Statistics Greenland in 1997 and has since 2004 been hosted by Ilisimatusarfik, University of Greenland. The *Greenland Home Rule Government* has supported the SLiCA project from the very beginning (with seed money) and over the years financed the implementation of the Greenlandic part of SLiCA data including analysis, publication and presentation of results as well as international coordination of the project.

National Science Foundation: the Arctic Social Sciences Program within the Division of Polar Programs of NSF provided support critical to the success of SLiCA. In 2000, NSF awarded a grant for the design of a survey of living conditions in the Arctic. This grant supported leadership participation of the US in a series of international workshops focusing on measurement of well-being. In 2001, NSF awarded a grant to support the implementation of SLiCA in Alaska and US team leadership in international pretesting, training, data entry, coding, and analysis. This grant was later supplemented by an award of funds and logistical support for implementation of SLiCA in Chukotka. NSF later granted a third award to support a data release conference and a workshop discussion of results with indigenous partners. Finally, NSF awarded a grant to an American graduate student at Laval University, Ned Searles, who implemented questionnaire development in Canada.

³² The meeting took place during the Danish chairmanship of the Nordic Council of Ministers in Narsaq, Greenland 20–21st August, 2005. This meeting also included a presentation to the Nordic Committee for Co-operation (NSK)

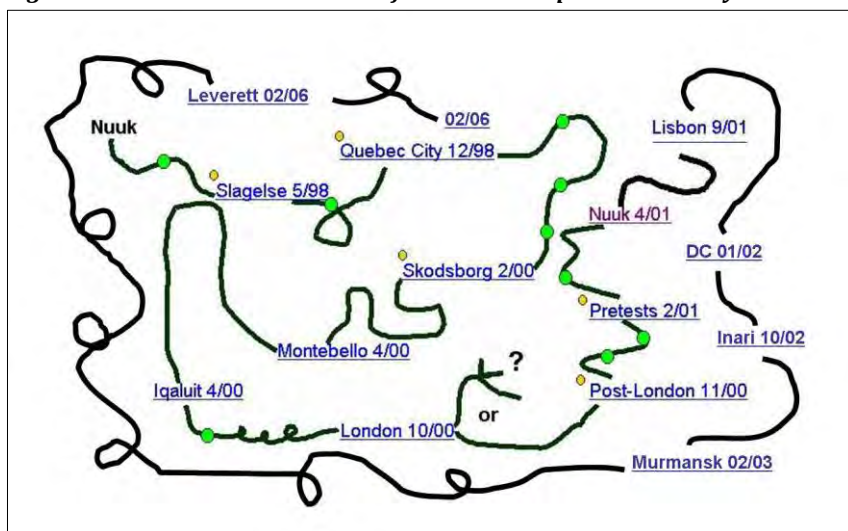
³³ Examples are: NCM NORDBUK (Nordic Committee for Children and Young People) – workshop in Nuuk, 17–20th August, 2010); Nordic Citizens' and Consumer Rights Committee. Kangerlussuaq 28th June, 2010.

³⁴ An example: Presentation to Nordic journalists in Nuuk, 21st April, 2009.

1.5 SLiCA questionnaire development

Questionnaire development took place between 1998 and 2001 in eleven workshops and field pre-tests in each country (see Figure 2). This work involved indigenous people and researchers from eight countries and five social science disciplines. Indigenous steering committees approved the final questionnaire design. The entire process of questionnaire development is documented on the project website (www.arcticlivingconditions.org).

Figure 2. The route SLiCA travelled: from research question to analysis



Source: Kruse 2007.

In 2001 the joint efforts resulted in the completion of an international SLiCA core questionnaire³⁵ (www.arcticlivingconditions.org). The questionnaires applied in the different regions consisted of the SLiCA core questionnaire that was agreed upon in the international steering committee and with regional/country specific additions.

³⁵ Various conditions in the participating countries and regions have led to modifications to the international core questionnaire. In Canada, collaboration between SLiCA's Canadian team, and Statistics Canada's Aboriginal Peoples' Survey, APS 2001 resulted in a common questionnaire. This means that there are limitations to the comparisons that can be made with the regions applying the international core questionnaire.

SLiCA partly involved a number of conventional social indicators and partly a series of dimensions and indicators of living conditions not usually applied in conventional living conditions studies. All social indicators are defined as resources – material as well as non-material – that can be used in different arenas (see Andersen 1999; Andersen and Poppel 2002). All in all, the SLiCA indicators are derived from these living conditions dimensions: language, self-identification, cultural identity, family and social networks, households, employment: paid work / hunting and fishing, health, religiosity and spirituality, communication and technology, discrimination, education, environment, housing, legal relationship and security, leisure, mobility, and political resources.³⁶

Chukotka SLiCA interview team with Russian Research team and members of International team. SLiCA meeting in Anadyr, Chukotka, April, 2005



Photo: Provided by Jack Kruse.

³⁶ For further discussions of methodology, theoretical considerations and the research process, see the project website where the questionnaire is also available: www.arcticlivingconditions.org.

The international core questionnaire of the living conditions survey allows us to analyse relationships between respondents' background and resources, satisfaction with various aspects of life, as well as satisfaction with life as a whole.

Allardt emphasized that the ultimate goal for studying living conditions is to measure individual well-being and quality of life (Allardt 1975). This was also the ambition for the SLiCA team with the following understanding of well-being:

- Being an inclusive concept covering all aspects of life as experienced by individuals;
- Well-being has both objective conditions and subjective elements;
- Subjective well-being is closely connected to the collective well-being in social groups, regions and countries;
- Well-being constitutes a system of interacting variables;
- Research into well-being is related to the social sciences in particular but also to other disciplines;
- Well-being research is oriented towards the past, the present as well as the future.

Table 2. SLiCA sample summary – including details about interview periods and population sizes

SLiCA: population*, sample* and respondents*						
Settlement region	Indigenous peoples in the survey	Period of interviewing	Total number of adults in population	Sample size (N)*	Response rate	Respondents (n)
Northern Alaska	Iñupiat; Yupiit	2002–2003	11,000	700	84%	650
Chukotka	Inuit; Chuckchi; Evan; Chuvan; Yukagir	2005–2006	14,000	600	85%	500
Canada	Inuit	2001	22,000	5,650	83%	4,700
Greenland	Inuit	2004–2006	36,000	1,450**	83%	1,050
Inuit homelands/ regions/countries			83,000	8,400	83%	6,900
Sweden	Saami	2006–2008				200
Norway	Saami	2006–2008		800	56%	450
Kola Peninsula	Saami	2006–2008	1,500			300
Sapmi			50,000***			950

Note:

* Rounded (to nearest “50”/ “100”).

** In Greenland also the non-indigenous population was part the survey. In this chapter only the Inuit (the Greenlanders) are part of the analysis.

*** Estimate for Nordic Saami (incl. Finland – excl. Kola Peninsula) (AMAP, 1998).

1.6 From fieldwork/interviewing to findings

Interviews were conducted between 2001 and 2008 face-to-face with people 15 and older in Canada and Greenland and 16 and older in the other regions.

Almost 8,000 Inuit, Saami and other indigenous people were interviewed in Greenland, in the Inuit settlement regions in Alaska and Arctic Canada, in the Northern regions of Norway and Sweden as well as the Kola Peninsula and Chukotka in Russia.³⁷ Response rates are presented in table 2.

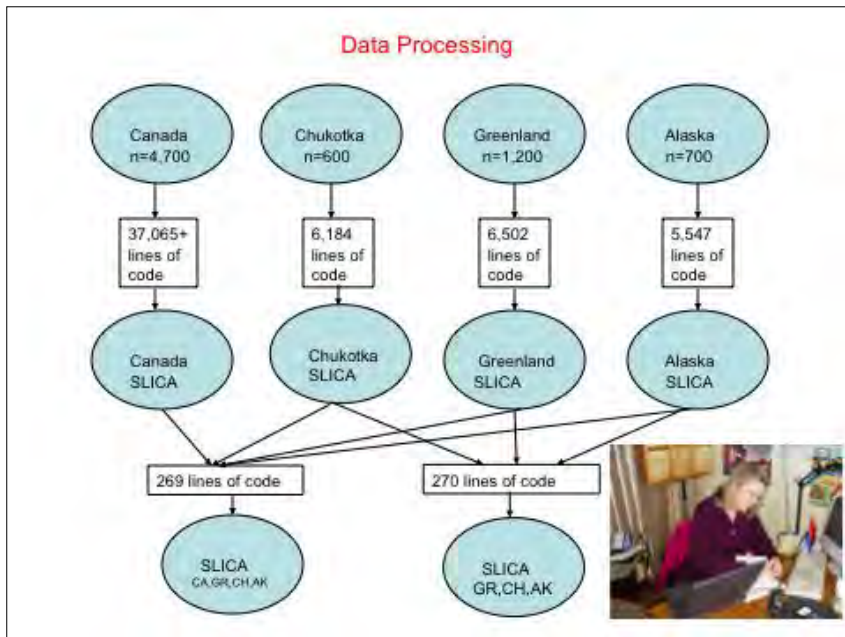
It goes without saying that there was much work to do from the completion of almost 8,000 questionnaires, each containing responses to roughly 200 questions through the development of an analysis database, much less through the publication of research findings in scholarly journals as well as in papers and in magazines directed toward larger audiences.

Following the face-to-face interviews, the completed questionnaires were checked at the field sites. Subsequently responses, including verbatim volunteered comments, were entered into regional/national SLiCA databases using the statistical software package, SPSS. Based on this preliminary work all regional and national data had to be merged into a common database.³⁸ The data processing work including: developing a joint data dictionary, coding open questions, establishing coherent responses categories to open-ended questions and creating the SPSS syntax, all of which was a precondition for SLiCA analysis and reporting, was conducted by Jack and Marg Kruse (see Figure 3).

³⁷ Due to lack of funding SLiCA was not conducted in Northern Finland.

³⁸ As the interviewing of the Canadian Inuit was conducted by Statistics Canada the handling and storage of data took place under Canadian legislation, which implied that only "sworn-in statisticians" could only merge Canadian data with SLiCA data from the other regions/countries at StatCan's laboratories.

Figure 3. Data Processing. Inuit regions



Kruse 2007.

1.7 Launching SLiCA findings and research results for the Inuit settlement regions: Inuit Nunaat

Due to a non-parallel conducting of interviews data processing and thus the research analyses were carried through and concluded at different times.

1.7.1 *Launching SLiCA Results for Inuit Nunaat, the Inuit settlement regions*

The sequence of concluding the data processing followed the sequence of conducting the interviewing in the different regions, which meant that by the beginning of 2007 data from the Inuit Settlement regions, Inuit Nunaat

(meaning “Land of the Inuit” in the different Inuit dialects) were merged into a joint database and comparative analyses between the different regions – including Chukotka – could be carried through.³⁹ Following a final consultation process with our indigenous partners almost 600 tables and a comprehensive overview were published on the project website⁴⁰ on the day the SLiCA international team hosted a public briefing on SLiCA results on 22nd March, 2007 and later the same day a “Survey of Living Conditions in the Arctic Results Workshop” with participants from both the research community and SLiCA’s indigenous partners.

The availability of data, analyses based on these data, an extensive documentation of the development of the SLiCA research design as well as sampling procedures and fieldwork experiences coincided with the official start of International Polar Year, IPY, 1st March, 2007 and the SLiCA Results Workshop at the University of Alaska Anchorage was at the same time an IPY opening event.

1.7.2 *Launching SLiCA Results for all SLiCA survey regions*

As interviewing in Sápmi was not concluded until 2008 and as a thorough data processing workup⁴¹ was necessary to be able to merge the Norwegian, Swedish and Kola Peninsula data into the already existing database for the Inuit survey regions SLiCA results for all regions, including the

³⁹ Merging of the data from different countries proved to involve an unexpected challenge. Early in the process of SLiCA development Statistics Canada provided technical support. Stat Can subsequently offered to modify its Aboriginal Peoples Survey design to incorporate SLiCA questions. Approximately a third of SLiCA questions were fielded by Stat Can. Access to the resulting data was governed by Stat Can’s enabling legislation. The practical consequence of this fact is that the merging and analysis of data from participating countries including Canada had to be done in secure StatCan laboratories. At one such merging exercise, members of the SLiCA team from Russia, Greenland, the US, and Canada all obtained security clearance to be present.

⁴⁰ Jack Kruse and Marg Kruse accomplished the data compilation (Kruse & Kruse 2004–2012). The project website www.arcticlivingconditions.org was funded by National Science Foundation, was developed by Jack Kruse and was launched on 22nd March, 2007.

⁴¹ As the initial data compilation the data processing of the Saami data was accomplished by Jack Kruse and Marg Kruse (Kruse & Kruse 2004–2012).

Sápmi regions, did not occur until 2010–2011.⁴² The release of comparative data including the Sápmi regions in Norway, Sweden, and the Kola Peninsula took the form of a final report to the Senior Arctic Officials of the Arctic Council in October 2010 at the SAO meeting in Torshavn, Faroe Islands and following that in May 2011 to the Ministerial Meeting in Nuuk. Additional circumpolar comparisons across countries and regions were carried out and published (Poppel *et al.* 2011). The results are presented below (see paragraph 1.9).

Permanent Participants of the Arctic Council (Indigenous Peoples' representatives in front of Katuaq, the cultural center i Nuuk). AC Ministerial Meeting, May 2011. Nuuk, Greenland



Photo: Birger Poppel.

⁴² The grant providing access to StatCan laboratories had expired by the time that the Saami data were available. Therefore it was not possible to merge the Saami data with the international data set that includes Canadian data. Such a merge is possible if researchers obtain the necessary grant and clearances.

1.8 The contents of the anthology

The SLiCA Anthology that you have downloaded to your screen or hold in your hands is the first book solely based on results from the different survey regions of the SLiCA research project but definitely not the first publications based on SLiCA data and findings. Roughly 50 peer reviewed articles and book chapters have been published in international research journals and books in different fields (Annex 5 includes a “SLiCA Bibliography”). To represent the many and broad faceted approaches five of the chapters in this anthology are reprints that authors and publishers generously have permitted be reprinted.

Three articles are based on PhD Dissertations and one article is based on a Master’s Thesis. Five PhD Dissertations have been at least partially based on SLiCA methodology and findings (see SLiCA publication list, Annex 5), indicating that one of the overall goals “to educate and involve post-docs, PhD students, candidates and undergraduates in the SLiCA project” has been – at least partly – met. Furthermore SLiCA has been included in university teaching and – as mentioned above – SLiCA presentations have been made at a large number of meetings, workshops, and conferences.

It has been an objective for the SLiCA anthology that the author team contributing to the anthology should mirror the variety of researchers and approaches involved in the SLiCA process. Having authors from seven disciplines (anthropology, economics, geography, political science, social medicine, sociology and statistics), with research experience and “seniority” from early career scientists to researchers with emeritus status, and with an age gap of some 40 years, diversity seems to be reflected – although more female authors would have improved the gender balance among the authors.

It has no less been an objective that the contents passed on an idea of the broad-spectred information the SLiCA data provides and the multifaceted approaches and discussions that eventually resulted in a new research design, a common core questionnaire and a common ground for data analyses via the SLiCA database.

Thematically, the SLiCA anthology ranges from theoretical and methodological issues to regional and country specific analyses of different living conditions dimensions.⁴³ *Chapter two* introduces a model for conducting research on living conditions among indigenous peoples and elaborates on and develops the concepts of living conditions, subjective well-being and quality of life reflecting the life forms and priorities among Arctic indigenous peoples. Furthermore the chapter deals with the challenge of measuring impacts of structural change on individual well-being.

Chapter three focuses on sampling methods and thus representativity. It compares the sampling methods used in Greenland, Northern Alaska and Northern Norway, addresses potential selection biases and concludes that a unique database for exploring relationships between health and other living conditions variables has been generated despite differences in sampling methods and other differences.

Chapter four analyses the prevalence of “suicidal thoughts” in Greenland, Northern Alaska, Northern Norway and Northern Sweden and concludes that the highest rates are found in Greenland and the lowest in Northern Sweden and furthermore differences in the prevalence of suicidal thoughts can be partly explained by education level.

One of the initial ambitions of the SLiCA project was to be able to make context specific analysis and to make comparisons over time. *Chapter five* is a prominent example of the kind of analyses that can be made when comparable datasets are available (in this case from Alaska’s North Slope in 1977 and 2003) and applied to a region characterised by a rapid socio-economic development. As the first living conditions study took place before oil development started it can be considered a base line study for the 2003 SLiCA study. Together the two surveys (and the resulting datasets) create an opportunity to provide knowledge of the impacts of oil development in the Alaskan North Slope.

Chapter six and seven focus on the Canadian Arctic. The first of the two Canadian focused chapters is a study of economic stratification and potential relationships between economic stratification and a number of

⁴³ The “Abstracts chapter” include abstracts in English, Danish and Greenlandic of chapters 2–11.

living conditions. The analyses both broadens the understanding of “social differentiation” and concludes that, for instance, social networks, family and the principle of reciprocity contribute to the required cohesion of local communities and thus to some degree compensates for the impacts of the economic stratification. The second Canadian focused chapters deal with objective and subjective living conditions in Nunavut. The analysis confirms generally difficult conditions for many Nunavummiut but also finds that the majority wish to stay in Nunavut despite those conditions because the attach meaning to living there. The degree of control of the Nunavummiuts’ personal and domestic reality is found contributing to this wish to stay.

The point of departure for *chapter eight* is the increasing public focus on formal education and how the attendance of education has developed from the early 1970s to 2006. Based on survey results from three Greenlandic living conditions surveys (1973, 1994 and 2004/06) the chapter finds that the percentage adults having a formal education beyond primary school has increased from 28 per cent in 1973 to 47 per cent in 2004/06.

Based on projections that women’s aspirations for education and stable jobs might result in an outmigration from smaller communities in Northwest Alaska and thus a future female deficit, *chapter nine* examines four SLiCA variables including participation in the mixed economy – subsistence activities and wage employment. The chapter finds differences between men and women in their productive activities as well as in their aspirations that support the projected population dynamics.

Chapter ten focuses on gender specific impacts of a rapid societal development in Greenland analysing how women and men perceive their most important contributions to their household. The assumption that rapid changes in family patterns have affected these perceptions seems to be substantiated, as both Greenlandic men and women find their primary contribution to be of a financial kind while “showing love and affection” ranks second for both genders.

Chapter eleven provides in three subunits a contextual insight into the Swedish part of Sápmi. The first entails discourse on the challenges of Saami representation. The second looks at the simultaneous net outmigration of Saami as the increasing interests of extractive industries have impacted their living conditions over the latest decades. Finally, the

chapter discusses key questions about Saami identity and ethnicity: who is recognised as Saami and what, for instance, are the implications for membership in the “sameby” herding collectives for Saami women after marriage? This section points to potential gender discrimination as a consequence of the Swedish legislation concerning Saami.

1.8.1 *Circumpolar comparisons across countries and regions*

The eleven chapters in the SLiCA Anthology deal with a variety of living conditions import to the indigenous peoples living in the SLiCA survey regions, mostly focussing on one or a few countries and regions. In an article published at the occasion of the Ministerial meeting of the Arctic Council in Nuuk, May 2011, cross country and regional comparisons were conducted within a number of living conditions indicators as for instance language proficiency, perceptions of social problems, satisfaction with influence over management of renewable as well as non-renewable resources and last but not least quality of life (Poppel *et al.* 2011). To reveal some of the potentials of the SLiCA data some major findings originally published in 2011 are presented below.

1.9 Major SLiCA findings⁴⁴

Among the hundreds of potential comparisons between SLiCA survey regions using different indicators, the following living conditions dimensions were chosen due to their prominence in the public discussions and in discussions of the SLiCA management board where some of the living conditions dimensions were part of the research themes selected by SLiCA’s indigenous partners: 1) The mixed economy: a way of life; 2) Education; 3) Language; 4) Major social problems; 5) Environmental concerns

⁴⁴ The subchapters 1.9.1–1.9.6 originate from Poppel *et al.* 2011 (Birger Poppel (editor), Jack Kruse, Ann Ragnhild Broderstad, Bent-Martin Eliassen, Christian Jensen, Stephanie Martin, Marita Melhus, Sara Olsvig and Charles Westin).

and local control. Language: “fluency” as well as “current language use” are key issues to indigenous peoples and is important both in relation to identity, cultural continuity, social relations and education. This is also the reason for a more detailed presentation of “language” survey findings.

Before presenting actual findings based on data analysis two overarching conclusions crucial to further research into Arctic indigenous peoples living conditions, well-being and quality of life have to be stated:

- The value of a major international research effort like SLiCA can be augmented by conducting follow up studies using the SLiCA findings as the base line for studies of rapid social change in the Arctic.
- Human development shall be measured in ways that reflect subjective well-being; thus partnerships with the respondents – in SLiCA the indigenous peoples of the Arctic – is key to study and understand living conditions and welfare priorities.

1.9.1 Overall findings

- A combination of traditional activities and cash employment, the mixed economy of the Arctic, is the prevailing lifestyle of Arctic indigenous peoples. It takes money to pursue traditional activities; households with higher incomes can, and do, choose to spend income on these activities.
- Despite the rapid changes in the Arctic, most indigenous peoples have maintained their traditional subsistence activities. Many also continue to speak their indigenous language – particularly in Greenland.
- Health conditions vary widely in the Arctic: Most of the indigenous people surveyed rate their own health as good or excellent. The exception is Chukotka, where more than half rated their health as only fair or poor (data not available for the Kola Peninsula).
- Even though most are satisfied with life in their communities, indigenous people also acknowledge widespread social problems: unemployment, alcohol abuse, suicide, drug abuse, family violence and sexual abuse are considered major social problems by more than six indigenous respondents out of ten. In Chukotka and the Kola Peninsula at least eight out of ten cite most of these problems.

- Results in SLiCA on health conditions, ability to speak and write the indigenous languages and also maintenance of traditional subsistence skills vary between age groups. Thus additional analyses controlling for age differences will be informative.
- On average three out of four indigenous people perceive climate change to be a problem in their communities and more than 50 per cent mention local contaminated sites, pollution of local lakes and streams and pollution from industrial development as problems in the region.
- Some of the overall SLiCA findings indicate an awareness of a variety of environmental problems to the indigenous peoples – problems that most Inuit and Saami feel they lack influence on.

1.9.2 *The mixed economy: A way of life*

- Hunting, fishing and herding are still important productive activities, and constitute the main source of income for many. The productive activities of the mixed economy consist of both traditional subsistence activities and activities rooted in the cash economy.
- Numbers of subsistence activities people take part in vary somewhat among regions, as do available resources and traditional practices. The survey asked about as many as 25 activities (but not all 25 in all regions). In Northern Alaska and Northern Norway respondents averaged about 9 different activities a year, compared with 8 in Chukotka and 6 in Greenland, Sweden and the Kola Peninsula.
- The most common subsistence activities throughout the survey regions are fishing and picking berries, which three quarters of respondents do. Roughly two thirds preserve meat or fish or do other things necessary to prepare for hunting or fishing or to take care of fish and game. One third or more hunt birds, sea mammals or big game.
- Seven to nine in ten Inuit, Saami and other indigenous people of The Kola Peninsula think “the way they view nature” and traditional activities and customs like eating and preserving traditional food, use of the indigenous language, fishing and hunting are important to their identity.
- The widespread participation in subsistence activities contributes to household economies, to healthy diets, to cultural continuity and social cohesion.

- When jobs are available, large majorities of people in Arctic communities work. About 75% of respondents in Northern Alaska, Northern Sweden and the Kola Peninsula, 80% in Greenland and Northern Norway, and 88% in Canada and Chukotka worked at least some time in the year before the survey. That includes people who worked full-time and many more who worked only part-time or seasonally.
- About a third of those who didn't work in the year before the survey were unemployed—they wanted jobs but couldn't find them. Others didn't work for various reasons— including family responsibilities, poor health, being in school or of advanced age.
- Indigenous peoples throughout the survey regions cite unemployment as one of the main problems in their communities. Jobs are scarce in small Arctic communities, and many jobs are seasonal or part-time labour.

1.9.3 *Education*

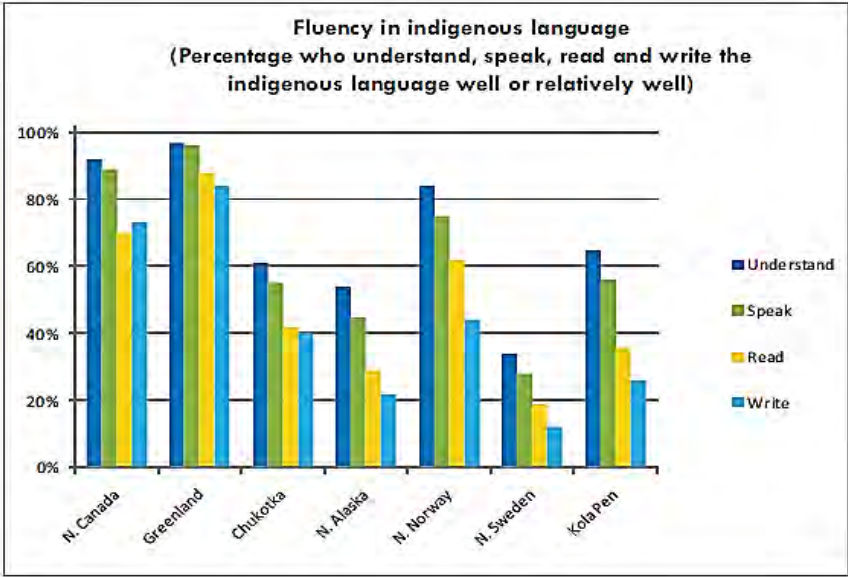
Different productive activities require different skills: formal education to fit jobs in the market economy and traditional education skills to use/apply in subsistence activities. The vast majority in all regions learned five or more skills (as for example: “read the weather”, “hunt and fish”, “learned stories passed by parents and grand parents”, “navigate at sea” and “cook and prepare traditional food”). More than seven out of ten in all regions have applied these skills since childhood. Overall approximately four out of ten indigenous adults in the survey regions have completed vocational training or high school/university. This average covers major differences: almost seven out of ten Saami in Northern Norway have completed the vocational training or high school/university. The figures for Chukotka, Greenland and the Kola Peninsula are between four and five.

1.9.4 *Language*

Maintaining the indigenous language is important for the identity of the individual as well as for the cultural continuity. In Greenland, Greenlandic is the official language and thus have a unique status compared to the other regions. We asked all respondents about their fluency in the indige-

nous (see Figure 4) as well as the non-indigenous language (see Figure 5) used in the region. Furthermore we asked about the current use of the indigenous language in the household (see Figure 6). More than eight out of ten Greenlanders and more than seven Canadian Inuit understand, speak, read and write well or very well in their native languages. In Northern Norway and more so in the other surveyed regions indigenous people are less likely to understand, speak, read and write their native languages. Many indigenous people in these regions report that they do not read or write their native language. Lack of teaching offered seems to be one major reason. The current use of the indigenous language mirrors the self-reported fluency in the indigenous language of the region: More than eight out of ten Greenlanders report that Greenlandic is spoken “all the time in the household”. The corresponding figures for the Inuit in Northern Canada and the Saami in Northern Norway are 50 per cent and forty per cent respectively. In the rest of the regions (the question was not asked to the Saami in Sweden) seventy per cent or more report that the indigenous language is used “sometimes or less” in the household.

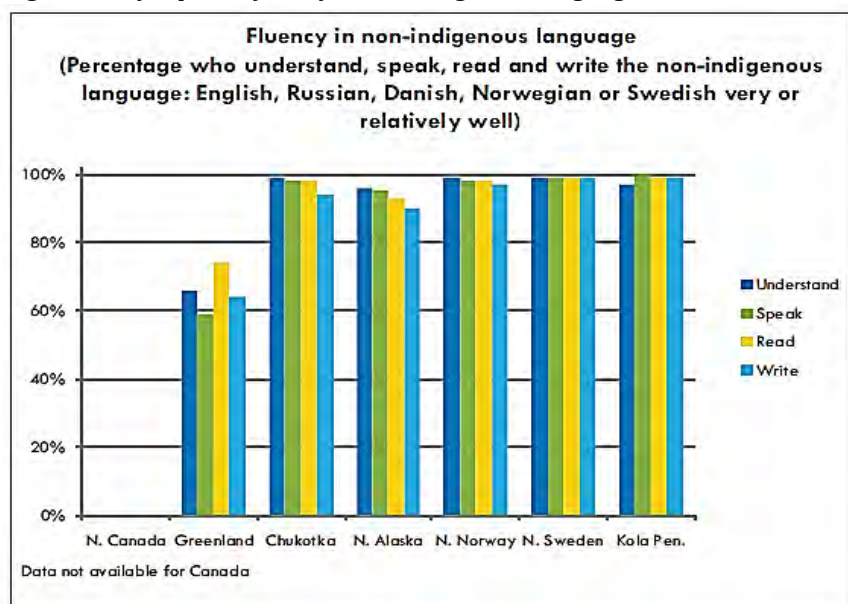
Figure 4. Self-reported fluency in indigenous language. Per cent



Source: www.arcticlivingconditions.org and the SLiCA database.

In most regions qualifications in a non-indigenous language (English, Danish, Norwegian, Swedish or Russian) are necessary when it comes to for instance further education. Almost all respondents report fluency in one non-indigenous language. In Greenland the situation is different, though, as less than three out of four report that they understand, speak, read or write Danish very or relatively well.

Figure 5. Self-reported fluency in non-indigenous language. Per cent

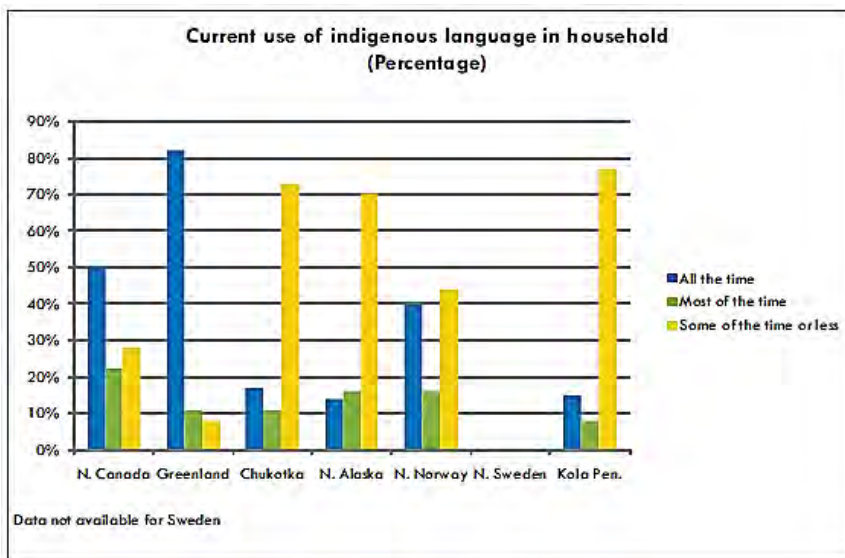


Source: www.arcticlivingconditions.org and the SLiCA database.

When it comes to using modern communication technology a parallel development to southern regions is experienced: Almost all indigenous respondents between 16 and 24 in Norway, the Kola Peninsula and Greenland used a cell phone in the twelve months prior to the interview. Apart from Norway and the Kola Peninsula few 65 year-old and older had used a cell phone in that period. In Norway, Greenland and Alaska more than two out of three in the younger age group had used the Internet. In the age group 65+ only in Northern Norway a substantial part (four out of ten) used the Internet (note: the span of years from inter-

viewing started in Canada and Alaska and until it was finalized in Norway might affect the differences).

Figure 6. Current use of indigenous language in household. Per cent



Source: www.arcticlivingconditions.org and the SLiCA database.

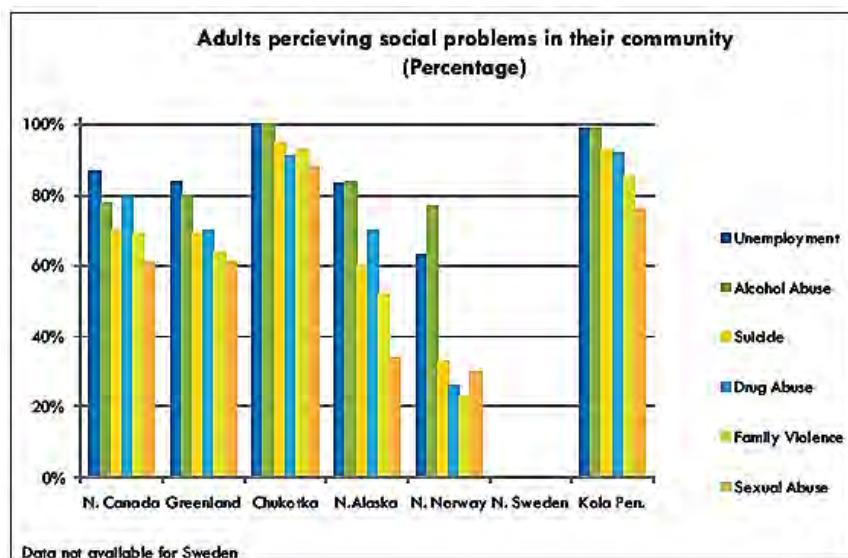
1.9.5 Major social problems (Figure 7)

Even though most indigenous people are satisfied with the quality of life in their Arctic communities, they also recognize major problems.

- Almost nine in ten say unemployment is a major social problem. People in Northern Alaska who reported that they had thought about moving out of their home communities – especially villages – frequently cited lack of jobs as a reason.
- 85 per cent of those in all survey areas – and everyone in Chukotka and the Kola Peninsula – say alcohol abuse is a problem in their communities. More than two thirds also cite drug abuse.
- Suicide is widespread among indigenous people across the Arctic, but a much larger share of people in Chukotka and the Kola Peninsula cite it as a problem.

- Family violence and sexual abuse also rank high on the list of problems, but less so in Northern Norway than in other areas, especially Chukotka.

Figure 7. Indigenous adults perceiving social problems in their community. Per cent



Source: www.arcticlivingconditions.org and the SLiCA database.

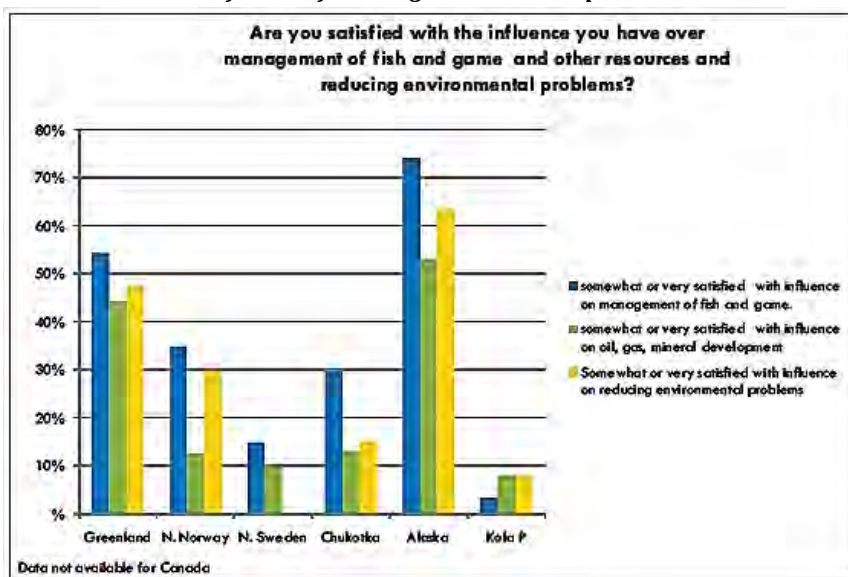
1.9.6 Environmental concerns and local control (Figure 8)

The indigenous peoples in focus of the survey were asked about environmental concerns, if any.

- On average three out of four perceive climate change to be a problem in their communities.
- More than 50 per cent mention local contaminated sites, pollution of local lakes and streams and pollution from industrial development as problems in the region.
- A significantly larger proportion of indigenous people in Chukotka and the Kola Peninsula are concerned with these problems.

- In Greenland a vast majority cite pollution from other countries and in Chukotka, Alaska and the Kola Peninsula erosion of coastal areas or riverbanks is reported as a problem by a majority. Six out of ten respondents in Chukotka and the Kola Peninsula consider fish or animals may be unsafe to eat.
- The Iñupiat of Northern Alaska are much more likely than indigenous people elsewhere to be satisfied with their ability to influence management of local fish and game and other natural resources. Only between 10 per cent and 15 per cent of the Saami in Northern Norway and the Kola Peninsula and the indigenous peoples in Chukotka are satisfied with the influence the indigenous peoples have on the management of natural resources like oil, gas, and minerals.

Figure 8. Satisfaction with influence over management of fish and game and other resources and with influence of reducing environmental problems. Per cent

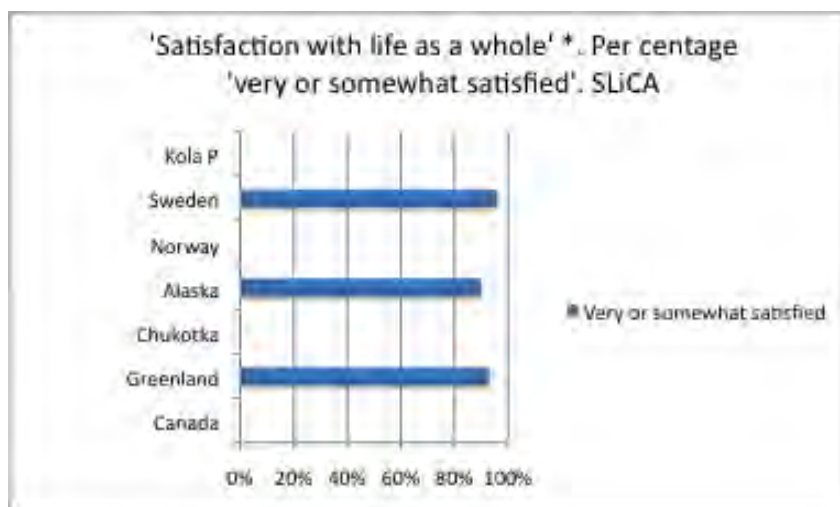


Source: www.arcticlivingconditions.org and the SLiCA database.

1.9.7 *Satisfaction with life as a whole – Greenlanders, Inupiat and Swedish Saami*

The question that usually frames how happy the citizens of a country are: “How satisfied are you with your life as a whole?” was part of the SLiCA core questionnaire but was only asked in Northern Alaska, Greenland and the Swedish part of Sápmi. More than nine out of ten indigenous people in Greenland, Alaska and Sweden reported that they were somewhat or very satisfied with their life as a whole. Coding the answers with the values from 1 to 5 results in an average score of 4.2 in Greenland, 4.4 in Alaska and 4.5 in Sweden. This means, that the vast majority – despite facing and being aware of a number of social problems and large parts being far from satisfied with influence over renewable and non-renewable resources – is somewhat or very satisfied with their life as a whole. The lower average in Greenland reflects a larger proportion of somewhat satisfied than in the two other regions. Possible explanations were discussed during the development of the first review of SLiCA, including differences among respondents to rate themselves “very satisfied” (see Kruse *et al.* 2008:133), but to get beyond qualified guessing a follow-up survey needs to explore the differences more thoroughly.

Figure 9. Satisfaction with life as a whole – Greenlanders, Inupiat and Swedish Saami. Per cent



* Data Not Available for Canada, Chukotka, Norway and the Kola Peninsula

** Source: www.arcticlivingconditions.org & SLiCA database. (Glatzer, 2014)

In the chapter “Living Conditions and Perceived Quality of Life among Indigenous Peoples in the Arctic” in “Global Handbook of Subjective Well-being and Quality of Life” the major “contributors” to “satisfaction with life as a whole” are investigated through regression analysis. The analysis finds the following variables: satisfaction with “standard of living”, “personal health”, “opportunities to hunt and fish” and “combination of productive activities” to be the ones explaining the larger part of “satisfaction with life as a whole”. In Greenland and Alaska more than half and in Sweden at least one-third is explained by these independent variables. It gives one food for thought that “opportunities to hunt and fish” is part of the Quality of Life-equation in all three regions/countries. (Poppel 2015).

Ilulissat SLiCA interview team with national coordinator. Ilulissat, Greenland. 2004



Photo: Birger Poppel.

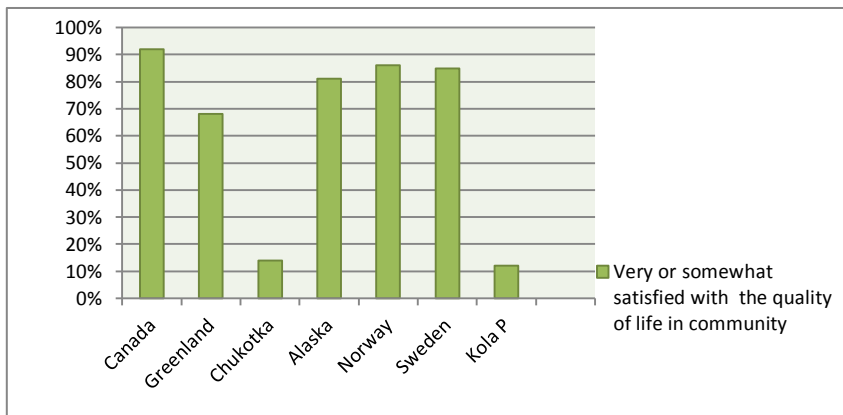


Photo: Jack Kruse.

1.9.8 Satisfaction with quality of life in this community

Whereas the more overarching question about satisfaction with life was only asked in three survey regions a question about “Satisfaction with quality of life in this community” was asked in all regions but Arctic Canada. The Canadian questionnaire asked a slightly differently phrased question about “quality of life as a whole in this community”, but the Canadian responses are included in the comparison with the other regions in Figure 10 below.

Figure 10. Very or somewhat satisfied with the quality of life in this community. Per cent



Note: the question behind this figure was generally focussing on satisfaction with “quality of life in this community”, whereas the Canadian questionnaire asked about “quality of life as a whole in this community”.

Source: www.arcticlivingconditions.org and the SLiCA database.

The figure shows marked differences between the two Russian survey regions: Kola Peninsula and Chukotka and the remaining Inuit and Saami survey regions where at least six out of ten in Greenland and more than eight out of ten in Arctic Canada, Northern Alaska and the Norwegian and Swedish parts of Sápmi are somewhat or very satisfied with quality of life in their community. Parallel regression analysis to the abovementioned was conducted to single out the most important factors in explaining “satisfaction with quality of life in this community”. Satisfaction with “transportation to and from community”, “standard of living” and “recreational facilities” were important explanators in all/most regions and countries. And as the analysis further concludes: “opportunities to hunt and fish”, “quality of health services”, “cost of living” and “availability of goods in local stores” significantly contribute to the explanation of satisfaction with life in this community in several regions/countries.” (Poppel 2015:32).

When further elaborating on these results it is important to bear in mind that despite the problems faced and the dissatisfaction with a number of living conditions even where dissatisfaction is most significant, namely the two Russian survey regions, a majority of the indigenous peoples report that they did not think about leaving during the last

five years. There is probably no doubt that some (but maybe quite few) are lacking the necessary resources to leave or even think about leaving. But the SLiCA survey indicates that to a large part of Arctic indigenous peoples staying is a result of voluntary choice – but also, that this choice could be accompanied with much more satisfaction with life and satisfaction with quality of life in the community if some of the living conditions that score low on the satisfaction scale but are important to people, like “satisfaction with standard of living” and “opportunities to hunt and fish” were improved.

1.10 Postscript – what next?

Over the last decades there has been a growing awareness that human development should be assessed in ways that grasp different welfare priorities and diverse approaches to “subjective well-being- and quality of life”. The increased focus – for instance in the United Nations Development goals – on poverty world wide and the emphasis on the necessity of a sustainable development has revealed a need for indicators to make it possible to track changes over time. Despite these needs and despite critique from researchers, politicians, NGOs and others and despite prominent initiatives (for example OECD’s Better Life Index,⁴⁵ the so-called “Sarkozy initiative”⁴⁶ and others) to find more nuanced and less crude and even misleading measure than GDP, Gross Domestic Product, to assess human development, GDP still seems to be a significant part of the “credo” of the most influential political and economic forces.

For a number of reasons both discussions of alternative measures of human development have gained some momentum in the Arctic. Arctic Council supported projects like the Survey of Living Conditions in the Arctic, SLiCA, the Arctic Human Development Report, AHDR and the fol-

⁴⁵ OECD Better Life Index (www.oecdbetterlifeindex.org/).

⁴⁶ In 2008 the French Government created a Commission on Measurement of Economic Performance and Social Progress including – among others – Nobel laureates Joseph Stiglitz, and Amartya Sen, as well as Jean-Paul Fitoussi (www.stiglitz-sen-fitoussi.fr/en/index.htm).

low-up project to the AHDR: Arctic Social Indicators have all paved the road for thinking “human development” and “quality of life” differently. The Nordic Council has pushed in the same direction, supporting both SLiCA and other of the abovementioned initiatives. The Nordic Council of Ministers has also facilitated exchange of ideas and experiences between Bhutan’s Gross Domestic Happiness Program⁴⁷ and Nordic participants in an NMC funded seminar in Nuuk 2010.

The Nordic Council of Ministers’ Arctic Cooperation Program 2015–2017 gives priority to – among other thematic areas – “The population”. The Nordic Council of Ministers emphasizes the societal changes in the Arctic – for instance: urbanization, the demographic challenge, settlement structures, town planning and mobility, the different impact changes have on women and men. Furthermore the Arctic Cooperation Programme “has a special focus on the living conditions of the indigenous peoples and their adaptation to new conditions that are the results of climate change, globalization and new economic potentials” (translation – BP). One precondition for developing and implementing policies to follow up on such a “special focus” is a solid foundation of statistical and survey data and a follow up that is based on a combination of regularly collected data by regional and national statistical institutes and surveys focussing on more specific topics like satisfaction with different aspects of life – including life itself.

It is the hope and ambition that the SLiCA project and the articles presented in this book can contribute to an increased focus on human development of both indigenous peoples of the Arctic and other Arctic residents and enhance discussions on individual well-being and quality of life bearing in mind two overarching conclusions stated above (1.9):

- The value of a major international research effort like SLiCA can be augmented by conducting follow up studies using the SLiCA findings as the base line for studies of rapid social change in the Arctic.

⁴⁷ Bhutan’s Gross Domestic Happiness Index has been developed over a decade through a large number of local consultations. The intention is to apply the GNHI ensure a sustainable development. Bhutan initiated a discussion in the United Nation that resulted in a unanimous UN General Assembly decision to *adopt Happiness as an independent goal for all countries*. www.gnhbhutan.org/about/ accessed 10th February, 2015.

- Human development shall be measured in ways that reflect subjective well-being; thus partnerships with the respondents – in SLiCA the indigenous peoples of the Arctic – is key to study and understand living conditions and welfare priorities.

1.11 References

- AHDR, *Arctic Human Development Report*. (2004). Akureyri: Stefansson Arctic Institute.
- AHDR, *Arctic Human Development Report*. (2015). TemaNord2014:567. Copenhagen: Nordic Council of Ministers.
- Allardt, E. (1975). *Att Ha, Att Älske, Att Väre. Om välfärd i Norden*. Lund.
- Andersen, T. (2004). *Living conditions research in the Arctic. How to measure Living Conditions and Individual Well-being among Inuit and Sami in the Arctic*.
- Andersen, T. (1999). A Circumpolar Study of Living Conditions among Saami and Inuit Peoples. In: Petersen, H. & Poppel, B. (eds.): *Autonomy, Dependency and Sustainability in the Arctic*, Ashgate, London.
- Andersen, T., & Poppel, B. (2002). Living Conditions in the Arctic. In: Hagerty, M.R., Vogel, J. & Møller, V. (eds.): *Assessing Quality of Life and Living Conditions to Guide National Policy. The State of the Art*. Social Indicators Research Series, Vol. 11. Kluwer Academic Publishers. Reprinted from: Social Indicator Research, Vol. 58, pp. 191–216.
- Eliassen, B.M., Melhus, M., J. Kruse, Poppel, B. & Broderstad, A.R. (2012). Design and methods in a survey of living conditions in the Arctic - the SLiCA study. *International Journal of Circumpolar Health*, 71:17229,10.3402/IJCH.v71i0.17229.
- From, A., Jensen, K. J., Friis, P. & Kjær, A., (1975). *Levevilkår og Sociale Problemer i Vestgrønland* [Living conditions and social problems in Westgreenland]. Social-forskningsinstituttet. Publikation 64. København, 1975.
- Glomsrød, S. & Aslaksen, I. (eds.) (2006). *The Economy of the North*. Oslo: Statistics Norway. <http://www.ssb.no/en/natur-og-miljo/artikler-og-publikasjoner/the-economy-of-the-north--36697>
- Glomsrød, S. & Aslaksen, I. (eds.) (2008). *The Economy of the North 2008*. Oslo: Statistics Norway. <http://www.ssb.no/en/natur-og-miljo/artikler-og-publikasjoner/the-economy-of-the-north-2008>
- Inuit Circumpolar Council. (2015). The ICC Resolution 29, from the Inuit Circumpolar Conference in 1998. <http://www.inuitcircumpolar.com/resolution-98-29.html>
- Krupnik, I., Allison, I., Bell, R., Cutler, P., Hik, D., Lopez-Martinez, J., Rachold, V. & Sarukhanian, E. (eds.) 2011. *Understanding Earth's Polar Challenges: International Polar Year 2007-2008*. Edmonton: Canadian Circumpolar Institute.

- Kruse, J., Poppel, B., Abryutina, L., Duhaime, G., Martin, S., Poppel, M., Kruse, M., Ward, E., Cochran, P. & Hanna, V. (2007). Survey of Living Conditions in the Arctic: Project Overview. In: Poppel, B., Kruse, J., Duhaime, G., Abryutina, L. *Survey of Living Conditions in the Arctic: SLiCA Results*. Anchorage: Institute of Social and Economic Research, University of Alaska Anchorage. <http://www.arcticlivingconditions.org/>.
- Kruse, J., Poppel, B., Abryutina, L., Duhaime, G., Martin, S., Poppel, M., Kruse, M., Ward, E., Cochran, P. & Hanna, V. (2008). Survey of Living Conditions in the Arctic, SLiCA. In: Møller, V., Huschka, D. & Michalos, A. C. (eds.). *Barometers of Quality of Life around the Globe. Springer Social Indicators Research Series*. Springer Verlag, pp. 107–134.
- McDougall, B. (1998). *Draft Proceedings Report. Workshop on the Proposed Survey of Living Conditions in the Arctic*. May 18–21, 1998. Slagelse, Denmark.
- Larsen, J. N., Schweitzer, P., & Fondahl, G. (eds.) (2010). *Arctic Social Indicators – A follow up to the Arctic Human Development Report*. TemaNord: 521. Copenhagen: Nordic Council of Ministers.
- Larsen, J. N., Schweitzer, P., & Fondahl, G. (eds.) (2015). *Arctic Social Indicators II – A follow up to the Arctic Human Development Report*. TemaNord2014:568. Copenhagen: Nordic Council of Ministers.
- Nordic Council of Ministers (2014). *Arctic Cooperation Program 2015-2017*. www.norden.org. Accessed 6th February, 2015.
- Poppel, B. (2006a). Interdependency of subsistence and market economies in the Arctic. In: Glomsrød, S. & Aslaksen, I. (eds.) (2006). *The Economy of the North*. pp. 65–80. Oslo: Statistics Norway.
- Poppel, B. (2006b). Den arktiske Levevilkårsundersøgelse, SLiCA – et komparativt og transnationalt projekt. [The Survey of Living Conditions in the Arctic, SLiCA – a Comparative and Transnational Project]. In: Hanne Petersen (ed.) *Grønland i verdenssamfundet*, pp. 259–277. Nuuk: Atuagkat/Ilisimatusarfik.
- Poppel, B. (2010). Some data sources on people, peoples, communities, regions and human activities in Greenland. In: G. Winther (ed.), *The Political Economy of Northern Regional Development – Yearbook 2008*. pp. 254–282. TemaNord. Nordic Council of Ministers.
- Poppel, B. (2014). Survey of Living in the Arctic, SLiCA. In: Michalos (ed.) *Encyclopedia of Quality of Life Research*. Springer.
- Poppel, B. (2015). Living Conditions and Perceived Quality of Life Among Indigenous Peoples in the Arctic. In: Glatzer, W., Camfield, L., Møller, V., Rojas, M. (eds.) *Global Handbook of Quality of Life - Exploration of Well-Being of Nations and Continents*. Springer Science+Business Media Dordrecht. pp. 715–747.
- Poppel, B. (ed.) Kruse, J., Broderstad, A. R., Eliassen, B.-M. Jensen, C., Martin, S., Melhus, M., Olsvig S., & Westin, C. (2011). *Arctic living conditions. Survey of Living Conditions in the Arctic SLiCA*. Major SLiCA findings presented to the Arctic Council Ministerial meeting. Nuuk.

Statistics Greenland (1994). *Levevilkår i Grønland – Den Grønlandske Levevilkårsundersøgelse* [Living conditions in Greenland - The Survey of Greenlandic Living Conditions]:

Grønlands Statistik/Statistics Greenland (1994). *Kalaallit Nunaanni inooriaaseq/ Levevilkår i Grønland*. [Living Conditions in Greenland]. Rapport fra undersøgelse af befolkningens økonomiske og materielle levevilkår, foråret 1994/[Report from the population survey of the economic and material living conditions, spring 1994]: Nr. 1. Nuuk, Grønland.

Grønlands Statistik/Statistics Greenland (1994). *Avislæsningsvaner i Grønland*. [Newspaper reading habits in Greenland]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 2. Nuuk, Grønland.

Grønlands Statistik/Statistics Greenland (1995). *Fisker- og fangerfamiliers levevilkår*. [Living Conditions in Fishermen's and Hunters' Families]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 3. Nuuk, Grønland.

Grønlands Statistik/Statistics Greenland (1995). *Familiers levevilkår i Grønland*. [Living Conditions among families in Greenland]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 4. Nuuk, Grønland. (in Greenlandic and Danish)

Grønlands Statistik/Statistics Greenland (1995). *Rapport om Levevilkår i byggerne*. [Report on Living Conditions in the Settlements]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 5. Nuuk, Grønland. (in Greenlandic and Danish)

Grønlands Statistik/Statistics Greenland (1995). *Rapport om Boligforholdene i Grønland*. (Report on Housing Conditions in Greenland). Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 6. Nuuk, Grønland.

Grønlands Statistik/Statistics Greenland (1995). *Rapport om Arbejde og ledighed i Grønland*. [Report on Work and Unemployment]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 7. Nuuk, Grønland.

Grønlands Statistik/Statistics Greenland (1996). *Rapport om Den sproglige udvikling i Grønland 1984–1994*. [Report on the Development of Language Abilities in Greenland 1984–1994]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 8. Nuuk, Grønland.

Grønlands Statistik/Statistics Greenland (1996). *Rapport om Indkomstforhold i Grønland 1993*. [Report on Incomes in Greenland 1993]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 9. Nuuk, Grønland. (in Greenlandic and Danish)

Grønlands Statistik/Statistics Greenland (1996). *Rapport om Forbrug i Grønland*. [Report on Consumption in Greenland]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 10. Nuuk, Grønland.

Grønlands Statistik Statistics Greenland (1997). *Rapport om Skole- og erhvervsuddannelse i Grønland 1994*. [Report on Primary Education, Secondary Education and Vocational Training in Greenland 1994]. Rapport fra den grønlandske Levevilkårsundersøgelse 1994/[Report from the Greenlandic Living Conditions survey 1994]: Nr. 11. Nuuk, Grønland.

Websites

<http://naalakkersuisut.gl/~media/Nanoq/Files/Attached%20Files/Naalakkersuisut/DK/Selvstyre/Gr%C3%B8nlandsk-Dansk%20Selvstyrekommisionens%20bet%C3%A6nkning.pdf>. Accessed 6th February, 2015.

Statistic Greenland. (2015). *Population figures by July 1, 2014*. Accessed 28th Jan., 2015, from StatBank. Population figures by 1 July, 2014. Available from data bank: Matrice BEDSTM4

OECD Better Life Index: www.oecdbetterlifeindex.org/ Accessed 10th February, 2015.

Commission on Measurement of Economic Performance and Social Progress: www.stiglitz-sen-fitoussi.fr/en/index.htm Accessed 10th February, 2015.

www.gnhbhutan.org/about/ Accessed 10th February, 2015.

Annexes 1–6

1.12 Annex 1: ICC resolution on SLiCA, July 30, 1998

Nuuk, July 30th, 1998

PROPOSAL FROM THE GREENLANDIC DELEGATION (29)

INUIT CIRCUMPOLAR CONFERENCE SUPPORTS RESEARCH PROJECT: SURVEY OF LIVING CONDITIONS IN THE ARCTIC: INUIT, SAAMI, AND THE INDIGENOUS PEOPLES OF CHUKOTKA

WHEREAS, the indigenous peoples of the Arctic share a number of economic, cultural, spiritual and technological conditions; and

WHEREAS, rapid social change characterises all indigenous peoples of the Arctic; and

WHEREAS, there is a need to document and compare the present state of living conditions and the development among the indigenous peoples of the Arctic; and

WHEREAS, there is a need for indicators on living conditions among indigenous peoples in the Arctic that more accurately reflect their resources, needs, and priorities; and

WHEREAS, it is essential that there be local participation in the research process to ensure

- The inclusion of indigenous principles and values; and
- That indigenous peoples and their representative bodies have knowledge of and a vested interest in participating in this study to the greatest extent possible;

NOW THEREFORE BE IT RESOLVED THAT the ICC supports the research project being implemented by an international project team under the guidance of Statistics Greenland: *Survey of Living Conditions in The Arctic: Inuit, Saami, and The Indigenous Peoples of Chukotka*, which will address these issues in partnership and collaboration with local and regional organisations in each country where research is conducted; and

BE IT FURTHER RESOLVED THAT the ICC works with RAIPON and the Saami Council to assist the project team to carry out the proposed research; and

BE IT FURTHER RESOLVED THAT the ICC works with the project team to:

1. Approach national and international agencies to acquire funds needed to carry out this important research project; and
2. Seek endorsement of the proposed research programme by Arctic Council ministers at their meeting in Canada in September 1998; and

BE IT FURTHER RESOLVED THAT the ICC ensures that the results of the research are used for the benefit of the indigenous peoples.

1.13 Annex 2: SLiCA survey regions and countries

For the sake of meaningful comparisons all SLiCA population data are aggregated at different levels: “country” meaning: *Chukotka*; *Inuit settlement regions in Northern Alaska* (abbreviated: “Northern Alaska” or “Alaska”; *Inuit Settlement regions in the Canadian Arctic* (abbreviated: “Northern Canada” or “Canada”); *Greenland*; *Norwegian Sápmi* (abbreviated: “Northern Norway” or “Norway”; *Swedish Sápmi* (abbreviated “Northern Sweden” or “Sweden”); *Kola Peninsula Sápmi* (abbreviated: “Kola Peninsula”). “Regions” are further defined in www.arcticlivingconditions.org.

The levels of aggregation are defined as follows:

- *The national level*: Inuit settlement regions in Chukotka⁴⁸, Northern Alaska, the Canadian Arctic, Greenland, Norwegian Sápmi, Swedish Sápmi and Kola Peninsula Sápmi.
- *The regional level* [to get yet another categorization to compare different parts of the Arctic “regional capitals” were singled out to be compared with “other communities”;⁴⁹ this categorization is included in the outline below in square brackets].
- *Chukotka* [“regional capital”, “other communities”]:
 - Western Chukotka (Western region in Chukotka).
 - Anadyr (Anadyr region in Chukotka).
 - Central Chukotka (Central region in Chukotka).
 - Eastern Chukotka (Eastern region in Chukotka) – [“Eastern Chukotka”⁵⁰ and “Other Chukotka”].

⁴⁸ In Chukotka Siberian Yupik (the Chukotkan branch of Inuit) as well as other indigenous peoples: Chukchi, Evan, Chuvan and Yukagir are included by SLiCA.

⁴⁹ Further information can be found on www.arcticlivingconditions.org

⁵⁰ Most of the Inuit of Chukotka (i.e. Siberian Yupik) live in the Eastern Region.

- *Inuit settlement regions in Northern Alaska* [“regional capital”, “other communities”]:
 - Bering Straits (Bering Straits region in Alaska) – [“Nome” and “Other Bering Strait”].
 - NANA (Northwest Arctic Borough in Alaska) – [“Kotzebue” and “Other NW Arctic”].
 - North Slope (North Slope Borough in Alaska) – [“Barrow” and “Other North Slope”].
- *Inuit settlement regions in the Canadian Arctic* [“regional capital”, “other communities”]:
 - Inuvialuit [“Inuvik” and “Other Inuvialuit”].
 - Nunavik [“Kuujuaq” and “Other Nunavik”].
 - Nunavut [“Iqaluit” and “Other Nunavut”].
 - Labrador [“Happy Valley-Goose Bay” and “Other Labrador”].
- *Greenland* [“regional capital”, “other communities”]:
 - North Greenland (Nordgrønland).
 - Disco Bay (North-western region in Greenland: Diskobugten).
 - Middle Greenland (Midtgrønland) – [“Nuuk” and “Other Midtgrønland”].
 - South Greenland (Sydgrønland).
 - East Greenland (Østgrønland).
- *Norwegian Sápmi* [“regional capital”, “other communities”]:
 - Finnmark.
 - Troms.
 - Nordland.
 - Trøndelag.
- *Swedish Sápmi* [“regional capital”, “other communities”]:
 - Norbotten.
 - Västerbotten.
 - Jämtland.
 - Härjedalen.
 - Dalarne.
- *Kola Peninsula Sápmi*.

1.14 Annex 3: Regional, national and international organisations/associations representing the indigenous peoples of the Arctic

Alaskan, Canadian, Greenlandic and Chukotkan Inuit

- Inuit Circumpolar Council (ICC).

Alaska, U.S.A.

- The Alaska Native Science Commission.
- Inuit Circumpolar Council, Alaska.
- Arctic Slope Native Association.
- Maniilaq.
- Kawerak.
- North Slope Borough.
- NANA Inc.
- Northwest Arctic Borough.
- Ukpogvik Inupiat Corporation.

Canada

- Labrador Inuit Association.
- Makivik Corporation.
- Nunavut Tunngavik Inc.
- Inuvialuit Regional Corporation.
- Inuit Tapirisat of Canada.

Greenland

- Inuit Circumpolar Council Greenland (ICC Greenland).

Saami in Norway, Sweden, Finland, Kola Peninsula

- Saami Council.

Norway

- Saami Parliament in Norway.

Sweden

- Saami Parliament in Sweden.

Finland

- Saami Parliament in Finland.

Kola Peninsula

- The Kola Saami Association.

Chukotka

- The Russian Association of Indigenous Peoples of the North (RAIPON).

1.15 Annex 4: Research institutions affiliated with the SLiCA project (since 1998)

- Institutions in *italics* are still affiliated.

Greenland

- *Ilisimatusarfik (University of Greenland)*, Nuuk (international coordinator).
- Statistics Greenland, Nuuk.
- Greenland Language Secretariat.

Denmark

- The National Institute for Public Health, Copenhagen.
- Institute of Political Science, University of Aarhus.

Norway

- *Centre for Sami Health Research, Faculty of Health Sciences, UiT the Arctic University of Norway.*
- Faculty of Political Science.
- The Saami Institute, University of Tromsø.

Sweden

- *Institute of Anthropology, University of Uppsala.*
- Centre for Research in International Migration and Ethnic Relations (CEIFO), University of Stockholm.

Finland

- Arctic Centre, University of Lapland.

Russia

- The Barents Centre for Social Research, The Kola Peninsula, Russia.
- Russian Academy of Sciences, Institute for Economic Forecasting, Moscow, Russia.
- Institute of Anthropology, Moscow State University, Moscow, Russia.

USA/Alaska

- *Institute of Social and Economic Research, ISER, University of Alaska Anchorage.*
- Old Dominion University, Norfolk, Virginia.
- *Colby-Sawyer College, New London, New Hampshire.*

Canada

- *Groupe d'études inuit et circumpolaires (GÉTIC), Laval Université, Quebec City.*
- The Arctic Institute of North America, University of Calgary.
- Statistics Nunavut, Nunavut.
- Statistics Canada, Ottawa.

Furthermore a number of independent researchers were part of the research teams.

1.16 Annex 5: Survey of Living Conditions in the Arctic: Dissertations, Books & Peer-reviewed Articles and Book chapters 1997–2015

PHD-dissertations based on SLiCA data and SLiCA findings (chronologically)

Edouard, R. (2007). *La production des conditions de vie. Le cas des Inuit de l'Arctique canadien*. Ph.D. dissertation in Sociology, Université Laval (Canada). 450p. + appendices.

Martin, S. (2005). *Determinants of Well-being of Iñupiat and Yupiit Eskimos: Do Communities Matter?* Ph.D. Dissertation. University of Texas at Dallas.

Morin, Alexandre. (2007). *Intégration sociale et problèmes sociaux chez les Inuits du Nunavut. Stratégies des Nunavumiuts à l'égard des possibilités et contraintes de la vie contemporaine*. Ph.D. dissertation in Sociology, Université Laval (Canada). 322p. + appendix.

Turcotte-Seabury, Catherine. (2011). *Wage Employment, Traditional Subsistence, and Aspirations among Iñupiat and Yup'ik in the Mixed Economy of Northwest Alaska*. Ph.D. dissertation in Sociology, University of New Hampshire (USA). 187p. + appendices.

Eliassen, Bent-Martin. (2013). *Social determinants of self-rated health and cardiovascular disease among the Sami and other Arctic indigenous peoples. The SLiCA study and the SAMINOR study*. Ph.D. dissertation. Centre for Sami Health Research, Department of Community Medicine. University of Tromsø (Norway). 92p. + three articles + appendices.

Books

Poppel, B (ed.) (2015). *SLiCA: Arctic living conditions. Living conditions and quality of life among Inuit, Sami and indigenous peoples of Chukotka and the Kola Peninsula*. TemaNord 2015:501. Nordic Council of Ministers: Copenhagen.

Articles (peer reviewed)

Allard, M., Lemay, M., Barrett, M., Bertol, M., Brassard, F., Cosette, S., Duhaime, G., Girard, N., Poisson, F., Sheldon, T. & Simpson, A. (2012). Nunavik and Nunatsiavut: an Inuit homeland peninsula. In. Allard, M. and M. Lemay (eds.), *Nunavik and Nunatsiavut. From science to policy. An Integrated Regional Impact Study (IRIS) of climate change and modernization*. ArcticNet Inc., Québec City, Canada, pp. 31–55.

Andersen, T. (1999). A Circumpolar Study of Living Conditions among Saami and Inuit Peoples. In. Petersen, H. & Poppel, B. (eds.): *Autonomy, Dependency and Sustainability in the Arctic*, Ashgate, London.

- Andersen, T. (1999). Living Conditions Research and Sustainable Development, in *Arctic Journal of Research*, 1999:2, Nuuk.
- Andersen, T. (2004). *Living conditions research in the Arctic. How to measure Living Conditions and Individual Well-being among Inuit and Sami in the Arctic*. Preliminary version circulated to the Arctic Council Ministerial in Reykjavik, November 2004 and to the Nordic Council of Minister meeting in Narsaq, August 2005.
- Andersen, T., & Jensen, J. (1998). Ethnical and Demographic Aspects of the Circumpolar Living Conditions Project. In. Greiffenberg, T (ed.), *Development in the Arctic*, Danish Polar Centre Publications No. 5, Copenhagen.
- Andersen, T., Kruse, J., Poppel, B. (2002). Survey of Living Conditions in the Arctic (12 p.), *Arctic – Journal of the Arctic Institute of North America*, Vol. 55, No. 3, 2002, University of Calgary.
- Andersen, T., & Poppel, B. (2002). Living Conditions in the Arctic, *Social Indicators Research*, Vol. 58, pp. 191–216, 2 Kluwer Academic Publishers, Dordrecht/Boston/London
- Andersen, T., & Poppel, B. (2002). Living Conditions in the Arctic. In. Hagerty, M.R., Vogel, J. and Møller, V. (eds.), *Assessing Quality of Life and Living Conditions to Guide National Policy*. The State of the Art. Social Indicators Research Series, Vol. 11. Kluwer Academic Publishers. Reprinted from: Social Indicator Research, Vol. 58, pp. 191–216, 2002.
- Andersen, T., & Poppel, B. (2008). Living Conditions in the Arctic. In. Mara Stankovitch. (ed.) *Indicators Relevant to Indigenous Peoples: A Resource Book*. Tebtebba Foundation (Indigenous Peoples' International Centre for Policy Research and Education) Philippines, pp. 273–293.
- Andersen, T., & Tonsgaard, O. (2002). Voting power in Greenland. In. Winther, G. (ed.) *Democracy and Power in Greenland*, pp. 55–79, The Danish Power Investigation, Copenhagen.
- Aslaksen, I., Dallmann, W., Holen, D. L., Høydahl, E., Kruse, J., Poppel, B., Stapleton, M. & Turi, E. I. (2009). Interdependency of subsistence and market economies in the Arctic. In. Solveig Glomsrød and Iulie Aslaksen (eds.) *The Economy of the North 2008*. Statistisk Sentralbyrå/Statistics Norway (2009), pp. 75–98.
- Beach, H., Lewis, D., Rasmussen & R.O. Roto, J. (2015). The Survey of Living Conditions in the Arctic (SLiCA) as deployed in Sweden – initial issues. In. Poppel, B. (ed.). *SLiCA: Arctic Living Conditions. Living conditions and quality of life among Inuit, Sami and indigenous peoples of Chukotka and the Kola Peninsula*. TemaNord 2015:501, pp. 319–384. Nordic Council of Ministers. Copenhagen.
- Berman, M. (2009) Moving or staying for the best part of life: Theory and evidence for the role of subsistence in migration and well-being of Arctic Inupiat residents. *Polar Geography*, 32 (1-2), pp. 3–16.
- Broderstad, A. R., Eliassen, B. & Melhus, M. (2011). Prevalence of self-reported suicidal thoughts in SLiCA. The Survey of Living Conditions in the Arctic (SLiCA). *Global health action*; Volum 4. ISSN 1654-9880.s doi: 10.3402/gha.v4i0.10226.
- Duhaime, G. (sous la dir.), (2012). *More poverty in Nunavik*. Nunivaat, Nunavik Statistical Bulletin, No. 6E-2012.

- Duhaime, G., (2014). Nunavik. In. Michalos, A.C. (ed.). *Encyclopedia of Quality of Life and Well-Being Research*. Springer, Dordrecht, Netherlands: Springer, pp. 4396–4399.
- Duhaime, G. & Édouard, R., (accepted). *How Many Arctic Poors? Monetary Poverty Measurements in Inuit Nunangat. Arctic*.
- Duhaime, G., Édouard, R., Bernard, N. (2015). Economic Stratification and Living Conditions in the Canadian Arctic. In. Poppel, B. (ed.). *SLiCA Anthology*. TemaNord 2015:501, pp 169–195. Nordic Council of Ministers. Copenhagen.
- Duhaime, G. & Édouard, R. (2012). *Low Incomes Measures and Rates in Inuit Nunangat*. Québec, Canada Research Chair on Comparative Aboriginal Condition, 21p.
- Duhaime, G. & Searles, E. (2002). *The Challenge of Research Partnership. Aboriginal and Academic Organizations working together*.
- Duhaime, G. & S. Lévesque, (2014). Aboriginal People Survey, Canada (APS). In. Michalos, A. C. (ed.). *Encyclopedia of Quality of Life and Well-Being Research*. Springer, Dordrecht, Netherlands: Springer, pp. 5–8.
- Duhaime, G., Usher P., Searles, E., Myers, H. & Fréchette, P. (2004). Social Cohesion and Living Conditions in the Canadian Arctic : From Theory to Measurement. *Social Indicators Journal*, 66, pp. 295–317.
- Édouard, R. & G. Duhaime (sous presse). Prédicteurs de la pauvreté et modernité dans l’Inuit Nunangat. In Duhaime, G. & R. Édouard (éd.). *Pauvreté quotidienne, pauvreté planétaire. Actes du 5e séminaire Fernand-Dumont*. Québec, Nota Bene Éditeur.
- Édouard, R. & Duhaime G., (2013). The Well-Being of the Canadian Arctic Inuit. The Relevant Weight of Economy in the Happiness Equations. *Social Indicators Research*, 113 (1), pp. 373-392.
- Édouard, R. & Duhaime, G., (2012). The Well-Being of the Canadian Arctic Inuit. The Relevant Weight of Economy in the Happiness Equations. *Social Indicators Research*. DOI 10.1007/s11205-012-0098-5.
- Eliassen, B., Braaten, T., Melhus, M., Hansen, K. & Broderstad, A. R. (2012). Acculturation and self-rated health among Arctic indigenous peoples: a population-based cross-sectional study. *BMC Public Health*; Volum 12. ISSN 1471-2458.s 948 - .s doi: 10.1186/1471-2458-12-948.
- Eliassen, B., Melhus, M., Kruse, J., Poppel, B. & Broderstad, A. R. (2012). Design and methods in a survey of living conditions in the Arctic - the SLiCA study. *International Journal of Circumpolar Health*; Volum 71. ISSN 1239-9736.s DOI: 10.3402/IJCH.v71i0.17229.
- Hamilton, L., Bjerregaard, P. & Poppel, B. (2010). Health and Population. In: Joan Nyman Larsen et al. (eds) *Arctic Social Indicators – A follow-up to the Arctic Human Development Report*, pp. 21–37.
- Kruse, J. (2010). Sustainability from a local point of view: Alaska’s North Slope and oil development. In. Gorm Winther (ed), *The Political Economy of Northern Regional Development – Yearbook 2008*. Nordic Council of Ministers, TemaNord 2010:521, pp. 55–72.

- Kruse, J., & Kruse, M. (2004–2012) *Data compilation and development of SLiCA database and table section* on www.arcticlivingconditions.org.
- Kruse, J., Poppel, B., Abryutina, L., Duhaime, G., Martin, S., Poppel, M., Kruse, M., Ward, E., Cochran, P. & Hanna, V. (2007). Survey of Living Conditions in the Arctic: Project Overview. In: Poppel, B., Kruse, J., Duhaime, G. & Abryutina, L. *Survey of Living Conditions in the Arctic: SLiCA Results*. Anchorage: Institute of Social and Economic Research, University of Alaska Anchorage. <http://www.arcticlivingconditions.org/>
- Kruse, J., Poppel, B., Abryutina, L., Duhaime, G., Martin, S., Poppel, M., Kruse, M., Ward, E., Cochran, P. & Hanna, V. (2008). Survey of Living Conditions in the Arctic, SLiCA. In: Møller, V., Huschka, D. and Michalos, A. C. (eds.), *Barometers of Quality of Life around the Globe*. Springer Social Indicators Research Series. Springer Verlag, pp. 107–134.
- Lennert, M. (2015). Education in Greenland 1973 - 2004/06 - an analysis based on three living conditions surveys. In: Poppel, B. (ed.), *SLiCA: Arctic Living Conditions. Living conditions and quality of life among Inuit, Sami and indigenous peoples of Chukotka and the Kola Peninsula*. TemaNord 2015:501, pp. 237–260. Nordic Council of Ministers. Copenhagen.
- Lévesque, S. (2014). *Les inégalités sociales dans l'Inuit Nunangat - L'empreinte, le pic et la crevasse*. <http://www.chaireconditionautochtone.fss.ulaval.ca/documents/pdf/Memoire-Sebastien-Levesque-2014.pdf>. Master Degree Thesis in Sociology, Université Laval, 192 p.
- Mikkelsen, E., & Hoel, A. H. (lead authors). Hacquebord, L., Poppel, B., Larsen, J.N. (contributing authors). (2011) Social, Economic, and Institutional State of the Circum-Arctic Coast. In: Forbes, D.L. (Ed.), *State of the Arctic Coast 2010 – Scientific Review and Outlook*. International Arctic Science Committee, Land-Ocean Interactions in the Coastal Zone, Arctic Monitoring and Assessment Programme, International Permafrost Association. Helmholtz- Zentrum, Geesthacht, Germany, 178 p. <http://arcticcoasts.org>, pp. 57-78 (Box pp. 65–66).
- Morin, A., Roberson, E. & Gerard, D. (2010). *Beyond the harsh. Objectives and Subjectives Living Conditions in Nunavut*. Polar Record 46 (237), Cambridge University Press; pp. 97–112.
- Poppel, B. (2006). Interdependency of subsistence and market economies in the Arctic. In: Solveig Glomsrød & Iulie Aslaksen (eds.), *The Economy of the North*. Statistisk Sentralbyrå/Statistics Norway, pp. 65–80.
- Poppel, B. (2006). Den arktiske Levevilkårsundersøgelse, SLiCA – et komparativt og transnationalt projekt. [The Survey of Living Conditions in the Arctic, SLiCA – a Comparative and Transnational Project]. In: Hanne Petersen (ed.), *Grønland i verdenssamfundet*. Forlaget Atuagkat/Illisimatusarfik. Nuuk, pp. 259–277.
- Poppel, B. (2007). Nogle forskelle mellem levevilkår i byer og bygder – og input til en diskussion om bygdernes fremtid. [Some differences between living conditions in towns and settlements – and input to the discussion about the future of the settlements] In: *Samfundsøkonomen*, vol. 1, April 2007. København, pp. 19–24.

- Poppel, B. (2008). Er subsistensaktiviteter i Arktis en del af den markedsøkonomiske virkelighed eller er markedsøkonomien en del af en subsistensbaseret blandingsøkonomi? [Are subsistence activities in the Arctic part of the market economic reality or - is the market economy a part of a subsistence based mixed economy?]. In *Grønlandsk Kultur og Samfundsforskning 2006-07*. Ilisimatusarfik/Forlaget Atuagkat. Nuuk, pp. 217–232.
- Poppel, B. (2008). Measuring Ways of Living and Living Conditions of Indigenous Peoples of the Arctic – The Greenlandic Inuit as an example. In Engell, M. & Søndergaard, J. (eds.), *Menneskesjæl. Festskrift til Finn Lynge*. Forlaget Atuagkat, pp. 97–117.
- Poppel, B. (2010). Are subsistence activities in the Arctic part of the market economic reality or - is the market economy a part of a subsistence based mixed economy? (2006–2007). In *Cultural and Social Research in Greenland, selected essays 1992–2010*. Ilisimatusarfik/Forlaget Atuagkat. Nuuk, pp. 349–365.
- Poppel, B. (2010). Some data sources on people, peoples, communities, regions and human activities in Greenland. In Gorm Winther (ed.), *The Political Economy of Northern Regional Development – Yearbook 2008*. Copenhagen: Nordic Council of Ministers, TemaNord 2010:521, pp. 254–282.
- Poppel, B. (2014). SLiCA, Survey of Living Conditions in the Arctic. In Michalos, A. C. (ed.), *Encyclopedia of Quality of Life and Well-Being Research*. Springer, Dordrecht, Netherlands: Springer, pp 5993–6003.
- Poppel, B. (2014). Subsistence in the Arctic. In. Michalos, A. C. (ed.), *Encyclopedia of Quality of Life and Well-Being Research*. Springer, Dordrecht, Netherlands: Springer, pp 6464–6466.
- Poppel, B. (2015). Living Conditions and Perceived Quality of Life Among Indigenous Peoples in the Arctic. In Glatzer, W., Camfield, L., Møller, V., Rojas, M. (eds.) *Global Handbook of Quality of Life - Exploration of Well-Being of Nations and Continents*. Springer Science+Business Media Dordrecht. pp. 715–747.
- Poppel, B. (2015). The Inuit World: Measuring living conditions & subjective well being – monitoring human development using the Survey of Living Conditions in the Arctic (SLiCA) to augment ASI for the Inuit World. In Larsen, J. N., Schweitzer, P., Petrov, A., Fondahl, G. (eds.), *Arctic Social Indicators II - Implementation*. TemaNord 2014:568. Nordic Council of Ministers. Copenhagen. pp. 223–276.
- Poppel, B. (2015). Introduction to SLiCA – Survey of Living Conditions in the Arctic: Inuit, Saami and the Indigenous Peoples of Chukotka and the Kola Peninsula – From Research Question to Knowledge: Why? What? How? & Some Main Results. In. Poppel, B. (ed.), *SLiCA: Arctic Living Conditions. Living conditions and quality of life among Inuit, Sami and indigenous peoples of Chukotka and the Kola Peninsula*. TemaNord 2015:501. Nordic Council of Ministers: Copenhagen
- Poppel, B., & Andersen, T. (1997). Fiskeres og fangeres levevilkår. Signalement af en fisker/fanger og en fisker-/fangerhusholdning. In *Kalaalimernit, Arktisk Forskningsjournal*, 1997:1, Nuuk, pp. 41–56.

- Poppel, B., Andersen, T. & Lyster, P. (2000). *Measuring Ways of Living and Living Conditions of Indigenous Peoples of the Arctic – The Greenland Inuit as an example*. Montreux, Switzerland: IAOS (International Association of Official Statistics) – conference: Paper. www.statistik.admin.ch/about/international/03iaos_det07.htm.
- Poppel, B., Kruse, J., Duhaime, G. & Abryutina, L. (2007). *Survey of Living Conditions in the Arctic: SLiCA Results*. Anchorage: Institute of Social and Economic Research, University of Alaska Anchorage. <http://www.arcticlivingconditions.org/>. 666 pages.
- Poppel, B., & Kruse, J. (2009). The importance of a mixed cash- and harvest herding based economy to living in the Arctic – an analysis based on Survey of Living Conditions in the Arctic (SLiCA). In: Møller, V. and Huscka, D. (eds.), *Quality of Life in the New Millenium: Advances in Quality-of-Life Studies, Theory and Research*. Social Indicators Research Series. Springer Verlag, pp. 107–134.
- Poppel, B. (ed.), Kruse, J., Broderstad, A. R., Eliassen, B.-M., Jensen, C., Martin, S., Melhus, M., Olsvig, S., & Westin C. (2011). *Arctic living conditions. Survey of Living Conditions in the Arctic*. Major SLiCA findings presented to the Arctic Council Ministerial meeting. 6 pages. Nuuk.
- Poppel, B., & Jensen, C. O. (2013). *SLiCA Greenland tables*: <http://www.uni.gl/da-dk/forskning/projekter/slica/tabeloversigtslica.aspx>
- Poppel, M. (2015). Changes in gender roles in Greenland and perceived contributions to the household. In: Poppel, B. (ed.), *SLiCA: Arctic Living Conditions. Living conditions and quality of life among Inuit, Sami and indigenous peoples of Chukotka and the Kola Peninsula*. TemaNord 2015:501, pp. 297–318. Nordic Council of Ministers. Copenhagen.
- Statistics Canada (2006). *Harvesting and Community Well-being Among Inuit in the Canadian Arctic: Preliminary Findings from the 2001 Aboriginal Peoples Survey - Survey of Living Conditions in the Arctic*, Ottawa: Statistics Canada, no. 89-619-XIE. Available at http://www.statcan.gc.ca/access_acces/archive.action?loc=/pub/89-619-x/89-619-x2006001-fra.pdf; and <http://www.statcan.gc.ca/pub/89-619-x/89-619-x2006001-eng.pdf>
- Turcotte, C. (2015). “Boys aren’t taught anything anymore!” The Role of Gender in Native Subsistence, Work Patterns and Aspirations in Northwest Alaska. In: Poppel, B. (ed.). *SLiCA: Arctic Living Conditions. Living conditions and quality of life among Inuit, Sami and indigenous peoples of Chukotka and the Kola Peninsula*. TemaNord 2015:501, pp. 261–296. Nordic Council of Ministers. Copenhagen.
- Usher, P. J., Duhaime G. & Searles, E. (2003). The Household as an Economic Unit in Arctic Aboriginal Communities, and its Measurement by means of a Comprehensive Survey, *Social Indicator Research*. Vol. 61, pp. 175–203. Kluwer Academic Publishers, Dordrecht/Boston/London.

1.17 Annex 6: Extract of SAO meeting report, Thorshavn, 19–20th October 2010



ARCTIC COUNCIL

AC-SAO-OCT10-FINAL REPORT

Meeting of Senior Arctic Officials: **Final Report** 19–20 October 2010 Tórshavn

In Attendance:

Senior Arctic Officials (SAOs)

Chair: Lars Møller

Canada: Sheila Riordon

Denmark/Greenland/Faroe Islands: Mikaela Engell, Inuuteq Holm Olsen (Greenland), Elin Mortensen (Faroe Islands)

Finland: Hannu Halinen

Iceland: Greta Gunnarsdóttir

Norway: Karsten Klepsvik

Russian Federation: Anton Vasiliev

Sweden: Helena Odmark

United States: Julia L. Gourley

Permanent Participant (PP) Heads of Delegation (HoD)

Aleut International Association (AIA): Victoria Gofinan

Arctic Athabaskan Council (AAC): Cindy Dickson

Gwich'in Council International (GCI): Serena Petruska

Inuit Circumpolar Council (ICC): Jimmy Stotts

Russian Association of Indigenous Peoples of the North (RAIPON): Dmitry Berezhev

Saami Council (SC): Geir Tommy Pedersen

5.1 Survey of Living Conditions in the Arctic: Inuit, Sámi and the Indigenous peoples of Chukotka (SLiCA)

Background: Project leader Birger Poppel summarized the major objectives and conclusions of the finalized SLiCA project which began more than 10 years ago (www.arcticlivingconditions.org). A CD-Rom containing relevant SLiCA data will be released in Nuuk. If funding is obtained, a SLiCA anthology will be available in May 2011. Poppel suggested that the AC consider running a benchmark study like SLiCA every 10 years.

Discussion: Finalization of this project is a major AC achievement. The project results are especially important for the indigenous peoples of the Arctic, as there has always been a lack of data on living conditions of indigenous peoples. The data collected is already being used and methods on how to follow up/use the data in the future were discussed. Canada raised its intention to follow-up on how to ensure Canada's data is best reflected in the final report. The Saami Council thanked the financing institutions that had made the project possible.

Decision: SAOs thanked and congratulated the Sustainable Development Working Group (SDWG) and everybody involved in the SLiCA project for its completion. The project is a major Arctic Council achievement providing a solid socio-economic knowledge basis about the living conditions in the Arctic and an excellent foundation for policy making. The report should get widespread circulation and be of use also to other projects dealing with human dimension questions, such as the planned Arctic Human Development Report II.

2. Living Conditions in the Arctic⁵¹

Thomas Andersen & Birger Poppel

2.1 Abstract

This chapter introduces a model for conducting research on living conditions among peoples that have experienced rapid social, cultural and economic change in countries where a non-parallel development has occurred.

This model was developed by the researchers of SLiCA, A Survey of Living Conditions in the Arctic; Inuit, Saami and the Indigenous Peoples of Chukotka, which was initiated by Statistics Greenland in 1997. The point of departure for this model is a critique of contemporary living conditions surveys carried out by national statistical bureaus in economically, technologically and culturally segmented areas. The point of view is that these studies erroneously assume that the populations they investigate are homogeneous, and that consensus concerning individual social and economic objectives exists. This usually leads to research designs and indicators of individual well-being that reflect the dominant culture, or the prevalent way of living and thinking in these countries. The focus of this chapter is on the research design of SLiCA. The implementation of two important methodological challenges is discussed. Namely, (1) how to secure a context specific concept of

⁵¹ Permission to reprint granted by the authors and the publisher, Springer. Reprinted from: Andersen, T. & Poppel, B. (2002). Living Conditions in the Arctic. In: Hagerty, M.R., Vogel, J. and Møller, V. (Eds.), *Assessing Quality of Life and Living Conditions to Guide National Policy. The State of the Art*. Social Indicators Research Series, Vol. 11. Kluwer 'Academic Publishers.

well-being which also mirrors the life forms and the priorities of the respondents and (2) how to measure impacts of structural change on individual well-being.

2.2 Introduction

Towards the end of the 1960s and in the 1970s the first living conditions studies were carried out in the Nordic countries. The Swedish Institute of Social Studies published the *“Levnadsnivåundersökning”*, which was the first study of living conditions, in 1968 (Johanson, 1970) and it was followed by Allardt’s pan-Nordic study in 1972 (Allardt, 1975), Norway in 1973/74 (NOU, 1976), Denmark in 1976 (Hansen 1978) and Finland in 1978 (Hansen, 1990). Such studies now form part of the plan of work in the national statistical bureaus in Sweden, Norway, Finland and Denmark.

In Greenland studies of living conditions have never been institutionalised in the way they are in the Nordic countries. The Danish National Institute of Social Research did carry out the first real study of the Greenlanders’ living conditions in 1970–73, but more than twenty years passed before Statistics Greenland in 1994 carried out the next living conditions study. The need for such a study arose partly from a desire to measure the distributive effects of 15 years of Home Rule politics on different population groups and partly because of a lack of register statistics in different areas. Due to the small number of studies in Greenland, research on living conditions was thus at a beginner’s level in 1994.

The 1994 study temporarily closed a number of “black holes” in register statistics, but several invalid results prompted Statistics Greenland to evaluate the research design for future living conditions studies in Greenland. In this paper we introduce the result of these considerations; Namely SLiCA: *“A Survey of Living Conditions in the Arctic; Inuit, Saami and the Indigenous Peoples of Chukotka”*. In section 2 we briefly describe the parameters of the Greenland survey from 1994. In section 3 we introduce the specific Arctic context, while in section 4 we present a general list of ground rules for living conditions studies among indigenous peoples in the Arctic based on our experiences from the 1994 survey. In section 5 we introduce SLiCA which is a

circumpolar study of living conditions among Inuit and Saami peoples, and in section 6 we discuss how to secure (a) context-specific and valid concepts of well-being and (b) focus on the relation between structural change and individual well-being within SLiCA. Furthermore, we define our use of concepts like well-being and living conditions in this section. Finally, in section 7, the relationship between living conditions research and political planning in the Arctic in general and sustainable development more specifically is discussed.

2.3 The Greenland Living Conditions Study 1994

The research design of the 1994 study was to a large extent a copy of the Scandinavian model which had been developed in connection with the earlier Nordic living conditions studies in the 1960s and 1970s (Eriksen and Uusitalo, 1987; Hansen, 1990).

The selection of living condition dimensions and indicators was characterised by a “garbage-can” process in which those directorates, which were interested and had the time had most questions included in the final study. When operationalising the questions, the living conditions study carried out in 1992 by the Danish National Institute of Social Research and Statistics Denmark (Danmarks Statistik & Socialforskningsinstituttet, 1992) had a considerable influence. This meant, although it was not so intended, that large parts of the Greenland questionnaire were characterised by the social indicator approach on which the Scandinavian statistical bureau’s base their living conditions studies (ibid; Vogel, 1996, Statistiska Centralbyrån, 1995) as well as by the factor which Eriksen and Uusitala in 1987 described as The Scandinavian Model.

During the analytic work on the data of the Greenland survey a number of problems arose which should lead to a discussion of the application of the Scandinavian model to future Greenland living conditions studies. In part it was a question of specific problems connected with transferring a concept of well-being between different types of society, and in part general problems connected with the application of the social indicator approach and The Scandinavian model on the Greenlandic reality. Thus the conclusion was that it is problematic to transfer a re-

search design which presupposes a basic value consensus in society, and hence also implies the presence of universally necessary needs, from a relatively homogeneous late industrial society (such as Denmark) to a country which first of all is characterised by a non-parallel internal development, and secondly can hardly be described as industrialised, and which in addition has a completely different cultural and historic profile from the Nordic countries (for a detailed critique of these approaches, see Andersen 1998, 2001).

The main conclusion was that to obtain valid measures of well-being in the Greenlandic population it was necessary to develop a new research design including identification of new living conditions dimensions and new operationalisations of traditional dimensions adapted to the Greenland context. In section three, we describe the main features of the Greenland empirical context. As will be shown, the history of Greenland post-war development is very similar to that of other indigenous peoples in the Arctic.

2.4 The Arctic Context

The political and economic changes in the period after the Second World War led to crucial changes in the traditional Greenland fishing/hunting culture, and hence in the traditional social structures. The changes in the industrial culture, the transition to a monetary economy, the educational mobility as well as the increased urbanisation have meant that the norm, value and prestige systems in the Greenland society today are linked less to a subsistence production in extended families in small closed communities and primarily to wage earning in a more globalised and open society. In 1945 it was estimated that 66% of the labour force in a population of 21,412 individuals was involved in hunting and fishing. In 1996 this proportion had decreased to approximately 25%. A figure which also includes persons working in the modern fishing industry.

Without maintaining that the mode of production is the only decisive factor for the culture of a given people, it should be stressed that in Greenland it has been possible to identify a direct connection between changes in the mode of production and cultural and social changes (Kruse, 1999;

Andersen, 1999b). It has been a question of a process of modernization which in some areas is reminiscent of industrialization of the modern Western societies – but also different as far as pace and point of departure and results are concerned.

The changed industrial structures and the urbanisation in the 1950s and 1960s resulted in changes in the social structures which then led to a shift in the traditional norm and value systems, especially for people in the towns. New arrivals typically became unskilled workers in the fishing industry or fishermen in the new modern fishing fleet, and they lived in modern blocks of flats.

This process of change, and the population's attempt to adjust to it, was not without problems. Not least because it was extremely rapid. The changes in the economic, political and social structures led to a break with the traditional norm and value systems. Due to the rapidity of the process these systems were not naturally replaced by new norms and values. A lack of norms, or anomie, appeared in large segments of the population. This was accompanied by a general feeling of powerlessness or alienation in large parts of the population who felt they could not influence the process of modernisation (Hansen, 1999), and the result was a number of serious life style problems. The increase in number of suicides was thus pronounced (approx. 12% of all deaths in 1997 was due to suicide), crime, social problems (including the removal of children from their home and child abuse), and the consumption of alcohol and marijuana. This has not been characteristic of Greenland only but has also been occurring in other indigenous populations in the Arctic where a similar modernisation process has taken place. Jack Kruse, who is the director of US branch of SLiCA, described the transformation of living conditions among indigenous peoples in the Arctic like this:

“The last quarter of a century has brought a radical transformation of living conditions among Native people across the circumpolar world. There are few remaining doubts about the social-historical forces behind this revolution. Government policies in the late fifties initiated trends of modernisation. The growth of the market economy, social welfare policies, consumerism, and mass communication accelerated these trends to their full momentum in the early seventies.

The basic processes of changing living conditions are also well understood: settlement in permanent communities; monetization of work, trade and mutual aid; technological emancipation from toil and uncertainty (housing, clothing, feeding, transportation, hygiene and health maintenance); bureaucratization of social organization; personal mobility through schooling, vocational training, or professional experience; growing class stratification and status differentiation; increasing separation between public and private life; institutionalization of politics and the rule of law; concomitant development of civil society (voluntary associations, independent press, and private enterprises); and conversion of public discourse to conflicting ideologies of progress, mastership of destiny, formal rights and a self-conscious quest for identity.

Almost in the space of one generation, most of the practical or mental references of what it had always meant to be an Inuit, Iñupiat, or a Saami became indeterminate, fluid, less reliable. At the same time, widening opportunities opened the door to rising expectations, both personal and collective. Inasmuch as the past no longer provided a handbook for the future, people sought – if only partially – to write their own futures. But the acceleration of change also frayed social bonds and weakened the bearings of social regulation. Today Native Arctic peoples are experiencing some of the highest rates of social problems (see, for example, Kirmayer, 1994; Berman and Leask, 1994).

These global changes had deep implications for the living conditions of the Arctic's inhabitants. As Scardigli (1983) put it, there was a general shift from a cultural order to an economic order; in other words, from a closed society to a market society, and from a society governed by customs to a society governed by laws and regulations."

Kruse, 1999

Thus, the political, economic and social developments in the indigenous societies in the period after the Second World War have been characterised by rapid and regionally different structural changes which have had crucial effects on the living conditions of these peoples.

2.5 A new set of ground rules for living conditions research in the Arctic

On the background of the criticism levelled at the Greenland living conditions study 1994 (Andersen, 2001), and hence at the Scandinavian model and the social indicator approach, the Scandinavian model was revised and a general list of ground rules for living conditions studies among indigenous peoples in the Arctic produced (Ibid.):

1. The identification of the dimensions and indicators for living conditions must be context-specific so that the well-being concept reflects the way of life and the priorities of the population.
2. The research design must be able to capture the effects of social, cultural, political and economic changes. Thus a correlation between structural events and changes in individual living conditions must be established.
3. The living condition dimensions and indicators must be identified, if not on the background of theories at least on that of hypotheses about and models of causal relationships between the indicators, and between the indicators and the structural variables.
4. The research design must be based on explicit definitions of living conditions and well-being so that the researchers, the respondents and the politicians will be able to evaluate the validity of the data.
5. Both evaluative and descriptive measures for well-being must be applied.
6. Both material as well as non-material indicators must be applied.
7. Data must be representative, reliable and valid.
8. The focus should be on resources rather than on the satisfaction of demands and preferences.
9. The selected dimensions and indicators of living conditions must be coherent and exhaustive.
10. It is assumed that it is feasible to talk of universal or generally necessary resources within that period of time to which a given living conditions study refers.

11. The study must be quantitative.
12. The analytical focus must be the allocation of resources between various segments of the population.
13. Data must be statistically comparable. This means that the same theoretical variables are operationalised, as far as it is possible, in the same manner.

The above critique may be extended to include living conditions studies among indigenous peoples in the Arctic. As mentioned in the introduction our preparatory work for the new Greenland living conditions study showed that especially the problems connected with the use of non-adequate concepts of well-being did not apply to the Greenland living conditions research only – but was a general problem connected with the study of living conditions among indigenous peoples in the Arctic. As these populations – in contrast to the Greenlanders – are relatively small, ethnic minorities, the national statistical bureaux have only used few resources for developing specific assessment instruments in connection with living conditions studies among these peoples.

2.6 SLiCA – A Survey of Living Conditions in the Arctic; Inuit, Saami and the Indigenous Peoples of Chukotka

The Arctic Living Conditions Study among Inuit and Saami (SLiCA) came into being as a reaction to the problems we had experienced in connection with the analysis of data from the Greenland living conditions study 1994. Thus at the beginning of 1997, Statistics Greenland initiated preparations for carrying out a new Greenland living conditions study. However, as described above we very soon discovered that our own problems with the living conditions study were similar to those encountered by other living conditions studies among indigenous peoples in the Arctic. We also encountered an increasing need among these populations – including Greenland – for opportunities for comparing ones own living conditions with those of other populations with the same developmental characteristics – instead of comparisons with the majority populations in the various countries, or, as in

the case of Greenland, with Denmark. With this in mind Statistics Greenland initiated the comparative Arctic living conditions project instead of carrying out an exclusive Greenland study at the beginning of 1997.

At present approx. 40 international senior researchers and 15 research institutions in and outside the Arctic participate in the project. Furthermore a number of organisations representing the indigenous peoples are also acting as active participants in SLiCA.

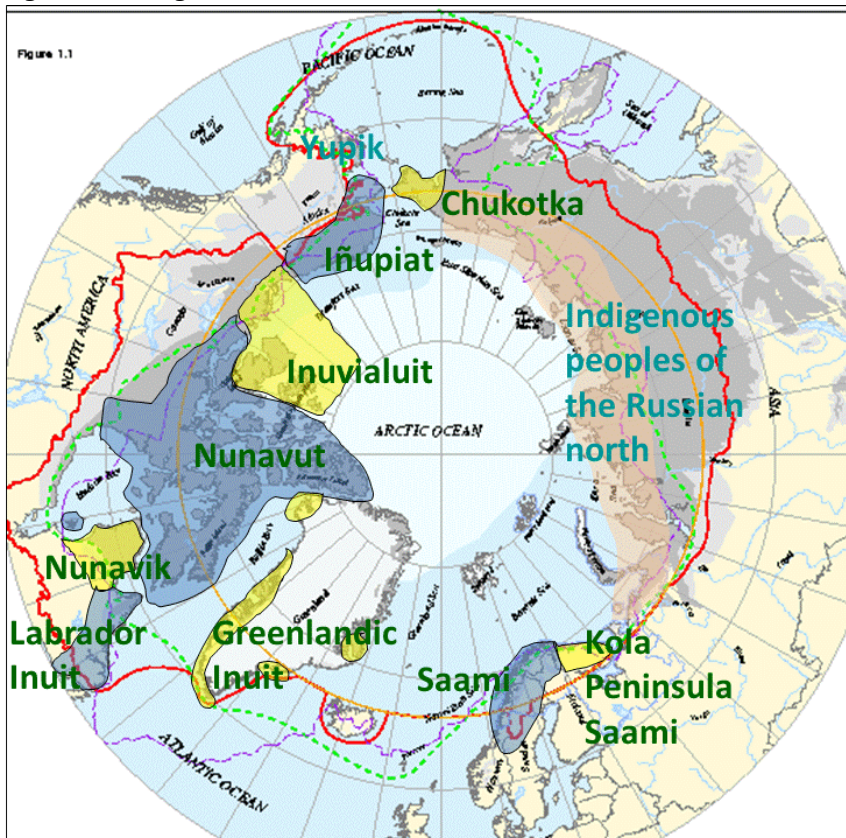
The main purposes of SLiCA are:

1. To develop a new research design for comparative studies of the living conditions among the Inuit and Saami population in the Arctic region. This includes drawing up a selection of nominal and operational living conditions indicators based on earlier theoretical literature, the experiences from the Greenlandic living conditions study and consultations with the indigenous peoples' organisations.
2. To carry out a comparative, dynamic social analysis of the cause and effect relationship between the various political, economic, cultural and technological structures and individual living conditions, and between individual resources and individual conduct.
3. To map the living conditions among Inuit and Saami in Greenland, Inuvialuit, Nunavut, Nunavik, Labrador, Alaska, Sweden, Norway, Finland and Chukotka and the Kola Peninsula.
4. To create a better basis for local as well as national decision-makers for political planning and implementation
5. To establish an interdisciplinary network of researchers and research institutions interested in living conditions research in the Arctic region.
6. To increase knowledge among the indigenous peoples concerning their own and other indigenous peoples' history of development and living conditions.
7. To train and include local students and researchers in the project. (Andersen, 1999c).

The project is a quantitative cross section study which will carry out 23,000 personal interviews (14,000 of these will be carried out in Canada by Statistics Canada) and which is expected to be completed at the end of 2002. The

group of respondents is made up of Inuit and Saami in the Arctic who are at least 15 years old at the time when the collection of data takes place. The participating regions are shown in Figure 1.

Figure 1. The regions in SLiCA



In September 2001 SLiCA's phase 1, which include the development of a new research design and carrying out pilot studies, will be concluded. The actual data collection will take place during October 2001-February 2002 while analyses and publishing are scheduled to 2002-2003.

2.7 Focus on context, social change and the concepts of well-being within SLiCA

In this section we focus on how we implement three crucial items of the list of ground rules presented in section 4 within SLiCA. Firstly, we specify SLiCA's concepts of well-being and living conditions. Secondly, we demonstrate how SLiCA through the process of identifying living conditions indicators ensure that these are context-specific and thereby valid. In this connection we introduce the concept of household production as an example of context-specific and model based identification of living conditions indicators. Finally, we briefly discuss how to include and measure the effects of structural changes on individual living conditions.

2.7.1 *The concepts of well-being and living conditions in SLiCA*

We define living conditions by means of two components. First of all we define, as in the Scandinavian model, individual living conditions based on the individual's control of material as well as non-material resources which may be applied in order to influence one's own living conditions (Titmuss 1958). Focusing on resources rather than on demand satisfaction is a result of the recognition of the fact that the priorities of any individual between the satisfaction of social, cultural and physical needs are not universally given, but the level and the demand for satisfaction of the same types of need will vary with the historical, cultural and material context. This is true both inter- and intranationally. It is not the same as saying that it is impossible to establish a universal hierarchy of demands in a given society at a given time. It simply emphasises that apart from a few basic needs, no universal hierarchy of demands separated from time and space exists. By focusing on resources it is emphasised that the individual is not simply a victim of a mechanical need for satisfaction but is equipped with a free will which will lead to a situation where the application and appropriation of resources at a conscious as well as at an unconscious level will change with time and place, and that different individuals may choose to apply the same resources in different ways.

Secondly, the definition of living conditions should include an assumption of the fact that the application of resources to a certain extent is influenced by structural conditions. In this connection it is relevant to include the arena approach which has developed as an extension of Coleman's social theory (Coleman 1971) and which was used in the first Norwegian study of living conditions at the beginning of the 1970s (Ringen 1975, Ringen 1995).

The core of this point of view is the fact that well-being cannot be defined only as the individual possession of a number of resources – but as the individual possession of resources which may be applied in various arenas (= social structures as for example the labour market, the private sphere, the political/public life etc.). It is especially relevant for this project as the process of development in the regions may be of a very heterogeneous nature so that the arenas, and hence the opportunity for applying specific resources may differ considerably from the one region to the next. Thus the recognition of structural limits is important in the process of identifying the composite parts of individual well-being and for the analysis following. Thus living conditions are defined as:

“individual possession of resources in the form of money, goods, services, mental and physical energy, social relations, physical security etc. by means of which the individual person may control and consciously direct his/her living conditions in so far as the necessary arenas are available.”

Andersen, 1999c.

Well-being

The purpose of measuring living conditions is ultimately to obtain a picture of individual well-being (Allardt, 1975). The concept of well-being is a broader concept than that of living conditions because it also includes the person's subjective evaluation of his/her objective resources.

Only using objective measuring had some unfortunate consequences for the Greenland study of living conditions 1994 (Andersen, 2001). We found, like Erik Allardt (Allardt, 1975), that to measure individual well-being adequately, it is necessary to combine the objective resources of the individual with the person's evaluation of these resources. Below is the outline of Allardt's conceptual apparatus for measuring well-being in the Nordic countries.

Table 1. Allardt's conceptual apparatus for measuring well-being

	Well-being	Happiness
Living standard	Satisfaction of needs defined in terms of material resources	Subjective evaluations and experiences of material living conditions
Quality of life	Satisfaction of needs defined in terms of other people, society and nature	Subjective evaluations and experiences of relations to other people, nature and society

Source: Allardt, 1975, pp. 23.

Allardt's argument was that well-being should be measured subjectively (well-being) and objectively (happiness), and that the measuring should include material (level of living conditions) as well as non-material (quality of life) variables. Although well-being in this connection only signifies the objective measure, he actually includes all four dimensions in his concept of well-being (ibid.).

As the concept of well-being in SLiCA, as argued above, should be based on resources and not on needs, we have adapted Allardt's model to fit this.

Table 2. The concepts of living conditions and well-being (SLiCA)

	Descriptive well-being	Evaluative well-being
Material well-being	Descriptive measurement of material resources	Evaluative measurement of material resources
Non-material well-being	Descriptive measurement of non-material resources	Evaluative measurement of non-material resources

Source: Andersen, 2001.

In summing up, the following may be said about measuring well-being and living conditions in SLiCA:

We are interested in all aspects of living as experienced by individuals in the context of social groups; (2) individual experiences with living conditions have objective and subjective components, the latter including satisfaction, expectations, and aspirations; (3) we are interested in the resources individuals can apply, the ways in which they choose to apply these resources, and the barriers and incentives to the application of resources; (4) we want to organise our dimensions of living conditions in terms that are both meaningful to Arctic indigenous peoples and

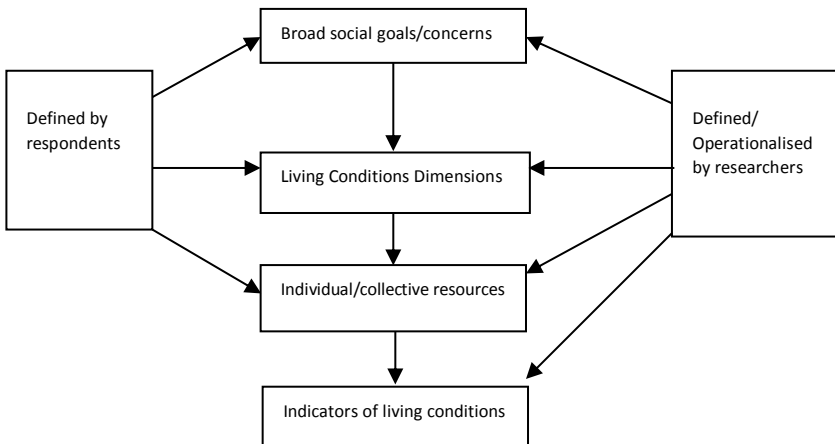
that can be associated with hypotheses about regional, community, household, and individual differences in living conditions.

2.7.2 Context

Thus the concept of living conditions is constituted by individual resources as well as by access to the relevant arenas. Not all resources are equally important, however, and not all arenas are equally relevant. The obvious question, therefore, is how to select the adequate dimensions and indicators of living conditions.

As argued in section 4, the first requirement is that the underlying concept of well-being in a reasonable measure corresponds with the idea of well-being in the group of respondents – in other words that the concept of well-being is context-specific. Our argument is that this can only be achieved by an interactive selection process between the researchers and representatives from the group of respondents. In Figure 2 below we have described this process and the elements of the process, which are used within SLiCA.

Figure 2. The process of defining indicators of living conditions



Andersen, 1999a.

Broad social goals

The starting point is to identify broad social goals that are generally accepted either by the researchers or by majorities of the respondents. These can be divided into two sub-categories (Kruse and Hannah, 1998).

Social concerns/goals that are dominant in all areas of the project

Physical security, health, and sufficient and healthy nutrition are types of universally accepted social goals that are included in this category. These are goals that are identified by researchers in the project and/or on the basis of previous literature in the field of living conditions research. While these goals are universal by nature, the ways of reaching or satisfying them may vary over time and place. In addition we identify social goals that are not universal – but dominant among Inuit and Saami peoples in all areas of the project. These are defined by researchers and by Inuit and Saami representatives.

Region-specific social goals

While the basic social goals mentioned above are legitimate in all geographical areas of this project – there exist of course region-specific social goals in each area due to variations in material and technological conditions and cultural and political differences. These social goals are identified in an interactive process between researchers and Inuit and Saami representatives.

The implication for SLiCA is that we develop two questionnaires: One that contains a common core of questions which is employed in all areas of the project and 11 questionnaires containing region-specific questions.

Dimensions of living conditions

Dimensions of living conditions are operationalised social goals in terms of variable clusters that comprise important areas of the well-being of the individual. The proper “translation” of social goals into dimensions of living conditions is very context-dependent. Food security is defined differently among Inuit in Chukotka than e.g. in Western Europe. The identification of dimensions of living conditions therefore takes place as an interactive process between researchers and Inuit and Saami representatives.

Individual/collective resources

Relevant individual and collective resources must be derived and operationalised from the dimensions of living conditions. The question is: Which individual resources are needed to obtain individual well-being within the different dimensions of living conditions. Again, this translation is very context-dependent which calls for a joint effort from researchers and the respondents. We want to underline again that the actual measurement of resources will be at the individual level while we recognise the influence of collective resources on the well-being of the individual. Collective resources are examined in socio-economic and cultural analyses of the different regions and will be related to the individually based survey data in the final analyses.

Living conditions indicators

Living conditions indicators are the actual questions to be posed as operationalisations or representations of the individual resources mentioned above. These will constitute the questionnaires. The questionnaires will be constructed by the researchers in the project and then pilot tested in all areas.

The above model for inclusion of the group of respondents in the process of selecting dimensions and indicators of living conditions ensures that the final research design will be context-specific and thus will reflect also the perceptions of well-being in the groups of respondents so that all relevant dimensions have been included, and that the theoretical variables are correctly and validly operationalised.

The household economy – an example

To illustrate the importance of this process and of the application of context-specific models for the identifications of living conditions indicators in general SLiCA has introduced an alternative way of measuring among others income among indigenous peoples in the Arctic. This model is described below.

In living conditions studies the unit of analysis is most often the individual as the main focus of the research is the individual well-being. This is also the case for SLiCA. Studies (e.g. Hertz, 1995; Nuttall, 1998; Dahl, 2000) of ways of living and living conditions in small communities in the Arctic, however, document that more traditional family and household structures still play an important role in the Arctic region. Hence the

SLiCA research team has developed a household production model from which it is also possible to derive information at the individual level.

The household is in this model chosen as a central unit of analyses primarily because of three circumstances:

1. Even though family patterns and ways of living together through several generations have been – and still is changing – it is still common, that a household consists of family members besides the nuclear family. It is also assumed that the share of three generation households is significantly bigger in the Arctic than in e.g. Scandinavia, Canada and the USA.
2. Despite the rapid economic, social and cultural change of the Arctic societies, a large part of the families are still dependent on subsistence hunting and fishing⁵² or at least a combination of subsistence hunting/fishing, wage income and transfer payments.

In the 1994 Greenland Living Conditions Survey, one of the topics analysed was subsistence activities – measured as the respondents' participation in subsistence hunting and fishing activities as well as the share of the food supply stemming from such activities.

Whereas less than 9% of the Greenland part of the labour force has subsistence hunting or fishing as their main occupation (Danielsen *et al.* 1998), the degree to which people participate in those activities at all, is much more extensive. This is especially true for the settlement inhabitants. According to the 1994 Greenland Living Conditions Survey, 67% of the population in the settlements indicating wage income as main income source were engaged in small-scale fishing and/or hunting activities (the corresponding figure for the town inhabitants was 28%). 80% of the households in the settlements had members participating in hunting sea or land mammals and/or fish for the consumption of the household (and/or the sledge

⁵² The concept of subsistence (hunting and/or fishing) as "hunting and/or fishing for the household economy, with a distribution system which secures that the community shares the products" is based on the definition by Kapel and Petersen (1982).

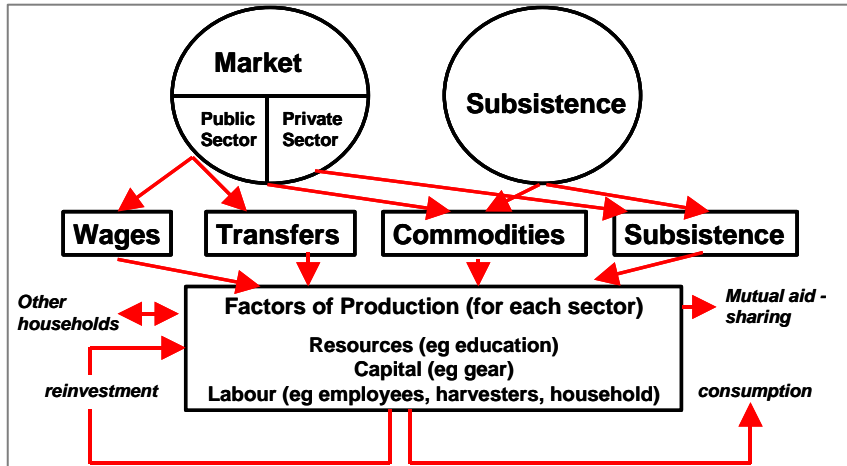
dogs) as a necessary supplement to their wage incomes (Andersen/Statistics Greenland 1995).

These figures both shows the importance to the Greenland Inuit of having access to hunting and fishing activities and a significant difference between the more traditional living in the small settlements and the more modern ways of living in the towns. (There is no official distinction between the concepts of “towns” and “settlements”. In practice, however, the “capitols” of the 18 municipality are classified as towns – while other inhabited places are classified as settlements. The number of persons living in different towns range from 550 to 14,000, whereas the population figures in the settlements vary from 25 persons to 500).

Most of all, however, they underline that contributions from subsistence activities are crucial to the survival of many households. In traditional statistical studies the outcome from these activities are not part of the income measurement due to the monetary concept of income most often applied by researchers and statisticians. The ultimate consequence is that from a GDP-point of view subsistence hunting and fishing does not contribute to the wealth of a nation (Poppel *et al.* 2000).

To grasp the importance of subsistence and how the household in the mixed subsistence-based economy works as a micro-enterprise in organising productive activity and allocating the factors of production (land, labour, capital) to optimise income the household production model was developed (Usher 2000 a) to and through the SLiCA-proces.

Figure 3. A household production model



The model illustrates how an essential socio-economic unit below the regional economy level – the household – works as a micro-enterprise in the Arctic and makes it possible for living conditions researchers to capture both monetary, non-monetary production and consumption within the household.

There are three types of questions relevant to the household economy model: characteristics of the individual members (their western and traditional education for example); activities of the individual household members (wage labour and hunting for example); and flows of different types of cash and harvests into and out of the household. (Usher 2000b)

Households have access to land – not in the conventional sense of ownership – but to the traditional land base used for harvesting. Households own items used in production: boats, outboard motors, snow mobiles, trucks. Household members work to produce money and harvests: they have paid jobs, they hunt and fish, and they process foods. We try to understand how everyone in the household fits together to do these things – this is the challenge theoretically as well as methodologically (Ibid.).

As can be seen from the short description of and comments to the model, the main purpose is to understand how the household as a production unit works: the individuals' resources, the arenas they are being used in and the output of the process. How the process is being perceived and evaluated by the household members will be addressed by questions derived from "outside the model".

2.8 Focus on structural and individual change

As mentioned in Section 5 it is one of SLiCA's main goals to carry out a dynamic social analysis of the effects of structural change on living conditions. As we are not able to measure the relationship between structural changes and individual well-being over time, we shall have to do it over place. Thus the value of a circumpolar comparison of living conditions is found in, among other things, a better understanding of how different structural conditions and changes affect individual resources in culturally comparable groups. For example, how has the exploitation of mineral resources affected the living conditions of the Inuit compared to areas where no such exploitation takes place? Or how have the G50 and G60 plans of the Danish government affected the living conditions of the Greenland population in contrast to areas where no concentration policy, for example, was initiated?

The first task is thus to identify the most important structural changes or "forces of change" which have influenced the freedom of choice, either by 1) changing the resources people possess, or 2) affecting them so that new arenas are chosen where their resources are more or less sufficient, or 3) creating completely new arenas. Kruse and Hannah (Kruse and Hannah, 1998) have identified the following important causes of structural changes among Saami and Inuit in the Arctic:

- Climate change.
- Government.
- Policies Native self-government.
- Resource development.
- Technology.
- Animal rights groups.
- Contaminants.
- Increased access to the north.
- Religion.
- Education.

The question is whether these structural and institutional factors affect individual living conditions and well-being. Mohatt, McDiarmid and Montoya (1988) presented an overview of the impact of social change among Alaska Natives on human health. They pointed out that forces for change are cumulative, a combination of “big” history (e.g. disasters, social change, economics); and “little” history (e.g. family and individual trauma, developmental trauma, biological/hereditary events within family history, emotional events). They emphasised the importance of understanding how these forces of change affect the coherence of individuals, families, and communities. Quoting Antonovsky (1980), they defined coherence as:

“...a global orientation that expresses the intent to which one has a pervasive, enduring though dynamic feeling of confidence that one’s external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected”

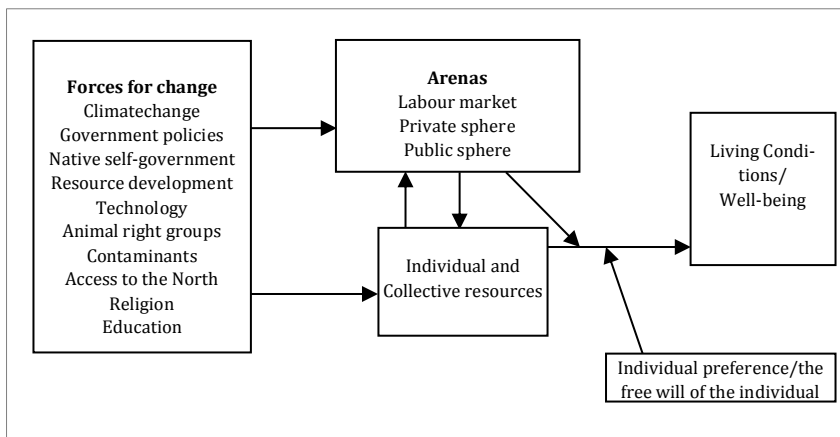
(p. 123).

We raise Mohatt’s point here because it would be a delusion to think that we can partition the effects of concurrent forces for change on arena outcomes and, even if we could, we would lose sight of the cumulative effects. These cumulative effects may be the most important in that they become a resource limitation in all living conditions dimensions at the same time. This means that the loss of a sense of confidence in a degree of social and cultural continuity, for example, can undermine the ability and the will to act, and hence the freedom of choice of the individual in general.

However, we assume, as mentioned above, that we are able to identify some direct effects of well-being based on the structural changes which have taken place in the Inuit and Saami societies during the period after the Second World War.

Figure 4 describes our view of the overall co-variation between structural change and a changed individual well-being. The model is an illustrative one and not an attempt at reproducing reality precisely. Thus the list of the structural and institutional forces of change is not exhaustive.

Figure 4. A model for explaining and describing living conditions among Inuit and Saami in the Arctic



Andersen, 1999a.

The model may look rather deterministic at first glance. To underline the individual choice or the free will of man we have added a box to indicate that acquiring and employing individual resources is not only conditioned by forces of change or access to arenas, but also by the individual choice. As a consequence of Mohatt's argument one might draw an arrow which indicates a correlation between the forces of change and the general will and ability of the individual person to manage his/her resources.

Two consequences arise from the above model. First of all, the identification of specific causes of change should contribute to steering the selection and operationalisation of the living conditions indicators. Secondly, SLiCA will produce region-specific socio-economic reports which will make it possible to correlate and compare these structural events with the living conditions of the individual so that in the analysis phase it will possible to carry out dynamic social analyses and thus identify how the forces of change have affected the living conditions and the well-being in the various regions. In this way focus remains on change and not on static descriptions of the Inuit and Saami living conditions in the Arctic.

2.9 An outline of SLiCA's research design

The above chapters have mainly been oriented towards 1) a discussion of the experiences from the Greenland Living Conditions Survey 1994, 2) the basic model for living conditions research among Inuit and Saami within SLiCA, and 3) a selective discussion of how this model may be implemented in a comparative study of these populations. The drawing up of the actual questionnaire is not discussed here. However, below we have listed the living conditions dimensions included in SLiCA's research design:

- Part A: Family
(1) Family relationships and (2) Household economy.
- Part B: Background
(1) Mobility, (2) Language, and (3) Education.
- Part C: Lifestyle
(1) Employment, (2) Harvest, (3) Leisure, (4) Spirituality, (5) Identity and (6) Health.
- Part D: Environment
(1) Housing, (2) Income and expenses, (3) Technology, (4) Safety and justice, (5) Resource management.
- (6) Environmental health, (7) Political resources and (8) Community viability.

This list contains not only living conditions dimensions specific to indigenous peoples in the Arctic but of course also a number of more traditional topics. The point is that the important theoretical variables or resources do not always differ between different kinds of societies – but that they have to be operationalised differently to measure well-being among indigenous peoples in the Arctic and e.g. well-being of the inhabitants of western, industrialised countries as was shown in the example regarding income measurement in section 6.2.

2.10 The perspective: Living conditions research and political planning in the Arctic

If living conditions research is going to play a role in connection with political planning and implementation in the Arctic, it will have to become relevant again, and in order to be relevant research must again become theory-propelled and must to a greater extent focus on the interplay between events at system level and individual well-being. Furthermore, living conditions research must be based on context-specific research designs in order to obtain meaningful and realistic measurement of well-being.

If these conditions are included in the living conditions studies, living conditions research may contribute with new and essential knowledge about the indigenous peoples in the Arctic. Not least in connection with planning, implementation and evaluation of the sustainable process of development which plays such an important role in setting the political agenda in the Arctic.

In 1996 Arctic Council, whose members represent all the 8 countries geographically linked to the Arctic region, defined sustainable development as a concept not only related to the environment but also to economic and social development and as a question of securing the cultural welfare of the Arctic inhabitants. (Arctic Council, 1996). In order to acquire a correct understanding of how living as well as non-living resources should be regulated in a sustainable way, it is necessary to focus in a greater measure on the social aspects of sustainable development. In order to understand how resources were regulated in the past, how they are regulated today, and how they should be regulated in the future, it is important to include human activity, politico-economic systems, cultural conditions and technological aspects in the concept of sustainability.

Only by including in the mental picture the social, cultural, political, economic and technological differences in the various Arctic societies it is possible to plan and implement a sustainable development in the Arctic. A sustainable regulation of the resources is not a question only of adapting the political and economic control systems. In order to avoid “the tragedy of the commons” (Hardin, 1968) and “the tragic necessity of Leviathan” (Ophuls, 1973), it is necessary to learn more about the living conditions,

informal institutions, political resources, attitudes, values and welfare priorities among the Arctic peoples who actually manage the resources.

The majority of the indigenous peoples in the Arctic have, as shown above, experienced rapid changes in a number of exogenic variables which to a great extent have affected their lives. Today many of these people mix traditional activities with wage labour, for example. They adapt the traditional lifestyle. Seen from the perspective of sustainable development it is important to study how these events at the system level affect habits of diet, consumption patterns, occupational conditions, incentive structures, and, in continuation of these factors, the ways in which the individual person relates to the living and the non-living resources. When the concept of sustainability does not exclusively relate to animals, plants and minerals but to human beings also, it becomes relevant to study how the above events have affected the living conditions of the indigenous peoples, that is their health, opportunities for work, housing, level and sources of income, educational level, family structures, social networks as well as their attitudes, values and priorities in general.

By carrying out a representative, comparative study of individual living conditions, it becomes possible to expose how various indigenous peoples with different cultural, technological, political and economic structures manage their resources. In this way it becomes possible to learn more of the causal relations between economic, political and cultural systems and the way in which the resources are managed. A comparative study of these conditions makes it possible to identify some of the key variables that decide whether the management of resources is a success or a failure.

Thus living conditions research may contribute considerably to political planning in the Arctic – not least in connection with the implementation of the sustainable development process if it is based on adequate and meaningful research designs. We are convinced that the comparative study of living conditions among Inuit and Saami in the Arctic is a major step in the right direction.

2.11 References

- Allardt, E. (1975). *Att Ha, Att Älska, Att Vara. Om Välfärd i Norden*. Lund.
- Andersen, T. (1995). *Work and Unemployment in Greenland*. Statistics Greenland, Nuuk.
- Andersen, T., Jensen, J. (1998). Ethnical and Demographic Aspects of the Circumpolar Living Conditions Project. In Greiffenberg, Tom (ed.), *Development in the Arctic*, Danish Polar Center Publications no. 5, København.
- Andersen, T. (1999a). Living Conditions Research and Sustainable Development. In *Inussuk, Arctic Journal of Research 1999:2*, Nuuk.
- Andersen, T. (1999b). A Circumpolar Study of Living Conditions among Saami and Inuit Peoples. In Petersen, H. & Poppel, B. (eds.), *Autonomy, Dependency and Sustainability in the Arctic*. Ashgate, London 1999.
- Andersen, T. (2001). *Living Conditions in the Arctic – How to Measure Living Conditions among Indigenous Peoples Living in the Arctic*. Canada, AINA
- Antonovsky, A. (1980). *Health, Stress and Coping*. Jossey-Bass Publishers, San Francisco.
- Berman, M., Leask, L. (1994). *Violent Death in Alaska: Who is Most Likely to Die?* Institute of Social and Economic Research, University of Alaska Anchorage, Alaska Review of Social & Economic Conditions 29(1).
- Coleman, J. S. (1971). *Resources for Social Change*. New York.
- Dahl, J. (2000). *Saqqaq: An Inuit Hunting Community in the Modern World*. Toronto.
- Danielsen M., Andersen, T., Knudsen, T., Nielsen, O. (1998). *Mål og strategier i den grønlandske erhvervsudvikling*. Sulisa A/S, Nuuk.
- Danmarks Statistik og Socialforskningsinstituttet (1992). *Levevilkår i Danmark 1992*. København.
- Erikson, R. & Uusitalo, H. (1987), The Scandinavian Approach to Welfare Research. In Eriksen, Hansen, Ringen and Uusitalo (eds.): *The Scandinavian Model. Welfare States and Welfare Research*. M.E. Sharpe, New York, London.
- Hansen, Erik J. (1978). *Fordelingen af levevilkårene*, SFI publikation 82. København 1978.
- Hansen, E. J. (1990). *Levekårsforskningen i Norden: Et historisk overblik*. DDA-NYT, Nr. 53, Odense 1990.
- Hansen, E. E. (1999). Udvikling og Forsorg. In: *Gyldendals bog om Grønland*, Gyldendals. Nordisk Forlag A/S Copenhagen.
- Hertz, O. (1995). *Økologi og levevilkår i Arktis: Uummannamiut*. Copenhagen.
- Johansson, S. (1970). *Om levnadsnivåundersökningen. Utkast til kapitel 1 och 2 i betänkande att avgives af låginkomstutredningen*. Allmänna Förlaget, Stockholm.
- Kirmayer, L. (1994). Suicide Among Canadian Aboriginal Peoples. *Transcultural Psychiatric Research Review*. Vol 31(1): 3–58.
<http://dx.doi.org/10.1177/136346159403100101>

- Kruse, J., Hanna, V. (1998). *Forces for Change in the Arctic North America and the Sustainability of Northern Communities*. Paper presented at the International Arctic Social Sciences Association, Third International Congress of Arctic Social Sciences, Copenhagen.
- Kruse, J. (1999). *Proposal to the National Science Foundation*. Washington D.C.
- Mohatt, G. et al. (1988). Societies, Families and Change. *American Indian and Alaska native Mental health Research, Monograph no 1*, pp 325–365.
<http://dx.doi.org/10.5820/aian.mono01.1988.325>
- NOU (1976), *Sluttrapport*. Nou 1976:28, Oslo.
- Nuttall, M. (1998). *Protecting the Arctic: Indigenous Peoples and Cultural Survival*. Amsterdam.
- Kapel, F.O. and Petersen, R. (1982). Subsistence Hunting – The Greenland Case. In *Rep. Int. Whaling Commission* (Special Issue 4).
- Poppel, ., Andersen, T. and Lyster, P. (2000). *Living Conditions of Indigenous Peoples of the Arctic – The Greenland Inuit as an example*. Paper presented at the IAOS conference: Statistics, Development and Human Rights.
www.statistik.admin.ch/about/international/03iaos_det07.htm
- Ringen, S. (1975) Noen hovedtrekk ved den velferdsteoretiske diskusjon i Norden. In Ringen, Anders (red.) *Velferdsforskning og sosialpolitikk*. INAS-rapport.
- Ringen, S. (1995). Well-being, Measurement and preferences. *Acta Sociologica* 38:3-15. <http://dx.doi.org/10.1177/000169939503800102>
- Scardigli, V. (1983). *La Consommation, Culture du Quotidien*. PUF, Paris.
- Statistiska Centralbyrån (1995). *Levnadsförhållanden – appendix 15*. Stockholm.
- Titmuss, R. (1958). *Essays on the Welfare State*. London.
- Usher, P. J. (2000;a). *Understanding the household in the mixed, subsistence-based economy: Towards a survey questionnaire module* (draft),
www.arcticlivingconditions.com
- Usher, P. J. (2000;b). The household Economy. In *Iqaluit Summary: meeting of the SLiCA-Canada National Steering Committee*. Iqaluit Nunavut, 18–19 April 2000,
www.arcticlivingconditions.com
- Vogel, J. (1996). Social Indicators and Social Reporting. *Statistical Reports of the Nordic Countries no. 66*. Copenhagen.

3. Design and methods in a survey of living conditions in the Arctic – the SLiCA study⁵³

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Objectives

The main objective of this study is to describe the methods and design of the survey of living conditions in the Arctic (SLiCA), relevant participation rates and the distribution of participants, as applicable to the survey data in Alaska, Greenland and Norway. This article briefly addresses possible selection bias in the data and also the ways to tackle it in future studies.

Study design

Population-based cross-sectional survey.

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Methods

Indigenous individuals aged 16 years and older, living in Greenland, Alaska and in traditional settlement areas in Norway, were invited to participate. Random sampling methods were applied in Alaska and Greenland, while non-probability sampling methods were applied in Norway. Data were collected in 3 periods: in Alaska, from January 2002 to February 2003; in Greenland, from December 2003 to August 2006; and in Norway, in 2003 and from June 2006 to June 2008. The principal method in SLiCA was standardised face-to-face interviews using a questionnaire.

Results

A total of 663, 1,197 and 445 individuals were interviewed in Alaska, Greenland and Norway, respectively. Very high overall participation rates of 83% were obtained in Greenland and Alaska, while a more conventional rate of 57% was achieved in Norway. A predominance of female respondents was obtained in Alaska. Overall, the Sami cohort is older than the cohorts from Greenland and Alaska.

Conclusion

Preliminary assessments suggest that selection bias in the Sami sample is plausible but not a major threat. Few or no threats to validity are detected in the data from Alaska and Greenland. Despite different sampling and recruitment methods, and sociocultural differences, a unique database has been generated, which shall be used to explore relationships between health and other living conditions variables.

Keywords

Inuit; Inūpiat; Sami; Indigenous peoples; living conditions; survey.

3.1 Introduction

The Survey of Living Conditions in the Arctic: Inuit, Sami, and the Indigenous Peoples of Chukotka (SLiCA) is an international research project on health and other aspects of the living conditions of Indigenous peoples in Alaska, Canada, Greenland, Norway, Sweden and Russia. The motivation for launching SLiCA was the ambition to describe these aspects with re-

gard to indigenous language, tradition and resource utilisation. The background of SLiCA is described in detail elsewhere (1–3).

The sampling methods used in the survey have been different due to country/regional variability in indigenous population density and register availability. The scope of this article does not allow in depth descriptions of the methods used in the involved countries/regions; we shall thus focus on the data from Alaska, Greenland and Norway, as these indigenous populations are integral to the future research questions of the first author. The main objective of this article is to describe the methods and design of SLiCA, relevant participation rates and the distribution of participants, as applicable to the survey data in the aforementioned countries/regions. We also briefly address possible selection bias in the data and describe how to tackle it in future studies.

3.2 Material and Methods

The principal method in all SLiCA countries was standardised face-to-face interviews using a questionnaire. The questionnaire may be accessed on the project website (4). The SLiCA target population was indigenous individuals aged 16 years and older (15 years and older in Canada and Greenland), residing in traditional settlements. Ethnic background was ascertained by self-report. The duration of each interview in Alaska, Greenland and Norway was approximately 1.5–2 hours, and the respondents were almost exclusively interviewed in their homes.

3.2.1 *Data collection and sampling*

Alaska

Data collection took place from January 2002 to February 2003. In Alaska, we did not have access to the U.S. Census 2000 population lists. The sample frame consisted of 4 components, that is, regions and communities, blocks, housing units and individuals. The Alaska sample is a probability multi-stage sample (5). The Iñupiat regions of Northwest Arctic (NA), North Slope (NS) and Bering Strait (BS) were selected in advance. In each of the 3 regions, one started with 2 strata, that is, regional centres and

villages. The regional centres of Kotzebue (NA), Barrow (NS) and Nome (BS) were included. Villages in NA and BS were sampled and stratified as coastal or inland. All villages on the NS were included, as there are only 8 of them. In the regional centres, one applied a 2-stage area probability-sampling approach. First, a probability sample of blocks with probabilities proportionate to the number of Iñupiat households was selected. Second, a probability sample of Inuit households in each sample block was done. A local Inuit colleague identified the Inuit households in the sample blocks. Finally, Iñupiat adults, within each sampled household, were sampled according to the person with the next birthday. We observed a bias in favour of females that was addressed as a final sampling weight. According to the U.S. Census 2000, a total of 4,581, 3,082 and 3,505 persons lived in the regional centres of Barrow, Kotzebue and Nome, respectively. The total population number in the villages varied between 136 in Deering and 772 in Selawik (6). In the villages, the American Indians/Alaska Natives (AIAN) make up close to 100% of the population. In Barrow, Kotzebue and Nome, 64%, 77% and 59% of the population reported AIAN ethnicity, respectively. Here and in the villages, the AIAN category almost exclusively refers to the people of Iñupiaq ethnicity. The total Iñupiaq population in Alaska is estimated at 13,500–15,700 (6–9).

Greenland

Data collection was performed from December 2003 to August 2006 by Statistics Greenland. The project was later transferred to Ilisimatusarfik, University of Greenland, in 2006. Greenland is home to about 57,000 people, of which approximately 90% are Inuit (12). In terms of ethnic categorisation, the Greenlandic population may be divided according to the place of birth, that is, in or outside Greenland. For the adult population, this variable roughly refers to an ethnic categorisation of Greenlanders and Danes, which may be ascertained in interview settings (10). On basis of the official regional division by Greenland Statistics, 8 municipalities and their main towns were selected in advance. The main towns were Nanortalik, Qaqortoq, Paamiut, Nuuk, Aasiaat, Ilulissat, Upernavik and Tasiilaq. Villages were chosen at random in the selected municipalities. In the selected towns and villages, a random sample of persons born in Greenland was drawn from the population register. As a minority of Greenlanders live in smaller settlements of less than 500 inhabitants

(17% in 2005) (11, 12), a greater sample weight was given to this population (3). In 2006, the total population in the main towns varied from 1,133 inhabitants in Upernavik to 14,583 in Nuuk, and in the villages, from 47 in Saarloq to 404 in Kullorsuaq and Kuummiut⁵⁸ (13). Sampling in Greenland is also described elsewhere (3).

Norway

Data collection was commenced by the Centre for Sami Studies, University of Tromsø, in 2003. Since 2006, the study has been administered and run by the Centre for Sami Health Research. The majority of the material was collected between June 2006 and June 2008 and a smaller amount (n67) in 2003. The areas included were chosen in advance, based on knowledge of Sami settlement patterns.

Sami respondents in Finnmark were selected through the representative database of the Population-based Study of Health and Living Conditions in Areas with both Sami and Norwegian Populations (SAMINOR). This study was run by the Centre for Sami Health Research and the Norwegian Institute of Public Health in 2003–2004 and is described in detail by Lund et al. (14). A random sample was drawn from the sample frame of all SAMINOR participants in Kautokeino, Karasjok and Nesseby, who reported Sami ethnicity and gave consent to be contacted in future studies. This method was unavailable in Sami settlement areas, south of Finnmark, as permission to contact these participants was not obtained during SAMINOR. Instead, a non-probability snowball sampling technique (15, 16) was applied to list Sami living in Sami settlement areas in Troms, Nordland and the Trøndelag counties. From this sample frame random samples were drawn. This method was also applied in Finnmark to recruit individuals in the youngest age strata, as SAMINOR only included participants aged 30 and 36–79 years in 2003–2004. Sticking to a random sampling became challenging in areas, where the Sami population is a minority and lives scattered across great distances. The South Sami area is one such example. Because of funding issues, a scattered population structure

⁵⁸ In Greenland, town status is not determined by population size but by the presence of the municipality headquarter, a hospital or health centre and a school (12).

and the few Sami living in each community, we had to interview a certain number of persons in each place to reach an adequate total number of completed interviews. Multi-stage probability sampling was not possible for the same reasons. Except for Røros (n=5,683), all the municipalities and communities had, in 2008, less than 3,000 inhabitants (17). Among these, the Sami were majority only in Kautokeino, Karasjok and Nesseby. There is no updated demographic record on the Sami, but the population in Norway is usually and roughly estimated at 40,000 (18, 19).

3.2.2 *Logistics*

The Iñupiat of Alaska inhabit the northern and western coasts as far south as Norton Sound (7), and most of the communities cannot be reached by car or ferry (20). Interviewers traveled by car within the regional centres, while all respondents lived within walking distance in the villages. Respondents were contacted by house visits, and the interviewer gave a brief description of the study to the person answering the door and asked to speak to the person who had the next birthday. If that person was not available, contact information (e.g. phone numbers) would then be obtained and attempts were made to contact the selected person. Those who failed to attend scheduled interviews were contacted to reschedule.

The majority of the Inuit in Greenland are concentrated on the west coast and in the south, with only 3,500 living on the east coast and less than 1,000 in the far north (11, 12, 21). In Greenland, the towns and villages are isolated from one another and can only be reached by boat or flight (21). As in Alaska, cars were used for transport in the towns, while interviewers could walk to interview appointments in the villages. Selected individuals were contacted and invited to participate by phone. If contact was not established by phone, interviewers would contact the person at home. Those who failed to attend scheduled interviews were re-contacted and new interviews were planned.

The traditional Sami settlement area in Norway stretches from Finnmark in the north to Engerdal in Hedmark County in the south, with the majority of the Sami population settled in Finnmark (19). All communities are reachable by car. In Norway, invitation to participate in the study was presented in 2 ways. First, SAMINOR-sampled individuals in Finnmark received a letter of invitation, containing information on the study, a writ-

ten consent form and a return envelope. The recipients were asked to return the signed consent form and provide their telephone number. Those who consented were contacted by phone to schedule the time and date for the interview. Those who did not return the consent form were tried contacted over the phone, if their number was accessible. Second, south of Finnmark, people were invited by phone only. During the phone conversation, the study was presented, and if preliminary consent was obtained, time and place of the interview were fixed. Those who failed to attend scheduled interviews were contacted by phone to reschedule.

3.2.3 Questionnaire

The core questionnaire consisted of 4 parts: the main questionnaire, 3 household charts intended to facilitate responses on questions concerning household members and a self-administered questionnaire used for sensitive questions. Finally, cue cards were used to efficiently present respondents with response choices. The core questionnaire was produced in collaboration with indigenous representatives and field tested in all countries/regions. English was used as a common language for questionnaire development. Country/region-specific questions were produced to address issues, items and perspectives relevant to the respective country/region. All fieldworkers in SLiCA were trained in interviewing techniques and procedures. An interview guide was produced to optimise standardisation and training. In Norway and Greenland, the core questionnaire was translated into Northern Sami and Kalaallisut (Greenlandic), respectively, while only the cue cards were translated into Iñupiaq in Alaska.

3.3 Results

A total of 663, 1,197 and 445 individuals were interviewed in Alaska, Greenland and Norway, respectively (Table 1). Herein, 135 participants in Greenland and 18 in Norway who reported non-indigenous backgrounds shall be excluded in future studies. Participation rates by age and sex are unavailable in Norway and Alaska due to the sampling methods used. Very high overall participation rates were obtained in Greenland and Alaska,

while a more conventional rate was achieved in Norway. Tables 2 through 4 present community- and regional- specific participation rates. Tables 5 shows the distribution of participants by age and sex. A predominance of female respondents was obtained in Alaska. Overall, the Sami cohort is older than the samples from Greenland and Alaska.

3.4 Discussion

In this article, we have presented the methods and design, overall regional- and community-specific participation rates, and the distribution of participants by age, sex and country/region in the SLiCA survey in Alaska, Greenland and Norway. High overall participation rates were obtained in Greenland and Alaska, while a more conventional rate was observed in Norway. A conventional participation rate and non-probability sampling may have introduced selection bias in the Sami sample.

Available literature stresses that person-to-person approaches usually give higher participation rates than initial telephone contacts (5, 22). The different methods used in the recruitment phase may, thus, explain some of the observed discrepancy in participation rates between the countries/regions. In Norway, the participation rates in Finnmark were systematically lower compared with the rates from Troms, Nordland and Trøndelag; the snowball sampling may have led us to the more motivated respondents in these 3 counties.

The only information on Sami non-responders available to us is their sex and place of residence. Nevertheless, it has been documented that the differences between responders and non-responders, generally, are important but seldom so great that studies are irrevocably undermined (23). Furthermore, the Sami sample is a nonprobability sample. Those invited were not chosen at random; we cannot rule out the possibility that our participants differ systematically from the population we want our sample to reflect (24, 25). In terms of external validity, selection bias is generally a problem, if the priority is to describe the distribution of variables in the population (26). However, in the future, SLiCA data will be used to explore the relationships between health and related areas of living condition, and associated risk factors. Any association may well be biased, if the study

participants have a different distribution of confounding factors than the non-participants (26). Given a large enough sample, however, this may be statistically corrected, by adjusting, for the known and relevant confounding variables. As all SAMINOR municipalities overlap with the municipalities visited in SLiCA, SAMINOR data may be used to assess possible skewed distributions of confounding variables in SLiCA in the relevant age strata. Assuming that SAMINOR is a plausible estimate of the total Sami population aged 30 and 36–79 years, discrepancies in distributions of comparable variables may be tested statistically. Significant statistical differences in distributions may be used for evaluating inclusions of covariates in the model. Also, if relevant, valid estimates of the distribution of variables in the Sami population may be produced by applying weights to skewed variables by using the same method (27, 28).

However, preliminary assessments suggest that selection bias in the Sami sample is plausible, but not a major threat when comparing education attainment with SAMINOR data. Based on previous research (29) and the U.S. Census 2000 (30, 31), few or no threats to validity are detected in the data from Alaska and Greenland. Probability sampling, in addition to high participation rates, explains this.

Because of funding issues, data collection was delayed in Greenland and Norway. As a consequence, the respective data-sets stem from different periods, which may challenge comparisons. Data collection was done within a 6-year period; this may result in confounding, due to period effects. Some of this effect may be controlled, by adjusting, for interview year. A strength is that data collection took place in parts of the respective populations across the year, which reduced possible bias due to seasonal effects. Seasonal effects are common for various health variables in epidemiological studies (23).

Table 1. Participation by region/country

Country	Original sample	Total participants (%)	Indigenous sample	Indigenous participants (%)
Alaska	1,151		797	663 (83.2)
Greenland	1,440	1,197 (83.1)		1,062
Norway	788	445 (56.5)		427

In Alaska non-indigenous persons were excluded prior to invitation. In Greenland and Norway, however, information on ethnic background was not known in advance. Thus, total participants include persons who did not report indigenous background. Of the 663 participants in Alaska, 67 in the Bering Strait and 2 in the Northwest Arctic reported exclusively Yupik background (data not shown).

Table 2. Participation by region and town/village in Alaska, n = 663

Town/village/Region	Sample	Participants	Participation rate (%)
Anaktuvuk Pass	15	10	66.7
Atkasuk	11	11	100
Barrow	122	100	82.0
Kaktovik	16	13	81.3
Nuiqsut	20	16	80.0
Point Hope	30	26	86.7
Point Lay	11	11	100
Wainwright	34	25	73.5
<i>North Slope totals</i>	<i>259</i>	<i>212</i>	<i>81.9</i>
Deering	27	20	74.1
Kivalina	22	20	90.9
Kotzebue City	142	106	74.6
Noorvik	23	21	91.3
Selawik	22	21	95.5
Shungnak	23	16	69.6
<i>Northwest Arctic totals</i>	<i>259</i>	<i>204</i>	<i>78.8</i>
Brevig Mission	21	21	100
Koyuk	23	20	87.0
Nome City	164	144	87.8
Savoonga	28	25	89.3
Stebbins	21	19	90.5
Unalakleet	22	18	81.8
<i>Bering Strait totals</i>	<i>279</i>	<i>247</i>	<i>88.5</i>

The involved peoples represent varied ways of life of unique histories, experiences, communities and languages. The goal of standardised measurements is central to survey research, and it has been considered essential to keep the wording of questions constant across respondents (32). But even the same question may mean different things to different people, which may produce differential respondent/reporting bias. Culture influences the ways in which information is processed and conceptualised (33), and by no means, meaning is determined by words alone (34). This

issue has been addressed by SLiCA, and a joint effort from involved researchers and indigenous representatives have maximised consistency of meaning. Standardisation in SLiCA was also possible as the indigenous peoples involved share common concepts with regard to the role of household production, their strong ties to the environment and the continuing role of extended informal and formal social relationships (2). Despite different sampling and recruitment methods and sociocultural differences, a unique database has been generated, which shall be used to explore relationships between health and living condition variables.

Table 3. Distribution of participants by region and town/village in Greenland, n = 1197

Town/village/region	Sample	Participants	Participation rate (%)
Qaqortoq	80	76	95.0
Nanortalik	73	67	91.8
Alluitsup Paa	38	29	76.3
Tasiusaq (Nan)	8	7	87.5
Aappilattoq (Nan)	14	11	78.6
Saarloq	4	4	100.0
Eqalugaarsuit	13	13	100.0
<i>South Greenland totals</i>	<i>230</i>	<i>207</i>	<i>90.0</i>
Paamiut	78	56	71.8
Nuuk	481	382	79.4
Arsuk	24	20	83.3
Kapisillit	16	15	93.8
Qeqertarsuatsiaat	63	54	85.7
<i>Mid Greenland totals</i>	<i>662</i>	<i>527</i>	<i>79.6</i>
Ilulissat	118	111	94.1
Aasiaat	101	40	39.6
Kitsissuarsuit	9	8	88.9
Akunnaaq	10	7	70.0
Ilimanaq	4	4	100.0
Oqaatsut	3	3	100.0
Qeqertaq	12	11	91.7
Saqqaaq	16	11	68.8
<i>Disco Bay totals</i>	<i>273</i>	<i>195</i>	<i>71.4</i>
Upernavik	25	25	100.0
Kangersuatsiaq	37	37	100.0
Innaarsuit	19	19	100.0
Nuussuaq (Upernavik)	17	14	82.4
Kullorsuaq	55	55	100.0
<i>North Greenland totals</i>	<i>153</i>	<i>150</i>	<i>98.0</i>
Tasiilaq	53	53	100.0
Isortoq (Tas)	10	10	100.0
Kulusuk	14	13	92.9
Kuummiut	27	25	92.6
Sermiligaaq	18	17	94.4
<i>East Greenland totals</i>	<i>122</i>	<i>118</i>	<i>96.7</i>

Table 4. Distribution of participants by municipality and county in Norway, n = 445

Municipality/Region	Sample	Participants	Participation rate (%)
Kautokeino	192	99	51.5
Karasjok	207	99	47.8
Nesseby	81	46	56.8
<i>Finnmark totals^a</i>	<i>480</i>	<i>244</i>	<i>50.8</i>
Kåfjord	84	51	60.7
Gratangen	12	8	66.7
Lavangen	12	4	33.3
Skånland/Evenes ^b	26	22	84.6
<i>Troms totals^a</i>	<i>134</i>	<i>85</i>	<i>63.4</i>
Vassdalen ^c	5	3	60.0
Tysfjord	72	43	59.7
Grane/Majavatn	15	10	66.7
Hattfjelldal	27	24	88.9
<i>Nordland totals^a</i>	<i>119</i>	<i>80</i>	<i>67.2</i>
Snåsa	21	15	71.4
Røros	34	21	61.8
<i>Trøndelag totals^a</i>	<i>55</i>	<i>36</i>	<i>65.5</i>

^aThe 4 northernmost counties in Norway. Trøndelag is a joint category of the 2 counties, Nord-Trøndelag and Sør-Trøndelag.

^b Evenes is located in the northernmost part of Nordland County. The Evenes Sami, however, are of the same people as the neighbouring Skånland Sami.

^c Vassdalen is a small community in the Municipality of Narvik.

3.5 Ethics

Detailed information on the project was given to the participants orally and in writing, and written informed consent was obtained before interviews took place. For respondents younger than 18 years, who took part in the study, prior written informed consent from parents or legal guardians was obtained.

In Norway, the study was accredited by the Norwegian Social Science Data Service and the National Committee for Research Ethics in the Social Sciences and the Humanities. In Alaska, the study was approved by the University of Alaska Institutional Review Board (IRB). In Greenland, approval from the research ethics committee was not obtained, because this is required only for medical research projects. Being responsible for data collection, Statistics Greenland guaranteed an ethical handling of individual data and these rules and regulations ensuring confidentiality for respondents were followed.

The survey adheres to the Declaration of Helsinki and to IASSA's Guiding Principles for the Conduct of Research in the Arctic 1998. Representatives of the Inuit Circumpolar Conference, the Sami Council and the Russian Association of Indigenous Peoples of the North have formed advisory boards to oversee the study (1). Indigenous steering committees approved the final questionnaire (2).

Table 5. Indigenous participation by age, sex, and region/country, n = 2146

Sex	Age	Alaska		Greenland ^b		Norway ^b	
		n	(%)	n	(%)	n	(%)
Men	16–34	109	(38.7)	165	(32.5)	33	(15.6)
	35–59	119	(42.2)	267	(52.6)	117	(55.5)
	60–87	54	(19.2)	76	(15.0)	61	(28.9)
	<i>Total</i>	282	(100)	508	(100)	211	(100)
Women	16–34	140	(37.0)	181	(32.7)	43	(20.1)
	35–59	179	(47.4)	296	(53.5)	124	(57.9)
	60–87	59	(15.6)	76	(13.7)	47	(22.0)
	<i>Total</i>	378	(100)	553	(100)	214	(100)

^a: Numbers do not add up to total sample due to missing data on sex and/or age.

^b: Youngest participants were 15 years in Greenland and 17 years in Norway.

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3.8 References

- 1) Andersen T, Kruse J, Poppel B. (2002). Survey of living conditions in the Arctic: Inuit, Saami and the indigenous peoples of Chukotka (SLiCA). *Arctic* 55(3):310–5. <http://dx.doi.org/10.14430/arctic713>
- 2) Kruse J, Poppel B, Abryutina L, *et al.* (2009). Survey of Living Conditions in the Arctic (SLiCA). *Social Indic Res.* 33:107–34238.
- 3) Poppel B. (2010). Some data sources on people, peoples, communities, regions and human activities in Greenland. In: Winther G, editor. *The political economy of northern regional development*. Copenhagen: Nordic Council of Ministers. p. 287–320.
- 4) Kruse J, Poppel B. [cited 16th December 2011]. *Survey of living conditions in the Arctic*. Available from: <http://www.arcticlivingconditions.org/>
- 5) Bowling A. (2009). *Research methods in health: investigating health and health services*. 3rd edition. Buckingham: Open University Press. XIII, 525 p.
- 6) USCB. (2000). *Demographic profiles*. Washington, DC: U.S. Census Bureau [cited 2011 Apr 17]. Available from: <http://censtats.census.gov/pub/Profiles.shtml>
- 7) Berner J. Alaska (2008). In: Young TK, Bjerregaard P, editors. *Health transitions in Arctic populations*. Toronto, ON: University of Toronto Press. p. 53–70.
- 8) Krauss M. (2007). Native languages of Alaska. In: Sakiyama O, Miyaoka O, Krauss M, editors. *The vanishing languages of the pacific rim*. Oxford, NY: Oxford University Press. p. 406–17.
- 9) Alaska Native Language Center. (2007). *Iñupiaq*. Fairbanks: Alaska Native Language Center (ANLC), University of Alaska Fairbanks [cited 2010 Dec 14]. Available from: <http://www.uaf.edu/anlc/languages/i/>
- 10) Dahl-Petersen I, Bjerregaard P. (2008). Om undersøgelsen. In: Bjerregaard P, Dahl-Petersen I, editors. *Befolkningsundersøgelsen i Grønland 2005–2007: levevilkår, livsstil og helbred*. Copenhagen: Statens Institut for Folkesundhed. p. 7–15. [in Danish].
- 11) Bjerregaard P. (2010). Greenland Population Study Group. Childhood conditions and education as determinants of adult height and obesity among Greenland Inuit. *Am J Hum Biol* 22:360–6. <http://dx.doi.org/10.1002/ajhb.20999>

- 12) Bjerregaard P, Stensgaard T. (2008) Greenland. In: Young T, Bjerregaard P, editors. *Health transitions in Arctic populations*. Toronto: University of Toronto Press. p. 23–38.
- 13) Statistics Greenland (SG). (2006). *Grønlands befolkning 1. januar 2006*. Nuuk: Statistics Greenland (SG); [cited 2011 Apr 19]. Available from: <http://www.stat.gl/dialog/main.asp?lang=da&version=200601&link=BE&subthemecode=p2&colcode=p>. [in Danish].
- 14) Lund E, Melhus M, Hansen K, Nystad T, Broderstad AR, Selmer R, *et al*. Population based study of health and living conditions in areas with both Sami and Norwegian populations – the SAMINOR study. *Int J Circumpolar Health*. 2007;66:113–8. <http://dx.doi.org/10.3402/ijch.v66i2.18241>
- 15) Ringdal K. (2001). *Enhet og mangfold: samfunnsvitenskapelig forskning og kvantitativ metode*. Bergen: Fagbokforl. 506 p. [In Norwegian].
- 16) Trochim WM. (2006). *The research methods knowledge base*. Atomic Dog Publishing [updated 2011 Oct 20; cited 2011 Mar 22]. Available from: <http://www.socialresearchmethods.net/kb/sampnon.php>
- 17) Statistics Norway. (2008). *Statistisk årbok 2008*, 56 Folkemengd og areal, etter kommune. Oslo: Statistics Norway (SN); 2008 [cited 2011 Apr 19]. Available from: <http://www.ssb.no/aarbok/2008/tab/tab-056.html>. [in Norwegian]
- 18) Store Norske Leksikon (SNL). (2011). Samer. Store Norske Leksikon (SNL) [updated 2011 Sep 22; cited 2011 Oct 13]. Available from: <http://snl.no/samer>. [in Norwegian].
- 19) Solbakk J. (2004). *Samene – en håndbok*. Karasjok: Davvi girji. 288 p. [In Norwegian].
- 20) Goldsmith S. (2008). Understanding Alaska's remote rural economy. Anchorage: Institute of Social and Economic Research, University of Alaska Anchorage [cited 2011 Dec 16]. Available from: http://www.iser.uaa.alaska.edu/Publications/researchsumm/UA_RS10.pdf
- 21) Niclasen B, Mulvad G. (2010). Health care and health care delivery in Greenland. *Int J Circumpolar Health* 69:437–47. <http://dx.doi.org/10.3402/ijch.v69i5.17691>
- 22) Hartge P. (2006). Participation in population studies. *Epidemiology* 17:252–4. <http://dx.doi.org/10.1097/01.ede.0000209441.24307.92>
- 23) Bhopal R. (2008). *Concepts of epidemiology: integrating the ideas theories, principles and methods of epidemiology*. 2nd edition. Oxford, NY: Oxford University Press. XXXVII, 417 p. <http://dx.doi.org/10.1093/acprof:oso/9780199543144.001.0001>
- 24) Bjørndal A, Hofoss D. (2004). *Statistikk for helse – og sosialfagene*. 2nd edition. Oslo: Gyldendal akademisk. p. 269 [in Norwegian].
- 25) Bethlehem J, Cobben F, Schouten B. (2011). *Handbook of nonresponse in household surveys*. Hoboken: John Wiley & Sons. xiii, p. 474. <http://dx.doi.org/10.1002/9780470891056>
- 26) Hjartåker A, Lund E. (2007). Kohortstudier. In: Laake P, Hjartåker A, Thelle D, Veierød M, editors. *Epidemiologiske og kliniske forskningsmetoder*. Oslo: Gyldendal akademisk. p. 185–209. [in Norwegian]

- 27) Kleinbaum D, Morgenstern H, Kupper L. (1982). Selection bias. In: Kleinbaum D, Morgenstern H, Kupper L, editors. *Epidemiologic research: principles and quantitative methods*. New York: Van Nostrand Reinhold. p. 194–219.
- 28) Greenland S, Lash T. (2008). Bias analysis. In: Rothman K, Greenland S, Lash T, editors. *Modern epidemiology*, 3rd edition. Philadelphia, PA: Lippincott Williams & Wilkins. p. 345–80.
- 29) Bjerregaard P, Pedersen C, Pedersen J. (2008). Livsbetingelser og levevilkår. In: Dahl-Petersen I, Bjerregaard P, editors. *Befolkningsundersøgelsen i Grønland 2005–2007. Levevilkår, livsstil og helbred*. Copenhagen: Statens Institut for Folkesundhed. p. 21–49. [in Danish].
- 30) U.S. Census Bureau (USCB). (2000). Census 2000: P148C. *North Slope census subarea, North Slope Borough, Alaska. Sex by educational attainment for the population 25 years and over (American Indian and Alaska Native alone)* [17]. U.S. Census Bureau [cited 2011 Mar 17]. Available from: http://factfinder.census.gov/servlet/DTable?_bm=y&-context=dt&-ds_name=DEC_2000_SF3_U&-CONTEXT=dt&-mt_name=DEC_2000_SF3_U_P148C&-tree_id=403&-keyword=north%20slope&-all_geo_types=N&-geo_id=06000US0218555970&-search_results=01000US&-format=&-_lang=en&-SubjectID=17498112
- 31) U.S. Census Bureau (USCB). (2000). Census 2000: P148C. *Northwest Arctic census subarea, Northwest Arctic Borough, Alaska. Sex by educational attainment for the population 25 years and over (American Indian and Alaska Native alone)* [17]. U.S. Census Bureau [cited 2011 Mar 17]. Available from: http://factfinder.census.gov/servlet/DTable?_bm=y&-context=dt&-ds_name=DEC_2000_SF3_U&-CONTEXT=dt&-mt_name=DEC_2000_SF3_U_P148C&-tree_id=403&-keyword=north%20slope&-all_geo_types=N&-redoLog=true&-_caller=geoselect&-geo_id=06000US0218856270&-search_results=01000US&-format=&-_lang=en&-SubjectID=17498112
- 32) Converse JM, Presser S. (1986). *Survey questions/handcrafting the standardized questionnaire*. Beverly Hills, CA: Sage. 80 p.
- 33) Schwarz N, Oyserman D, Peytcheva E. (2010). Cognition, communication, and culture: implications for the survey response process. In: Harkness J, Braun M, Edwards B, Johnson TP, Lyberg LE, Mohler P, et al., editors. *Survey methods in multicultural, multinational, and multiregional contexts*. Hoboken, NJ: Wiley & Sons Inc. p. 177–201. <http://dx.doi.org/10.1002/9780470609927.ch10>
- 34) Harkness J, Edwards B, Hansen S, Miller D, Villar A. (2010). Designing questionnaires for multipopulation research. In: Harkness J, Braun M, Edwards B, Johnson TP, Lyberg LE, Mohler P, et al., editors. *Survey methods in multicultural, multinational, and multiregional contexts*. Hoboken, NJ: John Wiley & Sons Inc. p. 33–57. <http://dx.doi.org/10.1002/9780470609927.ch3>

4. Prevalence of self-reported suicidal thoughts in SLiCA⁵⁹

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Objectives

The Survey of Living Condition in the Arctic (SLiCA) is an international research project on health and living conditions among Arctic indigenous peoples. The main objective of this article is to examine the prevalence of self-reported suicide thoughts among the study population in Alaska, Greenland, Sweden and Norway.

Study design

Population-based survey.

Methods

Indigenous participants aged 16 years (15 years in Greenland) and older living in traditional settlement regions in Alaska, Sweden and Norway and across the entire Greenland were invited to participate. Data were collected in three periods: in Alaska from January 2002 to February 2003, in Greenland from December 2003 to August 2006, in Sweden from spring 2004 to 2006 and in Norway in 2003 and from June 2006 to June 2008. The principal method in SLiCA was standardised face-to-face interviews using a questionnaire. A questionnaire had among other things, questions about health, education, traditional activities, ethnicity and suicidal thoughts.

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Results

Information about suicidal thoughts, gender and age were available in 2,099 participants between the ages of 16 and 84 from Alaska, Greenland, Sweden and Norway. Greenland had the highest rates of suicidal thoughts when adjusting for age and gender ($p=0.003$). When stratifying on age and gender, significant differences across countries were only found for females in the two youngest age groups. Differences in suicidal thoughts across countries could partly be explained by educational level.

Conclusion

Swedish respondents had less suicidal thoughts than those in any other countries. In the future, analyses of suicidal thoughts should take socio-economic status into account as well as self-reported health, depression and anxiety.

Keywords

Suicidal thoughts; SLiCA; survey; Inuit; Inupiat; Sami; indigenous peoples.

4.1 Introduction

In the last century, health problems among indigenous people have changed from mainly infectious diseases towards other health risks, due to urbanisation (1). Communicable diseases as tuberculosis and venereal diseases continue to affect indigenous populations, although incidence rates are decreasing (2, 3). However, cancer, ischemic heart disease, obesity and diabetes have become the modern indigenous health risk and show increasing trends. In addition, alcohol and drug abuse, suicide, accidents and violence are important health problems among indigenous groups. Change in dietary patterns, reduction in physical activity and lastly exposure to new environmental hazards are the most suitable explanation of these new health challenges (2, 4). Also, the prevalence of suicidal behaviour within different indigenous groups indicates great variation (5, 6). The majority of studies show higher prevalence of suicide attempts among indigenous groups than among their majority peers (1, 7). Although several studies have shown considerable disparities in health status among indigenous populations and the general population of the national states, surveys comparing different

indigenous groups are missing. Undoubtedly, there are considerable variations across regions and countries.

The Survey of Living Condition in the Arctic (SLiCA) is an international research project on the health and living conditions among indigenous peoples in the Alaska, Canada, Greenland, Norway, Sweden and Russia (8, 9). The motivation for launching SLiCA was an ambition of reflecting the ways of life of Arctic indigenous peoples more appropriately with regard to resource utilisation. The SLiCA is the first international cooperative study that compares indigenous peoples of the circumpolar north with regard to health and living conditions. The survey aimed to develop a context-specific concept of living conditions more suitable for indigenous peoples who still rely on the harvest of local resources. Accordingly, it was considered more appropriate to explore health and other aspects of the living conditions of peoples with similar ways of life and environmental circumstances, than to compare northern indigenous peoples and southern majority populations (10, 11).

The main objective of this article is to examine the prevalence of self-reported suicide thoughts among the study population in Alaska, Greenland, Sweden and Norway.

4.2 The Arctic Indigenous Peoples

4.2.1 *The Sami*

The Sami is the indigenous people of the Nordic countries. The Sami live in the northern regions of Fennoscandia in what today comprises the northern area of Norway, Sweden, Finland and Russia's Kola Peninsula. No exact overview over the total number of Sami exists, and estimates vary in accordance with criteria used such as genetic heritage, mother tongue and sense of belonging to the Sami. Norway has the greatest proportion of the total Sami population.

4.2.2 *The Inuit*

The traditional homeland of the Alaskan and Greenlandic Inuit comprises the Western and Northern coasts of Alaska and the coastline of Greenland. Also, in Alaska some Inuit, the Yupik, live in inland communities along rivers and lakes. A substantial Inuit population is settled at the Arctic coast and Arctic Archipelago in northern Canada and at the coast of the Chukotka Peninsula (1, 12). In the SLiCA survey, the Inuit in Alaska was defined by the Inupiat people living in the North Slope, the Kotzebue region and the Nome region. Inupiat people of Alaska have the most in common with Inuit people elsewhere in the Arctic.

4.3 Material and methods

Indigenous participants living in traditional settlement regions in Alaska, Sweden and Norway and across the entire Greenland were invited to participate. Data were collected in three periods: in Alaska from January 2002 to February 2003, in Greenland from December 2003 to August 2006, in Sweden from spring 2004 to 2006 and in Norway in 2003 and from June 2006 to June 2008. The principal method in SLiCA has been standardised face-to-face interviews using a questionnaire on health and other aspects of living condition, indigenous language and culture. Cue cards were used to efficiently present respondents with response choices. The duration of each interview was approximately 1.5–2 hours. The SLiCA target population is indigenous individuals aged 16 years (15 years in Greenland) and over residing in a traditional settlement region. Indigenous participants were ascertained by self-reported ethnicity. SLiCA's conceptual design has been described in detail elsewhere (8, 9, 13).

4.3.1 *Age*

The study sample was restricted to persons of age 16–84 years (15–84 years in Greenland), the age span common for all countries. In further analyses, age is categorised into three groups, 16–34, 35–59 and 60–84 years.

4.3.2 Questionnaire

The questionnaire was developed in 11 workshops from 1998 to 2001 and was field tested in Alaska and Greenland (9). All fieldworkers in SLiCA have been trained in interviewing techniques and procedures. Also, an interview guide was produced to optimise standardisation of the training.

4.3.3 Suicidal behaviour

The questionnaire contained two questions about suicidal behaviour. The question "Have you ever seriously considered to commit suicide?" was used to measure prevalence of suicide thoughts. Alternative answers were "yes/no." In addition, respondents who answered "yes" were asked if this thought was in the course of the last year.

4.3.4 Education

There are some discrepancies in the questionnaire with regard to primary and secondary education, due to different wording of some categories. This is mainly due to discrepancies between the various national and regional school systems. In Norway and Alaska, the question was What is the highest level of schooling or training you have completed? In Alaska category, one was "Advanced traditional training." Apart from this, response choices in Norway and Alaska ranged from primary school through PhD degree. In Greenland, education attainment was measured using three questions: "What level of schooling do you have;" "are you at the moment undertaking higher education/vocational training;" and "have you previously completed higher education/vocational training?" To the last two questions, specifying the degree undertaken or completed was possible. In the first question, response choices ranged from "less than seven years of schooling" through "high school". Other i.e. response choices were "other" and "still in school." Those still in school (n=40, data not shown) were categorised according to the highest level of schooling or education completed. Participants reporting "other" schooling (n=67, data not shown) and individuals in Alaska reporting advanced traditional training (n=2, data not shown) were classified in the appropriate formal category. By recoding and generating a joint education variable, educa-

tion level was divided into three groups, less than High School/Vocational School, High School/Vocational School and University education.

4.3.5 Ethics

The survey is in accordance with the Helsinki Declaration of 1975 and to International Arctic Social Sciences Association (IASSA) Guiding Principles for the Conduct of Research in the Arctic (1998). All participants gave written informed consent prior to the interview. In Norway, the study was accredited by the Norwegian Social Science Data Service and the National Committee for Research Ethics in the Social Sciences and the Humanities. In Alaska, the study was approved by the University of Alaska Institutional Review Board

4.3.6 Statistical analyses

Results are presented as counts and percentages. Differences in sample characteristics across countries were tested by ordinary Chi-square tests. When stratifying for gender and age groups, differences in suicidal thoughts between countries were tested by the Fisher exact test, due to small expected cell counts. The Cochran-Mantel-Haenszel test was used to perform an age- and gender-adjusted test for differences between countries.

Two ordinal logistic regression models were fitted to model effects on the three level variables on suicidal thoughts. Explanatory variables in model 1 were country, age group and gender. In model 2, education was added. The age group 60–84 years was excluded in the regression analyses due to a small number of people in this age group having had suicidal thoughts.

Statistical analyses were performed using the SAS statistical software for Windows version 9.1 (SAS Institute Inc., Cary, NC, USA).

4.4 Results

Table 1 shows country-specific characteristics. Information about suicidal thoughts, gender and age were available in 2,099 indigenous participants between the ages of 16 and 84 from Alaska, Greenland, Sweden and Norway. Furthermore, education level was available for 2,064 participants.

The Sami cohort is older than the samples from Greenland and Alaska.

University education was more common among the Norwegian participants. Greenlandic participants reported the lowest educational level. No discrepancy in level of education was observed between Alaska and Greenland in the oldest age stratum (data not shown).

A total number of 298 participants (14.2%) reported to have thought seriously of committing suicide, out of which 125 (6%) reported having had thoughts during the last year.

Table 1. Sample characteristics (n=2099)

	Greenland N (%)	Norway N (%)Y	Sweden N (%)	Alaska N (%)	P-value*
Age					<0.0001
15–34	332 (34)	71 (21)	48 (24)	224 (39)	
35–59	527 (54)	209 (61)	109 (56)	281 (49)	
60–84	126 (13)	63 (18)	39 (20)	70 (12)	
Gender					0.03
Male	473 (48)	171 (50)	102 (52)	243 (42)	
Female	512 (52)	172 (50)	94 (48)	332 (58)	
Education					<0.0001
Less than high school/ vocational school	573 (59)	45 (13)	26 (15)	155 (27)	
High school/ vocational school	312 (32)	109 (32)	103 (59)	387 (67)	
University	89 (9)	187 (55)	46 (26)	32 (6)	

*Chi-square tests.

Table 2 shows the distribution of suicidal thoughts by countries, age and gender. Suicidal thoughts were rare among the oldest part of the sample and more common among the youngest and middle-aged groups. Females

reported suicidal thoughts more often than males. There was a significant difference between countries when adjusting for age and gender ($p=0.003$). Greenland had the highest rates and Sweden the lowest. When stratifying on age and gender, significant differences across countries were only found for females in the two youngest age groups.

Table 2. Suicidal thoughts, by country, gender and age

	Suicide thoughts	Greenland N (%)	Norway N (%)	Sweden N (%)	Alaska N (%)	P-value
Total	Yes, last year	83 (8)	6 (2)	3 (2)	33 (6)	0.003*
	Yes, but not last year	87 (9)	32 (9)	7 (4)	47 (8)	
	No	815 (83)	305 (89)	186 (95)	495 (86)	
Male						
Age						
15–34	Yes, last year	15 (10)	1 (3)	0	9 (9)	0.57**
	Yes, but not last year	17 (11)	2 (6)	1 (5)	7 (7)	
	No	124 (79)	29 (91)	21 (95)	81 (84)	
35–59	Yes, last year	11 (4)	0	1 (2)	3 (3)	0.41**
	Yes, but not last year	17 (7)	6 (6)	2 (4)	8 (7)	
	No	225 (89)	92 (94)	54 (95)	99 (90)	
60–84	Yes, last year	1 (2)	0	0	0	0.84**
	Yes, but not last year	3 (5)	3 (7)	0	1 (3)	
	No	60 (94)	38 (93)	23 (100)	35 (97)	
Female						
Age						
15–34	Yes, last year	34 (19)	4 (10)	1 (4)	14 (11)	0.05**
	Yes, but not last year	26 (15)	8 (21)	2 (8)	12 (9)	
	No	116 (66)	27 (69)	23 (88)	101 (80)	
35–59	Yes, last year	22 (8)	1 (1)	0	7 (4)	0.01**
	Yes, but not last year	23 (8)	11 (10)	1 (2)	16 (9)	
	No	229 (84)	99 (89)	51 (98)	148 (87)	
60–84	Yes, last year	0	0	1 (6)	0	0.08**
	Yes, but not last year	1 (2)	2 (9)	1 (6)	3 (9)	
	No	61 (98)	20 (91)	14 (88)	31 (91)	

* Cochran-Mantel-Haenszel test for differences across countries, adjusted for age and gender.

**Fischer exact test.

Ordinal logistic regression showed that, adjusted for age and gender, suicidal thoughts were significantly more common in Greenland than in Alaska and significantly lower in Sweden (table 3). There was no significant difference between Norway and Alaska.

When educational level was added to the regression, Greenland and Alaska no longer showed a significant difference in suicidal thoughts.

Table 3. Ordinal logistic regression. Age group 60–84 excluded due to very small numbers of suicide thoughts

	Model 1 (n=1801) ^a		Model 2 (n=1783) ^b	
	OR	95% confidence interval	OR	95% confidence interval
Country				
Greenland	1.48	(1.10–2.00)	1.27	(0.92–1.76)
Norway	0.87	(0.56–1.36)	1.03	(0.63–1.70)
Sweden	0.34	(0.16–0.73)	0.39	(0.18–0.85)
Alaska	1.0 (ref)		1.0 (ref)	
Gender				
Female	1.71	(1.31–2.24)	1.74	(1.32–2.28)
Male	1.0 (ref)		1.0 (ref)	
Age				
15–34	2.28	(1.76–2.96)	2.18	(1.68–2.84)
35–59	1.0 (ref)		1.0 (ref)	
Education				
Less than high school/vocational school			1.0 (ref)	
Highschool/vocational school			0.65	(0.48–0.88)
University			0.54	(0.33–0.87)

a Explanatory variables in model 1 were country, age group and gender.

b Explanatory variables in model 2 were country, age group, gender and education.

4.5 Discussion

In this survey of Arctic Indigenous people in Alaska, Greenland, Sweden and Norway, we have observed the prevalence of suicidal thoughts among the Inuit and the Sami. The prevalence of suicidal thoughts was studied in relation to countries, gender, age and educational level. The main results demonstrated that there was a significant difference between countries, where suicidal thoughts were more common in Greenland than in Alaska and significantly lower in Sweden.

Education is often used as a proxy for socioeconomic status and represents an important variable in terms of measuring living condition. In numerous studies, socioeconomic status was shown to be associated with health and other living conditions as, for example, housing condition (14).

In present-day Alaska, Norway, Sweden and Greenland, a high school diploma represents 13 years of schooling (kindergarten-12th grade, or 1st-13th grade) and is a requirement for commencing college/university education. In Alaska, the general education development test is an alternative to a high school degree. In Norway and Sweden, vocational training is usually integrated into high school education, whereas local vocational schools provide such training in Greenland and Alaska. Unlike tertiary education in Greenland, Sweden and Norway, education beyond high school in Alaska is fee paying.

Naturally, the level of education among the Inuit and the Sami is associated with age, as the availability of education has increased throughout the 20th century. In Greenland, after the introduction of Home Rule in 1979, 7 years of compulsory schooling was replaced by 9 years of obligatory primary and middle school. From 1977, high school education was made available (15). In 1983, the Inuit Institute College was established and later assigned university status in 1989: Ilisimatusarfik, University of Greenland, Alaska, USA (16).

Until the late 1970s, school facilities on Alaska's North Slope were available only up to ninth grade, and high school students had to attend boarding schools far from home. A law suit was brought against the state of Alaska in 1976 committing it to establish high schools in rural villages, with the further aim of including Iñupiaq language and culture in the curriculum. New school programmes were consequently introduced in 95 communities throughout rural Alaska (17). A handful of colleges and the University of Alaska system provide tertiary education today. The Bureau of Indian Education serves American Indian and Alaska Native post-secondary students through higher education scholarships (18). As in Greenland, primary and middle school constitutes today 10 years of compulsory schooling both in Norway and Sweden. The University of Tromsø was opened in 1972. The Sami University College was established in Kautokeino in 1989 (19). Students from different part of Sápmi can study at The Sami University College, where the education is primarily given in Sami language. Today, the level of education is generally high in Norway and Sweden. In Norway, it is higher for women than for men (20). Furthermore, the Sami settlement of Karasjok has one of the nation's highest levels of education for women aged 25-40 years (21). Education is known

to protect against disease. A high education level is closely related to better socioeconomic status. However, education level can also be a proxy of urbanisation. Indigenous societies are transformed from rural characteristics in terms of economy, culture and lifestyle, to one which can be characterised as urban. Urbanisation is a global trend and there is a marked divide between regions. Places where educational opportunities are available are growing, whereas the smaller places experience a decline. This leads to various sociocultural changes. In Norway and Sweden, this urbanisation process started after the Second World War and has influenced societies and people for several decades. Among other things, this can be one of the explanations to the education level in Scandinavia. In other regions in the Arctic, the urbanisation process has started some decade later, but the sociocultural changes are today quite similar in the whole region. Not all the changes have been for the best for the indigenous people. In the course of the changes, various new social, political and environmental challenges have arrived (1, 22). As a consequence of all these social changes, different health risks have become a major problem for the indigenous peoples (23–25). It is assumed that the continuous sociocultural transition has an influence on indigenous people's well-being. In many indigenous societies, suicide rates are alarmingly high, particularly in Greenland and Alaska (23, 26–28). In the SLiCA survey, the percentage of suicidal thoughts in Greenland, Alaska, Norway and Sweden were 17%, 14%, 11% and 6%, respectively. The prevalence of suicide thoughts is highest among the Greenland and Alaskan participants and very low among Swedish participants. In addition, suicidal thoughts were most frequent in the youngest age group in all countries. When education level was added to the model, the difference between Greenland and Alaska was no longer significant. The variation in prevalence of suicidal thoughts between the different indigenous groups in SLiCA cannot be easily explained. However, transition from traditional to modern lifestyle among the indigenous populations has increased the prevalence of several chronic diseases as cancer and cardiovascular disease (24). Poor health in general is known to influence mental health. Grossmann and colleagues found that self-perception of poor general health was associated with history of suicide attempts among Navajo adolescents (25). Associations have been found between somatic symptoms and depression, anxiety and suicide

attempts in other adolescent populations (29, 30). One major challenge in our study is the historical and country-specific differences between the ethnic groups, the Sami and the Inuit. Indigenous populations participating in SLiCA are diverse. Setup and access to health care systems vary greatly according to geography and country. Development of community-level health systems and public-health planning that reflect geographic location and indigenous ethnic groups varies between countries. In addition, suicidal thoughts and attempts are context dependent. In a community with a high rate of suicidal attempts, this can affect especially the young people, as an accepted pattern of behaviour.

In our analyses, we have not adjusted for these factors, but several associations shall be investigated in future studies. And, lastly it is important to emphasise that although suicidal thoughts and suicidal attempts are different phenomena, suicidal thoughts are associated with suicidal attempts and therefore important clinical indicators.

When stratified in age groups and gender, the differences on suicidal thoughts between countries were significant only for the female participants. Moreover, females reported suicidal thoughts more often than males in all countries, except for Sweden. Our results are in accordance with an earlier study on indigenous Sami adolescents in Norway where females reported a higher degree of suicidal thoughts (19%) (6).

Among Arctic Indigenous people, little is known about the causes of mental health problems in general and the impact of rapid sociocultural changes in particular. The SLiCA survey's contribution to this research is important to expand the understanding of the topic. Especially, epidemiological knowledge about suicidal behaviour among indigenous populations is important for the implementation of appropriate prevention strategies in the health care system in local communities.

In the future analyses of suicidal thoughts, education and other measures of socioeconomic status should be taken into account as well as self-reported health, depression and anxiety.

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4.7 Conflict of interest and funding

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4.8 References

- 1) Young TK, Bjerregaard P, editor. (2008). *Health transitions in arctic populations*. Toronto: University of Toronto Press.
- 2) Bjerregaard P, Young TK, Dewailly E, Ebbesson SO. (2004). Indigenous health in the Arctic: an overview of the circumpolar Inuit population. *Scand J Public Health* 32(5): 390-5. <http://dx.doi.org/10.1080/14034940410028398>
- 3) Grzybowski S, Styblo K, Dorken E. (1976). Tuberculosis in Eskimos. *Tubercle* 57(4 Suppl): S1-58. [http://dx.doi.org/10.1016/0041-3879\(76\)90059-3](http://dx.doi.org/10.1016/0041-3879(76)90059-3)
- 4) Trowell HC BD, editor. (1981). *Western diseases: their emergence and prevention*. Cambridge, MA: Harvard University Press.
- 5) Hunter E, Harvey D. (2002). Indigenous suicide in Australia, New Zealand, Canada, and the United States. *Emergency Medicine (Fremantle)* 14(1): 14-23. <http://dx.doi.org/10.1046/j.1442-2026.2002.00281.x>
- 6) Silviken A, Kvernmo S. (2007). Suicide attempts among indigenous Sami adolescents and majority peers in Arctic Norway: prevalence and associated risk factors. *J Adolesc* 30(4): 613-26. <http://dx.doi.org/10.1016/j.adolescence.2006.06.004>

- 7) Kirmayer L. J., Brass G. M., Tait C. L. (2000). The mental health of Aboriginal peoples: transformations of identity and community. *Can J Psychiatry* 45(7): 607–16.
- 8) Andersen T, Poppel B. (2002). Living Conditions in the Arctic. *Social Indicators Research* 58: 191–216. <http://dx.doi.org/10.1023/A:1015787901370>
- 9) Kruse J., Poppel B., Abryutina L., Duhaime G., Martin S., Poppel M., *et al.* (2002) Survey of Living Conditions in the Arctic (SLiCA). *Arctic* 55(3): 310–5.
- 10) Kruse J, Poppel B, Abryutina L, Duhaime G, Martin S, Poppel M, *et al.* (2009). Survey of Living Conditions in the Arctic (SLiCA). *Social Indic Res.* 33: 107-34238. http://dx.doi.org/10.1007/978-1-4020-8686-1_5
- 11) Andersen T., Kruse J., Poppel B. (2002). Survey of living conditions in the Arctic: Inuit, Saami and the indigenous peoples of Chukotka (SLiCA). *Arctic* 55(3): 310–5. <http://dx.doi.org/10.14430/arctic713>
- 12) Sakiyama O. M.O., Krauss M.E., editor. (2007). *The Vanishing Languages of the Pacific Rim*. Oxford: Oxford University press.
13. Eliassen B, Melhus M, Kruse J, Poppel B, Broderstad AR. (2012). *Design and methods in a survey of living conditions in the Arctic – the SLiCA study*. *Int J Circumpolar Health* 71: 17229.
14. Phelan JC, Link BG, Tehranifar P. *Social conditions as fundamental causes of health inequalities: theory, evidence, and policy implications*. *J Health Soc Behav* 2010; 51: S28S40.
15. SG. Skole- og erhvervsuddannelse i Grønland 1994 [*School and occupational education in Greenland 1994*]. In: Andersen T, ed. *Den Grønlandske levevilkårsundersøgelse [The Greenland Living Conditions Survey]*. vol. 11: *Statistics Greenland* (SG); 1996, p. 26.
16. Olsen KK. Education in Greenland Fairbanks, Alaska: University of Alaska Fairbanks; 2006 Available from: <http://www.ankn.uaf.edu/IEW/edgreen.html> [cited 15 August 2011].
17. Chance NA. *The Inupiat and Arctic Alaska: an ethnography of development*. Fort Worth: Holt, Rinehart and Winston; 1990.
18. BIE. *The Bureau of Indian Education (BIE)* [updated April 2011]; 2011. Available from: <http://www.bia.gov/WhatWeDo/ServiceOverview/IndianEducation/index.htm> [cited 23 May 2011].
19. Solbakk J. Samene: En ha°ndbok. [Karasjok]: Davvi girji [*The Sa'mi people. A manual*]; 2004.
20. Hassler S, Sjo°lander P, Janlert U. Northern Fennoscandia. In: Young TK, Bjerregaard P, eds. *Health transitions in arctic populations*. Toronto: University of Toronto Press; 2008, XXI, 485 s., [484] pl.
21. Hassler S, Kvernmo S, Kozlov A, Sami. In: Young TK, Bjerregaard P, eds. *Health transitions in arctic populations*. Toronto: University of Toronto Press; 2008, XXI, 485 s., [484] pl.
22. Shephard RJ, Rode A. *The health consequences of “modernization”*. In: Shephard RJ, Rode A, eds. *Evidence from circumpolar peoples*. Cambridge: Cambridge University Press; 1996, 306p.

23. Bjerregaard P, Curtis T. *Cultural change and mental health in Greenland: the association of childhood conditions, language, and urbanization with mental health and suicidal thoughts among the Inuit of Greenland*. Soc Sci Med 2002; 54: 3348.
24. Gracey M, King M. *Indigenous health part 1: determinants and disease patterns*. Lancet 2009; 374: 6575.
25. Grossman DC, Milligan BC, Deyo RA. *Risk factors for suicide attempts among Navajo adolescents*. Am J Public Health 1991; 81: 8704.
26. Blum R. *Native American youth*. Poor health carries a powerful message. Minn Med 1992; 75: 79.
27. Blum RW, Harmon B, Harris L, Bergeisen L, Resnick MD. *American Indian/Alaska Native youth health*. JAMA 1992; 267: 163744.
28. Borowsky IW, Resnick MD, Ireland M, Blum RW. *Suicide attempts among American Indian and Alaska Native youth: risk and protective factors*. Arch Pediatr Adolesc Med 1999; 153: 57380.
29. Cappelli M, Clulow MK, Goodman JT, Davidson SI, Feder SH, Baron P, *et al*. *Identifying depressed and suicidal adolescents in a teen health clinic*. J Adolesc Health 1995; 16: 6470.
30. Slap GB, Vorters DF, Khalid N, Margulies SR, Forke CM. *Adolescent suicide attempts: do physicians recognize them?* J Adolesc Health 1992; 13: 28692.

5. Sustainability from a Local Point of View: Alaska's North Slope and Oil Development⁶²

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Keywords: SLiCA, North Slope of Alaska, Inuit, Iñupiat, Iñupiat regional government, North Slope Borough, sustainability, oil development.

5.1 Well Being and sustainability

We commonly assume that the actions of multinational corporations to extract petroleum resources in remote areas will conflict with the sustainability of local communities. Such development would seem to typify the opposite of sustainable development. It is a non-renewable resource being developed by non-local corporations possessing vastly more financial resources than local communities.

This is not a paper questioning whether, from a global point of view, petroleum development is sustainable. Rather, our focus is on whether multi-

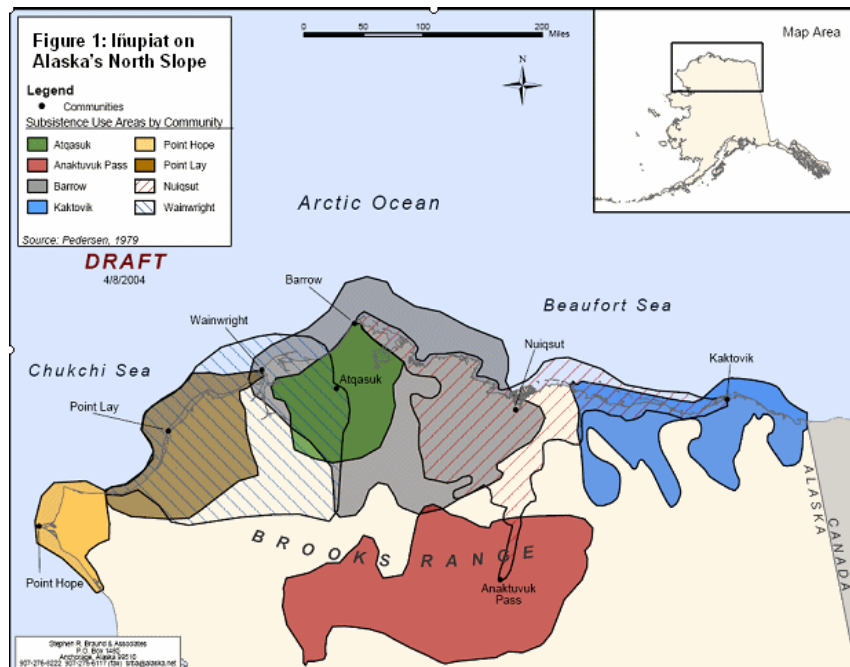
⁶² Permission to reprint granted by the author and the publisher, Nordic Council of Ministers. Reprinted from: Kruse, J. (2010). Sustainability from a local point of view: Alaska's North Slope and oil development. In: Winther, G. (Ed), *The Political Economy of Northern Regional Development – Yearbook 2008*. Copenhagen: Nordic Council of Ministers, TemaNord 2010:521, pp. 55-72.

national, large scale, non-renewable developments can interact with local communities with the net effect of promoting, at least for a matter of decades, the sustainability of these communities. Put another way, are there circumstances in which world scale resource developments can increase the sustainability of local communities?

If we were to empirically test the effects of such a development on the sustainability of nearby local communities, what would we measure? If individual well-being in its broadest sense increases or stays the same over time, can we say the same about community sustainability? The premise of this paper is that individual well-being and community sustainability should at least be highly correlated. We use a six category definition of well-being recommended in the Arctic Human Development Report (2004) as our measure of community sustainability. The AHDR categories of well-being are: material success, health, education, ties with nature, cultural continuity, and fate control. Our measures are based on questions asked of community residents in face-to-face interviews.

The North Slope of Alaska is home to the Iñupiat, an Inuit people. In 1977 about 3,500 Iñupiat lived in eight villages on the North Slope (Figure 1). The original Prudhoe oil field is located about 50 miles from the nearest village, Nuiqsut. Since 1977, the development of satellite fields has expanded the footprint of oil development on the North Slope.

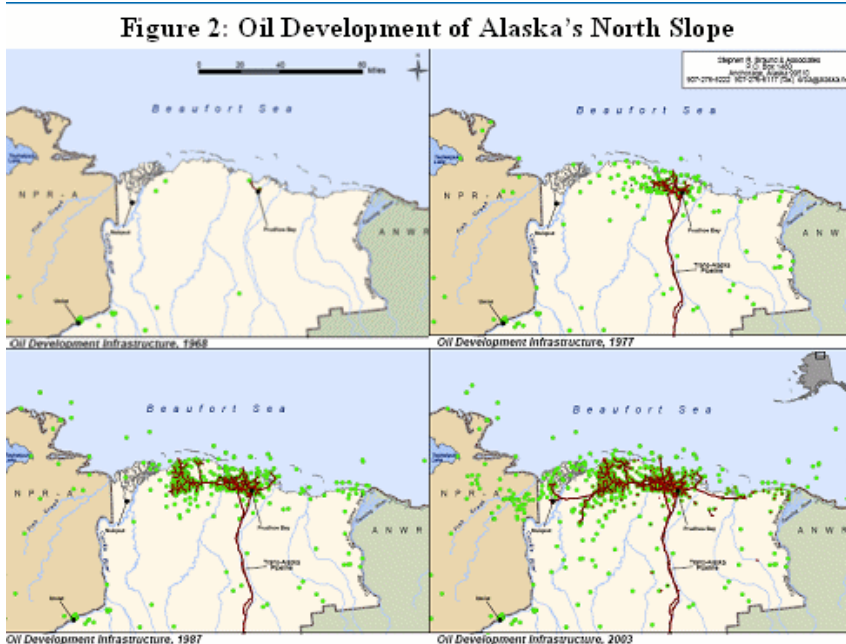
Figure 1. Iñupiat on Alaska's North Slope



The Iñupiat actively hunt and fish for much of their food. On land caribou are a major food resource. The bowhead whale is another major food resource, and bowhead whaling is the heart of Iñupiat culture. Iñupiat hunt, fish, and gather over thirty different species.

The development in question is centered on state lands at Prudhoe Bay Alaska (Figure 2). Less than a decade after Alaska became the 49th state in 1959, private companies discovered oil near Prudhoe Bay in 1968. After a nine-year period of debate and construction of the Trans-Alaska oil pipeline, oil production began in 1977. Since then, more than 13 billion barrels of oil have been produced.

Figure 2. Oil Development of Alaska's North Slope



We are close to having a baseline measure of well-being for North Slope Iñupiat communities. In 1973 the US National Science Foundation funded the University of Alaska's Institute of Social and Economic Research (ISER) to investigate the effects of energy development on Alaska's people (Kresge *et al.* 1977). In 1977, ISER researchers collaborated with North Slope Borough planning staff to conduct the first probability sample survey of North Slope Borough residents (Kruse *et al.* 1980). The original data set of 290 interviews with Iñupiat adults is used as the baseline for comparison in this paper.

Our second dataset comes from the Survey of Living Conditions in the Arctic (SLiCA), conducted on the North Slope in 2003. The SLiCA North Slope data set consists of 212 interviews with Iñupiat adults. Also included as a basis for comparison are results of interviews with indigenous adults in Chukotka (534), Greenland (1,062), Canada (4,700), and two other Iñupiat settlement regions in Alaska, the Northwest Arctic Region (204), and Bering Straits Region (247). A grant from the US National Science Foundation funded both US and Russian participation in SLiCA, including data collection

in Alaska and Chukotka, design of the international core questionnaire, and preparation and analysis of the international data set.

Armed with the 1977 and 2003 datasets we can compare sustainability measures over both time and space. We can compare measures for North Slope Iñupiat between 1977 and 2003 and we can compare current results (collected at slightly different times in different countries, but between 2001 and 2006) between the North Slope Iñupiat, Iñupiat in two other Alaska Iñupiat settlement regions, Inuit in northern Canada Inuit settlement regions, Inuit in Greenland, and indigenous people in Chukotka.

5.2 Iñupiat of Alaska's North Slope, 1977 and 2003

Table 1 identifies the measures used for each of the six AHDR categories of well-being. It also displays the direction of change one would hypothesize given the presence of a non-local, non-renewable resource development in a region populated by indigenous people who actively use local wildlife resources for food.

We would expect the number of subsistence activities to decrease in response one or more of the following changes: decreases in subsistence resources, reduced dependence on local resources due to increased incomes, and reduced time for hunting and fishing due to increased time working. The latter two changes are based on the optimistic assumption that the non-local development would increase local job opportunities. For similar reasons, we would expect a decrease in the proportion of food coming from subsistence harvests. Due to expected conflicts between resource development and local wildlife populations (e.g. disturbance of caribou), we would expect a decrease in satisfaction with the amount of fish and game available locally. Again due to resource conflicts as well as conflicts between resource development and hunting access (e.g. pipelines as barriers to travel), we would expect a decrease in satisfaction with opportunities to hunt and fish.

Table 1. Measures of sustainability and hypothesized change over time

Domain	Concept	Hypothesized direction of change 1977–2003
Ties with Nature	Subsistence Activity	decline
	Proportion food from subsistence	decline
	Amount of fish and game	decline
	Opportunities to hunt and fish	decline
Material Success	Work for pay	not change
	Satisfaction with job opportunities	not change
	Kinds of things you can buy in stores	not change
	Cost of living	not change
	Preference subsistence job both	decline
Education	Education	not change
	Satisfaction education services	not change
Health	Satisfaction with health services	not change
	Perception drinking, drugs, fighting, stealing	increase
Cultural Continuity	Sharing and Helping	decline
Fate Control	Voting	decline
	Say over oil development	decline
Overall	Satisfaction with village life	decline

Optimistically, we might expect non-local resource development to create more job opportunities, drawing Iñupiat into the labor force. Since the Prudhoe Bay development is a remote enclave, separated from the nearest community by some 30 miles with no year-round road connection, a more realistic hypothesis would be that there would be little local employment benefit associated with the development. We therefore would hypothesize that labor force participation and satisfaction with job opportunities would stay the same. Using the same logic, we would not expect local incomes to increase. Supply links to the development bypass local communities and flow directly between Anchorage and Fairbanks and Prudhoe Bay. Local availability of goods and services in the communities would therefore be expected to remain unchanged. The separation of the development from local economies would also have little expected effect on the cost of living. Barrow already had jet service in 1977, for example, so the Prudhoe Bay development would not have caused a decrease in transportation costs to the North Slope.

Although oil development might not bring new jobs to village residents, it might raise resident expectations about wage income. This expectation, coupled with hypothesized conflicts between resource development and subsistence, would lead us to hypothesize that Iñupiat might shift in their preference from a subsistence, or mixed mode of subsistence and wage production, to a preference for wage work.

Concerning the domain of education, the disconnect between resource development and local jobs would mean little change in local incentives for education. There would also be no reason to expect that education services would improve, so we would hypothesize that satisfaction with education services would at best remain unchanged.

Likewise, we would hypothesize that satisfaction with health services would remain unchanged. If the development enclave were completely unassociated with local villages, we might also expect village social problems to remain unchanged. But we might also hypothesize that the presence of even small numbers of non-local workers in villages would introduce new sources of alcohol and drugs, increasing levels of social problems. Since traditional helping and sharing values are maintained in large part through participation in subsistence activities, reduced subsistence resources and local hunting and fishing opportunities would be expected to decrease sharing and helping in communities.

We would expect that the negative effects of a non-locally controlled resource development would undermine Iñupiat perceptions of being in control of their own fate. As a result, we would hypothesize a decrease in civic participation, with fewer Iñupiat choosing to vote. More directly, we would expect a decrease in satisfaction with Iñupiat influence over oil and gas development as the negative impacts of such development materialized.

Table 2. North Slope Sustainability Comparisons, 1977 versus 2003

Number of subsistence activities	1977	2003
0	32%	11%
1 or 2	22%	15%
3 or 4	19%	13%
5 or more	27%	61%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Proportion of Household Food(1977) Meat & Fish(2003) From Household Subsistence Harvest	1977	2003
Less than half	47%	7%
About half	16%	31%
More than half	23%	24%
All	14%	38%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with Amount of Fish and Game Available Locally	1977	2003
Very Bad/ Very Dissatisfied	14%	1%
Bad/Dissatisfied	22%	3%
Mixed/Neither Satisfied nor Dissatisfied	37%	8%
Good/Satisfied	20%	39%
Very Good/Very Satisfied	6%	48%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfied with Time Spent on Subsistence	1977	2003
No/Mixed, Somewhat, or Very Dissatisfied	49%	9%
Yes/Somewhat or Very Satisfied	51%	91%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Worked for Pay in Past 12 Months	1977	2003
Yes	65%	77%
No	35%	23%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with Job Opportunities	1977	2003
Very Bad/ Very Dissatisfied	4%	17%
Bad/Dissatisfied	7%	19%
Mixed/Neither Satisfied nor Dissatisfied	23%	21%
Good/Satisfied	49%	29%
Very Good/Very Satisfied	17%	14%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with Availability of Goods (and Services)	1977	2003
Very Bad/ Very Dissatisfied	6%	10%
Bad/Dissatisfied	13%	15%
Mixed/Neither Satisfied nor Dissatisfied	27%	17%
Good/Satisfied	41%	40%
Very Good/Very Satisfied	12%	17%
<i>Total</i>	<i>100%</i>	<i>100%</i>

Satisfaction with Cost of Living	1977	2003
Very Bad/ Very Dissatisfied	44%	21%
Bad/Dissatisfied	30%	25%
Mixed/Neither Satisfied nor Dissatisfied	23%	19%
Good/Satisfied	3%	25%
Very Good/Very Satisfied	0%	10%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Mostly Subsistence	13%	9%
Mostly Wages	18%	27%
Both	69%	65%
<i>Total</i>	<i>100%</i>	<i>100%</i>

Overall, we would hypothesize a decrease in Iñupiat satisfaction with life between 1977 and 2003. Now we turn to our empirical results. In 2003, 61% of Iñupiat engaged in five or more subsistence activities in the previous 12 months compared with 27% in 1977 (Table 2). Sixty-two per cent of households in 2003 reported that half or more of their meat and fish came from their subsistence harvests. In 1977, 37% of households reported that half or more of their food (not just meat and fish) came from their household subsistence activities. The two measures differ somewhat, and we would expect that the proportion of meat and fish coming from subsistence would be higher than the proportion of food as a whole (e.g. including vegetables and beverages). The direction of change, however, is not the hypothesized decrease.

Almost half (48%) of Iñupiat in 2003 were very satisfied with the amount of fish and game available locally while in 1977 the figure was only six per cent (Table 2). We should explain that in 1977 caribou harvests were being restricted by the state, and the International Whaling Commission was threatening to close down Iñupiat bowhead whaling. The high absolute level of satisfaction with the amount of fish and game available locally, however, leads us to refute the hypothesis that resource development would be accompanied by a decrease in satisfaction.

Nine in ten Iñupiat in 2003 were satisfied or very satisfied with opportunities to hunt and fish while 51% of Iñupiat in 1977 reported that they were satisfied with the time they spent on subsistence (Table 2). Summarizing changes in our measures of ties with nature, we can conservatively conclude that Iñupiat ties with nature have persisted through 25 years of North Slope oil development.

Turning now to the wage economy, 77% of Inupiat adults worked for pay in 2003 compared with 65% in 1977 (Table 2). This difference is significant ($p < 0.05$), but not substantial. It likely reflects the continuation of a trend already underway in 1977 for young women to enter the labor force. Inupiat in 2003 were somewhat less likely to be satisfied with local job opportunities (43% “satisfied” or “very satisfied” versus 66% “good” or “very good” in 1977). As we shall explain further in the discussion section of this paper, the decline in satisfaction may reflect the fact that village wage opportunities have fallen in recent years. For much of the intervening years, however, job opportunities exceeded those in 1977.

Satisfaction with the availability of goods and services remained virtually unchanged, while satisfaction with the cost of living improved (35% satisfied or very satisfied in 2003 versus three per cent “good” or “very good” in 1977, see Table 2). Recall that our hypothesis was that satisfaction with both the availability of goods and services and the cost of living would remain unchanged.

Contrary to our hypothesis that Inupiat would become more likely to prefer wage employment, we see that two out of three in 2003 continued to prefer a mix of wage employment and subsistence activities (Table 2).

We also did not expect Inupiat to become more educated as a result of oil development. Probably the major factor affecting education levels on the North Slope, however, are increased local educational opportunities. In part, the increase in village high schools in Alaska during the 1980s was a statewide response to a court mandate made possible by state oil revenues. In part, the increase from 14% to 25% of Inupiat with more than a high school education is likely due to an increased demand for education in local jobs and increased local education opportunities, as for example, provided by the (Barrow college) (Table 2).

The percentage of Inupiat very satisfied with local education services increased from 11% to 40% between 1977 and 2003 (Table 3). Satisfaction with health services also increased (19 to 28%). We hypothesized no change in satisfaction.

In 1977, only four per cent of Inupiat perceived the level of drinking, drugs, fighting, and stealing was “good” or “very good” (Table 3). In 2003 55% of Inupiat reported that they felt “very safe” outside at night. While

these questions differ, the results do not support the hypothesis that perceptions of local social problems would worsen.

Inupiat perceptions of cultural values also appear to have persisted between 1977 and 2003 (Table 3). Fifty eight per cent of Inupiat in 2003 were “very satisfied” with their community’s efforts to promote helping and sharing values. In 1977, 23% of Inupiat thought local sharing and helping was “very good”. Again the results are contrary to the hypothesized decline.

Turning to fate control, voting participation appears to have remained virtually constant Table 3). Contrary to our hypothesis, however, satisfaction with Inupiat influence over oil development increased between 1977 and 2003, with 26% of Inupiat “very satisfied” in 2003 compared with three per cent who rated people’s say over petroleum development “very good” in 1977.

Table 3. North Slope Sustainability Comparisons, 1977 versus 2003

Formal education	1977	2003
Less than Elementary	17%	6%
Elementary or Some High School	41%	30%
High School	27%	40%
More than High School	14%	25%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with Schools	1977	2003
Very Bad/ Very Dissatisfied	6%	3%
Bad/Dissatisfied	10%	7%
Mixed/Neither Satisfied nor Dissatisfied	21%	10%
Good/Satisfied	52%	40%
Very Good/Very Satisfied	11%	40%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with Health Services	1977	2003
Very Bad/ Very Dissatisfied	2%	4%
Bad/Dissatisfied	6%	14%
Mixed/Neither Satisfied nor Dissatisfied	14%	12%
Good/Satisfied	59%	42%
Very Good/Very Satisfied	19%	28%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with Drinking, Drugs, Fighting, and Stealing (1977) and How Safe Feel Outside at Night (2003)	1977	2003
Very Bad/ Unsafe	48%	12%
Bad	33%	0%
Mixed	14%	0%
Good/ Rather Safe	2%	34%
Very Good/ Very Safe	2%	55%
<i>Total</i>	<i>100%</i>	<i>100%</i>

Satisfaction with Sharing and Helping (1977), With Community Promotion of Sharing (2003)	1977	2003
Very Bad/ Very Dissatisfied	0%	0%
Bad/Dissatisfied	5%	1%
Mixed/Neither Satisfied nor Dissatisfied	26%	5%
Good/Satisfied	46%	36%
Very Good/Very Satisfied	23%	58%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Number of Elections Voted	1977	2003
None of last elections	14%	16%
One	4%	5%
Two	7%	8%
Three	11%	9%
Four	15%	9%
Five	49%	53%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with People's Say Over Petroleum Development	1977	2003
Very Bad/ Very Dissatisfied	10%	6%
Bad/Dissatisfied	18%	7%
Mixed/Neither Satisfied nor Dissatisfied	36%	22%
Good/Satisfied	34%	39%
Very Good/Very Satisfied	3%	26%
<i>Total</i>	<i>100%</i>	<i>100%</i>
Satisfaction with Village as a Place to Live	1977	2003
Very Bad/ Very Dissatisfied	1%	2%
Bad/Dissatisfied	9%	4%
Mixed/Neither Satisfied nor Dissatisfied	17%	10%
Good/Satisfied	51%	46%
Very Good/Very Satisfied	23%	38%
<i>Total</i>	<i>100%</i>	<i>100%</i>

Our final time series comparison is satisfaction with one's community as a place to live. In 1977, 23% of Inupiat felt that their community was a "very good" place to live. In 2003, 38% of Inupiat were "very satisfied" with their community as a place to live, a significant increase ($p < 0.05$). We now turn to a comparison of sustainability measures for the North Slope, two other Inupiat settlement regions of Alaska, and three international comparisons: northern Canada, Greenland, and Chukotka.

5.3 Inupiat of Alaska's North Slope and Other Arctic Indigenous Peoples

Alaska's North Slope has not been the only arctic region to experience large scale resource development. We also must keep in mind that there are many other regional differences that may account for variations in our sustainability measures. Other factors being equal, however, we can hypothesize that the large scale, non-locally controlled petroleum development on the North Slope would be associated with lower levels of sustainability among North Slope Inupiat than their Inupiat neighbors in the Northwest Arctic and Bering Straits regions, as well lower than among fellow Inuit in Canada and Greenland. Given the collapse of the Soviet Union, Chukotka is a special case, and we would expect measures to be lower there than on Alaska's North Slope. Before turning to results we should also note that many sustainability measures are not available from the Canada data set.

With the exception of Bering Straits region Inupiat, in 2003 North Slope Inupiat engaged in as or more a diverse set of subsistence activities as arctic indigenous residents in our comparison regions (Table 4). North Slope Inupiat households harvested as high or higher a proportion of their meat and fish. They were somewhat less satisfied in 2003 than Northwest Arctic Inupiat with the amount of fish and game available locally, but more satisfied than their other arctic indigenous neighbors. The same is true with regard to their satisfaction with opportunities to hunt and fish.

North Slope Inupiat participated in the labor force as much as their Alaska and Greenland neighbors, and slightly less than their indigenous neighbors in Canada and Chukotka (Table 4). In 2003 they were as or more satisfied with local job opportunities, more satisfied with the local availability of goods and services, and as satisfied with the cost of living. North Slope Inupiat were somewhat less likely to prefer a combination of wage and subsistence activities than their Inupiat neighbors in 2003, but considerably more likely to do so than Chukotka indigenous adults.

Table 4. North Slope Sustainability Comparisons by Region

	North Slope	Northwest Arctic	Bering Straits	Canada	Greenland	Chukotka
Mean number of subsistence activities engaged in within last 12 months	8,7	8,3	9,5	*	5,7	8
Proportion of Meat and Fish Consumed by Household Traditional Food						
None	7%	9%	8%	1%	0%	9%
Less than half	31%	23%	36%	24%	33%	34%
About half	25%	27%	25%	35%	27%	29%
More than half	37%	42%	31%	39%	40%	28%
	100%	100%	100%	100%	100%	100%
Satisfaction with Amount of Fish and Game Available Locally						
Very satisfied	48%	58%	24%	*	9%	5%
Somewhat satisfied	39%	33%	36%	*	54%	34%
Not satisfied or neither	13%	9%	40%	*	37%	71%
	100%	100%	100%	*	100%	100%
Satisfaction with Opportunities to Hunt and Fish						
Very satisfied	62%	66%	40%	*	13%	5%
Somewhat satisfied	29%	30%	33%	*	58%	25%
Not satisfied or neither	9%	4%	26%	*	29%	70%
	100%	100%	100%	*	100%	100%
Work Status in Previous 12 Months						
Worked in Past 12 Months	77%	75%	73%	88%	80%	86%
Did Not Work in Past 12 Months	23%	25%	27%	12%	20%	14%
Total	100%	100%	100%	100%	100%	100%
Satisfaction With Job Opportunities						
Very satisfied	14%	15%	6%	11%	4%	1%
Somewhat satisfied	30%	34%	24%	31%	28%	9%
Not satisfied or neither	57%	51%	70%	57%	68%	90%
	100%	100%	100%	100%	100%	100%

	North Slope	Northwest Arctic	Bering Straits	Canada	Greenland	Chukotka
Satisfaction with Availability of goods in local stores						
Very satisfied	18%	12%	10%	*	7%	2%
Somewhat satisfied	42%	37%	28%	*	48%	21%
Not satisfied or neither	40%	51%	62%	*	46%	77%
	100%	100%	100%	*	100%	100%
Satisfaction with Cost of Living						
Very satisfied	9%	7%	2%	*	3%	2%
Somewhat satisfied	27%	27%	20%	*	36%	7%
Not satisfied or neither	64%	66%	79%	*	60%	91%
	100%	100%	100%	*	100%	100%
Preferred Ways of Making a Living						
Working on a wage job	27%	14%	9%	*	*	40%
Both wage and harvesting,herding, or processing	65%	74%	85%	*	*	28%
Harvesting,herding, or processing	8%	12%	7%	*	*	32%
	100%	100%	100%	*	*	100%

As far as education is concerned, in 2003 North Slope Inupiat were similar to Inupiat in the Northwest Arctic and Bering Straits regions. North Slope Inupiat were more likely than Canadian Inuit in 2003 to have at least a high school education and less likely than Greenland Inuit and Chukotka indigenous adults population (Table 5).

North Slope Inupiat were the more likely to be very satisfied with the quality of local education services in 2003 than indigenous adults in any other comparison region. The same was not true with regard to health services, where North Slope Inupiat were more likely to be very satisfied than Inuit in Greenland or indigenous adults in Chukotka, as likely to be very satisfied as Inuit in Canada and Bering Straits Inupiat, while less likely to be very satisfied with local health services than Northwest Arctic Inupiat (Table 5).

Satisfaction with public safety among North Slope Inupiat was lower than among northern Canadian Inuit and higher than Greenland Inuit and Chukotka indigenous adults. North Slope Inupiat were more likely in 2003 to be very satisfied with promotion of helping and sharing values than all but their neighbors in the Northwestern Arctic region where the level of satisfaction was about the same in 2003 (Table 5).

Voting participation on the North Slope was comparable in 2003 to other arctic regions (Table 5). One in four North Slope Inupiat in 2003 were very satisfied with the influence Inupiat had over the management of resource resources like oil, gas, and minerals. This compares with one-in-five Northwest Arctic Inupiat, about one-in-ten Bering Straits Inupiat and only three per cent or less of Greenland Inuit and Chukotka indigenous adults.

In 2003, North Slope and Northwest Arctic Inupiat shared the highest level of overall satisfaction with life in their communities; more than one-in-three were "very satisfied". In the Bering Straits region, one-in-four were very satisfied, while only one-in-twenty Greenland Inuit and one-in-one-hundred Chukotka indigenous adults were very satisfied.

Table 5. North Slope Sustainability Comparisons by Region

	North Slope	Northwest Arctic	Bering Straits	Canada	Greenland	Chukotka
Highest level of school completed						
Elementary School	25%	31%	28%	70%	44%	26%
High School	43%	38%	49%	30%	56%	74%
Satisfaction with Quality of Education in Community						
Very satisfied	39%	23%	30%	25%	7%	10%
Somewhat satisfied	41%	42%	32%	48%	56%	31%
Not satisfied or neither	20%	34%	38%	27%	37%	59%
	100%	100%	100%	100%	100%	100%
Satisfaction with Quality of Health Services in Community						
Very satisfied	28%	38%	32%	26%	5%	7%
Somewhat satisfied	44%	38%	42%	47%	54%	28%
Not satisfied or neither	28%	24%	26%	27%	41%	65%
	100%	100%	100%	100%	100%	100%
Satisfaction with Public Safety in Community						
Very satisfied	12%	17%	19%	29%	4%	4%
Somewhat satisfied	44%	40%	45%	45%	51%	36%
Not satisfied or neither	44%	43%	36%	26%	45%	60%
	100%	100%	100%	100%	100%	100%
Satisfaction with Community's Promotion of Helping and Sharing						
Very satisfied	58%	51%	35%	*	14%	18%
Somewhat satisfied	35%	36%	41%	*	52%	33%
Neither	6%	5%	16%	*	26%	*
Somewhat dissatisfied	1%	7%	5%	*	7%	31%
Very dissatisfied	<1%	1%	2%	*	1%	18%
	100%	100%	100%	*	100%	100%
Count of Participation in Voting						
Three	63%	42%	37%	44%	23%	0%
Two	11%	25%	33%	17%	51%	85%
One	10%	8%	9%	11%	10%	3%
None	16%	25%	21%	28%	15%	12%
	100%	100%	100%	100%	100%	100%

	North Slope	Northwest Arctic	Bering Straits	Canada	Greenland	Chukotka
Satisfaction with Influence Indigenous People Have on Management of Natural Resources Like Oil, Gas and Minerals						
Very satisfied	26%	21%	12%	*	3%	2%
Somewhat satisfied	38%	40%	29%	*	41%	11%
Not satisfied or neither	35%	39%	59%	*	56%	87%
	100%	100%	100%	*	100%	100%
Satisfaction with Quality of life in this community						
Very satisfied	37%	39%	23%	*	5%	1%
Somewhat satisfied	47%	45%	54%	*	64%	13%
Not satisfied or neither	15%	16%	23%	*	31%	86%
	100%	100%	100%	*	100%	100%

5.4 Discussion

We have just seen that, on most measures, Iñupiat were as well or better off in 2003 than they were in 1977. Table 6 summarizes our time and spatial comparisons. We have also seen that North Slope Iñupiat, again on most measures, in 2003 were as well or better off than their Iñupiat neighbors in the Bering Straits and Northwest Arctic regions and as well or better off than the Inuit of northern Canada, the Inuit of Greenland, and the indigenous people of Chukotka.

Table 6. Summary of North Slope Sustainability Comparisons

Domain/Concept	2003 Vs 1977	N.Slope Vs Elsewhere
Ties with Nature		
Subsistence activity	Substantially better	Better except in 1 region
Proportion food from subsistence	Somewhat better	About the same or better
Amount of fish and game	Substantially better	About the same or better
Opportunities to hunt and fish	Substantially better	About the same or better
Material Success		
Work for pay	Somewhat better	About the same
Satisfaction with job opportunities	Somewhat worse	About the same or better
Kinds of things you can buy in stores	About the same	About the same or better
Cost of living	Substantially better	About the same or better
Preference subsistence job both	About the same	Same as other Alaska regions
Education		
Education	Somewhat better	About the same except lower than Greenland, Chukotka
Satisfaction education services	Substantially better	Better
Health		
Satisfaction with health services	About the same	About the same or better
Perception drinking, drugs, fighting, stealing	Somewhat better	Better than some, worse than others
Cultural Continuity		
Sharing and Helping	Substantially better	Better
Fate Control		
Voting	About the same	About the same
Say over oil development	Substantially better	Better except same as NW Arctic
Overall		
Satisfaction with village life	Somewhat better	Better except same as NW Arctic

Our comparisons are far from the results of controlled experiments. North Slope Iñupiat who were dissatisfied with the effects of development could have moved off the North Slope. Other regions have experienced development as well. All regions have been exposed to a myriad of changes besides development. Still, the picture we see in 2003 is far better than what we might have projected in 1968 when oil was discovered on the North Slope.

What do these results say about the general effects of large scale development on local communities? Only that there appears to be at least one set of circumstances under which large scale, non-local resource development can take place in a region while at the same time local community sustainability is maintained or even improves. What are these circumstances?

Critical to understanding the results just presented is that the Iñupiat of the North Slope successfully established a regional government in 1972, the North Slope Borough. The borough's regional boundary includes the Prudhoe Bay development and the borough has the legal right to tax energy development facilities on state land within the Borough. As a result of this power of taxation, the borough has received billions of dollars in oil tax revenues over the past 35 years. Between 1996 and 2006 alone these revenues totalled USD 224.8 million (DOLWD 2007). These revenues have supported a capital improvements program that has employed many North Slope Inupiat (56% of North Slope Inupiat adults worked for the borough at least once in 1977 and 28% worked for the borough on the job they worked the most hours on in 2003). The successful results of the capital improvements program and borough operations expenditures are reflected in the time and spatial comparisons given above.

The borough also funded its own Department of Wildlife Management, normally a state and national activity. It also established a regional Wildlife Management Advisory Committee. These and other actions made it possible for North Slope Inupiat to influence resource development activities. None of these actions would have been possible without oil-derived tax revenues, but it also took vision and leadership to understand and even to create opportunities to intervene in the development process.

The Inupiat have also been lucky. A series of offshore lease sales by the federal government in the 1980s failed to produce economically viable offshore petroleum prospects. The Inupiat noticed the effects of offshore exploration activities on the movement of bowhead whales, and they have

often testified about their concerns that offshore petroleum development would gravely harm their subsistence way of life. During the period we are comparing, however, most development activities occurred on land as expansions of the Prudhoe Bay development.

As Figure Two illustrates, onshore oil development on the North Slope has expanded greatly over the past thirty years. And more developments are being planned. The cumulative impacts of these expansions may be of an entirely different magnitude than that experienced by the Inupiat to date. These new developments would largely occur on federal lands, yielding far lower revenues to the North Slope Borough. Taken together, the smaller revenue stream and the cumulative geographic reach of petroleum development may spell the end to the era of local sustainable development. On the other hand, the Inupiat continue to actively intervene in the course of development. They once again prove their ability to create conditions where local community sustainability is possible along side of non-renewable, non-locally controlled large-scale development.

5.5 References

- AHDR. Arctic Human Development Report (2004). Akureyri: Stefansson Arctic Institute.
- DOLWD. Alaska Department of Labor and Workforce Development (2007) <http://almis.labor.state.ak.us>

6. Economic Stratification and Living Conditions in the Canadian Arctic⁶³

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Keywords: SLiCA, Canadian Arctic, Inuit, Nunangat, Inuvialuit, Nunavut, Nunavik, Nunatsiavut, living conditions, well-being, economic stratification, income distribution, social cohesion.

6.1 Abstract

This chapter discusses the stratification of contemporary Inuit societies in Canada. An analysis of total individual and household income enabled the authors to determine income distribution among the adult Inuit population across different strata. This analysis made it possible to go beyond merely describing income distribution and to observe a significant but weak relationship between economic stratification and the living conditions thus examined (schooling level, civic participation, social support, satisfaction in relation to certain aspects of community life, and subjective well-being). It also showed that the criteria of social differentiation include – aside from various sources of income – access to and availability of social support, participation in community life, satisfaction, and well-being. All in all, economic stratification appears, all things considered, to

⁶³ Manuscript received: 5th April 2013 and accepted: 8th January, 2015.

have a limited impact on the core aspects of life for the Canadian Arctic Inuit. Other processes are thought to interact with stratification to produce and materialize the cohesion required for the maintenance and development of local communities – such as, for example, the strength of social networks, the presence of family, or the principle of reciprocity.

6.2 Introduction

The concept of social stratification refers to the breaking down of a society into several distinct social spaces between which individuals do not all circulate identically. A system of social stratification does not result from biological inequalities but from socially defined criteria and prescriptions, conventionally ascribed meanings, and an unequal distribution of rights, duties and statuses. Each system acquires a particular form – e.g., systems of rank, kinship, order, caste, class, etc. Canada, for example, is characterized by a system of classes based on an unequal distribution of wealth, power, knowledge, status and prestige. According to this view, income, power and prestige are, along with other forms of social capital, the main foundations of differentiation – that is, the movement through which distinctions and the specialization of roles and positions are created in a society. In the literature, some criteria of social differentiation have met with happier fates than others. Such is the case of gender, income, occupation, prestige and mode of consumption, in contrast with ethics, habitat, social relations, etc.

As a field of study, the stratification of Aboriginal societies has, until now, been little developed. The objective of our article is not, however, to fill these gaps by, for example, presenting a study of the historical evolution of the distribution of Inuit populations in Canada's occupational structure. This article analyzes neither the social positions historically occupied by the Inuit, nor their social, professional or intergenerational mobility, nor their elites. Likewise, we will not dwell on the relevance, for Inuit territory, of new developments in stratification studies – e.g., polarization, generational effect, representations of inequalities, exclusion, etc. We instead will perform exploratory work that consists in verifying the current situation of stratification in Inuit societies and, as much as possible, sketching out the model of stratification at which they appear to have arrived.

Several authors have analyzed the processes involved in the phases of change that followed upon boom periods in Arctic energy resource development and whose social and ecological impacts are particularly well known. Klausner & Foulks (1982) described the original mechanisms of stratification of Inupiat society. Starting in the late 19th century, following the arrival of missionaries and the first traders, a class stood out from the rest of society for the first time: its members were educated, able to read and write, and could take part in the activities of the “outsiders”. Similarly, oil drilling in the North Slope region helped create a new class that was highly involved in the establishment of government structures, political organizations and negotiations over self-government. It has been argued that the emergence of this class coincided with the transition from an economy of production to an economy of consumption:

“Class in the North Village is increasingly based on control of distribution of these funds, or the relation to the system of consumption rather than production [...]

The new class system, which is primarily organised with respect to consumption, indeed becomes visible through this consumption, as expressed in income, education, and housing. The levels of income, and thus the level of consumption vary considerably among households, a variability which did not exist in the aboriginal society of hunters.”

Klausner & Foulks, 1982: 53, 61.

Thus, the stratification of this society originated in a stressful collective experience, as a result of which new norms came to redefine forms of hierarchy and solidarity. A reconfiguration of social relations is evidenced by the emergence of local and regional leaders, the permanence of bureaucratic and political functions at the local level (notwithstanding the circulation of the personnel itself) and, in short, the establishment and reproduction of economic and political strata.

In Canada, a study by Marybelle Mitchell (1996) recounted the evolution of the relationships between the players in Arctic energy development and local political leaders, as illustrated in particular by the emergence of a native ruling class. According to her hypothesis, the emergence of this class resulted from the economic development of the Arctic (Mitchell, 1996: 8) and that this

new class was made up of those who speak out on behalf of their group. They were the first leaders confronted with negotiating the terms of energy development in the Arctic with developers and government bodies. Subsequently, they came to constitute the native corporate (and political) elite. In short, they form a ruling class “whose members do not legally own the means of production or labour power but who nonetheless effectively control the process of investment and allocation of resources.” Even if they have alienated ownership of the land, they have preserved a right of oversight (hence authority) over the means of production (specifically, the land) and labour power (Inuit and non-Inuit). The Inuit ruling class thus partakes of a system of class distinctions aligned with the class structure of the dominant Canadian society (Mitchell, 1996: XV).

In addition, attempts by certain policies to reduce economic disparities between Aboriginals and non-Aboriginals – through such things as sedentarization, the commodification of life, and modernization (in relation to the government provisioning of services, the establishment of exogenous institutions, job creation, etc.) – all appear to have heightened disparities in Aboriginal groups: “Thus, some communities that were once relatively economically homogenous are now experiencing groups of haves and have-nots” (Bernier, 1997: 2).

It is one thing to know that a society is stratified; it is quite another thing to know how it is actually stratified. Over the last several years, a number of studies have focused on growing stratification of Inuit and First Nations societies in Canada and the widening gap between the Aboriginal peoples and the Canadian population, or indeed within Aboriginal communities themselves (Bernier, 1997; Maxim et al., 2000). Bernier’s study, for example, describes wage distribution among the Inuit based on data from the Aboriginal Peoples Survey 1991. She shows that wage distribution is considerably more polarized and unequal among the Inuit than among other Aboriginal groups. For example, the wage gap between quintiles shows that mean wage is 34 times higher for Inuit in the top quintile than for Inuit in the bottom quintile (Bernier, 1997: 14). Assuming that these observations are accurate, there are at least three factors that explain wage distribution among Aboriginal population in Canada. To begin with, there are the socio-demographic characteristics of the Aboriginal population – e.g., young, presenting low schooling levels – meaning that it

has a higher proportion of individuals for whom income gaps are larger (inequality due to demographic composition). Second, there are wage gaps between the various groups of the population – for example, the wage gap between secondary school graduates and university graduates may be higher for Aboriginals than for Canadians as a whole (intergroup inequality). And, third, wage disparity within each of the groups of the population is generally higher (intragroup inequality) (Bernier, 1997). Other studies have highlighted this situation, offering evidence of an inequitable distribution of income among the Inuit (Maxim *et al.*, 2000).

This chapter presents an exploratory study of the current model of stratification of Inuit societies in Canada. It examines the distribution of population through income strata. It then scrutinizes the relationships between economic differentiation and living conditions such as social support, civic participation, satisfaction in relation to certain aspects of community life, and subjective well-being.

6.3 Methodology

The present study is based on data from the Aboriginal Peoples Survey 2001 (APS 2001) and the supplement administered to Arctic residents (Survey of Living Conditions in the Arctic – SLiCA). The APS/SLiCA⁶⁴ provided a basis for gathering original data on the objective living conditions of the Inuit of Arctic Canada (e.g., education, language, health, employment, income, housing, etc.), as well as their perceptions of their objective conditions (e.g., participation in hunting and fishing activities, civic and community participation, social support, satisfaction and well-being, etc.).

The analysis is based on a survey sub-sample – namely, 4,700 participants aged 15 and over and declaring only an Inuit identity. The results⁶⁵ concern almost exclusively the Inuit Arctic as a whole.

⁶⁴ Concerning the methodology of this post-censal survey, see Statistics Canada (2001), Morin *et al.* (2010).

⁶⁵ Data were analyzed using the SAS and SPSS packages when there was no risk of disclosure – i.e., when statistical cross-referencing did not compromise rules of security and confidentiality. In keeping with the

Three income variables have been examined in this study. Whenever analysis concerns an attribute or a personal decision of the survey participant (e.g., schooling level, participation in civic activities, etc.), it focuses on the individual total income or employment income. Otherwise, the focus is on family income.⁶⁶ By and large, income has been segmented according to increments of CAD 10,000.

The links between income and the selected variables, with the exception of satisfaction, all produced tests⁶⁷ that were statistically significant at the threshold of 0.05 (chi-squared test). The variables for which strong relationships were observed were education, social support and civic participation. Cramer's V test indicated that the relationships between income and each of the remaining variables were significant but nevertheless of low intensity.

6.4 Results

6.4.1 *Sociodemographic profile of the Inuit population*

Most of the Inuit of Canada live in the country's Arctic regions⁶⁸ (Statistics Canada, 2008). At the time of the 2001 Census, 45,070 individuals – i.e., slightly less than 5% of Canada's total estimated Aboriginal population of 1 million – identified themselves as Inuit. Collectively, they are dispersed across 53 communities in the Canadian Arctic.⁶⁹ These communities generally present low demographic size and density: only 17 of them have an Inuit population of 1,000 inhabitants and over. The highest concentration

rules established by Statistics Canada, publishable data must be weighted and rounded to the closest ten, and each data cell in a table must include, prior to weighting, a minimum of 10 cases.

⁶⁶ In our view, it was a way of taking into account documented forms of solidarity in Inuit households and villages, whenever they applied (see Duhaime, 1991).

⁶⁷ The statistical tests used in this study were the chi-squared test, for the comparison of frequency distributions, and Fisher's F-test, for the comparison of averages. For all of the variables analyzed, a test threshold of under 0.05 indicates significant differences.

⁶⁸ The tendency of Inuit to migrate away from Nunangat accelerated between 2001 and 2006. At this time, according to 2006 Census data, close to 22% of them live in the major metropolitan areas and other urban and rural centres across the country.

⁶⁹ Inuit Nunangat designates the Inuit inhabited regions of the Canadian Arctic. On a regional basis, these communities break down as follows: both Nunatsiavut and the Inuvialuit region are home to six communities, while Nunavik is home to 14 and Nunavut to 27.

is found at Iqaluit, the capital of Nunavut, home to slightly more than 3,000 inhabitants at the time (Statistics Canada 2003). While 80% of this population understood or spoke an Aboriginal language at the time of the Census, less than half that number was able to read an Aboriginal language.

Canada's Inuit population is particularly young: in 2001, the median age was 20.6 years. Adults aged 15 and over accounted for approximately 60% of the total population, whereas the segment of individuals aged 60 and over accounted for less than 10% of the adult population. Inuit youth thus appear to exert strong pressure on the working-age population, as is shown by dependency ratio⁷⁰ of 0.72 for all Inuit regions. In addition, there is agreement between APS-SLiCA and the 2001 Census to the effect that Inuit families rank among the largest in Canada, with one third having at least three children as of 2001.

6.4.2 *Population distribution according to income*

Contemporary Inuit societies are characterized by a marked differentiation of families and individuals according to their income class. There are more individuals among lower income families, and fewer individuals as family income increases (Table 1). If the low income cut-off is calculated using one half of family median income (Table 2), this threshold would stand at a little under CAD 20,000. On that basis, it can be asserted that almost one quarter of the adult population lives in poverty, one half has an income approaching the median income (i.e., plus or minus 50%), and the remaining quarter earns at least 50% more than the median income. Thus, there are significantly marked gaps between ends of the family income distribution.

⁷⁰ This ratio is computed by dividing the number of people under 15 years and over 65 years of age by the number of people of working age (i.e., 15 to 64).

Table 1. Distribution of the Inuit population aged 15 and over according to census family income, Inuit regions and Canadian Arctic, 2001. Per cent

Income (CAD)	Regions				Canadian Arctic
	Nunatsiavut	Nunavik	Nunavut	Inuvialuit	
80,000 and over	4.65	14.95	15.11	20.93	15.49
70,000 to 79,999	13.95	4.67	4.32	4.65	4.45
60,000 to 69,999	9.3	7.48	5.04	4.65	5.94
50,000 to 59,999	9.3	9.35	7.55	6.98	8.06
40,000 to 49,999	11.63	13.08	10.07	11.63	11.04
30,000 to 39,999	11.63	12.15	14.75	11.63	13.58
20,000 to 29,999	11.63	13.08	15.11	11.63	14.01
10,000 to 19,999	18.6	14.95	15.83	16.28	15.92
Less than 9,999	9.3	10.28	12.23	11.63	11.5

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

Table 2. Average and median family income, Inuit regions and Canadian Arctic, 2001

Income (CAD)	Regions				Canadian Arctic
	Inuvialuit	Nunavut	Nunavik	Nunatsiavut	
Average	49,280	44,300	45,500	43,540	44,940
Median	38,320	34,400	39,530	38,910	36,150

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

Disparities become even more pronounced when only employment income is considered: close to three quarters of wage-earners have earnings under the low income cut-off, close to one quarter have earnings approaching the median income (i.e., plus or minus 50%), and scarcely 4% have earnings of at least 50% more than the median income. The profile remains unchanged when the focus is on total individual income: more than two out of three adults declared not having earned CAD 20,000 in total income, in contrast with only 8% who had total income of more than CAD 50,000.

Table 3. Distribution of the Inuit population aged 15 and over according to employment income class, Inuit regions and Canadian Arctic, 2001. Per cent

Income (CAD)	Regions				Canadian Arctic
	Inuvialuit	Nunavut	Nunavik	Nunatsiavut	
80,000 and over	0.0	1.3	0.0	0.0	1.0
60,000 to 79,999	7.9	4.1	2.4	0.0	3.4
40,000 to 59,999	11.4	7.8	7.1	6.4	7.5
30,000 to 39,999	5.5	5.6	10.7	9.2	7.4
20,000 to 29,999	9.1	6.9	9.3	11.1	8.3
10,000 to 19,999	10.2	9.1	12.8	13.2	10.7
1 to 9,999	27.6	32.6	24.0	25.4	28.9
No employment income	28.4	32.3	33.1	34.4	32.4
Missing value	0.0	0.3	0.6	0.3	0.4

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

Table 4. Distribution of the Inuit population aged 15 and over according to total individual income class, Inuit regions and Canadian Arctic, 2001. Per cent

Income (CAD)	Regions				Canadian Arctic
	Nunatsiavut	Nunavik	Nunavut	Inuvialuit	
50,000 and over	4.55	4.72	9.42	9.76	7.91
40,000 to 49,999	2.27	5.66	4.71	7.32	4.91
30,000 to 39,999	11.36	13.21	6.52	7.32	8.55
20,000 to 29,999	13.64	12.26	10.51	9.76	11.32
10,000 to 19,999	25.0	20.75	22.1	21.95	22.01
Less than 9,999	43.18	43.4	46.74	43.9	45.3

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

While the gaps calculated for individual or total earnings are sharper than for census family total income, they only confirm the overall inadequacy of a single earner to support the family budget. Survey data show that the budget of 82% of households is made up of more than one person's wages.

In addition to depending on several income earners, Inuit families (as is true all across Canada) appear to combine several sources of income: wage earnings, transfer payments from public administrations, investment income, etc. More than half of adults declared having other sources of income besides employment income, and one out of five adults declared having received a welfare benefit. That being said, employment income remains the primary source of family income. More than two-thirds of the Inuit population aged 15 and over declared having received earnings in

the form of wages in year 2000. Perhaps that is the reason why the population distribution according to earnings class presents characteristics similar to the population distribution according to census family income class: more individuals are to be found among the lower earnings classes, and fewer individuals are to be reported as earnings increase.

6.4.3 *Economic stratification and living conditions*

Do the living conditions of the Canadian Arctic Inuit population vary according to the economic strata to which various individuals belong? In response to this question, we will explore the way the economic differentiation of Inuit societies is related to education, civic and community participation, social support, social satisfaction, and subjective well-being. In other words, the next paragraphs will explore the correlation between income as an independent variable, and the different conditions we documented through APS-SLiCA, as dependent variables

6.4.4 *Education*

In this study, education is measured by the highest level of schooling achieved. According to the APS data, Canadian Arctic Inuit adults number among those having the least schooling in the country: close to 10% have no schooling and close to 60% have not earned a certificate of secondary studies (high school diploma).⁷¹

The association between education and income have been abundantly documented (see for instance Kruse *et al.* 2008). Membership in an economically disadvantaged environment is generally associated with lower chances of academic success and access to higher education (Drolet, 2005; Duru-Bellat, 2002). A lower schooling level is often related to a lower

⁷¹ A number of qualifications are in order here, as these percentages do not reflect changes that have, over time, occurred in respect of education in Inuit regions. For example, between 1981 and 2001, the proportion of Inuit who had completed post-secondary studies (which includes completed college, trades and university) shot up from 10% to 24%, and that of Inuit with a trades certificate nearly doubled, rising from 6% to 11%. On the other hand, no major change is to be noted during the same period among Inuit with a university degree, with the percentage of 3% holding steady (ITK and DIAND, 2006).

income and a lower social position (Forsé, 2001). The data examined here tend to confirm these hypotheses, showing in effect a significant positive relationship between individual income and level of schooling.

Table 5. Distribution of the Inuit population aged 15 and over according to total individual income class and years of completed schooling, Canadian Arctic, 2001. Per cent

Income (CAD)	Less than 6 years	6 to 10 years	11 years and over	Total
50,000 and over	5.6	50.0	44.4	100.0
40,000 to 49,999	9.1	54.6	36.4	100.0
30,000 to 39,999	10.5	55.3	34.2	100.0
20,000 to 29,999	19.2	51.9	28.9	100.0
10,000 to 19,999	28.0	55.0	17.0	100.0
Less than 10,000	12.1	67.6	20.3	100.0
All income classes	15.8	60.0	24.3	100.0

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

Thus, lower schooling level is associated with lower total individual income; conversely, higher schooling is associated with higher income. This is by no means a hard and fast rule, however. It is important to recall that the income in question consists more of total income than earnings; furthermore, the other sources of income depend on factors external to the labour market.

As a result, it may well be that for reasons related to life history (e.g., experience, seniority, etc.), a person having a lower level of schooling will have an income larger than that of a person who has several more years of schooling. This would partially explain the presence of Inuit with very low schooling levels in higher income strata. And the converse may hold true as well: A higher level of schooling would not be in itself a sufficient condition of stratification in Inuit societies.

6.4.5 Participation in civic activities

Participation in civic activities refers to public involvement in organizations, events, community assemblies and public assemblies. For the Canadian Arctic as a whole, 38% of the Inuit population aged 15 and over took part in at least one civic activity during the year preceding the survey. The data examined in relation to this point show a significant positive relationship between individual income and civic participation. Thus, lower

total individual income associates with lower civic participation and, conversely, higher income associates with higher civic participation.

Table 6. Distribution of the Inuit population aged 15 and over according to total individual income class and number of civic activities participated in, Canadian Arctic, 2001. Per cent

Income (CAD)	No activity	1 to 3 activities	4 activities and over	Total
50,000 and over	18.2	51.5	30.3	100.0
40,000 to 49,999	18.2	45.5	36.4	100.0
30,000 to 39,999	21.6	51.4	27.0	100.0
20,000 to 29,999	22.0	54.0	24.0	100.0
10,000 to 19,999	30.2	49.0	20.8	100.0
Less than 10,000	32.0	55.7	12.4	100.0

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

6.4.6 Social support

Social support refers here to the possibility of receiving help from someone when the need arises. The APS-SLiCA measures both the availability and extent of support.

Availability of social support

The availability of social support indicates the possibility of receiving companionship, assistance, guidance or other types of support when a person needs it. For the Canadian Arctic as a whole, almost all Inuit adults say they are able to count on someone else to assist them in times of need. Regardless of the family income class, the availability index⁷² is never below 3.07. That being said, the social support availability index varies according to income. Lower family income associates with lower, yet constant, availability of social support; conversely, higher income associates with higher, increasing availability. While social support is, as a rule, available – applying invariably in 75% of cases – beyond a certain thresh-

⁷² The availability index consists in a scale of 1 to 4 and indicates the frequency with which adults can obtain a form of support when they need it. It is based on a value assigned to the four response options offered to Inuit adults during administration of the APS-SLiCA: 1 = almost none of the time, 2 = some of the time, 3 = most of the time and 4 = all of the time.

old (i.e., median income), it is proportional to family income. The permanent availability of social support increases according to family income.

Table 7. Distribution of the Inuit population aged 15 and over according to census family income and availability of social support, Canadian Arctic, 2001

Income (CAD)	Frequency of availability (%)			Average availability index (1–4)
	Never or seldom	Most of the time	All of the time	
80,000 and over	11	54	35	3.35
70,000 to 79,999	11	56	33	3.34
60,000 to 69,999	16	52	32	3.21
50,000 to 59,999	14	49	37	3.32
40,000 to 49,999	20	52	28	3.17
30,000 to 39,999	20	48	31	3.17
20,000 to 29,999	25	51	25	3.07
10,000 to 19,999	21	58	21	3.08
Less than 10,000	23	53	23	3.08

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

Extent of social support

The extent of social support⁷³ refers to the number of individuals or groups of individuals on whom a person can rely on for support in time of need, for advice when making an important decision, or for a sum of money. The results show that Inuit adults can count on an average of 1.65 people to borrow a sum of money.

An analysis of the relationship between income and the extent of social support, expressed in terms of the number of people to whom Inuit adults can turn in time of need, brings out a significant variation in relation to income (Table 8). In effect, among the adults who are members of families living below the low income threshold, the more income increases, the less they say they are able to turn to more than one person in time of need. Conversely, among those who live with a family income at least 50% larger than the median income, the more that income increases, the more survey participants said that they are able to turn to more than one person in time of

⁷³ The index used to measure the extent of social support corresponds to the total number of individuals – out of a maximum of 9 choices – to whom Inuit may turn in time of need, for advice when making an important decision, or for borrowing USD 200.

need. Finally, among those whose family income approaches the median income, there is no significant variation. The extent of social support index offers more of a clear-cut picture: although income is not the only factor involved, beyond a certain threshold (i.e., CAD 29,000), social support increases according to family income.

Table 8. Distribution of the Inuit population aged 15 and over according to census family income and extent of social support, Canadian Arctic, 2001. Per cent

Income (CAD)	Size of social support (%)									Index of social support		
	Extent of support in time of need			Extent of support for making an important decision			Extent of support for borrowing \$200			In time of need	Making a decision	Borrowing \$200
	No one	1 pers.	2 pers. and +	No one	1 pers.	2 pers. and +	No one	1 pers.	2 pers. and +	Number of persons		
80,000 and over	8,8	45,6	45,6	10,1	53,6	36,2	10,3	76,5	13,2	1,9	1,6	1,1
70,000 to 79,999	15,0	40,0	45,0	15,0	50,0	35,0	10,5	79,0	10,5	1,8	1,4	1,2
60,000 to 69,999	11,5	46,2	42,3	15,4	57,7	26,9	11,5	69,2	19,2	1,8	1,4	1,2
50,000 to 59,999	10,8	54,1	35,1	11,1	61,1	27,8	16,7	69,4	13,9	1,7	1,4	1,1
40,000 to 49,999	16,3	44,9	38,8	16,7	54,2	29,2	16,3	67,4	16,3	1,6	1,3	1,1
30,000 to 39,999	15,0	46,7	38,3	17,0	55,9	27,1	18,6	69,5	11,9	1,6	1,3	1,0
20,000 to 29,999	14,8	54,1	31,1	16,1	58,1	25,8	17,7	69,4	12,9	1,4	1,3	1,0
10,000 to 19,999	15,5	50,7	33,8	18,3	56,3	25,4	21,1	67,6	11,3	1,5	1,2	0,9
Less than 9,999	16,0	46,0	38,0	22,0	50,0	28,0	20,0	66,0	14,0	1,5	1,3	1,0
Average	13,7	47,6	38,7	15,7	55,2	29,0	15,9	70,4	13,7	1,7	1,4	1,1

Source: Authors' compilation, from APS 2001 and SLICA-Canada master data file.

Likewise, the extent of social support, as measured by the average number of individuals to whom Inuit adults may turn when making an important decision, varies according to census family income. In this instance, however, the variation appears to be more tenuous. It is most apparent among those who have no one to turn to: they account for 22% of the first stratum – i.e., the lower income stratum – whereas they account for only 10% of the stratum of adults having higher income. Here again, the index measuring the extent of social support exhibits greater clarity: beyond a family income of CAD 20,000, the average number of people who can be turned to when making an important decision increases according to an individual's family income.

Finally, analysis of the relationship between income and the extent of social support, expressed as the number of people to whom Inuit can turn for borrowing a sum of money, shows that regardless of their family income, only a very low proportion of the adult population can count on three or more individuals. In addition, within the three groups identified up to this point, there is little variation in the extent of social support according to income. Within the group living under the low income threshold, between 20% and 21% of adults have no one from whom they can borrow money – that is, twice the proportion of Inuit adults in families whose income is at least 50% higher than the median census family income. Here again, excepting the Inuit in the first stratum, the number of people on whom adults can turn to for borrowing money increases according to income.

6.4.7 *Satisfaction with aspects of community life*

The calculations⁷⁴ performed using APS-SLiCA data give an average satisfaction index of 70 for all Canadian Arctic Inuit. The population says that it is satisfied with community life overall. Analysis for the Arctic area as a whole nevertheless shows major differences in the results reported for various aspects (see for instance: Poppel *et al.* 2011 and Poppel 2015). Thus, the satisfaction index is high concerning the most recent job (84), the availability of country food (91) and life at present in the community (92).⁷⁵ On the other hand, it is only 52 for housing conditions and a mere 43 for job opportunities⁷⁶.

The data show that the overall index of satisfaction with life at present in the community varies very little according to income. The weak relationship between these two variables is not significant at the threshold of 0.05%. That being said, in the case of adults whose family revenue was at least 50% greater than the median income, the more that income increased, the more the ratio of satisfied people increased too. The level of satisfaction remained constant where the other income classes were concerned.

While there is no significant difference overall, statistically significant results were obtained regarding certain specific aspects of satisfaction. Satisfaction with education and the performance of governments tended to decrease as family income increased, while satisfaction with employment increased in keeping with income.

⁷⁴ Satisfaction of the population is measured using a series of 13 questions bearing on different aspects of community life: job opportunities and most recent job, quality of education, availability of health services, quality of housing and rent or house payments, recreational facilities, freshness of foods in local stores, availability of country food, the performance of government institutions, and overall appreciation of life at present in the community. For each of these questions, a value of zero (0) was assigned to a statement of dissatisfaction and a positive value (1) was assigned to a statement of satisfaction (including both "somewhat satisfied" and "very satisfied"). The sum of these values for each survey participant was divided by 13 and then multiplied by 100 so as to obtain a general indicator of satisfaction ranging from 0 to 100 – with 100 representing the perfect situation in which the participant was satisfied with all of the aspects measured.

⁷⁵ These indices have a coefficient of variation (c.v.) of 30% to 31%, thus prompting us to interpret these data with caution.

⁷⁶ The indices concerning housing and the performance of governments have a high coefficient of variation (c.v.), thus evidencing the considerable dispersion of responses.

It is also possible to analyse satisfaction with various aspects of community life using a comparative index based on census family median income (CAD 36,150).⁷⁷ The results of our tests on satisfaction were significantly influenced by income in respect of satisfaction with job opportunities and the education offered in the community. Thus, those who were satisfied with job opportunities presented a comparative figure of 112 whereas those who were dissatisfied had a figure of 92; those who were dissatisfied with education in the community had a comparative figure of 117 whereas those who were satisfied had a median income similar to that of the population as a whole.

Table 9. Level of satisfaction respecting certain aspects of life and associated median family income index, Canadian Arctic, 2001. Per cent

Aspects of life	Level of satisfaction (%)	Median income = index of 100	
		Very dissatisfied or somewhat dissatisfied	Very satisfied or somewhat satisfied
Job opportunities	43	92,2	112,5
Most recent job	84	91,3	108,0
Quality of education	73	116,6	100,3
Availability of health services	73	102,0	96,0
Quality of housing	52	98,9	93,7
Cost of housing	76	104,6	91,3
Recreational facilities	69	108,9	95,9
Freshness of food in stores	64	98,8	97,1
Availability of country food	91	88,7	97,7
Performance of prov./ terr. gov'ts.	50	109,3	96,4
Performance of local police force	74	104,5	97,0
Performance of courts	61	110,3	94,7
Overall satisfaction with community	92	86,9	104,2

Source: Authors' compilation, from APS 2001 and SLICA-Canada master data file.

On the other hand, the relationship between median income and satisfaction with the work performed by governments and with life at present in the community is not statistically significant, but the gap between the medi-

⁷⁷ For the purposes of analysis, we will consider the median census family income as the baseline and will assign it a value of 100. Thus, a comparative index of 105 will indicate a median family income 5% greater than the median family income for the entire population, while a comparative index of 95 will indicate an income that is 5% lower.

an income of those who are satisfied and those who are dissatisfied is considerable: there is a gap of 15 percentage points regarding satisfaction with the work performed by governments (satisfied = 96; dissatisfied = 109) and a gap of 17 points (satisfied = 104; dissatisfied = 87) regarding satisfaction with life at present in the community.

6.4.8 Well-being

Finally, well-being is defined in terms of the occurrence of certain states of mind. Participants were invited to state whether, in the 30 days preceding the survey, they had felt nervous, calm and peaceful, downhearted and blue, happy, or “so down that nothing could cheer you up.”⁷⁸ The results show that the Inuit present a fairly high well-being level, with an average of 1.99.

Analysis of the influence of income on perceived subjective well-being does not allow us to identify a central trend. The results indeed show a major variation between certain income strata but do not provide a sufficient basis for establishing a clear-cut relationship between family income and subjective well-being among Inuit adults. That being said, we note a positive relationship among those living with a family income below the low income threshold and a negative relationship among those living among families whose income is at least 50% greater than the median income.

For Inuit living in a low income family, an increase in income results in a slight increase in the subjective well-being index. Above this threshold and up to a certain upper limit (50% more than the median income), the subjective well-being index would appear to produce a J-shaped curve that increases considerably for a low variation of income and that decreases drastically for the same reasons. Starting from this upper limit (USD 60,000), subjective well-being would appear to decrease as family income increases.

⁷⁸ These responses were reproduced on a graduated scale of declining subjective well-being ranging from 1 to 6, with 1 representing a situation of total subjective well-being followed by five levels (2 to 6) of subjective well-being. An average was established for each survey participant, and on this basis, the index was developed.

Table 10. Distribution of the Inuit population aged 15 and over according to census family income, satisfaction regarding certain aspects of life and well-being, Canadian Arctic, 2001. Per cent

Income (CAD)	Satisfaction with certain aspects of life				Overall level of satisfaction	Subjective well-being index
	Jobs	Education	Government	Life in the community	(%)	(1–6)
80,000 and over	58	69	42	93	70,0	1,89
70,000 to 79,999	48	72	44	93	69,0	2,03
60,000 to 69,999	42	67	30	93	67,0	2,08
50,000 to 59,999	44	70	47	94	70,0	1,94
40,000 to 49,999	38	71	45	92	69,0	2,03
30,000 to 39,999	39	77	48	91	69,0	1,93
20,000 to 29,999	37	74	50	91	70,0	2,07
10,000 to 19,999	35	76	49	91	71,0	2,06
Less than 10,000	43	74	56	88	71,0	2,03

Source: Authors' compilation, from APS 2001 and SLiCA-Canada master data file.

6.5 Discussion

The results show that contemporary Inuit societies in Canada are indeed stratified. Inuit adults do not all share the same living conditions and prospects. They exhibit an unequal distribution of capital (in terms of wealth, income and education) and power. From that perspective, the Aboriginal society inhabiting Inuit Nunangat can be broken down primarily into three distinct economic strata.

Accordingly, the first stratum is made up of Inuit who earn a maximum individual income of CAD 10,000 or a maximum family income of CAD 20,000. It consists primarily of adults who have not completed ten years of schooling and who participate in very few community activities. In time of need, these individuals appear, as a rule, to have few people to turn to for financial assistance. Paradoxically, they most often appear to be satisfied with their lives and to be more likely to take a positive view of their personal well-being. Because they appear to combine several factors of material deprivation, they can be characterized as poor.

At the opposite end of the spectrum, a second stratum would appear to be made up primarily of Inuit who earn an individual income of CAD 50,000 and over or a family income of at least CAD 80,000. For the most part, these adults hold at least a secondary studies diploma, and they participate in a greater number of activities in all sectors of community life.

They appear to be able to turn to someone –and to a greater number of potential individuals – especially for obtaining financial support. Among all the Inuit, their views appear to be more severe regarding certain aspects of their living conditions (e.g., housing conditions, job opportunities, educational offering, performance of governments, etc.). Proportionally speaking, they apparently tend less to be satisfied with certain aspects of community life or to positively assess their well-being.

A third group of individuals can be fit in between these two strata. They earn individual income ranging between CAD 10,000 and CAD 50,000 or a family income in the range of one half to twice the median income. In general, they have a higher schooling level than the poorer Inuit adults, but their social support networks are practically as weak as the latter's. They participate in a greater number of community activities and do so more frequently. They tend to present a certain ambivalence respecting satisfaction with life in their community and subjective well-being.⁷⁹

This ideal-typical model of differentiation nevertheless shows up the limitations of total income as the sole criterion of the stratification of Inuit communities. As a rule, total individual income combines several sources of income (but primarily employment income and transfer payments), whereas total family income combines income from all sources and from all individuals making up the family. Knowing that Inuit families are large, these aggregations make it difficult to distinguish between truly well-off families from those families for whom the weight of numbers is the deciding factor. In other words, the composite nature of Inuit family income foils efforts to define the contours of social strata with precision.

Economic stratification based on income introduces another limitation into the scope of results. This limitation derives from the fact such figures do not factor for the number or the biographical path of the individuals making up households, as higher family income does not always equate with a higher standard of living. In order for family income to be an indica-

⁷⁹ Perhaps it is only a matter of a non-marginal effect of occupationally-related overfilling, underfilling, or recent mobility among certain individuals.

tor of living standard, it would have to be adjusted according to the size of the family and the needs of the individual members making up the family.

The inability to identify over classified families does not invalidate the stratification model presented here for all that. The differences noted between the distribution of individual incomes and that of family incomes shows the extent to which the structure of the employment market is a source of polarization in the Canadian Arctic. If the Inuit were confined only to employment income, the majority would live under the low income threshold and only 4% of them could claim to have an income larger than CAD 50,000. Other sources of income, government transfers in particular, thus have the effect of attenuating income inequalities. However, even after factoring for all other sources of income, polarization remains: the proportion of wealthier Inuit only doubles (8%) and that of the poorer decreases by a quarter (descending from 61% to 45%). Thus, the pooling of individual incomes enables 18% of Inuit adults to amass a family income of CAD 80,000 and over. This observation again testifies to the importance of sharing and solidarity in Inuit households and communities. Networks of solidarity and mutual assistance appear – to a greater extent than government programs – to decrease employment income distribution and the polarization effect it gives rise to.⁸⁰

Does it then follow that the effect of economic stratification on other aspects of Inuit lives has been attenuated? That, at least, appears to be what the data indicate. For example, in the Canadian Arctic, owing to a shortfall of skilled labour, one might expect that those who have a higher level of schooling would earn higher incomes than those with a lower schooling level. While this overall trend is born out by the data, it does not apply absolutely, as is evidenced by the presence of people with little schooling among the higher income strata.

All in all, while there is a link between income and an individual's ability to rely on some form or other of social support, to participate in civic activities or be satisfied with various aspects of community life, this

⁸⁰ It is important to add a qualification here. We have clearly demonstrated that families have managed to increase their purchasing power by pooling their individual incomes. That does not mean, however, that the distribution of this purchasing power proceeds equitably within households.

link nevertheless remains tenuous when tied to position in the Inuit's economic stratification.

If the results we have arrived at are accurate, they show that beyond a certain threshold, a noticeable increase in the income of the wealthier Inuit adults also appears to produce a comparable increase in the availability and extent of the social support that they may avail themselves of, whereas the relationship between income and dimensions of social support appear to remain constant for the less well-off. Thus, social support appears to be sensitive to the solvability of beneficiaries – i.e., their capacity to respond in like for what they have received. Solidarity appears to lessen as the poorer individuals manage to emerge from their difficulties, but tends to increase whenever the better off are confronted with hardship. The question then arises as to whether this pattern is an indication of the way that forms of solidarity contribute to the social reproduction of inequalities.

The Canadian Arctic Inuit participate in the construction of their world. They are encountered in the position of both the governed and the governing (or as voters and as elected representatives); they take an interest in their communities. In varying proportions, they are involved in all sectors of community life: economic activities, associations (volunteer activities), politics, cultural activities, sports and recreation, etc. Those who earn higher incomes are more inclined to take part in this process. However, there is every reason to believe that other intervening variables are at stake in both the income of the wealthier individuals and their greater civic participation.

The data pertaining to satisfaction and subjective well-being among the Inuit has helped to bring out an apparent paradox: it seems that those Inuit who enjoy better material living conditions are also those who are less satisfied and less inclined to report feelings of well-being, whereas the less well-off individuals appear to be more satisfied. In addition, a relative improvement of standard of living among the less well-off tends to produce a stronger feeling of satisfaction than does a comparable advance among the better-off. This paradox suggests that the wealthier individuals bear aspirations that cannot be satisfied in the conditions currently prevailing in the communities. Thus, in comparison to others, they appear to be more severe regarding the sectors of life where they have experienced better – i.e., areas over which they do not

have control but in which human action can have a decisive influence, such as housing conditions, job opportunities, educational offering, etc. The factors that escape the control of the more affluent individuals would thus appear to have a negative impact on their self-perceived well-being. That should be used as a hypothesis for further research.

6.6 Conclusion

During the last several decades, numerous factors have triggered transformations in the material and symbolic living conditions of the Canadian Arctic Inuit. The institutions and customary forms of Inuit social organization have been transformed by exogenous forces that have gradually penetrated the territory, such as the mechanisms of the market economy (including monetization and wage labour), political relations with the various levels of government in Canada, and cultural pluralism. Endogenous social dynamics have, in turn, developed in response to new requirements, aspirations and constraints, such as the need to redefine roles and statuses and to reendow a changing world with meaning (Damas, 2002; Édouard, 2008). Stratification can thus be viewed in terms of one of the perceptible consequences of these deep transformations.

This study has described the current stratification model of Canadian Arctic Inuit societies but has, at the same time, highlighted the limitations of income as a criterion for breakdown purposes. Our analyses have made it possible to go beyond merely describing wage distribution and to incorporate such differentiation criteria as access to and availability of social support, participation in community life, satisfaction in relation to several aspects of community life, and well-being. We have established that economic stratification has, all in all, a limited effect on the core aspects of life in the Arctic. Other processes would appear to interact with stratification to produce and materialize the cohesion required for the maintenance and development of local communities – for example, the strength of social networks, the presence of family, the principle of reciprocity, the gift system, etc. To a greater extent than income – or, more precisely, position in the economic stratification – these processes appear to provide more of a basis for explaining major phenomena that are currently affecting the

society under study, such as sustained demographic growth, out-migration of a growing proportion of the population from Inuit Nunangat, the preservation of a sense of identity, and the desire for self-government. The interrelationship of these processes could be examined as part of an in-depth study performed using data from the APS/SLiCA 2006.

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6.8 References

- Bernier, R. (1997). *The Dimensions of Wage Inequality among Aboriginal Peoples*. Ottawa: Statistics Canada, Analytical Studies Branch - Research Paper Series, No. 109.
- Chabot, M. (2004). *Standard of Living of Nunavimut. Considerations for Social Policy Development*. Paper presented at the Forums régionaux sur l'avenir du Québec, Kuujuaq, 17th June 2004.
- Condon, R.G. (1987). *Inuit Youth: Growth and Change in the Canadian Arctic*. London: Rutgers University Press, 252 pp.
- Damas, D. (2002). *Arctic Migrants/Arctic Villagers. The Transformation of Inuit Settlement in the Central Arctic*. Montreal and Kingston: McGill-Queen's University Press, 277 pp.
- Diener, E. & Suh, E.M. (2000). *Culture and Subjective Well-being*. Cambridge: MIT press.
- Drolet, M. (2005). Participation in Post-secondary Education in Canada: Has the Role of Parental Income and Education Changed over the 1990s? Ottawa: Analytical Studies Branch, *Statistics Canada catalogue no. 243*, February 2005. Available at <http://www.statcan.gc.ca/pub/11f0019m/11f0019m2005243-eng.pdf>
- Duhaime, G. (1991). Le pluriel de l'Arctique. Travail salarié et rapports sociaux en zone périphérique. *Sociologie et société*, 23(2): 113–128. <http://dx.doi.org/10.7202/001212ar>

Duhaime, G. (2007). Profil socioéconomique du Nunavik 2006, Québec City: Canada Research Chair. In *Comparative Aboriginal Conditions*, Université Laval, 65 pp. + appendices [Also published in English as Socio-economic Profile of Nunavik 2006.] Available at <http://www.chaireconditionautochtone.fss.ulaval.ca/documents/PDF/147.pdf>

Duru-Bellat, M. (2002). *Les inégalités sociales à l'école. Genèse et mythes*. Paris: Presses Universitaires de France, collection Éducation et formation.

Édouard, R. (2008), *Le développement inégal et la production des conditions de vie*. Le cas des Inuit de l'Arctique canadien, PhD Thesis, Québec City, Université Laval, 393 pp.

Forsé, M. (2001). L'évolution des inégalités des chances sociales et scolaires en France au cours des quinze dernières années. In Boudon, R., Bulle, N. and Cherkaoui, M., *École et société: Les paradoxes de la démocratie*. Paris: Presses Universitaires de France, (Collection "Sociologies").

Hobart, C. W. (1968). The Influence of the School on Acculturation with Special Reference to Greenland. In Gooderham, G.K.: *Proceedings of a Symposium on the Educational Process and Social Change in a Specialized Environmental Milieu*. Edmonton: Boreal Institute: 43–63.

Inuit Tapiriit Kanatami & INAC (2006). *Gains réalisés par les Inuit en matière de formation et de fréquentation scolaire, 1981–2001*.

Ottawa: INAC, Strategic Research and Analysis Directorate, Catalogue: R2-452/2006F. Last retrieved online on January 6, 2012 at http://publications.gc.ca/collections/collection_2007/inac-ainc/R2-452-2006F.pdf [Also published in English as Gains Made by Inuit in Formal Education and School Attendance, 1981–2001. Ottawa: INAC, Strategic Research and Analysis Directorate, Catalogue: R2-452/2006E. Available for viewing at: http://publications.gc.ca/collections/collection_2007/inac-ainc/R2-452-2006E.pdf.]

Klausner, S.K. & Foulks, E.F. (1982). *Eskimo capitalists: Oil, Alcohol and Social Change*. Montclair (NJ): Allenheld and Osmun.

Kruse, J., Poppel, B., Abryutina, L., Duhaime, G., Martin, S., Poppel, M., Kruse, M., Ward, E., Cochran, P. & Hanna, V. (2008). *Survey of Living Conditions in the Arctic, SLiCA*. In Møller, V., Hushka, D, and Michalos, A. C. (eds.), *Barometers of Quality of Life around the Globe*. Springer Social Indicators Research Series. Springer Verlag, pp. 107–134.

Maxim, P., White, J & Beavon, D. (2001). Dispersion and Polarization of Income among Indigenous and non-Indigenous Canadians. *Canadian Review of Sociology and Anthropology*, 38 (4), pp. 465–476. <http://dx.doi.org/10.1111/j.1755-618X.2001.tb00982.x>

Maxim, P. et al. (2000). *An Analysis of Wage and Income Inequality Dispersion and Polarization of Income among Aboriginal and Non Aboriginal Canadians*. PSC Discussion Papers Series: 14(9), Article 1. Last retrieved online on January 6, 2012 at: <http://ir.lib.uwo.ca/pscpapers/vol14/iss9/1>

Mitchell, M. (1996). *From Talking Chiefs to a Native Corporate Elite. The Birth of Class and Nationalism among Canadian Inuit*. Montreal: McGill-Queen's University Press.

- Morin, A., R. Édouard & G. Duhaime (2010). Beyond the Harsh. Objective and Subjective Living Conditions in Nunavut. *Polar Record*, 46(237): 97–112.
<http://dx.doi.org/10.1017/S0032247409990131>
- Poppel, B. (2015). Living Conditions and Perceived Quality of Life Among Indigenous Peoples in the Arctic. In: Glatzer, W., Camfield, L., Møller, V., Rojas, M. (eds.) *Global Handbook of Quality of Life - Exploration of Well-Being of Nations and Continents*. Springer Science+Business Media Dordrecht. pp. 715–747.
- Poppel, B. (ed.), Kruse, J., Broderstad, A. R., Eliassen, B.-M., Jensen, C., Martin, S., Melhus, M., Olsvig, S. & Westin, C. (2011). *Arctic living conditions. Survey of Living Conditions in the Arctic. Major SLiCA findings presented to the Arctic Council Ministerial meeting*. 6 pages. Nuuk.
- Statistics Canada (2001). *Enquête auprès des peuples autochtones de 2001 (Adultes de 15 ans et plus)*. Questionnaire [http://www.statcan.gc.ca/imdb-bmdi/instrument/3250_Q3_V1-fra.pdf] [Also published in English as Aboriginal Peoples Survey 2001 (Adults 15 and over). Questionnaire. Available at: http://www.statcan.gc.ca/imdb-bmdi/instrument/3250_Q3_V1-eng.pdf.]
- Statistics Canada (2003). *2001 Aboriginal Community Profiles*. Ottawa. Statistics Canada, [available for viewing online at: <http://www12.statcan.ca/english/Profil01/PlaceSearchForm1.cfm>.]
- Statistics Canada (2006). *Activités de récolte et bien-être de la collectivité dans l'Arctique canadien: constatations préliminaires de l'Enquête auprès des peuples autochtones 2001 – Enquête sur les conditions de vie dans l'Arctique*. Ottawa: Statistics Canada, no. 89-619-XIF [Also published in English as Harvesting and Community Well-being Among Inuit in the Canadian Arctic: Preliminary Findings from the 2001 Aboriginal Peoples Survey - Survey of Living Conditions in the Arctic, Ottawa: Statistics Canada, no. 89-619-XIE. Available at http://www.statcan.gc.ca/access_acces/archive.action?loc=/pub/89-619-x/89-619-x2006001-fra.pdf; and <http://www.statcan.gc.ca/pub/89-619-x/89-619-x2006001-eng.pdf>
- Statistics Canada (2008). *Peuples autochtones du Canada en 2006: Inuits, Métis et Premières nations, Recensement de 2006*. Ottawa: Statistics Canada, no. 97-558-XIF [Also published in English as Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census. Ottawa: Statistics Canada, no. 97-558-XIE. Available at: <http://www12.statcan.ca/census-recensement/2006/as-sa/97-558/pdf/97-558-XIF2006001.pdf>; and <http://www12.statcan.ca/census-recensement/2006/as-sa/97-558/pdf/97-558-XIE2006001.pdf>

7. Beyond the Harsh. Objective and Subjective Living Conditions in Nunavut⁸¹

Alexandre Morin, Roberson Edouard and Gérard Duhaime

7.1 Abstract

This chapter simultaneously analyses some objective and subjective living conditions in Nunavut (federal territory of Canada located in the Arctic) in 2001: population, housing, language, education, economic activities, health, social problems and geographic mobility. It examines original descriptive statistics from the Survey of living conditions in the Arctic and other sources. In some cases the results confirm the ordinary depressing picture of Inuit conditions, but in other cases statistics varies or even contradict such a picture. The overall findings show that despite objective difficult conditions, Nunavummiut living in Nunavut (primarily the elites and the lower class) are generally satisfied with their communities so that the majority wishes to remain there. Certain modern social institutions and individual rationalities are contributing to this situation: wage earning, market economy, utilitarian and consumption oriented approach,

⁸¹ Permission to reprint granted by the authors and the publisher, Cambridge University Press. Reprinted by: Morin, A., Edouard, R. and Duhaime, G. (2010) *Beyond the harsh. Objective and subjective living conditions in Nunavut*. Polar Record, Volume 46 (237) pp 97-112. Cambridge University Press. doi:10.1017/S0032247409990131 The original publication was received September 2007 and was published in 2010

democratic state based on law, formal knowledge, individualism and the capacity for self analysis.

The concepts of aspiration and mastery of one's own destiny seem accurate to explain the importance of education and employment in people's satisfaction, and their dissatisfaction about the housing situation. The existence of family and neighbourhood networks appears to explain both a certain residential stability and out migration, through the social support functions of these networks, in which sharing and exchanging food play a major role. In general, if most of Nunavummiut continue to live in the Arctic despite unfavourable conditions, it is not only because they are able to ensure their material existence there, but also because they attach a meaning to and believe, that is where they have the best chance to exert the highest degree of control over their personal and domestic reality.

7.2 Introduction

Living conditions are the circumstances that preserve life without necessarily engendering it, factors that shape the level and quality of life. The expression is generally used in relation to the circumstances of people's daily lives: jobs, family situation, housing, the local community, the overall standard of life... This approach first refers to the material conditions of existence. However, we postulate that subjective conditions are inherent in the material or objective conditions of existence. In our view, the notion incorporates not only the objective elements that shape the level of life, but also the subjective or evaluative aspects of life.

The objective living conditions that we are examining involve access to resources in the form of money, property, knowledge, mental and physical energy and social relations, since we know that this access enables individuals to exert some degree of control over their destiny. The subjective conditions that we are studying here involve the individual's evaluation of his or her material living conditions. Ultimately, human beings face two fundamental existential problems: they must resolve, for themselves and for the people they are responsible for, the omnipresent question of the material conditions of their existence, in focusing, for example, on their food, shelter, health and so on; but they must also give some meaning to their material

conditions, that is, they must judge these conditions in a way that inspires action and conduct aimed at, for example, accepting these conditions or aspiring to change them. From this viewpoint, it seems to us that objective and subjective living conditions develop reciprocally, and must be interpreted reciprocally, whether they are congruent or dissonant.

We suggest that such a perspective is relevant to an attempt to resolve an enigma posed by the study of Inuit communities. In 1994, our colleagues at Statistics Greenland conducted a major study of living conditions in employing the usual approach, which consisted in exclusively measuring objective conditions such as income, housing situation, etc. This survey took place when the government of Greenland decided to shut down some outlying villages that were almost exclusively oriented toward hunting and fishing activities, and therefore to stop providing some basic services such as supplying the general store or garbage collection. It confirmed that, in these villages, material conditions were well below the averages for the island as a whole. Paradoxically, it also showed that the residents did not want to move, and that they were instead determined to remain in their villages. The government of Greenland wished to understand the reasons behind this phenomenon, which was clearly not explained by the study of material conditions alone. This event led to the emergence of the *Survey of Living Conditions in the Arctic* (SLiCA) project, involving a small team of researchers from Greenland, United States and Canada. Since the beginning of the project, the Canadian Northern regions on the one hand, and the situation in Greenland and Alaska on the other hand, showed great similarities in terms of material living conditions. However, unlike Greenlandic and Alaskans, a low but increasing out-migration from the Canadian North to the southern part of the country occurred among the Inuit, so that in 2001, a total of nearly 14% of them were living primarily in urban or rural centers, while in 2006, they represented 22% of the total Inuit population (STC 2008).

As we have shared with our colleagues from Greenland and Alaska the same basic research question, we will not pretend any especial findings explaining out-migration itself. A research protocol about urban Inuit would have been very different and would have driven our thoughts towards other directions. So, questions like why and how did the apparent acceleration of Inuit out-migration occur will not be directly addressed in

this paper. Our research keeps asking primarily the question about the majority who stays in the Arctic: What are the social forces that make them stay, in spite of harsh material living conditions? If we find why do they stay, maybe we will be able to explain why some of them have left.

For the purpose of this paper, we have decided to focus exclusively on Inuit living in the *Inuit Nunaat* (Inuit homeland), which encompasses the four Inuit regions of Canada and where the sedentarization process was consolidated through the building of low-cost housing and municipal, educational and health infrastructures in villages which are now permanent. This sedentarization strengthened the prevalence of modernity and the increased implementation of its social institutions and modes of social relations, such as market logic, welfare state and cultural pluralism. Although they still exist and remain active, the earlier social institutions and social mechanisms (hunting, fishing and gathering activities, social hierarchization, nomadism, mythological and shamanistic beliefs, etc.) that underlay the material survival and social cohesion of Northerners were relatively marginalized.

Inuit objective living conditions are statistically below Canadian standards: household income, employment rate, housing conditions, education and public health levels are all below national averages (STC 2005a, b, c, d; CMHC and ITK 2001). On the social level, some problems are apparently more frequent among the Inuit than elsewhere in Canada, such as school dropout (Schofield 1998), juvenile delinquency (Condon 1987), child abuse and spousal abuse (Graburn 1987; Durst 1991; Zellerer 1989), drug abuse and criminality (Wood 1997), and suicide (Kirmayer *et al.* 1993; Dufour 1994). The same types of discrepancies are found in the areas of physical (MSSSN 2004) and mental health (Kral *et al.* 2003).

Nevertheless, contemporary Inuit communities seem to be engaged in a substantial development process. They are not only demonstrating their will to survive but are also in a process of demographic, economic, political and cultural expansion, as shown for example in the net population growth since sedentarization, the investment in economic development and the continuing demands for self-government (Adams 2002; Bone 1992; Dickerson 1992). After 50 years of rapid change, most of the Inuit of the Canadian Arctic still live on their ancestral lands and see themselves as a permanent distinct social group. So, how can we interpret the coinci-

dence of certain unfavourable living conditions and a growing out-migration, with the persistence and even the development of Inuit communities? What fundamental processes underlie this situation?

This study strives to reach the two following targets: the first is to profile certain objective and subjective living conditions among the Inuit of Nunavut; and the second is to analyze interrelations between these objective and subjective living conditions so as to improve our understanding of contemporary Inuit communities. Information about population, housing, language, education, economic activities, health, social problems and geographic mobility has been analyzed. Our study first pinpoints the main characteristics of Nunavummiut and then highlights areas of consonance and dissonance. It ends with a discussion which attempts to bring out the coherence of the overall findings in suggesting a sociological interpretation of the configuration of Nunavummiut living conditions.

7.3 Methods

Descriptive statistics analysis is the method chosen to analyze the living conditions of the Inuit of Nunavut in 2001.

7.3.1 *The Survey of Living Conditions in the Arctic*

A number of sources are used here, with the main one resulting from the *Survey of Living Conditions in the Arctic* (SLiCA). SLiCA is a large-scale international statistical survey on living conditions, based on a probability sample and administered to the Inuit of Alaska, the Canadian North and Greenland, the Saami of Norway, Sweden and the Federation of Russia, and the Chukchi of the Russian Far East (Andersen and Poppel 2002).⁸²

⁸² Launched in 1997, the SLiCA research program includes a national and an international facet. On the national level, SLiCA-Canada involves our team of researchers at the Canada Research Chair on Comparative Aboriginal Condition (Université Laval) and the University of Northern British Columbia, Statistics Canada and the national and regional Canadian Inuit organizations. On the international level, other researchers head the research program, particularly in Alaska, Greenland and Chukotka in Russia (Andersen and Poppel 2002).

SLiCA essentially completes the analysis of objective living conditions such as income, housing and hunting activities with an analysis of subjective living conditions such as people's perceptions about living conditions, social satisfaction, feeling of safety and psychological distress. In several ways, SLiCA is an innovative research approach. It is in fact the first probability survey of this size, administered on this scale, that so finely measures the objective living conditions of the Inuit; that integrates into these measures customary activities such as hunting and fishing (these dimensions having until this point been studied separately from other social realities, or studied for more limited geographical areas, generally communities); and, finally, that includes the populations' own points of view about their situation, that is, subjective living conditions.

The data derived from the SLiCA survey deal exclusively here with the Canadian facet of the program. In Canada, the survey was designed by a steering committee consisting of representatives of regional Inuit organizations (Inuvialuit Regional Corporation, Nunavut Tunngavik Incorporated, Makivik Corporation, Labrador Inuit Association), the national Inuit association (Inuit Tapiriit Kanatami) and Université Laval.⁸³ The questionnaire thus created was integrated into the Aboriginal Peoples Survey 2001, administered by Statistics Canada.

7.3.2 Case study: individuals and households in Nunavut in 2001

This paper focuses on the case of Nunavut for two reasons. First, it is the demographically largest Canadian Inuit region. Nunavut alone contains about half of the Canadian Inuit population (STC 2003b: 8). Next, aside from the data associated with SLiCA, Nunavut represents a statistical geographic unit for which data are available from various sources and for a number of dimensions – especially from Statistics Canada – as Nunavut

⁸³ This text is written within the framework of SLiCA-Canada, which has already been the subject of several publications, including one about the statistical measurement of Aboriginal households as an economic unit (Usher, Duhaime and Searles 2003) and another about the construction of statistical indicators based on the theoretical concepts of social cohesion and living conditions (Duhaime *et al.* 2004).

has since 1999 been one of the three official territories of Canada and consequently a statistical area classification component. Also, when Statistics Canada publishes data on Aboriginal peoples as a whole, this essentially means the Inuit in the case of Nunavut, which is different in Labrador or among the Inuvialuit, where the statistics also include other Aboriginal groups with sizeable populations. So, given the large proportion of Inuit and the readily available statistics, Nunavut proves to be especially well suited to an exploratory study of living conditions among Canadian Inuit, and one that could serve as a basis for other analyses seeking to more closely examine certain dimensions or to profile other Inuit regions.

Adults aged 15 and older and households represent our units of analysis, in keeping with the data corpuses used. It is from this perspective that we hope to better understand Inuit living conditions, that is, what Nunavummiut individuals and households do and think about their living conditions.

7.3.3 Statistical data sources

Since the SLiCA survey was developed in Canada in connection with the *Aboriginal Peoples Survey 2001* (APS) and the *2001 Census of Canada*, some variables initially designed for SLiCA were instead measured during these surveys in order to avoid redundancies between the surveys and to lessen the respondent's burden. Most of the data analyzed here are thus taken from these three surveys, all administered in 2001.

The *Survey of Living Conditions in the Arctic* (SLiCA) is a survey administered on the international circumpolar scale in order to collect, analyze and compare data on the living conditions of the Inuit, Inupiat and Saami. Its aim is to better understand household and harvesting activities, personal well-being, satisfaction regarding living conditions, and social participation. In Canada, it concerns the four Inuit regions of Labrador, Nunavik (Québec Arctic), Nunavut and the Inuvialuit region (the northwest portion of the Northwest Territories).

The *Aboriginal Peoples Survey 2001* (APS) covers other variables that are complementary to the analytical dimensions mentioned above: education, language, labour activities, income, health, communications technology, geographic mobility and housing (STC 2003a). Stemming from this survey is the data bank known as the *2001 Census Aboriginal Population Profiles* (STC

2005b), from which we derived most of the figures analyzed. The APS-SLiCA survey is post-censal in nature: it was administered to a probability sample formed from the Census.

The *2001 Census of Canada* focuses on certain basic analytical dimensions: population, daily and household activities, geographic mobility, education, labour market, income, housing, etc. In principle, it contains information about all residents.⁸⁴ Since the present text concerns the Inuit, whereas the census data used here concern both Inuit and non-Aboriginal populations (for objective living conditions only), these data should be interpreted carefully. The behaviours of these social groups may differ, and the appropriate cautions are noted where applicable. This does not however pose any major methodological problem, as the Inuit comprise 85% of the Nunavut census population. Resulting from the Census is the data bank *2001 Community Profiles* (STC 2005a), from which we derived the statistics presented here.

Other data banks were used to complete the analyses performed based on data connected with the SLiCA research program. The statistics assembled here come from about 50 tables overall dispersed through the scientific literature. Table 1 shows the main statistical data sources used here regarding the living conditions of the Canadian Inuit.

⁸⁴ Another advantage of the Census is that it gives us an opportunity to compare the Aboriginal situation to that of Canadian citizens as a whole. When used, such a comparative analysis is not intended here to show that one situation is subjectively better than another; rather, it provides another reference point from which to consider and better understand the Inuit situation.

Table 1. Main statistics on the living conditions of the Canadian Inuit

Data bank or document	Data source	Sample	Ethnicity	Symbol
2001 Community Profiles (STC 2005a)	Census of Canada	Population	Aboriginal and non-Aboriginal	I
2001 Census Aboriginal Population Profiles (STC 2005b)	Census of Canada	Population	Aboriginal	II
2001 Aboriginal Peoples Survey Community Profiles (STC 2005c) ⁸⁵	Aboriginal Peoples Survey 2001 (APS)	Probability sample	Aboriginal	III
Canadian Statistics (STC 2005d)	Census of Canada and other Statistics Canada sources	Population and probability sample	Aboriginal and non-Aboriginal	IV
Rapport du Nunavut sur les indicateurs comparables de la santé 2004 (Nunavut Report on Comparable Health Indicators) (MSSSN 2004)	Canadian Community Health Survey (CCHS) (primarily)	Probability sample	Aboriginal and non-Aboriginal	V

Unless otherwise indicated, the statistics referred to in this study concern adults aged 15 and older, of Inuit identity and living in Nunavut in 2001. Otherwise, indications are given so as to adequately define the data parameters (population, year, region, etc.).

7.3.4 Methodological and empirical contribution

In the field of Inuit research, the APS-SLiCA data are unique in several regards. As mentioned above, they combine the statistical study of the objective and subjective conditions of the Inuit, whereas these realities are generally studied separately. They also allow us to study the informal economy (hunting, fishing, etc.), which is not covered by the Statistics Canada System of National Economic Accounts. Several of the variables contained in the APS-SLiCA had not previously been the focus of in-depth study or of a quantitative approach. We also had access to a significant portion of the data through a personalized request made directly to Statistics Canada; these

⁸⁵ For data from the Aboriginal Peoples Survey 2001 (APS) that were the focus of a request made directly to Statistics Canada, some residual categories have been excluded from the statistical compilations: “don’t know,” “refused to answer,” “not stated,” “invalid” and “does not apply.”

data have never been published elsewhere. Nor had a questionnaire-type survey ever before been administered to the Inuit of Canada – and of the circumpolar region – with a probability sample of this size. The post-censal Canada-wide survey covered a systematic random sample of 117,241 respondents identified as Aboriginal people. The APS-SLiCA data bank is exclusively restricted to the major Inuit regions of Canada: that is, to a representative sample of 10,775 Inuit randomly drawn from among the 53 communities of Nunavut, Nunavik, Labrador and the Inuvialuit region, and averaging an 83% response rate. All of the quantitative estimates and analyses conducted at the individual or household level use a weighting factor that makes it possible to estimate sampling errors. This factor does not however allow us to obtain reliable estimates of sampling variance. In order to assess the quality of the data and to be able to use the data unrestrictedly, the coefficient of variation, which measures sampling errors, must be under 16.6, for a confidence interval of 95%; and this is the case for the data analyzed in this text. The APS-SLiCA thus allows for very fine statistical generalizations with an unprecedented external validity. Finally, although the dissemination of detailed statistics on basic dimensions such as population, education and the economy has long been a common practice for Canada as a whole, it is in many cases exceptional among the Inuit. The analyses that follow greatly take advantage of this major scientific innovation.

7.4 Results: Objective and subjective living conditions

7.4.1 *Population, housing and language*

Population

In 2001, Nunavut had 22,560 inhabitants of Inuit identity, representing 85% of the region's total population (Aboriginal and non-Aboriginal).¹¹ The Aboriginal and non-Aboriginal population of Nunavut had shown an 8.1% increase in relation to 1996,¹¹ and such growth was more strongly attributable to the Inuit than to the non-Aboriginal population. The phenomenon is also largely attributable to the significant increase of births in the population. According to a Statistics Canada population projection

scenario extending to 2017, the Canadian Inuit as a whole will show the fastest growth rate among Aboriginal peoples in Canada, that is, about 2.3%, in taking into account in particular a birth rate more than 1.5 times greater than the overall Canadian rate (STC 2005g: 9–10). Despite this, the overall growth of the Canadian Inuit population has slowed, and the population's fertility rate has fallen from 4 children per woman from 1986 to 1991 to just over 3 children from 1996 to 2001 (STC 2005e: 19).

This population growth prompted by high fertility has produced a very young population in Nunavut, where half of the Inuit population is under 19 years of age.¹¹ An aging trend is however projected for the Canadian Inuit population overall, whose median age is expected to rise from 21 in 2001 to 24 in 2017 (STC 2005e: 9).

Nunavut's population⁸⁶ is unequally distributed over a vast territory with a land area of more than 1,900,000 km² and a population density of 0.01 persons per km².¹¹ These data mask the fact that the Inuit of Nunavut are grouped together into 27 agglomerations, 7 of which have a population of less than 500 inhabitants, while 10 have between 500 and 1,000 and another 10 have more than 1,000 inhabitants. This is the case for the capital, Iqaluit, with a population of over 5,000 inhabitants. The ten largest agglomerations alone contain almost 70% of the population. Overall, in terms of population distribution, we see a low regional density but considerable density at the local level, which proves to be even more evident at the household level.

Housing

In Nunavut, there are 5,665 dwellings inhabited by Inuit residents, with an average of 4 persons per dwelling.¹¹ Nearly three quarters of this population rent their housing, with private property ownership being the case for a minority of people.¹¹ Just over one half of the Inuit population aged 15 and older (54%) also live in overcrowded dwellings according to the Statistics Canada definition, that is, dwellings with more than one person per room. Most of these people live in housing where there are between 1 and

⁸⁶ Some 94% of Nunavummiut live in a census family, that is, a household consisting of a couple with or without children, or a single-parent family.¹¹

1.5 persons per room. In light of the high Inuit population growth, the problem of overcrowded housing is likely to persist if not enough new rental units are built.

Despite this overcrowding, the available housing is equipped with basic amenities. Almost all Inuit (99%) have at least hot and cold running water, a flush toilet, and a septic tank or sewage system. However, only 87% have a home telephone.^{III} Almost all have access to electricity.

In this context, housing appears to be one of the most problematic issues in the view of Nunavummiut. First, some of them say that, in general, the water is not safe for drinking (13%), or at least at some times of the year (21%).^{III} More than one fifth of adults (21.6%) feel that their housing needs major repairs.^{II, 87} This results in one of the lowest proportions of people satisfied with this condition, compared with other conditions: only 45.8% of the Inuit of Nunavut are satisfied with the quality of the housing in their community, whereas 75.8% are satisfied with their rent or house payments.^{III}

So it would appear that certain basic material conditions are ensured in Nunavut – from an objective point of view – or, at least, according to the measures of central tendency mentioned. More detailed analyses might however show some subgroups to be more or less disadvantaged. Beyond this minimum level of comfort, the overcrowded housing problem is an important issue, and we suggest that it may affect other living conditions (health, education, etc.).

Language

Inuktitut, the Aboriginal language of the Inuit, is showing signs of vitality: for a large proportion of Nunavummiut it is the language first learned and still understood (83.8%).^{II} But this vitality varies, depending on the context in which Inuktitut is used. Some 71% of individuals aged 15 and older use their main Aboriginal language all the time or most of the time at home, whereas this percentage drops to 30% at school.^{III} Most Nu-

⁸⁷ So-called major repairs are structural repairs to the walls, floors, ceilings or foundations, installation of a new roof, replacement of deteriorated external cladding and the upgrading or replacement of plumbing and septic tanks.

navummiut also speak English. In fact, when we look at all the Aboriginal and non-Aboriginal residents of Nunavut, we find that 83% of these individuals speak English.^{iv} In this same population, English predominates at work in 72.3% of cases:^{iv} in public administration offices, for example. In Iqaluit, the territorial capital, bilingualism (English and Inuktitut) is prevalent among Inuit speakers under 50 years of age (Dorais and Sammons 2002). This diglossia is apparently manifested in different ways in other communities in the region (especially smaller communities), where Inuktitut seems to play a more important role when compared with the situation found in Iqaluit, where the frequency and intensity of contacts with non-Aboriginal people apparently influence this situation. The Inuit are thus immersed in a linguistic environment where their vernacular language is no longer the only means of communication, especially in institutional settings, and in the formal education system.

On the subjective level, most Nunavummiut feel that they have access to services in their main Aboriginal language (between 70% and 92%, depending on the particular case: health, legal, social services, etc.).ⁱⁱⁱ If Inuktitut is not always used in the Inuit's daily activities – as we described above – the Inuit show a strong emotional attachment to their language, since the vast majority (87%) of the Inuit of Nunavut say that it is “very important” to keep, learn or re-learn an Aboriginal language.ⁱⁱⁱ In Iqaluit, Inuktitut seems to be used particularly to address young children and elders, and to discuss subjects that are especially valued in Inuit traditions (Dorais and Sammons 2002). So we find a discrepancy between the utilitarian and symbolic functions of the language, since the majority of Nunavummiut cherish their language more than they speak it.

7.4.2 Education

Almost all children aged 6 to 14 attend school (97%).ⁱⁱⁱ As well, 18.6% of Nunavummiut aged 15 and older attend school full time (2.6% part time): this includes both men and women and especially individuals aged 15 to 24.ⁱⁱ But, in general, the Inuit of Canada are less educated than the Canadian average.

According to the analysis of the highest level of education reached for the Inuit population aged 25 and older, half of the individuals in this

population (51.7%) do not have a high school graduation certificate, and 27.8% have a trades, college or university certificate or diploma (below bachelor level), whereas this proportion drops to 1.4% for those who have obtained a university degree at the bachelor or higher level.^{II} When we look at all of the adult population, 11% of these individuals have no formal education.^{III}

Some 73.3% of Nunavummiut claim to be satisfied with the quality of the education offered in schools. But there is still a high dropout rate. The reasons most often given for abandoning elementary and secondary studies are the following: pregnancy / taking care of children (13.5%), boredom (12.5%), wanted to work (9.6%) or had to work (9.3%), to help at home (9%), no school available/accessible (8.1%), wanted to go out on the land (4.8%), and problems at home (4.6%).^{III, 88} Most of the reasons that prompt individuals to leave school thus go beyond the characteristics of school itself and seem to be instead related to other living conditions.

7.4.3 *Economic activities*

Wage-earning activities

For most Nunavummiut adults, wage work is their principal activity or one of their occupations. Nearly one third (29.8%) of Inuit adults have a part-time job and nearly one quarter (22.5%) work full time throughout the year.^{II} The labour force participation rate⁸⁹ in Nunavut is 61.8%.^{II} For the Inuit, we have to take into account here the fact of the pressure brought to bear on the population of working age by the large proportion of children (under 15 years of age), as shown by the dependency ratio for all Canadian Inuit: there are 71 persons not of working age for every 100 individuals of working age (STC 2005e: 37).

⁸⁸ For any one respondent, there might be more than one reason for abandoning their elementary or secondary studies, and consequently multiple responses to these questions.

⁸⁹ The labour force participation rate is the number of persons in the working population (doing wage work or unpaid family work or unemployed) relative to the number of individuals aged 15 and older (except for persons living in an institution: a prison, seniors' residence, hospital, etc.).

The vast majority of the experienced labour force⁹⁰ in Nunavut earns a living or recently earned a living in the tertiary sector. Some 84.9% of these individuals work in this sector. Healthcare and teaching, which are part of the tertiary sector, occupy 21.7% of the experienced Inuit labour force in the region, followed by wholesale and retail trade (14.6%). Activities in the remainder of the tertiary sector include finance and real estate, commercial and other services, especially in the public administration. A number of large service-sector industries are thus associated with the governmental and para-governmental sectors. For the rest, a smaller but nonetheless significant portion of the experienced labour force work or have worked in natural resource-related industries (6.2%), and in manufacturing and construction (9%). Job opportunities moreover obtain only a low level of satisfaction (36.6%), but 80.5% of Nunavummiut were satisfied with their last job held.^{III}

For Nunavummiut, the labour market is apparently characterized, in absolute terms, by an insufficient supply of jobs relative to the demand. The Inuit unemployment rate⁹¹ (22.9%) in the territory is three times higher than for the Canadian population overall, and the employment rate⁹² is considerably lower (46.7%). This inadequacy of the supply of jobs relative to labour force availability is seen despite a Nunavummiut labour force participation rate that is only a few percentage points below the Canadian rate.^{I, II} This means that the Inuit of Nunavut are almost as active as Canadians overall (in Statistics Canada's sense), but that their efforts are apparently less often rewarded with a job, which is partly explained by a situation of structural unemployment⁹³ due to a mismatch between the available jobs

⁹⁰ The experienced labour force consists of individuals aged 15 and older who are, in general, working or unemployed and whose last work was paid employment or self-employment in a given economic sector.

⁹¹ The unemployment rate is the number of unemployed persons relative to the labour force. Unemployed persons are persons who are available for work and were temporarily laid off or are looking for work or expect to be employed soon.

⁹² The employment rate is the number of employed persons relative to the population aged 15 and older.

⁹³ The concept of structural unemployment refers to inactivity on the part of persons who want to work as a result of a qualitative mismatch between the supply of and demand for work, between the positions available and workers' qualifications.

and the qualifications of the labour force, or, more simply, by the lack of available jobs.

People's perception appears to correspond to this analysis: 28% of Nunavummiut say that they are unemployed because they cannot find a full-time job. Others however are not available for work because they are attending school (22%) or because they have family responsibilities (19%). Health problems, a lack of qualifications and the fact of being retired also explain this phenomenon, but to a lesser extent.^{III} These factors show that the Inuit's likelihood of practising remunerated activities seems especially closely related to the population structure and to individuals' family situations. We will see further on that this situation is apparently not explained by economic considerations alone.

The labour market imbalances affect the subjective conditions of the Inuit. Unemployment is in fact the number one issue for Nunavummiut: 90.2% of the population consider it like a community-wide problem. This issue ranks quite far ahead of other issues taken into account by the APS, including suicide, violence, and drug and alcohol abuse, which are pointed out as problems by about three quarters of the population.

Non-remunerated activities

The economic situation of the Inuit cannot be fully depicted without taking into account certain harvesting activities that provide a significant quantity of goods and services to Nunavummiut households: hunting, fishing, trapping and related activities.

These activities are at times remunerated – through the sale of hunting products, for example. But although they are generally not remunerated, such activities represent a substantial portion of the Inuit non-monetary economy, as the foods produced are usually consumed by hunters and their families or given to others; the mediation of the market is thus supplemented by that of social networks involving relatives, neighbours, etc.

More than half of Nunavummiut state that they have hunted (58%), fished (67%) or gathered wild plants (51%) during the last twelve months prior to the APS-2001.^{III} The Inuit overall hunt sporadically; a minority of individuals spends most of their time hunting and makes it their trade. This is the case especially because of wage-earning: in metaphorical terms, we can say that wage-earning is both the enemy and the ally of the hunter. The more or less fixed schedule of wage work does not allow indi-

viduals to hunt whenever they feel like it. Weekends and holidays are for some people the only times that they can practise harvesting activities. On the other hand, wage work is a necessary source of income for the purchase of manufactured hunting equipment (firearms, motorized vehicles, etc.) (Duhaime, Chabot and Fréchette 1998: 22–23).

Almost all Inuit in Nunavut say that they practise harvesting activities to feed themselves.^{III} Non-monetary networks for the supply of country foods – although in quantitative terms less important than formal import networks (Duhaime *et al.* 2002) – provide a large portion of the meat eaten by Inuit populations living in the Arctic. The portion of proteins derived from the game and fish consumed is said to vary from 59% to 80% depending on the person's age and the region where the individual is found in the Canadian North (Lawn and Lagner 1994a, 1994b, quoted by Duhaime, Chabot and Fréchette 1998: 37). Imported meat is usually frozen, whereas local stocks offer a supply of fresh products. Overall, harvesting activities still have considerable economic importance, even though the production from these activities does not follow commercial circuits. A large proportion of Nunavummiut (91.9%) say that they are satisfied with the availability of foods derived from these activities.

Income

Inuit households in Nunavut have a median income of USD 38,348, which is almost 20% below than of Canadian households overall.^{I, II} This statistic should be interpreted in keeping in mind that the size of Inuit households is larger than that of Canadian households in general; so that even if the median income of Inuit households did come close to the median income of Canadian households, the Inuit have to support more people. Overall, per capita income is lower for the Inuit.

Most Inuit in Nunavut – that is, more than 2 out of 3 (68%) and in comparable proportions for both men and women^{II} – earn employment income. As most of them have a job, it is not surprising to find that 75.8% of their total income comes from wage work (earnings or employment income). The case is generally very similar for Canadians overall.^{I, II}

On the other hand, in terms of government transfer payments, Nunavut is very different from the rest of Canada: in 2000, as a percentage of income, transfer payments in Nunavut (20.5%) were worth nearly double those in the rest of the country.^{I, II} In this regard, from 2000 to 2004, Nu-

navut had an average social assistance rate⁹⁴ of 27.1%. This rate corresponds to 2,860 households, or an average of 7,420 beneficiaries, including children here, of which, as we know, there are a great many in Nunavut. Although the various provincial or territorial social assistance programs are not directly comparable among themselves, especially due to differences in the eligibility criteria and benefits paid, the fact remains that the proportion of Nunavummiut social assistance beneficiaries is four times higher than in the rest of the country (Morin 2006: 91–79). What does this finding mean, since we have seen the concomitant importance of income from wage work? It apparently shows a socioeconomic gap between a large number of households with income from wage work that is very likely higher than the median income, and a large number of households that cannot obtain enough income from wage work to meet their needs, or where no member of the household has been able to find a job, so that they have to turn to public assistance programs. To validate this hypothesis, one would need to do a more in-depth analysis. As well, the importance of transfer payments is intensified by the large number of young people in Nunavut, making the households in question eligible for child care benefits.

However, these data do not yet reflect income generated from the sale of products derived from harvesting activities. Thanks to SLiCA's methodological and empirical contribution, we can estimate the total amount of money earned by all members of a household from the sale of fish, meat, carvings, leather clothing, furs, crafts, etc. In Nunavut in 2000, just under 2 Inuit households out of 3 (65.6%) stated that they did not earn any income (or incur any loss) from these activities. Such activities provide between USD 1 and USD 2,499 to 17.4% of Nunavummiut. Others, less numerous, earn more: 4.7% earn between USD 2,500 and USD 9,999, while 4.6% of the population earn USD 10,000 or more from these activities.

In sum, the majority of Inuit in Nunavut work to earn the major portion of their income. Government transfer payments and income from

⁹⁴ The social assistance rate represents the proportion of adult and child beneficiaries of a government social assistance program within the total population aged 0 to 64.

harvesting activities represent supplemental income for most people and are not the only income sources used to entirely maintain their lifestyle. Let us now look more closely at how monetary and non-monetary activities influence the living standards of Nunavummiut.

7.4.4 Health and social problems

The Nunavummiut's state of health has improved since the middle of the 20th century, as shown by, among other things, the increase in life expectancy and the decline in general, infant and maternal mortality particularly due to infectious and parasitic diseases. The betterment of material living conditions would seem to have a great deal to do with this: the dissemination of health services, an improved housing situation, etc. Nevertheless, the Inuit are facing physical and mental health challenges. And the incidence of some social problems has apparently increased since the middle of the 20th century, to the point that they have today become major issues (Bjerregaard and Young 1998).

Health⁹⁵

The Inuit life span is on average about a decade shorter than that of Canadians overall. In Nunavut, the life expectancy at birth is 68.7 years,⁹⁶ all ethnicities combined, and, as in the rest of the country, women live longer than men.^v

Despite a slight decrease during the 1990s, the infant mortality rate⁹⁷ in Nunavut (4.4%) is at least three times higher than that in Canada overall. Nunavut also recorded about 9% of low birth weights⁹⁸ in 2004, that is, a little more than double the Canadian average (4%).^v

⁹⁵ Unless otherwise indicated, the data on health in Nunavut concern all the inhabitants of the territory, Aboriginal and non-Aboriginal, for the year 2001. These are data from probability samples compiled by the Nunavut Department of Health and Social Services using various Statistics Canada data sources (MSSSN 2004, indicated here by the Roman numeral V).

⁹⁶ Life expectancy is shown here using the average data for 1999 to 2001. It represents the average life span calculated at birth, based on the mortality conditions for a given year.

⁹⁷ Infant mortality refers to the death of infants weighing 500 grams or more, per 1,000 inhabitants.

⁹⁸ The low birth weight indicator considers infants weighing 500 to 2,500 grams.

The Nunavummiut scores regarding life expectancy and infant mortality suggest that there are certain health problems, which is confirmed in greater detail by an analysis of other physical and mental health indicators.

Certain pathologies and poor health-related lifestyles are more frequent in Nunavut than in the rest of Canada. This is the case for lung cancer (especially among women, for whom an overall rising trend is seen), colorectal cancer (particularly high in 2001), accidental injuries (especially for men), tuberculosis, and tobacco use. The opposite is found for mortality due to acute myocardial infarctus. Despite the uncertain reliability of the statistics, it appears that a slightly higher percentage of individuals have diabetes in Nunavut compared with the national level. But it is clear that there is no shortage of diabetes-related risk factors in Nunavut: overweight and obesity (28% and 20% of individuals aged 18 and older), as well as physical inactivity and smoking (60% and 65% of individuals aged 12 and older),⁹⁹ are frequent in the territory.

Nearly a third of the Inuit of Nunavut suffer from one or several chronic illnesses diagnosed by a professional (diabetes, cancer, etc.) and a fifth of them have high blood pressure, heart disease or stroke-related disorders.¹⁰⁰ Significant levels of respiratory problems (6.6%: asthma, chronic bronchitis, emphysema) and communicable diseases (4.8%: hepatitis, tuberculosis or HIV/AIDS) are also found.¹⁰¹

In regard to mental health, 67.5% of Aboriginal and non-Aboriginal people in Nunavut say that they experience “light” stress in their daily lives,¹⁰⁰ and slightly more so for men than for women. On the other hand, more women (21.2%) than men (15.6%) say that they experience “fairly intense” stress (the highest level).¹⁰¹ It is interesting that the incidence of this intense stress is a little lower in Nunavut than in Canada overall. A similar

⁹⁹ The data on diabetes-related risk factors are for the year 2003.

¹⁰⁰ The data on stress in daily life concern the population aged 18 and older living at home, in 2003. These data are taken from Statistics Canada’s Canadian Community Health Survey (STC 2004: 12).

¹⁰¹ The data on stress considered to be “fairly intense” in Nunavut should be interpreted with caution, given that these data are statistically valid, but to a lesser degree than with a higher coefficient of variation (sampling variability).

phenomenon is seen in the case of psychological distress,¹⁰² as manifested by depression or anxiety (Desmarais *et al.* 2000: 107). In Nunavut, 6.5% of Inuit adults present a high risk of psychological distress, which is several percentage points below the levels seen in Western European countries¹⁰³ (EORG 2003: 5). In examining the findings for all the Inuit of the Canadian Arctic, we see that approximately 60% of the persons presenting a high risk of psychological distress are women. Moreover, the incidence of this phenomenon apparently does not vary substantially from one age group to another.¹⁰⁴ This psycho-individual type of malaise is sometimes linked to various social problems seen on the societal level.

Despite this, most Aboriginal adults in Nunavut subjectively feel that their health is good (32.6%), very good or excellent (57.1%). And a large majority of Nunavummiut (70.4%) says that they are satisfied with the availability of health services.¹⁰⁵

Social problems

In general, the statistics indicate that the Inuit of Nunavut are proportionately more strongly affected by certain social problems such as suicide, alcohol abuse and criminality.

The suicide rate in Nunavut is 80.2 per 100,000 inhabitants, which is seven times higher than in the rest of Canada. The rate is considerably higher for men (131.9) than for women (24.6).¹⁰⁴ The potential years of life lost (PYLL) due to suicide have risen to more than 4,000 per 100,000 inhabitants under 75 years of age – which is one hundred times the level for Canada as a whole.¹⁰⁵

¹⁰² The psychological distress indicator measures the extent of the presence of certain symptoms associated with depression and anxiety (feelings of nervousness, discouragement and insurmountable despair) and certain opposing manifestations (feelings of calm, peacefulness and happiness). Beyond a given risk threshold, it only indicates the possible existence of a mental health problem, without specifying what that problem might be (Duhaime and Morin 2004).

¹⁰³ We refer here to the psychological distress indicator in Europe since, in our research in the scientific literature, we were unable to find equivalent data for Canada as a whole.

¹⁰⁴ The results presented here on suicide are for the year 2001 (STC 2005f).

¹⁰⁵ The results presented here on potential years of life lost (PYLL) due to suicide represent the average data for the period 1999-2001.

Also, more than two thirds of the population (70.3%) drink alcohol on average once a month or less. At first glance, the situation does not seem problematic, but this is invalidated by an analysis of so-called high alcohol consumption (more than five drinks per occasion), a level that is medically recognized to increase the risks of alcohol-related problems. From this point of view, 50.8% of drinkers show a high consumption^{III} and 20.3% of these say that they adopt this risk behaviour more than 2 to 3 times a month.^{III} These results are higher than the equivalent findings for Canada overall.

The crime rate in Nunavut is 38,493.5 offences per 100,000 inhabitants (including Aboriginal and non-Aboriginal people, in 2004), a level that is 4.4 times higher than in the country as whole. Nearly all of these crimes (95.3%) are *Criminal Code* offences (except for traffic offences). In regard to the criminal offences, we find a significant proportion of crimes of violence¹⁰⁶ (20.5%), especially assaults, followed by property-related crimes (18.1%), especially breaking and entering.¹⁰⁷ Since the early 2000s, Nunavut has had between 2 and 4 murders annually.^{IV} Adults commit far more assaults, sexual assaults and drug-related offences than do young people, as a proportion of the population; adults commit most of the murders, frauds and traffic offences (dangerous driving, impaired driving, and other offences). On the other hand, young people commit proportionately far more property-related offences than do adults (sexual offences other than assault, breaking and entering, motor vehicle theft, possession of stolen goods). Proportionately speaking, violent crimes are considerably more frequent in Nunavut than in Canada overall (6.8 times more murders, 10.7 times more attempted murders and 12.8 times more sexual assaults), whereas more aggravated thefts are committed in Canada than in Nunavut (an incidence 8.5 times higher in Canada).¹⁰⁸

The prevalence of social problems is a concern for many Nunavummiut; drug abuse is identified as such by 77.8% of the adult popula-

¹⁰⁶ Crimes of violence include murder, attempted murder, assault, sexual assault and other sexual offences, aggravated theft and other violent crimes.

¹⁰⁷ Breaking and entering includes motor vehicle theft, theft, possession of stolen goods, and fraud.

¹⁰⁸ Caution should be used when comparing crime (and suicide) rates, whether between young and adult Nunavummiut or between Nunavummiut and Canadians, since these comparisons are sometimes based on relatively low absolute numbers of offences per 100,000 inhabitants in Nunavut.

tion, suicide by 73.6%, alcohol abuse by 73%, family violence by 65.1%, and sexual assault by 58%. On the other hand, a fair number of respondents do not identify these problems as concerns. Most Nunavummiut also say that they feel safe in their community. Many people are satisfied with their personal safety from crime (91.5%). Many (87.5%) also feel very or reasonably safe from crime when they walk alone in their neighbourhood in the evening. And 86.6% of Nunavummiut adults walk alone in their neighbourhood or community in the evening, either daily or at least once a week. Many (81.8%) are not at all worried when they are alone at home in the evening.

7.4.5 Social networks: Family ties and social support

If almost every Nunavummiut can count on one or more sources of information or emotional support, less than 6% of the adults can't confide in someone when needs be, and just 4% of them can't be advised by a pair when they have to make a crucial decision ^{III}. "Social isolation" is more important for financial matter: up to 17% of Nunavummiut have nobody to whom borrow USD 200, if needs be.

We suggest that this information indicates more how financial resources are limited in Nunavut than a rebuff of material assistance. As a matter of fact, material support in Nunavut is not limited to financial resources and services: 22% of adults use, during office hours or when they are studying, their network support as child care or baby-sitting ^{III}, nearly all Nunavummiut (92.2%) of the territory have already received free traditional country food from either neighbours, or local hunter, etc. Very well documented among Canadian Inuit (e.g. Duhaime *et al.* 2002; Kishigami 1999 and 2002), this kind of sociality can take many forms of expression.

In sum, all of the Nunavummiut have access at least to a minimum of social support, of which, for most of them, particularly women, the quality has been assessed very high. Kinship still plays a greater role in the social support than the rest of social network (colleagues, neighbours, etc.). So, more than a half (53.9%) of Nunavummiut describe their ties with other members of their family as "very strong", and for one fifth of them (20.7%) they are just "strong" ^{III}. To what extent do these social ties can help them go beyond daily social problems, harmful living conditions and

lack of resources they face to? How much can they foster social cohesion among Inuit of Nunavut?

7.4.6 Geographic mobility

Young and growing, according to the last Census, the Inuit population increased much more rapidly (26%) between 1996 and 2006 than non-Aboriginal people (8%) and Nunavut has the second fastest growing Inuit population (by 20%). It's important to notice that Aboriginal people in Canada, especially Inuit, are increasingly urban. "In 2006, 54% lived in urban areas (including large cities or census metropolitan areas and smaller urban centers) up from 50% in 1996" (STC 2008: 6). However the majority of Inuit (78%) still live in Inuit Nunaat, while a growing percentage (22% in 2006) lives in other parts of Canada (southern urban Center: 17% and rural areas outside Inuit Nunaat: 5%). "In 2006, the urban centers outside Inuit Nunaat with the largest Inuit populations were Ottawa-Gatineau, 725; Yellowknife, 640; Edmonton, 590; Montréal, 570; and Winnipeg, 355" (STC 2008: 23).

Most Nunavummiut adults (65%) have always lived in the same village. Almost all were living in Nunavut one year (96.9%) or five years (98.5%) prior to the census ⁱⁱ – although they may have moved within the region in the interval. This intraregional mobility appears substantial, since a considerable proportion of these inhabitants have proved to be relatively mobile, and to virtually the same extent for both men and women: nearly one quarter of Inuit adults had changed their place of residence at least once during the five years prior to the census (at least twice in 10% of cases).ⁱⁱⁱ

Why do they move? We find that the main purposes for most people's geographic mobility are job (21%), school (10%), or in some cases, temporary absences (8.1%), but mostly for family reasons (62.4%),ⁱⁱ which is also why some people say they intend to move on later (19.1%)ⁱⁱⁱ. Curiously, Nunavut residents adopt a sedentary attitude for the same types of reasons: 68.9% want to be near their family, 34.2% because it is their home town and 22% because of the presence of friends. Some people also don't want to move because of their job (20.4%). So the explanation for sedentariness or geographic mobility appears to primarily concern social

networks and the sense of belonging to the territory, followed by educational, health and economic involvement.

All in all, two phenomena – which we view as fundamental – coexist: Although those who leave their region for rural or urban areas are increasingly numerous, most Nunavummiut live and wish to stay in their communities, which are at the same time paradoxically characterized by several living conditions substantially below statistical averages across Canada, and obvious indicators of positive dynamism (net demographic growth, political development, to name a few). Let us now discuss these coexisting phenomena based on the results presented above, and in the light of a sociological perspective.

7.5 Discussion

Our findings indicate that despite real harsh material living conditions – and which are often seen as such by them – almost all Nunavummiut are satisfied with their lives in their community (92.1%)^{III} and want to stay there, and do not present a high level of psychological distress compared with several other populations. How can we explain this? In order to shed some light on the coherency of these results, let us briefly summarize them.

From the Hawthorn-Tremblay report in the late 1960s to the Report of the Royal Commission on Aboriginal Peoples in 1995, the available statistics confirm that material living conditions of Aboriginal peoples, including the Inuit, are generally below Canadian averages. Our findings do not in general contradict such a picture. In Nunavut, the insufficient number of dwellings available results in their overcrowding and generates considerable dissatisfaction. The income of Nunavummiut is below the Canadian average, and Northern residents must satisfy consumption needs of a greater number of dependent persons, especially young people. Nor does the labour market meet people's needs for jobs, and their dissatisfaction with the number and type of jobs available is also evident. Significant health problems continue to exist, and social problems represent very widespread realities and concerns.

It is likely that these factors interact, so that the difficult conditions loom as obstacles to personal and collective growth and development. It

has been abundantly shown elsewhere, for example, that there are strong correlations, if not causal relationships, between, on the one hand, determinants such as low income or overcrowded housing and, on the other hand, low education levels, the incidence of physical illnesses and psychopathologies, and so on.¹⁰⁹

However, some aspects of the data examined suggest that there are significant discrepancies between the dark picture usually painted of Inuit conditions and certain realities for Nunavummiut. Thus, although English is commonly used at work, most people feel that they can obtain services in their own language. A large majority of Nunavummiut say that they know Inuktitut and very often use it at home. Despite the low level of schooling and high dropout rates, most people say they are satisfied with the education services available to them. Many people not only practise harvesting activities, but also express their satisfaction with the availability of the food derived from these activities.

Let us look at these results in a different way: what might underlie this intersection of objective conditions, satisfaction and dissatisfaction? And what might this reveal about Nunavummiut living conditions that we do not already know?

The major determinants represented by the social institutions of modernity undoubtedly very strongly influence the collective behaviours of the Inuit of Nunavut and could in large part help explaining Aboriginal conditions. The setting up of permanent villages at the beginning of the 1960s and the establishment of regional authorities up to the creation of the territory of Nunavut in 1999 have played a part in the formation and stabilization of a political system based on law, the separation of powers – including laicization – and democracy. The penetration of market relations has increasingly fostered wage-earning and consumption up to the present time, and both of them now constitute the main pillars of people's appropriation of material means of existence. However, such determinants, which are sometimes presented as a sort of historical fatality to which individuals

¹⁰⁹ See, for instance, the many examples of such relations between different social problems in Dumont, Langlois and Martin (1994) and in Vallerand (1994).

apparently have no choice but to submit, do not explain everything; to say so would be to attribute to the Inuit the almost exclusive role of powerless victims of a history unfolding as it were without their involvement. We in fact believe one cannot do that without explaining, in an intelligible way, the personal rationality and decisions that seem to be in part at the source of the current configuration of social relations. From the sociological perspective of actionalism, actors choose solutions because they know or think they know that is where their best interests lie. These choices are not random, but rational¹¹⁰: they are based on the possibilities offered to the person, including those that existing social institutions place before this person, but also including possibilities that stem from the actor's own will to act, from the actor's perceptions and values.

Let us emphasize right away that the following section is speculative; it is an attempt to sketch out an interpretation of the general configuration of contemporary Nunavummiut living conditions that goes beyond a purely descriptive analysis. In so doing we are trying to bridge the gap between personal trouble and collective issues, between individual aspirations and social conditioning, between reasoned choice and various forms of social determinism in Nunavut. Although speculative, this section nonetheless has a heuristic value as it suggests statistical association and correlation tests in view of a more complete explanation, which could be performed using the same corpus studied here during a second wave of analysis; the same hypotheses could also be applied to the even broader corpus on all of Canada's Arctic regions.

The respondents' behaviours and attitudes in regard to employment and education are exemplary of what we are trying to show here. Are

¹¹⁰ Moreover, according to the Weberian typology of the determinants of action, some human actions are not very well thought out of rational as they stem from the domain of reflexes and emotion (affectual action); whereas others are based on beliefs, customs and habits (traditional actions) and are almost automatic in nature (Weber 1922: 55). This is to say that some human behaviour do not result from a choice or reasoned calculation. We also know that some social phenomena do not result from the decisions or calculated will of the actors. For example, the aggregation effects described by Boudon (1991) especially are models of phenomena and situations that are unexpected and at times undesired by the actors. Nevertheless, for the purposes of this study, we will mainly focus on the rational actions of Nunavummiut in relation to an end or value, but without neglecting to take into account various forms of social determinism.

Nunavummiut dissatisfied with the number of available jobs simply because this leads to a high level of unemployment? Merely affirming this would not yet explain anything. We are supposing that this dissatisfaction in fact demonstrates a social valuing of wage work, now widespread across the Inuit region. Indeed, the actors seem to very clearly see wage work as the best way to earn monetary income, which has become indispensable in order to satisfy their consumption needs in a market-driven world. Ultimately, this dissatisfaction would seem to show the penetration of a utilitarian economic logic not only into people's practices, but even into individual consciousnesses.

We can propose a similar type of explanation in the area of education. Despite the tangible difficulties facing Nunavummiut in the pursuit of their educational goals, shown by the low graduation rates and high dropout levels, most respondents say that they are satisfied with the quality of education in their community. Why? Maybe because they seem to clearly view schooling as a decisive tool for acquiring knowledge, skills and attitudes required to increase their personal autonomy: economic autonomy through the preparation for the labour market, however restricted it may be; and personal autonomy through the preparation that will enable them to influence their destiny. The behaviours (such as the collective conformity with the legal requirement to attend school by the younger generations and their persistence at school despite obstacles of all kinds) and the perceptions of Nunavummiut (such as the satisfaction shown in the surveys) in regard to the quality of education might be some expression of an associated valuing of the capacity of individuals or collectivities to realize their aspirations or, in other words, to achieve the goals to which they are attracted.

These traits in turn reveal the eminently modern character of contemporary Inuit society. Indeed, the valuing of self aspirations seems to testify even more strongly to the actors' autonomy in their choices, made possible in a society where some of the rules and norms of the past have apparently been relaxed. Whereas in traditional types of societies, the main principle of social action is reproduction of the pre-established order (for example, the reproduction of roles and statuses so that the hunter's son invariably becomes a hunter), in contemporary Inuit society, individuals believe they can choose the role they wish to play and the status they wish

to have, even if they have to deal with the constraints imposed on them by their social environment.

This explanation could also be helpful in regard to the dissatisfaction expressed about housing. Although most Nunavummiut say that they are dissatisfied with the housing situation, and although many point to specific problems such as the state of dwellings or drinking water, they of course also understand that permanent housing is an obvious improvement, from the viewpoint of both sanitary conditions and comfort, when compared with the igloos and animal-skin tents in which earlier generations were born and lived their lives.¹¹¹ Here, the dissatisfaction might be understood as the expression of aspirations blocked as it were by the rigidity of the rules regulating this area. Indeed, Nunavummiut know very well that they could have better, at least theoretically, such as a greater number of dwellings in better condition, and better-quality water. However, in Nunavut, the actors' relation to housing is in several ways fundamentally different when compared with the areas of employment and education. In the latter areas, the relations are shaped by the actors' will to devote their vital resources, energy, skills, intelligence, and time to a goal that they have chosen and can aspire to, such as, for example, earning monetary income to meet the needs of their family or acquiring training that will give them greater autonomy: that is, to choose what they want to do with their lives. In short, in their relations to employment and education, the actors know or think they know that they are playing a decisive role, without which the relationship itself would not exist. With housing, the situation is very different. In this area, external determinations play a far more significant role than individual investment in the configuration of the social relationship. In Nunavut, individual home ownership is the exception; as a legacy of history, a large portion of the available housing consists of State-subsidized low-income housing, and tenants apparently experience this relationship more as a client relationship and even a consumption relationship. If they do not invest in housing as they would in work or school, it is because they grasp the nar-

¹¹¹ On this topic, see Duhaime (1985, 1983). In these studies, based on field research, the people interviewed unanimously express their satisfaction with permanent housing, where they feel warm and dry, even though they live in overcrowded conditions.

row limitations of their individual role in this area. Even though the Nunavut government gained broad powers in this area of responsibility, the fact remains that key decisions about the quality and quantity of the housing made available to public assistance program beneficiaries are less the result of the actors' will than of parliamentary decisions, in Iqaluit, the Nunavut capital, or even in Ottawa, the capital of Canada, where, in the final analysis, the main budgetary decisions are made. In this situation, tenants, without any power in terms of the places in which they live, say that they are dissatisfied with them as they would about a consumer product that they had paid for and found when they used it that its features were not up to their expectations.

In other words, the judgements made by the actors would seem to be strongly influenced by their perception of their own power in regard to the various areas on which they are questioned. If this interpretation is correct, we must then suppose that Nunavummiut are now aware that each of them individually plays an important, and perhaps decisive, role in their state of health, which they assess positively, despite higher epidemiological statistics than the national averages.

If the explanation we are proposing has some merit, it will also shed light on the three apparent enigmas that remain in regard to the results presented. Why do Nunavummiut show a relatively low indicator of psychological distress, despite the higher incidence of social problems? Why do they feel safe in their communities, despite their perception regarding the number and severity of the social problems they apparently face to? And, finally, why don't all of them leave their region?

The higher incidence of social problems in areas inhabited by the Inuit has been documented many times and explained in many ways, particularly by their acculturation (with acculturation seen more as a form of alienation stemming from colonialism), and so on (Morin 2004). We believe that one should be cautious in making this type of analysis, since it seems in part at least based on a statistical fiction. There is undoubtedly a proportionately higher incidence of social problems in the North than in Canada as a whole. However, if one wanted to conduct more detailed comparisons – and more valid from the viewpoint of statistical rigour – in using not national averages but instead averages calculated on comparable segments of the population, one might reach different findings. For example, if the Inuit were compared with popula-

tion segments sharing characteristics such as low income, underemployment or a low education level, one would probably find comparable incidence of problems associated with these determinants, including phenomena identified as social problems. From this perspective, it would then be much more difficult to identify these problems as being essentially “Inuit,” and to speak, for example, about “Inuit conjugal violence” or “Inuit suicide,” and it would be more appropriate to analyze similar primary conditions associated with similar behaviours. Certain indications lead us to believe that it would be worth looking into this idea more closely. As seen with the Inuit, studies conducted in deprived areas¹¹² of Québec for instance show more social and health problems in these areas when compared with provincial averages: a shorter life expectancy, more frequent hospitalizations, increased incidences of unintentional trauma (especially road accidents and accidental falls) and intentional trauma (suicides and murders), more young people living in social assistance families, a higher adolescent fertility rate, and a higher proportion of young people whose situation has been submitted to regional youth protection organizations for more in-depth evaluation due to maltreatment (abuse and neglect) or behavioural problems (Pampalon and Raymond 2003). The statistical measures differ from those used for the Inuit, but the main findings are quite similar, hence the pertinence of more closely examining the factors at the root of these similarities.

There are of course socio-historical conditions that are specific to Inuit regions, if not different from those found in other, comparable population segments, and that may help explaining the behaviours. But we believe that it would be wrong to try to explain the social problems experienced by Nunavummiut by pointing to historical phenomena alone, such as the dramatic issue of the residential schools, Anglicization, or the inclusion of social institutions foreign to the ancestral Inuit culture.

We will not attempt to explain the incidence of these problems, or to verify whether the general sociological explanations for them might be

¹¹² This is a question of a statistical deprivation index resulting from the work of Pampalon and Raymond (2003). The material dimension includes education, employment and income; and the social dimension includes the non-integration into a social network (separation, divorce, widowhood, single parenthood or living alone).

relevant in the context. In fact, whatever the findings in that regard might prove to be, the most surprising results revealed by this study are the following. Although Nunavummiut do perceive the severity of the social problems they in fact face to, they show a lower risk of psychological distress than the national averages in Western Europe; they do not feel a corresponding existential insecurity in their communities; and only a few of them present migratory behaviours that could be seen as those of avoidance or flight.

We believe that these paradoxes are merely apparent: that is, they appear if we neglect to analyze the role that individuals play in social action. There is no doubt that some individuals see the world around them with a degree of fatalism, which would for example support the real or perceived impossibility of their being able to move away, the desire to flee or even the plan to end their own life. But the results show that, collectively, individuals tend to have a different representation of their situation. This may be based on the actors' awareness that they can do something about their "destiny," as we maintained when we examined attitudes about employment, education and health. And, in Nunavut communities, we in fact find many individual initiatives (such as support for others) and collective projects (such as the prevention and intervention programs launched by non-governmental organizations) intended to fight against some of the known problems. There may be many people who are moving or thinking about moving to get a job or to be closer to their family. But the majority of them still do not leave the region itself: they persist in living on their land, including in villages only established a few decades ago.

They seem to act this way first because improving their living conditions in another place implies drawing on personal resources that they do not necessarily have, such as enough education to improve their job situation, or mastery of another language; on social support networks that do not necessarily exist in other villages or outside the region, such as family; and on collective resources that are not necessarily in greater supply elsewhere, such as housing. In this regard, family and neighbourhood networks seem to be especially important as residential stability factors, since they appear to significantly contribute to mutual support in particular: these networks seem to be abundantly used, for example, to discuss problems that arise, and to supplement people's diet with

hunting and fishing products, thus alleviating the family's food budget while simultaneously sustaining people's sense of belonging. These networks cannot however be spontaneously reconstructed, as they are in part inherited, and then gradually built up through affinities. This applies within Nunavut, and all the more so when it is a question of migrating outside the region.

Nunavummiut also seem to act this way because, in individual consciousnesses as in the collective consciousness, they appear to have gone past the point in their history when the world seemed completely beyond their control. Advances in formal, academic education and the generalization of market relations foster the emergence of the individual, the birth of aspirations, and the capacity to control, however slightly, one's personal destiny, which then moves beyond the earlier logic of reproduction of tradition. The founding clans lose their once virtually exclusive role in defining individual destinies. The strength of tradition diminishes with the formation of other networks of social solidarity and the widespread penetration of other social institutions based on personal resources, interpersonal affinities, the State and the market. The establishment of a stable political system and the creation of a territorial government led by a majority of Inuit elected officials also symbolize this new capacity to influence the collective destiny. Even the growing incidence of out-migration among Inuit of Nunavut seems to be another expression of the new era of self-fulfilment or wish-fulfilment. Indeed, those who leave are mostly those who are likely willing to feel some needs of self-fulfilment: women, young people with an intermediate level of schooling (between high school and master's degree), and unemployed persons.

Indeed, the decision of Nunavummiut to leave, to stay or to come back corresponds to their personal strategy for the fulfilment of a fundamental realization: studying, working, family entry and settlement, health purpose, and so on. Individual and domestic aspiration is the key concept for understanding the vitality of Inuit communities and their migration pattern. If unfavourable living conditions at home constraint upon their ability to accomplish their aspiration, and if they have social and economic resources needed, they leave their homeland. Otherwise, they prefer to stay. So, leaving or staying means more choosing where is the best chance to carry out a

promise or a duty, to fulfil a dream, a desire, or an aspiration, personally and domestically, than re-enacting the the world of their ancestry.

In sum, if Nunavummiut, individually and collectively, continue to live in Nunavut or outside despite factors that could lead one to believe that they are afflicted or eroded by unfavourable conditions and social problems, it is not only because they are able to ensure their material existence there, but also because they are able to give a meaning to the reality around them and feel to get there (in the North or the urban or rural southern areas) and more control over their destiny.

7.6 Conclusion

The SLiCA survey was based on the hypothesis that material living conditions and social representations develop reciprocally, and need to be interpreted reciprocally, regardless of whether they look like congruent or dissonant. The survey ultimately postulated that individuals and collectivities confer a meaning on the conditions in which they live, which in turn stimulates their action and aspiration.

The results of this survey, complemented by results examined from other sources, do not invalidate previous findings concerning the generally more unfavourable conditions in Nunavut compared with the national averages. The objective of this analysis was not merely to confirm or to invalidate previously acquired knowledge. We wanted to first verify this knowledge with the help of new statistical methods that are far more reliable than those used previously. Then, if this knowledge was proven, we wanted to try to understand how it is, in this context that is generally described as distressed, that Inuit society not only survives but even aspires to develop and flourish, as evidenced by some collective behaviour, such as rapid population growth, marginal out-migration and the investment in the development of political autonomy. The results in fact generally confirm that the objective conditions in which Nunavummiut live are less favourable than those in Canada overall. However, these findings allow us to go a little further in developing this social profile, by showing that the inhabitants of the North invest these conditions with meaning, through which they renew their cohesion and their desire to live together and, in case of out-migration,

to maintain strong social ties with original communities. If our analyses are correct, this meaning would lie in the capacity of the Inuit to imagine their role, to sustain aspirations regarding the world around them, or, in other words, to size up the present and make it their own.

Even though our proposed analyses attempt to provide an overview of the most important objective and subjective conditions documented in the SLiCA survey, these analyses are still limited. Firstly, they are solely based on measures of central tendency. Our analyses are offered here as hypotheses that could inspire new, more in-depth series of analyses and, in particular, statistical association and correlation tests. Secondly, our analyses only focus on data available for the Territory of Nunavut, whereas the SLiCA survey was administered in all of Canada's Arctic regions, in following a strictly identical method, and in Northern Alaska, Greenland and Chukotka (Federation of Russia), as well as being conducted with the Saami of Northern Norway, Sweden and the Kola Peninsula (Federation of Russia). The provisional conclusions of our exploratory study are also offered as hypotheses that might inspire international comparative analyses.

Finally, these results enabled us to underscore a limitation inherent to analyses that use national averages to compare population segments with socioeconomic and cultural characteristics presenting differences that are sometimes negligible, and at other times considerable. Subsequent analyses will enable us to avoid this pitfall by comparing Inuit regions of the circumpolar world; but if comparisons need to be conducted within the countries concerned, they would have the advantage of targeting socioeconomic and cultural groups presenting more similarities with Inuit groups, in order to control for the distortions that tend to emerge in national statistics.

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7.8 References

- Adams, J. (2002). Building on opportunities. In: Ingimundarson, J.H. (editor). *Northern Veche*. Veliky Novgorod, Russia: Stefansson Arctic Institute and University of Akureyri (Proceedings of the second Northern Research Forum): 91–94.
- Andersen, T., and B. Poppel. (2002). Survey of living conditions in the Arctic: Inuit, Saami and the indigenous peoples of Chukotka (SLiCA). *Arctic* 55(3): 310–315. <http://dx.doi.org/10.14430/arctic713>
- Boudon, R. (1991). Individualisme et holisme dans les sciences sociales. In: Birnbaum, P., and J. Leca (editors). *Sur l'individualisme: théories et méthodes*. Paris: Presses de la Fondation nationale des sciences politiques: 45–59.
- Bourdieu, P. (1980). *Le sens pratique*. Paris: Éditions de Minuit.
- Bjerregaard, P., and T.K. Young. (1998). *The circumpolar Inuit. Health of a population in transition*. Copenhagen: Munksgaard.
- Bone, R.M. (1992). *The geography of the Canadian north. Issues and challenges*. Toronto: Oxford University Press.
- CMHC (Canada Mortgage and Housing Corporation) and ITK (Inuit Tapirisat of Canada). (2001). Research and consultation project concerning Inuit housing across Canada: final report. Ottawa: Canada Mortgage and Housing Corporation.
- Condon, R.G. (1987). *Inuit youth: growth and change in the Canadian Arctic*. London: Rutgers University Press.
- Damas, D. (2002). *Arctic migrants/Arctic villagers. The transformation of Inuit settlement in the central Arctic*. Montréal and Kingston: McGill-Queen's University Press.
- Desmarais, D., F. Beauregard, D. Guérette, M. Himech, Y. Lebel, P. Martineau, and S. Péloquin. (2000). *Détresse psychologique et insertion sociale des jeunes adultes: un portrait complexe, une responsabilité collective*. Sainte-Foy: Publications du Québec.

- Dickerson, M.O. (1992). *Whose north? Political change, political development, and self-government in the Northwest Territories*. Vancouver and Calgary: UBC Press and Arctic Institute of North America.
- Dorais, L.-J., and S. Sammons. (2002). *Language in Nunavut: discourse and identity in the Baffin region*. Iqaluit and Québec: Nunavut Arctic College and Groupe d'études inuit et circumpolaires.
- Dufour, R. (1994). *Pistes de recherche sur les sens du suicide des adolescents inuit*. Santé mentale au Québec 19(2): 145–162. <http://dx.doi.org/10.7202/032318ar>
- Duhaime, G. (1985). *De l'igloo au H.L.M. Les Inuit sédentaires et l'État-Providance*. Québec: Université Laval (Centre d'études nordiques, collection Nordicana).
- Duhaime, G. (1983). *La sédentarisation au Nouveau-Québec inuit*. Études/Inuit/Studies 7(2): 25–52.
- Duhaime, G., and A. Morin. (2004). *Survey of living conditions in the Arctic. The mental health inventory scale (MHI-5) for psychological distress. Methodological notes*. Québec: Université Laval, Chaire de recherche du Canada sur la condition autochtone comparée.
- Duhaime, G., E. Searles, P. Usher, H. Myers, and P. Fréchette. (2004). Social cohesion and living conditions in the Canadian Arctic: from theory to measurement. *Social Indicators Research* 66(3): 295–317. <http://dx.doi.org/10.1023/B:SOCI.0000003726.35478.fc>
- Duhaime, G., A. Morin, H. Myers, R. Caulfield, P. Fréchette, and D. St-Pierre. (2002). Food Networks in North American Arctic. In: Duhaime, G. (editor). *Sustainable Food Security in the Arctic. State of Knowledge*. Edmonton: Canadian Circumpolar Institute Press, University of Alberta: 63–74.
- Duhaime, G., M. Chabot, and P. Fréchette. (1998). Portrait économique des ménages inuit du Nunavik en 1995. In: Duhaime, G. (editor). *Les impacts socio-économiques de la contamination de la chaîne alimentaire au Nunavik*. Québec: Groupe d'études inuit et circumpolaires, Université Laval: 17–156.
- Dumont, F., S. Langlois, and Y. Martin. (1994). *Traité des problèmes sociaux*. Québec: Institut québécois de recherche sociale (IQRC).
- Durst, D. (1991). Conjugal Violence: Changing Attitudes in Two Northern Native Communities. *Community Mental Health Journal* 27(5): 359–373. <http://dx.doi.org/10.1007/BF00752386>
- EORG (European Opinion Research Group). (2003). *The Mental Health Status of the European Population*. Brussels: European Commission.
- Graburn, N. (1987). Severe Child Abuse among Canadian Inuit. In: Scheper-Hugues, N. (editor). *Child Survival*. Dordrecht: D. Reidel: 211–225. http://dx.doi.org/10.1007/978-94-009-3393-4_11
- Kirmayer, L.J., B. Hayton, M. Malus, V. Jimenez, R. Dufour, C. Quesney, Y. Ternar, T. Yu, and N. Ferrara. (1993). *Suicide in Canadian aboriginal populations: Emerging trends in research and intervention*. Montréal: Culture and Mental Health Research Unit. Institute of Community and Family Psychiatry. Sir Mortimer B. Davis Jewish General Hospital (report no. 1).

- Kishigami, N. (2002). Urban Inuit in Canada: A Case from Montreal. *Indigenous Affairs* (3-4): 54-59.
- Kishigami, N. (1999). Why do Inuit Move to Montreal?: A Research Note on Urban Inuit. *Études/Inuit/Studies* 23(1-2): 221-227.
- Kral, M.J. (2003). *Unikkaartuit: Meanings of Well-Being, Sadness, Suicide, and Change in Two Inuit Communities*. Final Report to the National Health Research and Development Programs. Health Canada.
- MSSSN (Ministère de la Santé et des Services Sociaux du Nunavut). (2004). *Rapport du Nunavut sur les indicateurs comparables de la santé 2004*. Iqaluit: Gouvernement du Nunavut.
- Morin, A. (2004). Beyond the Colonial Discourse on Inuit Social Problems. In: Myers, H., and J. Reschny (editors). *Beyond Boom and Bust in the Circumpolar North*. Circumpolar Arctic Social Sciences Ph.D. Network. Proceedings of the Eighth Conference. Prince George: University of Northern British Columbia Press: 163-176.
- Morin, A. (2006). *Recueil statistique sur la pauvreté et les inégalités socio-économiques au Québec*. Québec: Institut de la statistique du Québec and Ministère de l'Emploi et de la Solidarité sociale.
- Pampalon, R., and G. Raymond. (2003). Indice de défavorisation matérielle et sociale: son application au secteur de la santé et du bien-être. *Santé, Société et Solidarité* (1): 191-208.
- Schofield, M.A. (1998). *Exploring Dropout Amongst Inuit High School Students in Nunavut*. Calgary: Department of psychology. University of Calgary (M.A. thesis).
- STC (Statistique Canada). (2003a). *Enquête auprès des peuples autochtones 2001: guide des concepts et méthodes*. Ottawa: Statistique Canada (document 89-591-XIF).
- STC (Statistique Canada). (2003b). *Enquête auprès des peuples autochtones de 2001, premiers résultats: Bien-être de la population autochtone vivant hors réserve*. Ottawa: Statistique Canada (document 89-589-XIF).
- STC (Statistique Canada). (2004). *Indicateurs de la santé*. Ottawa: Statistique Canada (document 82-221-XIF).
- STC (Statistique Canada). (2005a). *Profil des communautés de 2001*. Ottawa: Statistique Canada (data bank 93F0053XIF): http://www12.statcan.ca/francais/Profil01/PlaceSearchForm1_F.cfm.
- STC (Statistique Canada). (2005b). *Profil de la population autochtone du recensement de 2001*. Ottawa: Statistique Canada (data bank 94F0043XIF): http://www12.statcan.ca/francais/Profil01ab/PlaceSearchForm1_F.cfm.
- STC (Statistique Canada). (2005c). *Profils des communautés de l'Enquête auprès des peuples autochtones de 2001*. Ottawa: Statistique Canada (data bank 89590XIF): http://www12.statcan.ca/francais/Profil01aps/home_f.cfm.
- STC (Statistique Canada). (2005d). *Tableaux sommaires*. Ottawa: Statistique Canada: http://www40.statcan.ca/index_f.htm.
- STC (Statistique Canada). (2005e). *Projections des populations autochtones*. Canada, provinces et territoires. 2001 à 2017. Ottawa: Statistique Canada (document 91-547-XIF).

- STC (Statistique Canada). (2005f). *Indicateurs de la santé*. Ottawa: Statistique Canada (document 82-221): <http://www.statcan.gc.ca/pub/82-221-x/2004002/t/pdf/4249918-fra.pdf>.
- STC (Statistique Canada). (2005g). *La population autochtone du Canada en 2017. Le Quotidien. 28 juin*. Ottawa: Statistique Canada (document 11-001-XIF): 9–10.
- STC (Statistique Canada). (2008). *Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census*. Ottawa: Statistique Canada (document 97-558-XIF).
- Usher, P., G. Duhaime and E. Searles. (2003). The Household as an Economic Unit in Arctic Aboriginal Communities and its Measurement by Means of a Comprehensive Survey. *Social Indicators Research* 61(2): 175–202.
<http://dx.doi.org/10.1023/A:1021344707027>
- Vallerand, R.J. (1994). *Les fondements de la psychologie sociale*. Boucherville: Gaëtan Morin.
- Weber, M. (1922). *Économie et société: 1. Les catégories de la sociologie*. Paris: Plon.
- Wood, D.S. (1997). *Violent Crime and Characteristics of Twelve Inuit Communities in the Baffin Region, Northwest Territories, Canada*. Vancouver: Department of criminology. Simon Fraser University (Ph.D. thesis).
- Zellerer, E. (1989). *Violence Against Inuit Women in the Canadian Eastern Arctic*. Toronto: Department of criminology. University of Toronto (Ph.D. thesis).

8. Education in Greenland 1973–2004/06 – an analysis based on three living conditions surveys¹¹³

Mitdlarak Lennert

Keywords: SLiCA, Greenland, Greenlandic living conditions surveys, traditional education, formal education, education levels, language proficiency.

8.1 Abstract

This chapter analyzes the educational system in Greenland in the period 1973 through 2006, and focuses specifically on the development of education levels and language proficiency among the Greenlanders during this period of rapid development.

It is the first time that the education data from the three living conditions surveys and register data from Statistics Greenland, are analyzed together. An analysis of levels of survey and register data enabled the author to determine a correlation between language proficiency and level of education among the Greenlandic population. This analysis made it possible to go beyond merely describing, and comparing, the Greenlandic

¹¹³ Manuscript was received 5th November, 2014 and was accepted 8th January, 2015.

educational statistics with the Nordic countries, and to also analyze the context during the period of time of such a rapid development.

The chapter looks at the transition from traditional to formal education and the expansion of the Greenlandic school system as well as the prioritization of education and political goals from the Danish State and Home Rule government of Greenland. By looking at the tradition of education and comparing educational data in Greenland over the span of over 30 years, the rapid development of the education level measured by the proportion of the population having a formal education (i.e. a formal education beyond the primary school) of the Greenlandic population has increased from 28% to 47%, indicating that the Greenland Home Rule and Self Government – despite challenges, setbacks and a lack of tradition for formal education beyond the public school – is on the right track.

8.2 Introduction

With the colonization of Greenland different conceptual frameworks were introduced. Denmark led a protectionist colonial policy, in which the population of Greenland was isolated and “protected” from the influence of the rest of the world. The policy was intended to preserve the original occupation of the Greenlandic population: seal hunting, and following the turn of the 20th century, fishing. (Skydsbjerg 1999:11, Goldschmidt *et al.* 1961:18)

Formal education was considered only when one could not be trained (e.g. the fatherless) or was deemed unfit for traditional occupations.

The Instruction of 1782 mentions this fact and states that such a training of Greenlanders may only happen if they were not good at the traditional professions. (Goldschmidt *et al.* 1961:18)

This meant that for a long time after the colonization in the 18th century¹¹⁴ a link between the Greenlandic traditional culture and the society could be maintained. The change came with World War II and the modernization of Greenland in the 1950s. The development took off with a

¹¹⁴ In 1721 the colonisation alongside the mission of Greenland began.

series of political decisions, due to wishes from the Greenlandic people as well as the Danish State. Long-term plans and policies for expansion and modernization of the Greenlandic society were initiated. Greenland was now to become a modern society, and within a short period of time, the foundation, and requirements of the society was shifted towards Western cultures and standards.

This chapter analyzes the educational system in Greenland in the period 1973 through 2006, and focuses specifically on the development in education levels and language proficiency among the Greenlanders during this period of rapid development.

8.2.1 Methodology

The present study is based on data from three living conditions surveys in Greenland. The primary focus has been on the development of education levels and language proficiency over time. The relationship among other key variables has however, also been given due attention.

The analysis is primarily based on data from Greenland; additionally, when possible and appropriate, data from other Arctic and Nordic countries is used in comparison. To illustrate the development of the level of education and language skills over time, I have in my analysis chosen to compare Greenlandic living conditions surveys from 1975,¹¹⁵ 1994¹¹⁶ and finally data from 2004–06, Survey of Living Conditions in the Arctic, SLiCA¹¹⁷. In addition to the living conditions surveys, I have included official statistics in the analysis.

The main aim of the 1975 study conducted by the Danish National Institute of Social Research was to gain an overview of Greenland by correlating a wide range of information concerning individual backgrounds, living conditions, and various indicators of personal and social problems. In each of the surveys, the primary method applied was interviewing a

¹¹⁵ From *et al.* 1975.

¹¹⁶ Statistics Greenland 1994.

¹¹⁷ SLiCA 2004–06.

representative sample of the population of Greenland on the basis of a fixed structured questionnaire. (From *et al.* 1975)

The Survey of Greenlandic Living Conditions conducted in 1994 by Statistics Greenland was designed as a survey that included 1,500 randomly selected individuals over the age of 18. Respondents were asked to answer 147 questions concerning living and working conditions, economy, consumption and leisure. (Statistics Greenland 1994).

SLiCA (Survey of Living Conditions in the Arctic, Inuit, Saami and the Indigenous Peoples of Chukotka), is one of the most detailed surveys of Inuit and Sami educational and social backgrounds. SLiCA is an international research project that has carried out a survey of the living conditions of these indigenous populations. SLiCA was conducted in Norway, Sweden, Greenland, the United States, Canada and Russia (Kola Peninsula and Chukotka). A total of about 8,000 interviews were collected from the above-mentioned areas. The Greenland part of SLiCA comprises a representative sample of the population of Greenland with a total of almost 1,200 personal interviews. Data collection began in 2004 and was completed in the second half of 2006.

8.2.2 Results

The development of the Greenlandic education system

Before the colonization of Greenland, Greenlandic traditional education was informal, and occurred as a necessary social activity. The training was gender-divided, where boys were trained as hunters and girls learned to process and sew leather, keep a household and nursing. It was a life-long process in which the training of the next generation was the foundation of the livelihood of the hunting culture. Traditional education existed before contact with outsiders, and continues to exist as part of the traditional cultural practices, mixed economies and traditional systems such as food systems. (Aslaksen *et al.* 2009, Poppel 2006, Poppel and Kruse 2009).

In relation to the cultural transformation, figure 1 illustrates the development of Greenland's occupational structure over time. The transition from a hunting and fishing society around 1950 is evident. In the period prior to the G50 and G60 policies¹¹⁸ implemented by the Danish State (1950–1960), two-thirds of the population was engaged in hunting, fishing and fish processing. In 2009, at the time of introduction of self-government, this proportion was only five per cent.

Figure 1. Business and occupational structure in Greenland over time



Sources: Grønlands Styrelse 1942; Danielsen *et al.*, 1998; Statistics Greenland 2003, 2005, 2011; M. Poppel 2007.

Notes: *) incl. members of the household; **) incl. all hotels and restaurants

The occupational structure in Greenland has over the course of half a century changed from having minimal requirements for formal training to a structure that to a larger extent prior to 1945 requires a higher education.

¹¹⁸ The objective of these was to assimilate and integrate Greenland within the Danish Realm, by integrating the economy of the Danish welfare state and merging private capitalist production and public governance.

This development has not only presented structural challenges, but also major cultural adjustment challenges among the Greenlandic people.

The transition from the traditional, simple and stable society that economically rested in itself in the form of a subsistence economy, with no need of an organized educational system, to the more complex modern society, which placed new demands and prerequisites on the Greenlandic population, has resulted in an adaptation of traditions and culture. Learning traditionally took place within the family and local community, with the older generation as teachers. During the 1800s learning had, especially in major settlements, to some extent, been transferred to institutions developed by the Danish state.

In 1851, Samuel Kleinschmidt provided the Greenlandic orthography new forms and a framework, and as a result, production of Greenlandic literature started the following year (Petersen 1975:59). In 1972, the national parliament adopted a new orthography (GLF 1972:98). Greenland thus has a tradition of written language, and in the colonies on the west coast of Greenland, a large proportion of the population read and wrote from the mid-1800s. The limited supply of subjects and fiction, however, meant that the oral tradition has been sustained. (Kolte 1999:86)

Formal education can be said to have started in the 1720s, when the first missionaries began teaching Greenlanders to read and write. Teaching has taken place in Greenlandic. It was only after the Greenland Commission of 1948 presented their report in 1950, and the responsibility of educational institutions was transferred from the church to the state, that a more widespread use of the Danish language in classrooms began (Kleivan 1965:213).

The expansion of the Greenlandic school system during the 1950s resulted in a majority of children in Greenland attending elementary school. This young generation of Greenlanders had thus become acquainted with Western / Danish culture and concepts to an extent far greater than their parents and grandparents had, which created the basis for a substantial educational gap between generations. This gap between tradition and modernity was further exacerbated by the shift in occupational structure, which meant that the traditional skills and social experiences of the elders in many areas lost their importance, and thus resulted in the loss of their authority and their function as role models. This loss of authority and func-

tion as a role model diminished a respected position for elders in the traditional Greenlandic society.

The rapid societal development that took place in the period between 1950 and the introduction of Home Rule in Greenland in 1979 naturally brought discussions centering around the lack of formal education in Greenland more and more to the forefront. It led to an awareness of the necessity to expand the reach of education if industrialization in Greenland was to succeed (Mikkelsen 1963:453). Education had to be a priority if the fundamental business development objectives were to be achieved. Without significant investment in the education system, the projected increase in demand for skilled labor, both in the short and long term, could not be covered without a significant influx of foreign labor.

Education counselling in upper secondary school (gymnasium). 2013. Nuuk, Greenland



Photo: Birger Poppel.

The beginning of the 1970s marked a period of an increased prioritization of education in Greenland. And, prior to the introduction of Home Rule, the Danish government had made significant investments in the educational system in Greenland (MFG 1980. Table 24).

May 1st 1979 The Greenlandic Home Rule Government was established. Thus, the Danish-developed welfare system was transferred to, and implemented in this fledgling semi-autonomous Greenlandic administration within the framework of the Danish realm. In many areas of government policy, the introduction of Home Rule resulted in radical breaches with the mindset and policies implemented during the 1950s and 60s. One of these areas was education, where the requirement from the new Greenlandic parliament was that there should be a stronger focus on training and education of the Greenlandic workforce. Quantitative targets had priority during the first couple of years, as it was essential for the newly introduced Home Rule to assume authority of the youth, secondary and vocational education areas.

One of the fundamental objectives after the introduction of Home Rule was to adapt the systems to the Greenlandic conditions and culture. Given that the education system was based on the Danish school system, and the reality was, and still is, that to continue studying after primary and lower secondary school¹¹⁹ it is a prerequisite that the Greenlandic system be compatible with the Danish educational system, and that the Greenlandic students have a working knowledge of the Danish language. Since the introduction of Home Rule, the primary¹²⁰ school has undergone many changes. The primary school is the pupils' first meeting with the education system and lays down the foundation for the next step in the education system. The learning goals and curriculum of the primary school have, since the 1950s, been adapted to reflect the culture of Greenland.

The inherited Danish colonial systems were extended and modified to serve new economic and social needs defined by the Greenlandic government. With the introduction of Home Rule and the assumption of authority of education, one of the primary education policy objectives became to define the framework and content of the educational programs from a Greenlandic perspective, and thus improve compatibility of the system (Lennert 2014) with the Greenlandic culture. The Greenlandic language, which in the previous 10–15 years had been overshadowed by the Danish

¹¹⁹ As the Greenlandic education system has limited options, many students have to go abroad.

¹²⁰ The term primary school in this chapter is used for the Danish term "Folkeskolen", grades 1 through 10-12, depending on year and reform.

language in the education system, was now given higher priority. The cultural and economic transformation resulted in significant challenges in the attempt of adapting frameworks, content and context to the educational system in Greenland. These challenges are discussed below.

Major investments were carried through in the education sector in the 1980s. The Greenlandic government and administration assumed authority of both the primary school system (1980) and vocational training (1981). Simultaneously, a major capacity building in the administration, and among the population, was considered crucial. In an atmosphere of national enthusiasm the Greenlandic government approved large funds for the construction and initiation of vocational trading institutions and trade schools in all major towns.

Table 1. Educational Expenditures 1980–2009 in DKK. Current prices

	1980	1984	1990	1995	2000	2005	2009
Educational expenses	131	626	866	866	1,053	1,357	1,845
Total public expenses	567	3,428	5,696	5,754	6,513	7,523	9,358
Share of total public exp.	23%	18.2%	15.2%	15%	16.2%	18%	19.7%

Sources: Table 50 Greenland Statistical Yearbook 1991, Statistics Greenland electronic databank (www.stat.gl).

Five years after the introduction of Home Rule, politicians were already acknowledging that a “change of course” in the educational policy was necessary. The political ambitions had led to a hasty assumption of authority over too many areas of education. Policies had been implemented at the expense of the quality, and in particular the funding of the primary school system. At the time there was little correlation between the content in primary school and the institutional requirements that were asked for further education. Also, too many students still left primary school too early to acquire the necessary primary skills to enroll in either *HF/Gymnasium* or directly into a vocational training programme (Landsplanredegørelse 1994:16–17).

We must admit that we have not been successful in this area, and we must take action to correct the course. Too many times we have talked about the needs for training, without talking economy, and too many times the political wishes have not been realized.

Josef Motzfeldt, Agenda item no. 51, FM 1985:267.

The political goals were that the number of migrant workers should be minimized, and that the Greenlandic population eventually should be self-sufficient in labor. Combined with the policy of “Greenlandization”¹²¹, which became one of the watchwords after the introduction of Home Rule, one can say that education served as an important part of the Greenlandic national identity development (and thus a part of the nation-building project), and was viewed as politically important. Following this appraisal of education, actions were taken to create favorable conditions for Greenlandic students (Lennert 2014:237).

Education levels through time

Table 2 shows and explains the different levels of education used in the three living conditions surveys.

Table 2. Description of education levels in Greenland

Levels of education	No. of years in school	ISCED Level	Explanation
Less than 7 years	< 7	ISCED 1+2 Primary and lower secondary	From 1925 to 1979 compulsory school attendance was 7 years. In 1979 it was changed to 9 years.
School leaving certificate & Extended school-leaving certificate	11–12 years	ISCED 1+2 Primary and lower secondary	The school-leaving certificate gives access to general vocational programs. The extended school-leaving certificate gives access to preparatory general studies.
Upper secondary education, Vocational training, preparatory general studies	14–15 years	ISCED 3–4 Upper and post-secondary	<i>Gymnasium</i> , <i>HF</i> , general studies, Carpenter, blacksmith, electrician, upper secondary, health service assistant, agriculture, horticulture, forestry, vocational education
Higher education	16+	ISCED 5+6 Tertiary	Tertiary education, short-, medium-, long cycles, bachelor’s and masters’ degrees, doctoral programs

Sources: UNESCO 2014, Statistics Greenland 1994, SLiCA 2004–06.

In 1973 38% of men and only 18% of women had had vocational training (see Table 3). The political focus at that time was primarily on vocational

¹²¹ Focus on Greenlandic values and language in administration, legislature and society.

training in the sectors of construction, maritime activities and fisheries, shipbuilding and transportation, trade and administration (Mikkelsen 1963:453, Goldschmidt *et al.* 1961:29) which explains the higher educational level (measured by vocational training) among men as available education programs were directed towards these trades and sectors.

Table 3. Greenland-born interviewees with and without vocational training by gender. 1973. Weighted percentage distributions

Vocational training	Men	Women	Total
Has vocational training	38%	18%	28%
Has no vocational training	60%	79%	70%
Not stated	2%	3%	3%
Total	100% (288)	100% (288)	101% (576)

Source: From *et al.* 1975.

Six years prior to the introduction of Home Rule 3 out of 4 had no vocational training or further education besides primary school.

There is a strong relationship between Danish language proficiency and vocational education. 52% of those who had vocational training speak Danish “well” compared with 16% of those who did not. Of the 576 respondents, 425 had no vocational training and within the minority who had vocational training, more than 8 out of 10 had good or fairly good writing skills in Danish. Those who had better Danish language proficiency were more likely to get vocational education, as the teaching material was mostly Danish. The vocational training, by exposing the students more to the Danish language, probably also in turn improved the language proficiency overall.

Table 4. Greenland-born interviewees distributed by proficiency in Danish and after vocational training. 1973. Weighted percentage distributions

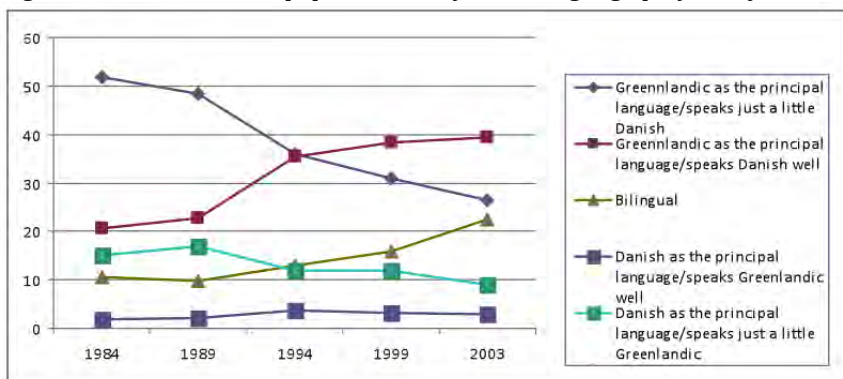
Proficiency in Danish	Has vocational training			Total
	Yes	No	Not stated	
Well	52%	16%	3%	26% (116)
Fairly	30%	21%	6%	23% (122)
Poorly	5%	16%	12%	13% (87)
Not at all	10%	45%	32%	34% (239)
Not stated	3%	2%	47%	4% (12)
Total	100% (132)	100% (425)	100% (19)	100% (576)

Source: From *et al.* 1975.

After an intensified focus on Greenlandic values and language during the 80s, the early 90s represented a shift of focus on the quality and the necessity of Danish language proficiency in regards to education. The language debate and its connection with education opportunities had also been embedded in the policy of the post-introduction-period of Home Rule, but it was not until the early 90s, that politicians clearly stated that there should also be room for, and focus on, the Danish language in the education system.

Figure 2 shows the changes of the Greenlanders self-rated language proficiency in the period 1984–2003.

Figure 2. The Greenlandic population's self-rated language proficiency



Source: HS Analyse and Statistics Greenland 1994.

In the period 1989–1994 there was a significant decrease in the part of the population having Greenlandic as the main language and only speaking a little Danish, declining from 50% to approximately 35%. This development should be seen in the context of the “Greenlandization” policy in the period after the introduction of Home Rule, and also that in the mid 90s it had become more socially and politically acceptable to speak Danish, or maybe rather acknowledging one’s Danish language abilities.

Comparing the correlation between language proficiency and level of education with numbers from 1973 (Table 4) it is evident that the Danish language in the beginning of the 90s continues to be an important factor (Table 5).

Table 5. Correlation between language proficiency and level of education among the Greenlandic population. 1994

Education level / language proficiency	Greenlandic as main language / speaks little Danish	Greenlandic as main language / speaks good Danish	Bilingual	Danish as main lan- guage/ speaks little Greenlandic	Danish as main lan- guage/ speaks good Greenlandic
Less than 7 years	43%	17%	5%	0	0
School-leaving certificate	56%	70%	64%	55%	50%
Extended school- leaving certificate	1%	11%	22%	9%	34%
Upper secondary education	0	2%	9%	37%	17%
Language profici- ency Total	100%	100%	100%	100%	100%
Group share of the population over 18 years	42.1%	41%	14.5%	1.7%	0.7%

Source: Statistics Greenland 1994.

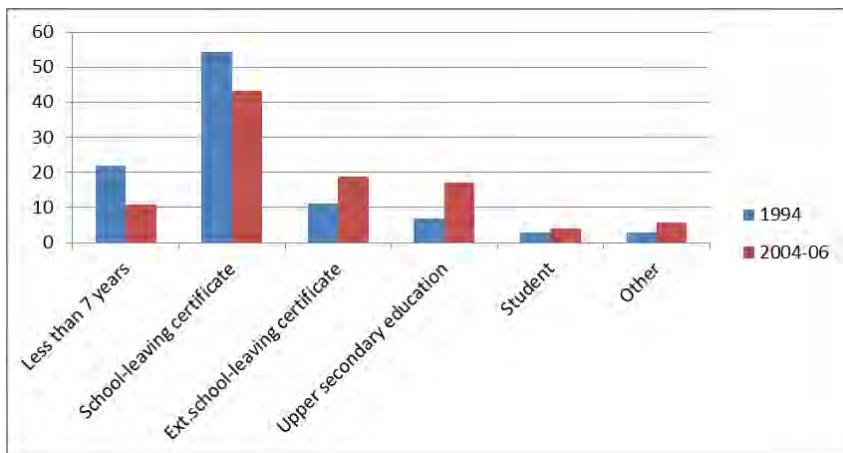
20 years after the 1973 study, the first survey on Greenlandic living conditions after the introduction of Home Rule was conducted. In 1994 almost three-quarters of the population over the age of 18 had no formal education beyond primary school (figure 3), which was the same level as 20 years before.

In 1994 there was a large group (22%) who had not completed primary school. Of the group that had finished primary school, the majority had done so with a school-leaving certificate, while only 10% had an extended school-leaving certificate. This means that a very small group of the population would be given access to higher education, as illustrated by the fact that only 7% of the population had gone through upper secondary school.¹²² The dropout rate in vocational and upper secondary educations

¹²² Upper secondary school comprises the Danish *Gymnasium* and HF (*Højere Forberedelseseksamen* [higher preparatory examination])

had also increased from an average of around 30% in the 80s, to a level of 43% in the mid-90s (see figure 5).

Figure 3. Educational levels in Greenland over time



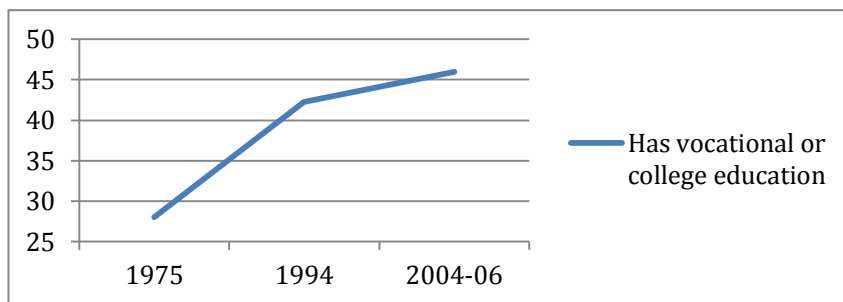
Sources: SLiCA Greenland 2004–06 (www.arcticlivingconditions.org), Statistics Greenland 1994.

Ten years after the survey of living conditions in 1994, the Survey of Living Conditions in the Arctic, SLiCA, was conducted. When comparing levels of education, a considerable development is evident. The percentage of the population with less than seven years in primary school has been reduced from about 20% to 10. There has also been a significant shift from those with a school-leaving certificate to those with an extended school-leaving certificate; in addition, the proportion of the population with an upper secondary education (*HF* or *Gymnasium*) has almost tripled.

The following figure shows the development of the proportion of the population with vocational training or higher education in the period 1975–2006.¹²³ There is a significant improvement from 28% in 1975 to 47% in 2004–2006.

¹²³ Data from Table 3 (has vocational education), Statistics Greenland 1994 (Figure 4.1.1), Figure 7 (vocational school or college)

Figure 4. Development of educational level



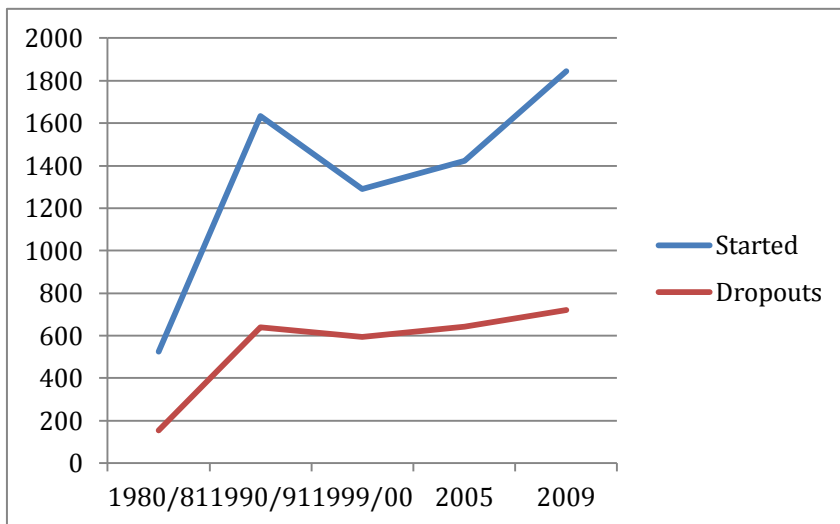
Sources: From *et al.* 1975, Statistics Greenland 1994, SLiCA 2004–06.

The figure above is based on representative data from the three living conditions surveys, and depicts the proportion of the population who has finished vocational training or higher education. Figure 5 below is based on register data, and focuses on the number of started and discontinued educations. The official numbers on Greenlandic education from Statistics Greenland, show the same trend as the three surveys¹²⁴. Still more students start education. Another “pattern” that can be seen in the figure is the dropout rate, which has increased significantly from 29% in 1980 to 53% in 2009 on all post primary school educational levels. This means that the primary school increasingly has had difficulties preparing its students for the next step in the education system. It might be linked to the arrival of more stringent requirements and stronger focus on quality in higher education. It should be mentioned, though, that the dropout curve has declined slightly since the decision and implementation of the Education Plan¹²⁵ in 2006.

¹²⁴ That there is a small difference between the two figures is linked to the statistical uncertainty of 3.5 %

¹²⁵ The Education Plan is a comprehensive plan and long-term reform approved by the parliament in 2005. The education plan, using both quantitative and qualitative targets, put focus on the two established target groups; primary school graduates and unskilled workers under 50 who are unemployed, are in threatened trades and / or are providers.

Figure 5. Education in numbers 1980–2009



Source: Statistics Greenland 2002, Statistics Greenland (www.stat.gl)

*Overall development in all education and training in Greenland, i. e. the basic vocational programs, secondary and higher education, in Greenland and in Denmark and the rest of the world. This means that primary school pupils, high school students, preparatory studies and single-course participants are not included.

8.3 Discussion and conclusion

The results from three studies of living conditions in Greenland show that over the timespan of more than 30 years, the education level measured by the proportion of the population having a formal education (i.e. a formal education beyond the primary school) of the Greenlandic population has increased from 28% to 47%. The quantification of the education level is a question of how to measure an important facet of human capital. It takes time and tradition to build human capital (see Figure 1), the traditional education and way of life as described in the beginning of the chapter illustrates this. The Greenlandic Inuit have for centuries adapted to the Greenlandic environment using their knowledge and adaptability to sustain their livelihoods and enhance their living conditions – and especially since 1950, has gone through a rapid adaptation, an adaptation to the modern and globalized society.

Graduates from Ilisimatusarfik, University of Greenland. February 2013. Nuuk, Greenland



Photo: Birger Poppel.

In the literature of the development of the education level of Greenlanders – be it scholarly analyses (Goldschmidt *et al.* 1961, Flora 2007, Lauritzen 1989, Lyng 2013), various reports to the government administration and parliament (Grønlandskommissionen 1950; Boelsen 2008, 2009, A Vision of the Future 2000, HS Analyse 2001) and parliamentary debates (see references) – researchers, bureaucrats and politicians have repeatedly compared the level of education in Greenland with other countries, especially the Danish and other Nordic countries and it has been a political goal to achieve the same education level as the Nordic countries.

The following quote from¹²⁶ *A Vision of the Future*¹²⁷ characterizes in a condensed way the typical approach when evaluating and setting goals for educational policy in Greenland:

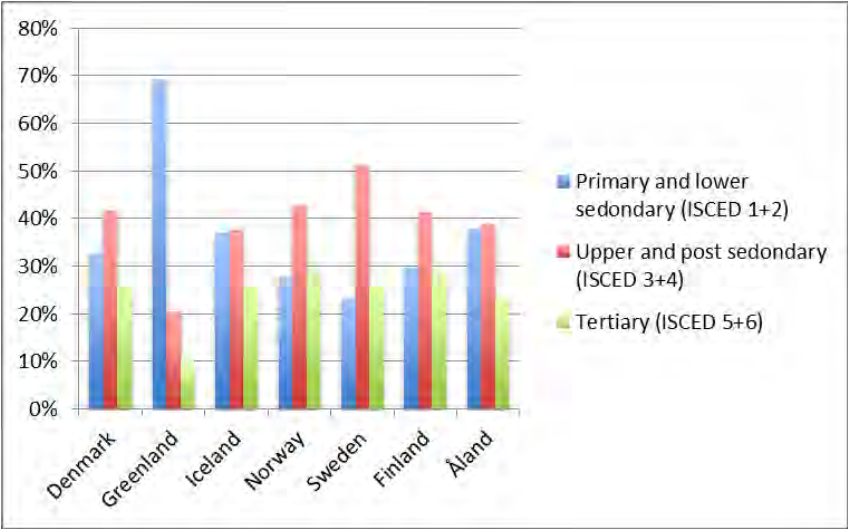
¹²⁶The purpose of the proposal was to create the framework and conditions which will provide the best possible conditions for Greenlandic business and thus guarantee continued growth, employment and earnings.

Furthermore, it is the general goal of the Home Rule Government to raise the educational level to a Nordic level.

A Vision of the Future 2000:41.

When Self-government was introduced in 2009, the Greenlandic educational level was still behind the level in the Nordic countries. Figure 6 compares the levels of education among the Nordic countries. The figure shows that almost 70% of the working part of the population¹²⁸ of Greenland has primary and lower secondary school as their highest level of education, whereas the level in the other Nordic countries ranges from 23-37%

Figure 6. Education levels in Nordic countries



Source: Nordic Council Statistics 2014.

¹²⁷As a follow up to the OECD report on Greenland's economy in 1999, the Greenland Government developed this Structural Policy Plan in 2000.

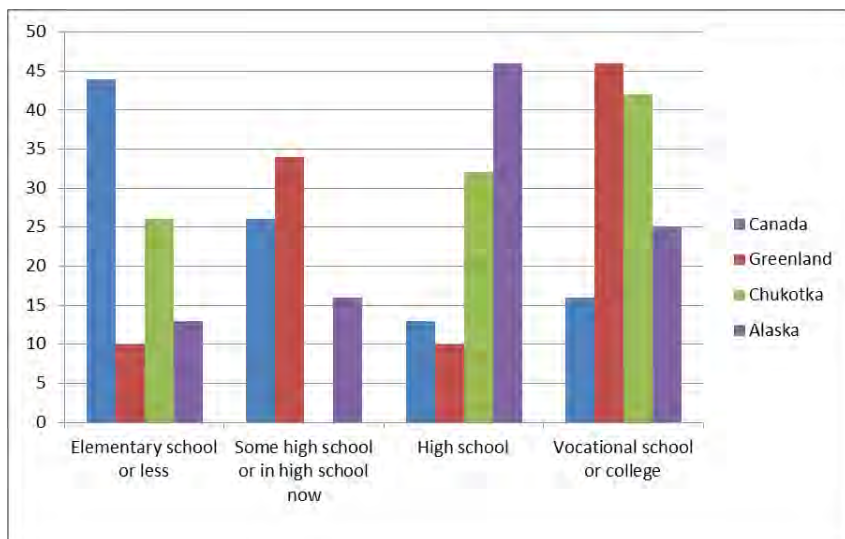
¹²⁸ISCED 1+2 divided by the sum of all three categories.

What the figure does not show, or tell, is the rapid development in education that did occur in Greenland, or the context in which that development took place. Looking at the numbers from the first survey of living conditions in 1975 and the latest from 2004–06 (see figure 7), it is evident that it takes more than just comparing actual figures between the Nordic countries to understand the challenges and obstacles that Greenlandic politicians and educational planners have faced. This requires an understanding of context, as, comparing the Greenland figures with the figures of the Nordic countries, one compares with countries with long traditions in education culture.

The comparisons sometimes result in a focus of negative aspects, which often has characterized the educational debate in Greenland. When comparing (and complaining about!) levels of education with Denmark and other Nordic countries, most people – including many political discussants – tend to forget to appreciate the positive developments and many of the innovations carried out over a relatively short time. Many of the systems and structures that the Greenlandic society is built around have been copied from other societies and cultures where the development has been going on for a longer time than in Greenland. Structures and systems that are customized to other communities have been “imported” since the colonization of Greenland – first by the colonial power and since the introduction of Home Rule by political decisions in the Greenlandic parliament.

The Survey of Living Conditions in the Arctic, SLiCA, makes it possible to compare indigenous peoples that to a larger degree have comparable livelihoods and recent histories of societal development. That was one of the overall reasons for the study and finally, and in conclusion of the chapter, levels of education in the Arctic regions inhabited by Inuit will be compared.

Figure 7. Highest level of completed education. Comparison of levels of education in Arctic countries



Source: www.arcticlivingconditions.org

Note: Data originates from interviews conducted in the Inuit homelands from 2001–2006: Arctic Canada, 2001; Northern Alaska, 2002–2003; Greenland, 2004–2006; Chukotka, 2005–2006.

When comparing education levels with other indigenous peoples in the Arctic, there are telling differences among the different regions: a markedly high proportion of Inuit adults in the Canadian Arctic (more than four out of ten) have no education beyond elementary school. Whereas both the Inupiat from Alaska and the indigenous peoples of Chukotka have a larger proportion of adults that completed high school, the largest proportion of adults who completed vocational school or college is the Greenlandic Inuit, indicating that maybe the Greenland Home Rule and Self Government – despite challenges, setbacks and a lack of tradition for formal education beyond the public school – is on the right track.

8.4 References

- Aslaksen, Iulie, Winfred Dallmann, Davin L. Holen, Even Høydahl, Jack Kruse, Birger Poppel, Mary Stappleton and Ellen Inga Turi. (2009). Interdependency of subsistence and market economies in the Arctic. In: Solveig Glomsrød and Iulie Aslaksen (eds.) *The Economy of the North 2008*. Statistisk Sentralbyrå/Statistics Norway (2009), pp. 75–98.
- Berliner, Peter (1984). Skoledebatten i Grønland [The education debate in Greenland]. In: *Tidsskriftet Grønland*, no. 6, article 1, 1984.
- Boolsen, Merete Watt. (2008). *Uddannelsesplanen*, Rapport 1, 2008 [The Education Plan, Report 1, 2008]. Greenland Home Rule.
- Boolsen, Merete Watt. (2009). *Uddannelsesplanen*, Rapport 2, 2008 [The Education Plan, Report 2, 2008]. Greenland Home Rule.
- Danielsen, M., Andersen, T., Knudsen, T., Nielsen, O. (1998). *Mål og strategier i den grønlandske erhvervsudvikling* [Goals and Strategies in the Greenlandic business development]. Sulisa A/S, Nuuk.
- Departement for Culture, Education, Research and Church (KIIN) (2009). *Uddannelse er en af de vigtigste opgaver for et selvstyrende Grønland* [Education is one of the most important tasks for an autonomous Greenland]. Text and editorial KIIN & Tupaarnaq Rosing Olsen.
- Greenland Home Rule (2000). *En vision om fremtiden - Oplæg til strukturpolitisk handlingsplan* [A Vision of the Future - Outline for a structural policy plan]. Greenland Home Rule, September 2000.
- Flora, Jane (2007). Tilknytning og Selvstændighed – unges fravalg af uddannelse. [Affiliation and Independence - young people opting out of education.] In: Kahlig, W. & Banerjee, N (eds.) *Børn og Unge – en antologi*. Nuuk: Mipi
- From, Anders; Jensen, Kirsten Just; Friis, Peter; Kjær, Anders (1975). *Levevilkår og Sociale Problemer i Vestgrønland* [Living conditions and social problems in West-greenland]. Socialforskningsinstituttet. Publikation 64. København, 1975.
- Goldschmidt, Verner; Agersnap, Torben; Barfod, Pie; Gad, Finn; Jensen, Christian (1961). *Uddannelsessituationen i Vestgrønland I* [The educational situation in West Greenland I]. Udvalget for Samfundsforskning i Grønland, København 1961
- The Greenland Commission (1950). *Skolevæsenet, Kirken og andre Kulturelle Forhold* [The school system, church and other Cultural Conditions] Report 3 of the Greenland Commission. Copenhagen, February 1950.
- Grønlands Styrelse (1942). Sammendrag af statistiske oplysninger om Grønland” [Summary of Statistical Information Regarding Greenland]. In: *Beretninger vedrørende Grønlands Styrelse 1942:1*. København.
- Greenland Home Rule (1995). *Uddannelsespolitisk Redegørelse* [Educational Policy Report]. Nuuk.
- Greenland Home Rule (2005). *Landstyreets Forslag til Uddannelsesplan* [The Government’s proposal for Educational policy plan] Departement for Culture, Education, Research and Church, Department for Business, Agriculture and Labour and Department of Finance.

- HS Analyse (2001). "Hvem får en uddannelse? En undersøgelse af hvem og hvorfor nogle unge gennemfører en uddannelse, mens andre falder fra eller slet ikke kommer i gang" [Who gets an education? A study of who and why some young people complete an education, while others drop out or do not start at all]. Nuuk, June 2001.
- Kleivan, Inge (1965). Sprogproblemet i folkeskolen i Grønland. En kommentar til lovudkastet til en ny lov om skolevæsenet i Grønland [The language problem in elementary school in Greenland. A comment on the draft bill for a new law on the school sector in Greenland]. *Tidsskriftet Grønland*, no. 6, article 3, 1965.
- Kolte, Svend (1999). Kalaallit Oqaasii - Det Grønlandske Sprog [Kalaallit Oqaasii - The Greenlandic Language] In: *Inuit, kultur og samfund: En grundbog i eskimologi*. Aarhus: Systime. pp. 93.
- Lauritzen, Phillip (1989). *Glimt af en arktisk revolution. 120 måneder med Grønlands Hjemmestyre* [Glimpses of an Arctic revolution. 120 months with the Greenland Home Rule]. 1st ed. Forlaget Grønlands Hjemmestyre.
- Lennert, Mitdlarak (2014). *Education in Greenland - an analysis of central parts of the educational policy in the period 1950-2009*. Masters thesis, Ilisimatusarfik.
- Lynge, Per Kunuk (2013). Den grønlandske kultur og den indvirkning på læring: Myten om de elskede sønner [The Greenlandic culture and its effect on learning: the myth on the beloved sons]. *Inussuk, Arctic Research Journal 1*, Greenland Self-government.
- Mikkelsen, O.I. (1963). "Kan uddannelsen følge med industrialiseringen i Grønland [Can education keep up with the industrialization in Greenland?]. *Tidsskriftet Grønland* no.12, article 2, 1963.
- Ministeriet for Grønland (MFG) [Ministry of Greenland] (1980). *Grønland 1980 - Årsberetning* [Greenland 1980 - Annual Report]. 10th ed. J.H. Schultz boghandel A/S.
- Olsen, Karl Kr. og Lyberth, Jakob Møller (2005). *Tænk tanken om højnelse af befolkningens uddannelsesniveau* [The think tank on raising the level of education]. Nuuk.
- Petersen, Robert (1975). Om grønlandsk - og om den nye grønlandske retskrivning [About Greenlandic - and about the new greenlandic orthography]. In: *Sprog i Norden*. Årsskrift for de Nordiske Sprognævn.
- Poppel, Mariekathrine (2007). Kønsbaseret arbejdsmarkedsudvikling og mænds vold [Gender-based labour market development and men's violence]. In: Gudbjörg Linda Rafnsdóttir (ed.) *Arbejde, helse og velfærd* [Employment, health and welfare]. Háskólaútgáfan.
- Poppel, B. and Kruse, J. (2009). The importance of a mixed cash- and harvest herding based economy to living in the Arctic - an analysis based on Survey of Living Conditions in the Arctic (SLiCA). In: Møller, V. and Huscka, D. (editors): *Quality of Life in the New Millenium: Advances in Quality-of-Life Studies, Theory and Research*. Social Indicators Research Series. Springer Verlag, pp. 107-134.
http://dx.doi.org/10.1007/978-1-4020-8569-7_4

- Poppel, B. (2006). Interdependency of subsistence and market economies in the Arctic. In: Solveig Glomsrød and Iulie Aslaksen (eds.). *The Economy of the North*. Statistisk Sentralbyrå/Statistics Norway, pp. 65–80.
- Skatte- og Velfærdskommissionen (2011). *Vores Velstand og Velfærd – kræver handling nu. Skatte og Velfærdskommissionens Betænkning*. ["Our Prosperity and Welfare - requires action now". Tax and Welfare Commission Report] March 2011. Government of Greenland.
- Skydsbjerg, Henrik (1999). *20 år med hjemmestyre – en samtidshistorie om Grønlands udvikling under Hjemmestyret* [20 years of home rule - A contemporary history on the development of Greenland under the Home Rule]. Nuuk. Atuagkat.
- SLiCA Greenland 2004–06 (www.arcticlivingconditions.org).
- Statistics Greenland (1994). *Levevilkår i Grønland – Den Grønlandske Levevilkårundersøgelse* [Living conditions in Greenland - The Survey of Greenlandic Living Conditions]. Statistics Greenland.
- Statistics Greenland (2002). *Kompetencegivende uddannelser i Grønland og i Danmark 1980/81–2000/01* [Education and training in Greenland and Denmark 1980/81–2000/01] 2nd ed. Statistics Greenland
- Statistics Greenland (2001). *Elever og studerende fra Grønland ved de faglige grunduddannelser, mellemuddannelser og videregående uddannelser i Danmark og ved Ilisimatusarfik 1980/81–2000/01* [Greenlandic students enrolled in basic vocational programs, vocational and higher education in Denmark and Ilisimatusarfik 1980/81–2000/01]. Statistics Greenland.
- Statistics Denmark and the Social Research Institute (1992). *Living Conditions in Denmark Compendium of Statistics*. Danmarks Statistik og Socialforskningsinstituttet. September 1992.
- UNESCO (2014). *ISCED Mappings*. <http://www.uis.unesco.org/Education/ISCEDMappings/Pages/default.aspx>
- Yearbook (various years). *Statistical Yearbook*. Nuuk. Statistics Greenland.

Parliamentary debates

Grønlands Landsråds Forhandlinger (GLF) [Greenland parliament negotiations and debates], Sydgrønlands Bogtrykkeri. Godthåb.

Sessions

- 1959.
- Extraordinary session 1965.
- Autumn Session 1972.
- Spring Session, 1976.
- Spring Session 1979.
- Autumn Session 1980.
- Spring Session 1981.
- Spring Session 1985.
- Autumn Session 1984.
- Spring Session 1985.

The remaining references to the parliamentary debates can be found at this link: <http://inatsisartut.gl/dvd/cd-rom/samlinger/landstingssamlinger.htm>

9. “Boys aren’t taught anything anymore!”^{129,130}

The Role of Gender in Native Subsistence, Work Patterns, and Aspirations in Northwest Alaska

Catherine Turcotte

Keywords: SLiCA, Northwest Alaska, Iñupiat, gender roles, gender relations, living conditions, well-being, subsistence activities, wage employment, moving, lifestyle aspirations.

9.1 Abstract

Patterns of and desires for subsistence and employment differ considerably among Iñupiat and Yup’ik living in Northwest Alaska. Previous studies (Bodenhorn 1990; Kleinfeld 2006; Hamilton & Seyfrit 1994; Hamilton & Miti-guy 2009) have shown that males and females diverge in their aspirations for education, employment, and outmigration, for example – findings suggesting that the region could face increasing social, economic, and cultural pressures in coming decades as females are more likely to leave small communities in favor of stable, year-round work more likely to be located in

¹²⁹ As quoted from an Iñupiaq mother of six, Kotzebue AK.

¹³⁰ Manuscript received 13th July, 2011 and accepted 12th December, 2014.

more populated areas, while males may be more apt to remain in villages performing subsistence. This chapter examines differences in four dependent variables associated with these issues from the Survey of Living Conditions in the Arctic (SLiCA) across gender: the number of subsistence activities respondents reported participating in during the previous year, the number of hours worked in the previous week in wage employment, whether respondents had considered moving elsewhere within the previous five years, and lifestyle aspirations for wage work only or one characterized by mixed wage and subsistence work. Findings illustrate considerable difference between men and women in factors affecting work patterns and desires, and point to a changing social landscape in the region.

9.2 Life in Northwest Alaska

Although in recent decades more and more Iñupiaq and Yup'ik villagers have migrated to larger towns and cities such as Barrow and Anchorage and to the lower forty-eight states (Williams 2010), more than half of Alaska Natives currently reside in villages with populations of less than one thousand (*ibid.*) and many villages remain more than 90% Native today (Seyfrit *et al.* 1998). There are no roads linking communities to one another, so travel between remote villages is limited. Consequently, the familial-based culture of self-sufficiency that has characterized Iñupiat and Yup'ik for centuries remains but has modified over time to take advantage of modern conveniences.

The lifestyle of the Alaska Native villager is similar in many respects to that of generations past, but has also been transformed by influences of southern¹³¹ culture including the arrival of a cash economy. Multigenerational and compound family groups¹³² continue work together in harvest-

¹³¹ Condon & Stern (1993) define "southern" culture, behavior, role expectations, and socialization as that which is influenced by television, advertising, radio, magazines, education, and trips to the south. Additionally, southern culture today can include influences provided by the internet and other electronic media.

¹³² Burch (2006:98) defined compound families as "family unit[s] whose members occupied two or more dwellings, but still operated in terms of a single overriding family organization."

ing traditional foods while Internet use has concurrently skyrocketed. Income and cash – once unnecessary – are now critical for the purchase not only of subsistence-related items, but also household goods such as fresh produce. Sod and underground winter houses of the past have given way to homes arranged in rows. Wage employment is sought after, but largely within the context of a traditional existence. As life has been changed, the aspirations of many to work or subsist and to stay or leave have been altered to reflect these new realities.

Given the need for Iñupiat to obtain wage employment for basic necessities as well as conveniences, a substantial portion of the population now desires employment within the economic sector with some leaving their home villages altogether in favor of work opportunities available in more populous communities (Kruse *et al.* 2008; Poppel *et al.* 2007). Does this group wish to give up the established subsistence lifestyle? In most cases, the answer is no. There is a fierce loyalty among Alaska Natives to traditional ways of life, and predictions of a rapid transition to a largely southern culture have proven incorrect thus far (Kruse 1991). It has been established that despite the arrival of the global economy to the doorstep of Arctic communities, subsistence work remains an integral component of their day-to-day existence (Condon *et al.* 1995; VanStone 1960). Iñupiat place a high value on the culture, characteristics, and lifestyle that are in step with customary practices (Poppel *et al.* 2007), but also recognize the importance of wage-based income in their communities (Chance 1990).

Salmon drying in the sun. Kivalina, Alaska. 2010



Cathrine Turcotte.

9.3 Theoretical Background

9.3.1 *Factors Influencing Subsistence, Work, and Aspirations*

Intersubjective intentions

Sagoff (1986) argued that *intersubjective intentions* define common goals and aspirations that develop individually but are shared with others within a society. Within the framework of community and culture, individual choice is largely based upon public and private value systems and is shaped by internal and external forces such as the presence of kin and family, education, and perceived level of safety and well-being. Therefore, the maintenance of aspirations embedded within the mixed cash/subsistence economy present in many areas of the North is affected by these intentions and affects preferences. Put simply, if subsistence or

other types of traditional activities are valued within a society those activities are preferred, with individuals living there aspiring to live within those values that are highly held. If the behavior is preferred it is then often chosen, and value systems are thus maintained. Consequently, if more value is placed on wage employment by some groups, such as females, than others, such as males, aspirations will diverge and differ based upon these divergent attitudes (Hamilton & Seyfrit 1993; 1994). The continued valuation of employment and subsistence along gender lines perpetuates and, I argue, encourages the development and maintenance of unique preferences between men and women.

Employment satisfaction and desires for work – context matters

For many, one's job is a source of great satisfaction (or disappointment). Quality of work life, a construct associated with well-being in the workplace, is akin to and aims to measure workplace satisfaction, and is associated with type of employment and time spent at work. Measures for quality of work life have been developed to reflect distinct characteristics of workers, conditions, and surroundings (Sirgy *et al.* 2001), and a previous study suggests that workplace satisfaction is located at the peak of a hierarchical "cone", with overall life satisfaction as its base (Martel & Dupuis 2006).

Desire to work and resulting satisfaction gleaned from employment are salient to the environment of individuals. Moreover, employment and aspirations for employment should be interpreted within the context of place, culture, and characteristics of individuals, as well as the employment structure in any given community or society (*ibid.*). In communities inhabited by indigenous people, interpretation of employment measures must account for value placed upon traditional activities such as subsistence, thus creating distinctions between Western and non-Western models of wage employment patterns. Wage work and resulting quality of work life should not be interpreted through a western lens when examining Native populations, but ought to account for other activities producing economic benefits, such as subsistence activity. Factors affecting quality of work life (wage-based) may diverge from factors influencing quality of subsistence-related work life, but neither should be discounted.

An example of a Native interpretation of successful work and high levels of quality of work life can be found in an examination of social capital. Research conducted using a sample in Spain found associations between

social capital, job satisfaction, and quality of life at work, with social capital more strongly related to job satisfaction than characteristics of the worker or qualities of the job itself (Requena 2002). Subsistence and other traditional skills and activities are strongly linked to social capital in Native societies. A skillful hunter, for example, is often a leader within his or her community and is regarded with a great deal of respect and authority from town or village residents, therefore possessing a high level of social capital (Wolfe 2004). As such, wage employment must be examined in tandem with subsistence in this project, with factors associated with increasing or decreasing subsistence activity and wage work appreciated as being entangled in and affecting one another.

9.4 Subsistence and Employment among Iñupiat

9.4.1 *What is Subsistence?*

Traditional subsistence activities among Iñupiat include hunting, fishing, gathering, sewing, skinning, processing, and traditional activities directly associated with this work, such as the repairing of traditional boats (Burch 2006; Kruse 1991; Nuttall 1998).¹³³ The number of Alaska Natives participating in subsistence activities is significant and varies widely by the location and size of communities, access to seasonal subsistence camps, and the age and gender of participants. More than 50% of Iñupiat report fishing, gathering plants and/or berries, skinning and butchering caribou, and preserving meat and fish, and hunting and harvesting are also vital subsistence activities (Poppel *et al.* 2007). Table 1 illustrates the percentage of SLiCA respondents reporting participation, by activity.

¹³³ For clarity, subsistence work is defined as participation in one of the above activities, while wage work is operationalized as those activities not normally defined as subsistence-based and completed for monetary payment.

Table 1. Per cent involvement in subsistence activities within the last twelve months, by activity¹³⁴

Activity	Per cent participation
Fish	75
Preserve meat/fish	71
Pick berries	69
Skin/butcher caribou	53
Gather greens, other plants	50
Hunt caribou, moose, sheep	46
Hunt waterfowl	36
Hunt seal	35
Help whaling crews	34
Make native crafts	34
Gather eggs	31
Sew skins, make parkas	26
Member of a whaling crew	22
Make sleds or boats	20
Hunt walrus	17
Trap	10

9.5 What is wage employment in Arctic Alaska?

Wage employment among indigenous populations in Northwest Alaska is unique, both in type of work available and in the value placed upon employment by Iñupiat and Yup'ik. Given the subsistence-based lifestyle of many households, wage work is viewed as a means to acquire the materials necessary for successful subsistence harvests (Condon *et al.* 1995) and “fill[s] the gap” in acquiring materials are necessary for successful subsistence participation (Ward 2010). Consequently, wage employment may be external to many individuals, especially in small villages such as Kivalina, located in the Northwest Arctic Borough of Alaska. Traditional activity, conversely, may be viewed as a means to achieve greater fulfillment. Additionally, state, Native corporation, and oil and gas industry-related subsidies in the form of cash payments to Alaska Natives often make up a considerable portion of household income (Anders 1989).

¹³⁴ Results here and in all tables and figures have been weighted to account and adjust for biases in sampling; see Methods section for details on weights used.

9.5.1 What is Available?

The availability of consistent wage work varies widely from community to community, with greatest differences in accessibility to stable employment found between towns and smaller villages (Poppel *et al.* 2007). In the majority of communities sampled in the SLiCA survey, local schools and government are the largest employers, often followed by jobs in the health care industry and town or village retail establishments (Kleinfeld *et al.* 1983; North American Industry Classification System 2007). Many remaining employment opportunities available to Iñupiat are seasonal. For Iñupiaq males, this often means jobs in the construction industry during the warmer months and unemployment for the remainder of the year (Bilson & Mancini 2007). Women's seasonal work often centers on the tourist industry, with the manufacture and sale of local crafts making up the bulk of work during the brief summer period.

The unemployment rate in majority-Native areas of Alaska tends to be among the highest in the state (Andrews & Creed 1998), and was 14.3% in the Northwest Arctic Borough in June 2010; the true number of Natives who are not working is significantly higher and not reflected in official unemployment figures, however (Alaska Department of Workforce Development 2010). Unemployment is also much higher in Kivalina and other small villages where wage opportunities are extremely limited. Income in the form of transfer payments from the state through annual dividend checks and Native corporation payments also provide a large proportion of income, especially in small villages such as Kivalina where wage opportunities are so limited.

9.6 Methods

9.6.1 Weighting

Several different weight variables were calculated for these analyses. Weighting survey data compensates for departures from random sampling and allows for a more realistic picture of population characteristics (Hamilton 2009). Two probability weights were used to adjust for each of the three regions sampled and for household size. Probability weights are

proportional to the inverse of the probability of selecting a person from a household containing only one individual, for example, compared with the probability of selecting someone residing in a larger household with more people employed (*hhwt*). Similarly, *regwt* was used to adjust for selection bias in the regions sampled. Additionally, a poststratification weight, (*genwt*), was used to adjust for the gender distribution in the sample. The percentage of males in the SLiCA survey is 42.75, with females making up 57.25% of the sample. Census data shows that in the three regions surveyed 49.1% of the population is male and 50.9% of the population is female, so this imbalance was adjusted to eliminate response bias. These three individual weights were then combined into one overall weight variable, *finalwt*,¹³⁵ and are used in analyses.

9.6.2 *Dependent Variables*

Four dependent variables will be included in statistical analyses. The first dependent variable, total number of subsistence activities performed in the previous twelve months, includes such activities as being a member of a whaling crew, sewing skins and making parkas, hunting, fishing, trapping, gathering vegetation, and making native crafts. A total of sixteen activities were included in the measure, and each activity was

¹³⁵ The construction of the weight used in this project, *finalwt*, was completed in the following manner: first, probability weights were constructed to adjust for household size and region sampled. Proportional to the inverse of the probability of selection, the weight for household size (*hhwt*) was achieved by compiling the total number of pseudopeople, or all persons residing in all households reached by the survey (12 households with 1 person = 12 pseudopeople, 44 households with 2 people = 88 pseudopeople, etc., for a total of 2684 pseudopeople). The inverse probability of selecting a person from a particular household size (from a 2-person household the probability would be 1/2, for example) were then multiplied by the ratio of real people to pseudopeople (663/2684) to maintain the same 1-2-3-4 etc. ratio as original household sizes. The same method was used to adjust for known regional sampling biases (*regwt*) across the North Slope, Northwest Arctic and Bering Straits areas. Finally, a poststratification weight was constructed to adjust for response bias by gender by dividing the proportion of males in the population (49.1) by the proportion of males in the SLiCA survey (42.75) and by dividing the proportion of females in the population (50.9) by the proportion of females in the sample (57.3). these ratios were then used to weight male and female responses accordingly. To combine these three weights into one overall weight (*finalwt*), individual weights were multiplied (*hhwt*genwt*regwt*) and adjusted so that the final sum of weights equaled the size of the SLiCA sample.

asked in an individual question. Values were summed for each respondent resulting in the total number of activities performed. The variable *subsist* was collapsed from sixteen values to five for the purposes of clarity in preliminary tables (see Table 2), although multivariate analyses uses the full 16-value scale.

Table 2. In how many subsistence activities did you participate in the previous year? (*subsist*, collapsed)

Grouped number of subsistence activities	Frequency	Per cent
Zero	78	10.0
1 to 3	132	19.3
4 to 6	186	28.6
7 to 10	175	27.1
More than 10	92	15.0
Total	663	100

The next dependent variable in this project measures the number of hours worked in wage employment in the past week. Care must be taken in interpreting results of the number of wage hours worked; major fluctuations in type and availability of employment in Native regional centers and villages could result in data representing an often unstable workforce in the region, depending upon the time of year in which surveys were completed and/or employment conditions in communities at the time of interviews.

Table 3 shows the number of wage hours worked in a collapsed scale (*hoursworked*). Further analysis the hours worked measure will employ the full 54-point scale; the variable is collapsed here for ease of interpretation. More than 24% of Iñupiat responded that they had not worked at any wage job during the previous week, while 42% expressed that they had worked the equivalent of a full-time job during the past week.

Table 3. How many hours worked in wage employment in the previous week? (*hours worked*, collapsed)

Hours worked	Frequency	Per cent
Zero	160	23.2
1 to 20	70	12.4
21–37	153	22.9
Over 37	280	41.5
Total	663	100

The third dependent variable included in analyses is dichotomous in nature and asked of respondents whether they had considered moving away from their community in the last five years. This variable aims to measure the desire among Iñupiat to relocate or migrate to another community. Table 4 shows the frequency and percentage of respondents who did and did not consider moving away from their current town or village in the previous five years, with forty-four per cent of respondents stating that they had considered moving.

Table 4. Have you considered moving in the past 5 years?

	Frequency	Per cent
Yes	287	46.5
No	364	53.5
Total	651	100

The fourth, subsistence and employment aspirations of Iñupiat, is measured using an indicator asking about employment preferences. Specifically, respondents were asked *“If you could choose, which lifestyle would you prefer: working on a wage job, or harvesting, herding, or processing your own food, or both?”*

Each response was originally coded as one of three categories; however, for the purposes of this study aspirations were made into a dichotomous variable, or collapsed into two categories to capture the dyadic nature of differences existing between individuals who aspire to only work in wage jobs without subsistence, and those who desire a lifestyle consisting of either subsistence participation only or both subsistence activity and wage work. Table 5 below illustrates that a large majority, 80%, of Iñupiat stated that they aspire to engage in both subsistence activities and wage work or subsistence only, while 20% would prefer to only engage in wage employment if given the choice.

Table 5. Which would you prefer, if you had the choice?

	Frequency	Per cent
Subsistence or Subsistence/wage work	503	80.8
Wage work only	126	19.3
Total	629	100*

9.6.3 *Independent and Control Variables.*

The first group of independent variables includes background characteristics of age (transformed using a logarithm to reduce positive skew), marital status, and a self-reported measure of overall health. Also included are socio-economic characteristics and local ties including education level, income (transformed to the square root of income, again to reduce skew), and whether one or both of respondent's parents were born in the community. Age cohorts are used rather than age in years for simplicity, although multivariate results will use the logarithm of all reported ages. Similarly, the square root of reported income to the nearest dollar will be used in bivariate and multivariate models for greater accuracy.

A number of independent variables were chosen to capture Native cultural ties and political knowledge, including Native language ability, participation in the telling or listening of a Native story, knowledge of local politics, and number of traditional skills participants learned as a child. Language and traditional skills are well-established indicators of ties to Native culture (Burch 2006), and more specifically, storytelling is regarded by Iñupiat as an important cultural component passed down through generations (ibid.).

Social support measures are used in multivariate analysis and are operationalized using seven indicators combined into one index measure. The social support index captures not only ties maintained through face-to-face interaction, but also includes types of support that could be gained through telephone conversations or maintained via the Internet.

Satisfaction with one's community consists of indicators measuring satisfaction with conflict avoidance (community harmony), satisfaction with the maintenance of public safety in respondent's town or village, satisfaction with the cost of living, overall satisfaction with the community, and perceptions of alcohol as a problem. Attitudes toward alcohol are included as previous study of alcohol abuse in the region has found that it is regarded by many to be a serious problem (Seale 2006).

Table 6 shows descriptive statistics for variables used in analyses. The mean number of hours worked in wage employment is 29.32, although 24% of respondents indicated that they did not work at all in the previous week for income. The mean number of subsistence activities performed in the previous year is 5.8. The average age of the sample is almost 42 years and the mean household income is USD 55,447, although the income distribution is skewed by a small number of very wealthy households.

Most Iñupiat appear to be satisfied with the overall quality of life and level of public safety in their town or village, although, expectedly, residents are dissatisfied with the high cost of living in the area. Finally, individuals are generally satisfied with the level of conflict avoidance in their community, which is an important facet of Iñupiaq culture. More than a quarter of respondents, however, stated that they were neither satisfied nor dissatisfied with the amount of conflict avoidance practiced in their community.

Table 6. Description of key analytic variables

Dependent variables	Range	Sd	Mean
Hours worked per week	0 – 90	21.45	29.32
Number of subsistence activities	0–16	4.04	5.80
Desire to move	0.1 (yes)	0.50	0.44
Lifestyle aspirations	0.1 (mixed work)	0.40	0.20
Independent Variables			
Age (log)	16–91 (2.77–4.51)	17.02 (0.425)	41.59 (3.64)
Marital status	0,1 (married)	0.48	0.36
Education level	1 (elem. Or less)–4 (college)	0.85	2.03
HH income	0–428,080	45,499	55,447
Health	1 (poor)–3 (excellent)	0.78	2.23
Native language ability			
	1 (not at all)–5 (very well)	1.40	3.06
Listened to Native story	0,1 (yes)	0.50	0.55
Traditional skills learned as a child	0–20	4.57	11.41
Parents born locally	0 (none) – 2 (both)	0.77	0.86
Level of social support	1–5 (high)	0.79	4.07
Life satisfaction			
	1 (very dissatisfied)–5 (very satisfied)	0.81	4.39
Alcohol as a family problem	1 (never)–3 (often)	0.58	1.40
Satisfaction with cost of living	0 (very dissatisfied)–5 (very satisfied)	1.26	1.54
Political knowledge	0 (not at all knowledgeable)–3 (very knowledgeable)	0.85	1.51
Satisfaction with public safety	1 (very dissatisfied)–5 (very satisfied)	1.24	3.48
Satisfaction with conflict avoidance	1 (very dissatisfied)–5 (very satisfied)	1.09	3.58
Alcohol as a community problem	0.1 (yes)	0.36	0.85

9.7 Community Data

Population size, population change, average income, and percentage of individuals over the age of 16 employed in communities surveyed by SLiCA is also included in analyses. These data will be obtained from Arctic Observation Network – Social Indicators datasets (AON-SI) (<http://www.iser.uaa.alaska.edu/projects/search-hd/datasets.htm>), the Alaska Department of Labor and Workforce Development (DOLWD), and the Alaska Community Database (ACD) maintained by the Division of Community and Regional Affairs for the State of Alaska. Place-level indicators consist of community population in 2000 and 2007 and change in population between 2000 and 2007, 2007 median family household earned and unearned income figures for each location, and the percentage of persons over the age of 16 working and per cent working year-round in 2009. Community-level population, employment, and income data are representative of all residents in the focus regions rather than Native residents only (as is the case with the SLiCA survey), but describe the common social environment that Natives and non-Natives both share.

Borough-level location data will also be used in support of that gathered at the town/village level. Borough-level data, obtained as a part of the AON-SI project, includes change in population for each decade between 1970 and 2000 by age, gender, and per cent Native, and are used peripherally to support SLiCA data. Additionally, Alaska Department of Fish and Game data consisting of harvest surveys for selected communities are used in this chapter. Surveys were not completed annually for each location; however such data is considered the primary resource for subsistence harvest data.

9.8 Analysis

9.8.1 *SLiCA Analysis*

This study first proceeds with bivariate analysis in the form of cross-tabulations with chi square tests to assess differences of dependent variables for males and females. These tables will help to establish whether aspirations for wage employment or subsistence participation, a desire to move

to another location, wage hours worked, and/or subsistence activities performed differ by gender. Kruskal-Wallis tests will also be used to test whether the medians for males and females are significantly different across subsistence and employment patterns.

Multivariate analyses consists of ordinary least squares and logit regression models to measure associations between individual, community, Native, and social support characteristics and each of the four dependent variables by gender – number of hours worked in wage employment in the previous week, number of subsistence activities performed in the previous twelve months, thoughts on moving to another community, and employment aspirations.

9.8.2 Hypotheses

It is hypothesized that a number of independent variables included in models will demonstrate a statistically significant relationship with the number of subsistence activities reported in the previous year, and that the strength of relationships will differ between males and females. In general terms, females will report taking part in fewer subsistence activities. I posit that the strongest associations with subsistence activity for both sexes will be found with independent variables linked to traditional activity and skill. More sophisticated knowledge of Native language, participation in Native storytelling, and the number of traditional skills learned as a child will all be positively correlated with more subsistence activity, net of other factors included in models for both men and women.

It is also hypothesized that gender will also be associated with the number of hours reported per week in a wage job, with females stating that they work significantly more hours in the week prior than males. More specifically, I hypothesize that social support and well-being variables will not demonstrate a statistically significant relationship with the number of hours worked for either gender, however I expect that community-level variables including the percentage of residents in poverty and the percentage not working will exhibit a relationship with wage work for females but not for males.

It is postulated that gender will be statistically associated with thoughts of moving elsewhere, with females more likely to have thought of living in another community than males. Marriage, subjective estimates of social support, and parental birthplace will also be significant for females but not males, I theorize, as these variables reflect social ties that individuals have within their community which may be of greater importance to women. Increased levels of social support will be positively associated with a desire to remain in one's community for females.

Finally, it is hypothesized that a number of characteristics, including age, marital status, education level, and ties to traditional ways of life such as traditional skills, storytelling, and Native language ability will be associated with aspirations for a particular lifestyle for both males and females. Specifically, older individuals, those who are married, respondents with less formal education, and Iñupiat with deeper knowledge of traditional skills through childhood instruction, knowledge of Native language, and participation in storytelling will be more likely to aspire a life consisting of only subsistence work while minimizing their participation in the wage economy. These associations will be present within both groups. Alaska Natives taught fewer traditional skills while young will also be more likely to prefer a lifestyle including wage employment.

As stated previously, it is expected that results will show the vast majority of Iñupiat of both sexes desiring to remain as participants in the mixed economy. I hypothesize that these attachments are due to strong cultural ties, financial necessity, and to and a collective recognition of the social and nutritional value of subsistence work.

9.9 Results

Results presented are obtained from SLiCA data and focus on distinctions by gender. More females than males are included in the sample, as is common in large surveys; however, as stated data were weighted to adjust for this imbalance. Table 7 is a frequency table of respondents by gender.

Table 7. Number and percentage of SLiCA respondents by gender

	Frequency	Per cent
Males	283	44.91
Females	379	55.09
Total	662 ¹	100

¹One response missing.

9.9.1 Lifestyle Differences by Gender

Gender and Subsistence

Women and young females are more likely to participate in certain subsistence activities, such as gathering berries and fishing, than males. Seine fishing, in which a large fishing net is held below the water's surface in a circle and then dragged to shore, is a fishing technique most often accomplished by women, for example. Men, alternatively, are more apt to be hunters and go on trips (almost always with family members, including women) to remote camps to harvest caribou or, in coastal regions, sea mammals such as *ugruk* (bearded seal) and bowhead whale. The amount of subsistence activities reported performed by men and women is significantly different, however, with Iñupiaq males participating in a greater number of activities overall than females. Figure 1 illustrates the number of activities reported by gender in the previous year. More women than men engaged in no activities in the previous year, and male responses are clustered between about four and thirteen different activities, while the majority of females report less than five. A Kruskal-Wallis test, shown by Table 8, is used to assess the null hypothesis that there is no difference in the means of *subsist* by gender, is significant ($p = 0.000$) indicating that means of *subsist* are significantly different.

Figure 1. Number of subsistence activities reported by gender. Per cent

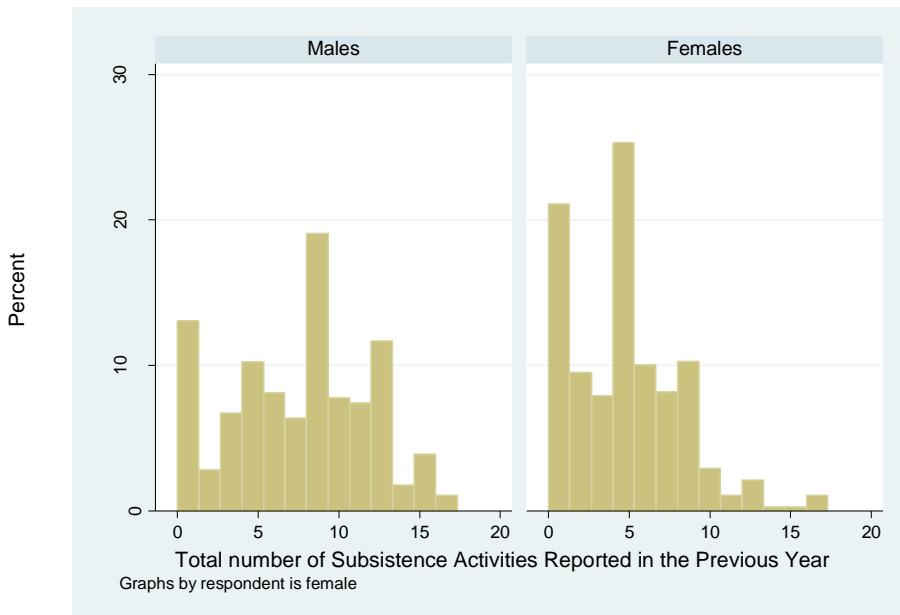


Table 8. Mean, Median, Standard Deviation and Kruskal-Wallis test of *subsist*

	MALES	FEMALES
Frequency	283	379
Mean	7.4	4.6
Median	8.0	5.0
Standard Dev.	4.26	3.4
Kruskal-Wallis	0.000	

Table 9 shows these gender differences in greater detail. The variable *subsist* has been collapsed in this table only for simplicity. More than 10% of females report engaging in no subsistence activities in the previous year, while only 5.4% of males state that they did not participate in any. When looking at higher levels of participation, more than one quarter of males stated that they performed more than ten subsistence activities in the previous year, compared with only 4.3% of females. A Pearson's chi-square test indicates that differences in male and female participation are statistically significant ($p = .000$).

Table 9. Cross-tabulation of number of subsistence activities¹ performed in the previous year, by gender

by gender:					
Number of activities	Males	Females	Total (of sample)		
Zero	5.4	10.6	8.3		
1 to 3	13.8	22.8	18.8		
4 to 6	18.0	37.5	28.7		
7 to 10	33.6	24.8	28.7		
More than 10	29.2	4.3	15.5		
<i>N (unweighted)</i>	283	379	662		
	Pearson chi2(3)	104.04	Pr	0.000	

¹Subsistence variable (subsist) has been collapsed into five categories for ease of interpretation in this table.

Iñupiaq males have traditionally taken part in subsistence harvests and activities more frequently and have participated in a wider range of activities, so results shown above are expected. The role of women in subsistence participation has been, and is to some degree, defined by the cleaning, preparation, and preservation of country food caught by males, although women frequently fish and hunt as well.

Gender and Work

Figure 2 and Table 10 illustrate the number of hours worked in the previous week by males and females, and descriptive statistics including a Kruskal-Wallis test are also shown by gender. From Figure 2 it is evident that respondents are clustered in two areas – those who reported that they did not work at all in the previous week, and those who report working a full-time (or close to full-time) job. More males than females stated that they worked more than fifty hours in the previous week, and slightly more females appear to have worked in part-time employment. The difference in means for the number of hours worked by males and females, shown by the Kruskal-Wallis test, is not significant ($p = 0.060$), although the mean number of hours worked by males is higher than by females (33.5 and 26.3, respectively).

Figure 2. Number of hours worked per week in wage employment, by gender. Per cent

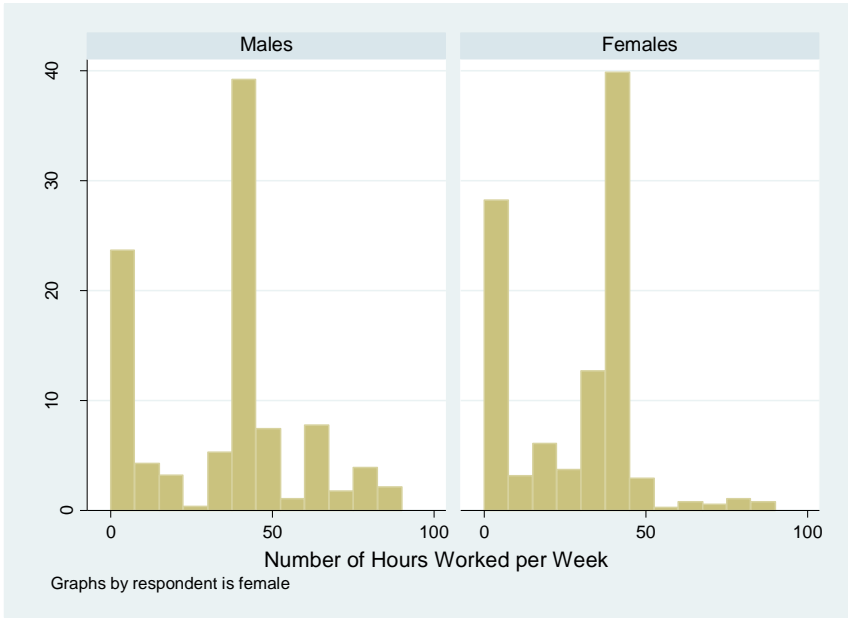


Table 10. Mean, Median, Standard Deviation and Kruskal-Wallis test of hours work

	Males	Females
Frequency	283	379
Mean	33.5	26.3
Median	40.0	35.0
Standard Dev.	23.4	19.3
Kruskal-Wallis	0.060	

Table 11, a cross tabulation of the number of hours worked by gender using a collapsed interpretation of the hours worked variable for ease of interpretation, confirms results shown in the histogram above. More than half of males reported working a full-time job, or more than 37 hours in the previous week, compared with just over a quarter of females. Almost half of women stated that they did work, but less than 37 hours in the previous week. A chi-square statistic, results of a test examining whether values of the number of hours worked (collapsed) are significantly different across gender ($p = 0.000$) shows that they are.

Table 11. Cross-tabulation of number of hours in wage employment worked per week,¹³⁶ by gender

Hours worked per week	Males	Females	Total (of sample)		
Zero	21.1	26.6	24.1		
1 to 20	13.5	15.6	14.7		
21 to 37	13.3	30.4	22.7		
Over 37	52.0	27.5	38.5		
<i>N</i>	283	379	662		
	Pearson	chi2(3)	49.03	Pr	0.000

It should be pointed out however, that seasonal employment creates wide swings in the number of hours worked by Alaska Natives in the region. Males involved in outdoor work such as construction or firefighting in the summer months, for example, may work many hours per week for a span of weeks only to have no work when construction work is completed, wildfire season concludes, or colder weather moves into the region. Given that much of the SLiCA survey was conducted in the winter months, results should be interpreted with caution.

Thoughts of Outmigration

The third dependent variable of focus asked Iñupiat whether they had thought about moving elsewhere in the previous five years. Table 12 presents results by gender. More than half of both men and women stated that they had not considered moving elsewhere, with slightly more females than males answering that they had considered it. A chi-square test, however, shows that results are not significantly different ($p = 0.180$), suggesting that despite previous research indicating that young females are more likely to move away from villages to obtain education or employment, perhaps males think about moving away to a degree that is comparable to females.

¹³⁶ Hours worked variable (hourswork) has been collapsed into four categories (hrsworkcoll) for simplicity in this table.

Table 12. Cross-tabulation of feelings toward living elsewhere, by gender

Considered moving away	Males	Females	Total		
Yes	42.0	49.1	45.9		
No	58.0	51.0	54.1		
<i>N</i>	276	374	650		
	Pearson	chi2(1)	3.25	Pr	0.180

Aspirations for Work and Subsistence

Males and females also do not appear to differ from one another in their lifestyle aspirations, which was coded as a dichotomous variable for either wage employment only or desiring a lifestyle consisting of both subsistence activity and wage work. Without controlling for other factors, a Pearson chi-square test does not allow us to reject the null hypothesis that the variables are not independent from one another with a probability value of 0.141. Despite this, it appears as though females may be slightly more likely than males to state that they would prefer a lifestyle consisting of wage work only over one characterized by both wage work and subsistence activity. However, the vast majority of males and females (87 and 82%, respectively) report that they desire a life rooted in both sides of the mixed cash/subsistence economy.

Table 13. Cross-tabulation of aspirations for wage employment or both wage work and subsistence, by gender

Aspiration	Males	Females	Total		
Wage Employment	12.8	18.1	15.7		
Traditional Subsistence/Both	87.2	81.9	84.3		
<i>N</i>	268	361	629		
	Pearson	chi2(1)	3.35	Pr	0.141

Factors Accounting for Differences in Dependent Variables by Gender

It is hypothesized that factors associated with variation in the four dependent variables examined – number of subsistence activities reported in the previous year, number of hours worked in wage employment in the previous week, thoughts within the past five years of moving elsewhere, and aspirations for a mixed subsistence/wage lifestyle or wage work only – will

differ by gender. OLS and logit regression analysis was used to test whether the null hypothesis, that there are no differences in each of the dependent variables by gender, can be rejected.

The first table shown below displays results for an OLS regression of the number of subsistence activities respondents reported participating in during the previous year on independent variables of interest. Models shown have been reduced by dropping one variable at a time across both males and females in order to arrive at simplified and parsimonious results. The results of Table 8.6 show that the null hypothesis that there are no differences by gender can be rejected.

For males, age is negatively associated with subsistence, and this relationship is reversed (although non-significant) for females. For every one-year increase in male age, the log-odds that he participated in a wider range of activities in the previous year decrease by 3.02. This relationship is statistically significant ($p = .000$). Variety in subsistence activity for males is also linked to Native language ability, with greater ability indicating increased subsistence participation ($t = .597, p = .028$).

Women differ from men in associations between subsistence and participation in Native storytelling, life satisfaction and satisfaction with costs in the community, and the percentage of residents in the community who are not working. The relationship between storytelling and subsistence is strong for females, with more participation in storytelling linked to a higher number of activities reported ($t = 1.23, p = .000$). Surprisingly, the relationship between storytelling and subsistence is almost non-existent for males. Increased levels of reported life satisfaction are associated with increased subsistence for females ($t = .697, p = .004$); however, those who report being satisfied with costs within the community tend to report fewer subsistence activities ($t = -.329, p = .041$). Finally, females residing in communities characterized as having more people not employed report a greater variety of subsistence activities ($t = .044, p = .006$).

Some similarities also exist between males and females and factors linked to variety in subsistence activities. Marriage is associated with more activities for both sexes ($t = 1.20, p = .044$ for men and $t = .772, p = .043$ for women), but the strongest relationships are found when examining depth of political knowledge and the number of traditional skills learned as a child. Both are positive, with increased political knowledge linked to a higher

number of activities ($t = 1.08$, $p = .004$ for men and $t = .770$, $p = .001$ for women), and more skills learned as a child indicating a greater number of activities reported as an adult for both men and women ($t = 3.84$, $p = .000$ and $t = 1.43$, $p = .000$, respectively). As was the case with place type, the number of skills learned exhibits the most robust relationship with subsistence by gender. The reduced model is significant for both males and females ($\text{Prob} > F = .000$).

Table 14. Reduced OLS regression of number of subsistence activities in the past year on key variables, by gender

Demographics	Males		Females	
	β	SE	β	SE
Age (log)	-3.017***	0.844	0.636	0.553
Married	1.200*	0.593	0.772*	0.381
Health				
SES				
Education level				
Household income (sqrt)				
Parents born locally				
Native & Local Ties				
Native language	0.597*	0.270	-0.152	0.155
Number of Native stories	-0.046	0.621	1.227***	0.337
Traditional skills	3.839***	0.511	1.432***	0.252
Political knowledge	1.076**	0.378	0.770***	0.231
Social Support & Well-being				
Social support				
Life satisfaction	0.262	0.318	0.697**	0.242
Alcohol a family problem				
Attitudes toward Community				
Alcohol a community problem				
Satisfaction with conflict avoidance				
Satisfaction with safety				
Satisfaction with costs	0.164	0.214	-0.329*	0.160
Community Characteristics				
Per cent in poverty				
Population change, 2000–07				
Per cent not working	0.040	0.026	0.044**	0.016
Constant	0.969	3.067	-6.993	1.935
<i>N</i>	255		337	
<i>F</i>	13.05		15.45	
<i>Prob > F</i>	0.000		0.000	
<i>R</i> ² (%)	34.42		37.19	

Results for all models are weighted.

* $p < .05$

** $p < .01$;

*** $p < .001$;

Table 15 is a reduced model regressing the number of hours worked in the previous week by respondents on key variables. For males, every year of formal education increases the log odds of reported subsistence activities by 6.38, and for females the log odds are 7.36. Both are significant at the $p < .001$ level.

A greater level of self-reported political knowledge and considering alcohol a problem within one's family are associated with increased subsistence activity in females ($t = 3.75, p = .019$ and $t = 3.83, p = .022$, respectively) while participation in Native storytelling is associated with decreased odds for subsistence for that group ($t = -8.59, p = .004$). Significant relationships between these variables and the number of hours worked are not present for males.

Interestingly, increases in reported levels of social support are associated with a decrease in the number of hours worked in wage employment for males. This relationship is statistically significant ($t = -5.41, p = .004$). However, higher overall life satisfaction is positively linked to wage hours for this group ($t = 4.93, p = .050$), although there is some question as to the temporal order of this relationship. Previous research has found life satisfaction to be an antecedent to quality work life, with higher levels of quality of work life also possibly linked to increased wage work hours (Martel & Dupuis 2006); however, with steady, full-time employment, Iñupiat in Northwest Alaska may also possess higher levels of life satisfaction as a result. Both models are significant, although with an R^2 of 15.99 for males and 18.47 for females, the model is not as robust as that shown in Table 14.

Table 15. OLS regression of number of hours worked in the previous week on key variables, by gender

DEMOGRAPHICS	Males		Females	
	β	SE	β	SE
Age (log)				
Married				
Health				
SES				
Education level	6.388**	2.209	7.360***	1.359
Household income (sqrt)				
Parents born locally				
Native & Local Ties				
Native language				
Number of Native stories	-1.540	3.323	-8.587**	2.980
Traditional skills				
Political knowledge	-1.443	2.065	3.752*	1.586
Social Support & Well-being				
Social support	-5.413**	1.862	-0.364	1.524
Life satisfaction	4.933*	2.580	-1.171	1.290
Alcohol a family problem	4.485	2.506	3.829*	1.657
Attitudes toward Community				
Alcohol a community problem				
Satisfaction with conflict avoidance	-2.615	1.588	-1.220	1.271
Satisfaction with safety	0.409	1.589	-1.697	1.012
Satisfaction with costs				
Community Characteristics				
Per cent in poverty				
Population change, 2000–07				
Per cent not working				
Constant	4.756	12.321	22.337	9.285
<i>N</i>	203		262	
<i>F</i>	3.67		5.67	
<i>Prob > F</i>	0.001		0.000	
<i>R</i> ² (%)	15.99		18.47	

Table 16 below illustrates results from a reduced logit regression model using the dependent variable asking respondents if they had thought about moving elsewhere within the past five years. For both men and women, youth is associated with thoughts of moving with relationships having statistical significance for both sexes ($t = -2.72$, $p = .001$ for men, and $t = -1.75$, $p = .002$ for women). Among females, considering alcohol problem within the family is linked to a higher likelihood that one has considered moving away ($t = .768$, $p = .012$), and higher satisfaction with the community's job in promoting conflict avoidance is related to a decrease in thoughts of relocation ($t = -.385$, $p = .023$).

There is a strong relationship between political knowledge and thoughts of moving among males that is unseen (and, in fact, reversed) among females. Males who report that they are more politically knowledgeable are significantly more likely to also state that they have thought of moving within the past five years ($t = .866, p = .000$). although less strongly associated with moving than political knowledge, the locality of parental birthplace also seems to matter to males, with an increased likelihood that they had not considered moving to another community if one or both parents was born in the same town or village in which the respondent currently resides ($t = -.586, p = .022$). Both male and female logit models exhibit statistical significance.

Table 16. Reduced logit regression of desire to move to another location on key variables, by gender

	Males		Females	
	β	SE	β	SE
Demographics				
Age (log)	-2.272***	0.643	-1.747**	0.560
Married				
Health				
SES				
Education level				
Household income (sqrt)				
Parents born locally	-0.586*	0.254	0.032	0.229
Native & Local Ties				
Native language				
Number of Native stories				
Traditional skills				
Political knowledge	0.866***	0.267	-0.095	0.204
Social Support & Well-being				
Social support				
Life satisfaction				
Alcohol a family problem	0.155	0.350	0.768*	0.303
Attitudes toward Community				
Satisfaction with costs				
Satisfaction with safety	-0.111	0.195	-0.255	0.135
Satisfaction with conflict avoidance	-0.257	0.190	-0.385*	0.168
Alcohol a community problem				
Community Characteristics				
Per cent in poverty				
Population change, 2000–07				
Per cent not working				
Constant	7.901	2.351	7.435	2.094
<i>N</i>	215		274	
<i>F</i>	3.82		3.49	
<i>Prob > F</i>	0.001		0.002	

Finally, Table 17 shows results from a reduced logit regression model of the dependent variable concerning lifestyle on key variables. Again, distinctions can be made between Iñupiaq men and women in factors affecting whether they would prefer a lifestyle of only wage employment, or one characterized by both subsistence and wage work. For females, age is an important factor – for each one-year increase in age, the log-odds that women will prefer to work in wage jobs only decrease by 2.53 – suggesting that for women, youth is associated with aspirations for wage work ($t = -2.53, p = .000$). This relationship is not present for males, and in fact the direction of the relationship is reversed.

Table 17. Reduced logit regression model of aspirations for wage work and/or subsistence on key variables, by gender

	Males		Females	
	β	SE	β	SE
Demographics				
Age (log)	0.492	0.596	-2.525***	0.523
Married				
Health	0.309	0.350	0.577*	0.282
SES				
Education level	-0.261	0.409	0.786*	0.322
Household income (sqrt)	-1.380*	0.629	-0.518	0.487
Parents born locally				
Native & Local Ties				
Native language				
Number of Native stories	-0.259	0.615	-0.892*	0.377
Traditional skills	-1.652***	0.489	-0.724*	0.319
Political knowledge				
Social Support & Well-being				
Social support	0.544	0.308	0.346	0.241
Life satisfaction				
Alcohol a family problem	-0.224	0.390	0.768	0.403
Attitudes toward Community				
Satisfaction with costs				
Satisfaction with safety				
Satisfaction with conflict avoidance	-0.506	0.263	0.012	0.178
Alcohol a community problem				
Community Characteristics				
Per cent in poverty	-0.008	0.021	-0.033*	0.016
Population change, 2000–07	-0.004**	0.001	-0.002	0.001
Per cent not working				
Constant	3.270	2.347	6.067	2.273
<i>N</i>	211		275	
<i>F</i>	2.99		6.68	
<i>Prob > F</i>	0.001		0.000	

Better health and education are also linked to an increasing likelihood that a female will desire wage work, and these relationships, too, are not nearly as strong for males (for females, these results are $t = .577$, $p = .042$ regarding health and $t = .786$, $p = .015$ for education). In fact, the direction of the relationship between education and aspirations is reversed when males are examined. Increasing levels of education are associated with a desire for wage work among females, but this relationship is the opposite for males, although not significant ($t = -.261$, $p = .524$).

Finally, significant relationships for women are also evident with Native storytelling and the percentage of residents in poverty in the respondent's community. Taking part in Native storytelling appears to act as a protective factor for women in desiring participation in subsistence ($t = -.892$, $p = .019$), as are higher poverty rates – the latter perhaps suggesting that women living in villages where the poverty rate is extremely high simply do not imagine a lifestyle in which wage employment is a component ($t = -.033$, $p = .037$).

For men, household income matters, as do the number of traditional skills learned as a child and population shifts within one's home community. Increasing income is linked to aspirations for subsistence or participation in the mixed economy ($t = -1.38$, $p = .003$), indicating that they may reside in a household in which income is already at a satisfactory level for comfort and subsistence participation. Next, the more traditional skills males report learning as a child, the more likely they are to aspire to subsistence or mixed work ($t = -1.65$, $p = .001$). Finally, an increase in the population of an Iñupiat hometown or village is linked to aspirations for subsistence ($t = -.004$, $p = .004$).

9.10 Discussion

9.10.1 *Subsistence*

Age is associated with the number of activities individuals take part in among males but not females. Relationships, between age and subsistence in fact, are inversed between males and females, with males significantly more likely to participate in a wider range of subsistence activities when younger and females more likely to participate in more activities as they get

older (although this relationship was not statistically significant). These results may point to divergent levels of importance afforded to education by males and females, with males perhaps preferring to spend more time on a wider range of subsistence activities while females place more importance on education, all else being equal. Traditional skills and activities are again found to be strongly linked to number of subsistence activities for both genders. Significant relationships exist regarding subsistence activities and life satisfaction, satisfaction with the cost of living, and the percentage of individuals within one's community who are not working for females but not males, suggesting that feelings and attitudes toward the community and the strength of social ties impact (or are very likely *impacted by*, as the direction of relationships here cannot be established) the range of subsistence activities women participate in. Perhaps most important to note from these results is that females who feel more satisfied with their lives tend to take part in more subsistence activities.

9.10.2 *Wage employment*

Factors associated with wage hours worked differ in a number of ways by gender. Greater perceived social support is linked to fewer hours worked by males, perhaps indicating that in some cases females within a household are working while males partake in more subsistence activities; conversely, increased social support in conjunction with decreased work hours could simply be a function of age. Among females, participation in Native storytelling is associated with fewer wage hours worked – again, this may indicate that older females partake in more storytelling activities and are also less likely to hold regular wage jobs.

9.10.3 *Thoughts of moving*

Interestingly, the strongest relationship found across gender when looking at thoughts of moving is found among males and their perceived political knowledge. Increasing knowledge is associated with a greater likelihood that an individual had thought of moving elsewhere, although this relationship is non-existent (and even reverses) for females. Although data do not allow for further exploration along this vein, perhaps

those males who perceive themselves to be politically knowledgeable are also discontent with the political environment within the community, borough, or state.

9.10.4 Aspirations

Aspirations diverge when males and females are investigated separately. Age appears to matter much more for females, with youth associated with desiring wage employment. These results confirm those hypothesized. What is surprising, however, is the lack of association between age and aspiration concerning males, and even the reversal in direction of this relationship when compared with females.

9.11 Conclusion

9.11.1 A Native conception of development

Indigenous populations do not identify themselves through a non-Native lens, and as such should be recognized in this manner despite the inclusion of technological advances in everyday life (McMichael 2008). As Marino found in the Alaskan village of Shishmaref (2009), there are competing values and cultures at work within Native communities. Western conceptions of development are in conflict with indigenous lifeways. Economics, politics, the environment, and culture are not mutually exclusive and cannot be untangled when examining development through subsistence and wage patterns and aspirations.

Instead, “local interpretations of development” (Pomponio 1992:192) are necessary for the maintenance of indigenous lifeways as they continue to be fixed within intersubjective intentions and to vary on individual and community levels. Amartya Sen (1999) constructs freedom as the ability to choose one’s fate. Similarly, Rampersad (2009) argues that the removal of opportunity and aspiration for Native populations in the Arctic and elsewhere to continue their livelihood in the way that they see fit is tantamount to the removal of choice. I argue based on findings presented that

lifestyle choice should include instruction on the value and methods associated with subsistence to young Native people of both sexes.

Summer in Kivalina, Alaska. 2010



Cathrine Turcotte.

Perhaps the most important finding from SLiCA analyses presented is the continued importance of Native tradition and culture in maintaining lifestyles rooted in the mixed economy regardless of gender. Native ties are strongly associated with subsistence and work patterns, aspirations for a lifestyle consisting of both subsistence and wage work, and remaining in the community. Indeed, factors such as those included in analyses are important in gaining an understanding of the desire among a few to aspire to have a wage job without subsistence involvement, which factors are most strongly associated with greater levels of subsistence activity, and issues and characteristics providing an impetus for some to consider moving elsewhere. What is central to this analysis, however, is the desire among the vast majority of Alaska Natives to continue hunting, fishing, harvesting, processing, preserving, and creating in a traditional manner

with the aid of modern equipment and methods, and the strength of associations between breadth of subsistence activity and past and current Native and traditional ties. Clearly, development in the region will continue to include subsistence practices and although it is not known whether wage opportunities will increase, especially in smaller villages, it is important to recognize that subsistence instruction to young Natives is essential regardless of the economic climate.

Specifically, Native ties through language, storytelling, and traditional activities learned as a child establish a strong link between these types of ties and a traditional lifestyle. First, more sophisticated Native language abilities are associated with *not* thinking of moving elsewhere. Second, strong, positive associations were found between both participation in Native storytelling and the number of traditional skills learned as a child and the number of subsistence activities respondents reported in the previous year. Finally, local ties measured through increasing political knowledge are associated with increased wage work hours.

Learning more traditional skills as a child appears to act as a protective factor for subsistence participation as an adult for both males and females – more skills learned as a child not only equates to participation in significantly more activities later in life, but also to increased aspirations for subsistence in the future. In general, these findings remain significant when data is examined across regional centers and villages and when examining male and female groups individually. Results dovetail those of previous research showing that superproducer families within communities harvest and produce proportionally large amounts of wild food that they then share with others (Wolfe 2004) and suggest that these qualities within certain families *themselves* likely reproduce, in effect, to continue traditions of “superproducing” and food sharing within communities. This evidence points to the importance of instruction of traditional skills and activities to Native youth in order to establish a foundation of subsistence in future generations.

9.12 References

- AHDR (2004). *Arctic Human Development Report*. Stefansson Arctic Institute. Akureyri, Iceland.
- Alaska Department of Workforce Development (2010). *Population Estimates by Place, 2005–2009*.
- Alaska Department of Labor and Workforce Development (2010). *Northwest Arctic Borough Profile*. vol. 2010. Anchorage, Alaska.
- Anders, Gary C. (1989). Social and Economic Consequences of Federal Indian Policy: A Case Study of the Alaska Natives. *Economic Development and Cultural Change* 37:285–303. <http://dx.doi.org/10.1086/451724>
- Andrews, Susan B. and John Creed (1998). *Authentic Alaska: Voices of Native Writers*. Lincoln: University of Nebraska Press.
- Bilson, Janet Mancini and Kyra Mancini (2007). *Inuit Women: Their Powerful Spirit in a Century of Change*. Lanham, MD: Rowman & Littlefield.
- Bodenhorn, Barbara (1990). I'm Not the Great Hunter, My Wife Is: Inupiat and Anthropological Models of Gender. *Inuit Studies* 14:55–74.
- Burch, Ernest S. (1985). *Subsistence Participation in Kivalina, Alaska: A Twenty-Year Perspective*. Edited by D. o. Subsistence and ALASKA Department of Fish and Game. Juneau, Alaska.
- . (2006). *Social Life in Northwest Alaska*. Fairbanks: University of Alaska Press.
- Chance, Norman A. (1990). *The Inupiat and Arctic Alaska*. Fort Worth: Holt, Rinehart and Winston.
- Condon, Richard G., Peter Collings, and George Wenzel (1995). The Best Part of Life: Subsistence Hunting, Ethnicity, and Economic Adaptation among Young Adult Inuit Males. *Arctic* 48:31–46. <http://dx.doi.org/10.14430/arctic1222>
- Condon, Richard G. and Pamela R. Stern (1993). Gender-Role Preference, Gender Identity, and Gender Socialization among Contemporary Inuit Youth. *Ethos* 21:384–416. <http://dx.doi.org/10.1525/eth.1993.21.4.02a00020>
- Hamilton, Lawrence C. (2009). *Statistics with STATA*. Updated for Version 10. Belmont, CA: Brooks/Cole.
- Hamilton, Lawrence C. and Angela C. Mitiguy. (2009). Visualizing Population Dynamics of Alaska's Arctic Communities. *Arctic* 62. <http://dx.doi.org/10.14430/arctic170>
- Hamilton, Lawrence C. and Carole L. Seyfrit. 1993. Town-Village Contrasts in Alaskan Youth Aspirations. *Arctic* 46:255–263. <http://dx.doi.org/10.14430/arctic1351>
- . (1994). Female Flight? Gender Balance and Outmigration by Native Alaskan Villagers. *Arctic Medical Research* 53:189–193.
- Kleinfeld, Judith, Jack Kruse, and Robert Travis (1983). Inupiat Participation in the Wage Economy: Effects of Culturally Adapted Jobs. *Arctic Anthropology* 20:1–21.
- Kruse, Jack. (1991). *Alaska Inupiat Subsistence and Wage Employment Patterns: Understanding Individual Choice*. *Human Organization* 50:317–326.

- Kruse, Jack, Birger Poppel, Larissa Abryutina, Gerard Duhaime, Stephanie Martin, Mariekathrine Poppel, Margaret Kruse, Ed Ward, Patricia Cochran, and Virgene Hanna.
- . (2008). Survey of Living Conditions in the Arctic (SLiCA). In *Barometers of Quality of Life Around the Globe: How are We Doing?* Edited by V. Moller, D. Huschka, and A. C. Michalos. New York: Springer.
- Marino, Elizabeth (2009). Immanent Threats, Impossible Moves, and Unlikely Prestige: Understanding the Struggle for Local Control as a Means Towards Sustainability. In: *Linking Environmental Change, Migration, & Social Vulnerability*, vol. 12, edited by A. Oliver-Smith and X. Shen.
- Martel, Jean-Pierre and Gilles Dupuis (2006). Quality of Work Life: Theoretical and Methodological Problems, and Presentation of a New Model and Measuring Instrument. *Social Indicators Research* 77:333–368. <http://dx.doi.org/10.1007/s11205-004-5368-4>
- North American Industry Classification System, US Census Bureau (2007). *County Business Patterns*.
- Nuttall, Mark (1998). *Protecting the Arctic: Indigenous Peoples and Cultural Survival*. Edited by R. Ellen. Amsterdam: Harwood Academic Publishers.
- Pomponio, Alice (1992). *Seagulls Don't Fly into the Bush: Cultural Identity and Development in Melanesia*. Belmont, California: Wadsworth.
- Poppel, Birger, Jack Kruse, Gerard Duhaime, and Larissa Abryutina (2007). *SLiCA Results*. vol. 2009. Anchorage: Institute of Social and Economic Research, University of Alaska Anchorage.
- Rampersad, E. Rania (2009). Indigenous Adaptation to Climate Change: Preserving Sustainable Relationships through an Environmental Stewardship Claim & Trust Fund Remedy. *Georgetown International Environmental Law Review* 21:1–22.
- Requena, Felix (2002). Social Capital, Satisfaction and Quality of Life in the Workplace. *Social Indicators Research* 61:331–360. <http://dx.doi.org/10.1023/A:1021923520951>
- Sagoff, Mark (1986). Values and Preferences. *Ethics* 96:301–316. <http://dx.doi.org/10.1086/292748>
- Seale, J. Paul, Sylvia Shellenberger, and John Spence. (2006). Alcohol Problems in Alaska Natives: Lessons from the Inuit. *American Indian and Alaska Native Mental Health Research* 13:1–31. <http://dx.doi.org/10.5820/aian.1301.2006.1>
- Sen, Amartya (1999). *Development as Freedom*. New York: Random House.
- Seyfrit, Carole L., Lawrence C. Hamilton, Cynthia M. Duncan, and Jody Grimes. (1998). Ethnic Identity and Aspirations among Rural Alaska Youth. *Sociological Perspectives* 41:343–365. <http://dx.doi.org/10.2307/1389481>
- Sirgy, M. Joseph, David Efraty, Phillip Siegel, and Dong-Jin Lee (2001). A New Measure of Quality of Work Life (QWL) Based on Need Satisfaction and Spillover Theories. *Social Indicators Research* 55:241–302. <http://dx.doi.org/10.1023/A:1010986923468>
- Turcotte-Seabury, Catherine (forthcoming). Boys Aren't Taught Anything Any-more! The Role of Gender in Subsistence, Work Patterns, and Aspirations among

- Inupiat and Yup'ik in Northwest Alaska. In Poppel, Birger and Kruse, Jack (eds.) *Survey of Living Conditions in the Arctic – A Comparative Study of Living Conditions among Inuit, Sami, and the Indigenous Peoples of Chukotka and the Kola Peninsula*. New York: Springer.
- Van Stone, James W. (1960). A Successful Combination of Subsistence and Wage Economies on the Village Level. *Economic Development and Cultural Change* 8:174–191. <http://dx.doi.org/10.1086/449835>
- Ward, Ed. (2010). *Kotzebue*. Alaska.
- Williams, J. Gregory (2010). *Anchorage Migration: The Movement between Alaska's Major Native Areas and Anchorage*. Pp. 1–12, edited by Alaska Department of Labor and Workforce Development. Anchorage, Alaska.
- Wolfe, Robert J. (2004). *Local Traditions and Subsistence: A Synopsis from Twenty-Five Years of Research by the State of Alaska*. edited by Alaska Department of Fish and Game. Juneau, A.

10. Changes in gender roles in Greenland and perceived contributions to the household¹³⁷

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Keywords: SLiCA, Greenland, gender roles, gender power, contributions to the household, rapid change, occupational structure, education, representation in parliament.

10.1 Abstract

Greenland family patterns and thus household sizes and composition have changed rapidly over just a few generations. There is a majority of men in the Greenlandic population. This chapter departs in the assumption that these changes in the Greenlandic society have affected not only the gender roles within the Greenlandic family but also the perceptions of what men and women contribute to the family.

The analysis of gender roles and perceived contributions to the household in this chapter is based on a theoretical understanding that gender roles involve a set of social norms in a specific culture. The research ques-

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tion is whether changes in socioeconomic conditions and gender roles affect the perceptions of what each individual contributes to the household?

The focus of the latter part of this chapter is the contributions by gender to “the Greenlandic household” using findings from “The Survey of Living Conditions in the Arctic”, SLiCA. The findings support the assumption that changing gender roles may have influenced perceptions of how women and men contribute to their household. The largest group of women between the age of 25 and 65 perceives that the most important contribution to the household is of an economic kind – primarily having a job and an income and “paying bills”. Most men in this age group also find their primary contribution to their households to be within the category “job, income and paying bills”. That the category that ranks the second highest for both men and women is “showing love and affection” might surprise in two ways. First, because it might have been assumed that this category would have ranked highest in women’s perceptions and second because all age groups of men perceive that “showing love and affection” is an important contribution to the household.

10.2 The Greenlandic welfare state and gender roles

The total number of inhabitants in Greenland is 56.600 (Statistics Greenland, 2012), of which 50.900 are born in Greenland. Eighty-eight hundred live in settlements (less than 500 inhabitants). Since January 1, 2009 four regional municipalities were established from former 18 municipalities.

Greenland has been a Danish colony since 1721. In 1953 the Danish constitution abolished colonial status and secured Greenland two seats in the Danish Folketing (Danish Parliament). The Danish state initiated an intensive process of modernization of the greenlandic society after World War II. The modernization policy aimed at developing Greenland into a welfare state. Some of the main instruments used were concentration of the population in fewer places and constructing housing facilities in the towns to which people were meant to move. Construction of hospitals, schools and administrative facilities were part of the modernization plans to improve health care, to increase the level of education and reform the administration.

The Home Rule Government was introduced in 1979, and at the beginning of the new millennium the Home Rule Act terminated. On June 21, 2009, the Greenland national day, Greenland Self-government was inaugurated and thus replaced the Home Rule arrangement. Criteria and regulations for the Greenlandic road to independence are stipulated in the Self Governance legislation principles. The 1979 Home Rule Act was the first step for Greenlanders to become a majority in a self-governing Greenland. When the 2009 Act of Self-Governance in Greenland replaced the 1979 Home Rule Act, an important part of the ensuing regime was that the Danish state recognised the Greenlandic people as a peoples according to international law and thus with a right to self-determination ([/http://www.stm.dk/multimedia/GR_Sel-Government_UK.doc](http://www.stm.dk/multimedia/GR_Sel-Government_UK.doc)).

The Greenland society has experienced major changes since World War II. The society changed from a hunters' and fishermen's society to a society more like a western, industrialized society, but fishing and hunting are still important activities to the Greenlandic economy as well as to the individual's self-knowledge and national identity. The welfare state in Greenland, like the Scandinavian welfare states, is characterized by a concept of government in which the state plays a key role in the protection and promotion of the economic and social well-being of its citizens. It involves a transfer of funds from the state, to fund services to individuals as well as to increase incomes of individuals in need (Esping-Andersen 1990).

"The Greenlanders are Danish citizens, the absence of formal Greenlandic citizenship has resulted in the category "born in Greenland". Citizens have rights and responsibilities within the frontiers of their national state (Jenson, 2006:4) which is responsible for protecting their rights. T.H. Marshall (1964) recognized three elements of citizenship rights: "civil rights" (freedom of speech, thought and faith), "political rights" (the right to vote) and "social rights" (education and welfare). Marshall defined social citizenship as "including social rights, these being the right to a modicum of economic welfare and security and right to live the life of a civilized being (quoted in Jenson, 2006:6)" (Poppel, M. 2014: 127).

In the civil society, the inter-human relations are not economic transactions or of a legal kind. You can be provided for by your family, by charity organizations or by friends. The norms of the community set the rules

for the use, distribution and redistribution of resources. Fulfilling the norms of a given community gives access to its resources.

The family patterns and thus household sizes and composition have changed rapidly. The sex ratio shows that there is a majority of men in the Greenlandic population¹³⁸ (Poppel M. 2010). It seems fair to assume that changes in the Greenlandic society have affected not only the gender roles within the Greenlandic family but also the perceptions of what men and women contribute to the family.

Teachers graduating from the Institute of Learning, Ilisimatusarfik, University of Greenland, June 2014. Nuuk, Greenland



Photo: MarieKathrine Poppel

It should be noted that there is an overrepresentation of men with a higher education level among immigrants – primarily Danes.

¹³⁸ Since the late 1950s the Greenland population has consisted of more men than women, primarily due to the major influx of Danish unskilled and skilled workers from the beginning of modernisation of Greenland initiated by the Danish state. Both the number and proportion of foreign – primarily Danish (male) workers have decreased especially since the late 1980s but it seems to be a recent tendency that a net-outmigration of Greenland consists of a majority of women.

Theoretically, gender roles involve a set of social norms in a specific culture. In this article I approach gender roles and contributions of the individual to the household from a social science perspective in accordance with the understanding of Holter:

"Since gender differentiation provides principles for the division of labor in most segments of society, the initiation of novel principles of allocation, even if they were restricted to the family, would of necessity, also require fundamental alterations of the rules for distributing tasks in occupational and political life"

Holter 1970: 213–214.

The research question is whether changes in socioeconomic conditions and gender roles affect the perceptions of what each individual contributes to the household?

The focus of the latter part of this chapter is the contributions by gender to "the Greenlandic household" using findings from "The Survey of Living Conditions in the Arctic", SLiCA.¹³⁹

10.3 The method

The chapter is divided into an outline of some essential aspects concerning gender roles and results based on the Greenlandic part of the Survey of Living Conditions in the Arctic, SLiCA. The 1,197 respondents (1,062 Greenlanders and 135 non-Greenlanders) were representative to the total population in Greenland (15 years and above in 2004–2006). Only the Greenlandic part of the population (those reporting their identity as

¹³⁹ Tables are based on computer runs and calculations applying the SLiCA database developed by Jack and Marg Kruse (Kruse and Kruse 2007)

“Greenlandic” or “Both Greenlandic and Danish”) is included in the analysis below.¹⁴⁰

In the SLiCA-questionnaire the question related to self-perceived contribution to the household was open-ended and phrased like this:

“Now I’d like you to think about what you feel is the most important way you contribute¹⁴¹ to your household. This may or may not be paid work. Of all the things you do what is the most important way you help your household?”

The focus below is on differences in perceptions of the individual’s perception of contribution to their household according to gender, age and labor market affiliation based on the findings from the SLiCA study. I have classified the open-ended responses in the following categories:

- Job, income, paying bills.
- Showing love and affection.
- Keeping the household going.
- Domestic duties, cooking.
- Emotional support.
- Stable environment.
- Taking care of children.
- Hunting and fishing.

10.4 Greenlandic households and family patterns

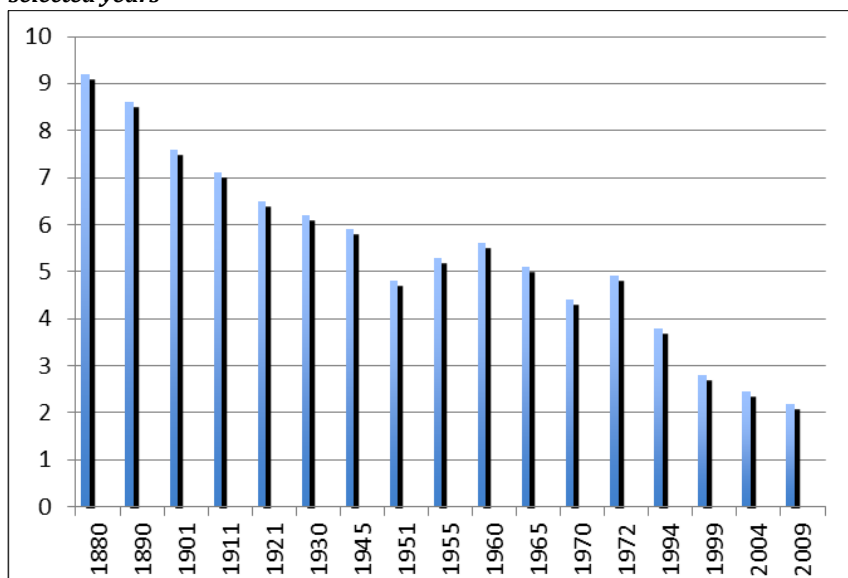
The introduction and the development of “the welfare state” in Greenland and the rapid socioeconomic and sociocultural development have had major impacts on the family structure.

¹⁴⁰ For further information about the Greenlandic sample and sampling procedure see e.g. www.arcticlivingconditions.org, Poppel, B. 2010 or Eliassen *et al.* 2012.

¹⁴¹ In the SLiCA core questionnaire, developed in English, the term ‘help’ was used. In the Greenlandic version of the questionnaire the term ‘tunniuttakkat’, meaning ‘how do you contribute to ...’. This is the reason for consequently using ‘contribute to’ and not ‘help’ in this chapter.

Whereas the Greenlandic households two generations ago very often contained three generations, now most Greenlandic families consist of one or two generations which means that the typical Greenlandic core families consist of fewer generations as well as fewer family members and that the actual family structure in Greenland is now very similar to the family structure in the western industrialized countries.

Figure 1. Average number of persons in Greenlandic households. 1880–2009: selected years



Sources: Weis Bentzon 1968; From 1975; Statistics Denmark 1965, 1970; Statistics Greenland 1995; and Statistics Greenland, annual volumes)

The “average household size” is one of the indicators that can report changing family structures. Whereas an average Greenlandic household in 1945 consisted of almost six persons, this number in 2009 has decreased to a little more than two persons.

This reflects, among other things, that:

- Three generation households nowadays are found more rarely which also is a consequence of welfare state initiatives to build an increasing number of flats for the elderly.

- The fertility rate has been decreasing compared to the first two decades after wwii.
- There have been an increasing number of households with one member (in 2009 more than one third of all households consisted of only one person).

These conditions and relationships have contributed to changes in traditional gender roles. The distribution of different tasks, duties and rights as well as expectations related to gender has changed. A consequence of these changes is that many women have had better possibilities to get an education and to participate in labor market activities (Poppel, M. 2010; Statistics Greenland 2014).

10.5 Employment

The proportion of women taking part in labor market activities has been steadily increasing and the gender balance among people with further education has changed as the proportion of higher educated women has increased too. (Poppel, M. 2010).

Greenland has experienced major changes in the occupational structure. The figure below shows the changes in employment by trade and industries for a long timespan (1834–2010). The most significant trend is the declining share of total employment that is based on hunting and fishing. This is important in many ways, not least because hunting is an activity that is considered an inseparable part of Greenlandic culture (Caulfield 1997, Lynge 1992, Petersen 2003) and an activity closely connected to the male gender role in the traditional Greenlandic household. In the old Greenland society the hunter was the “bread winner” in the families. On the other hand there has been an increase in “other land based trades and industries.” For example, construction and retail trade, which often employ male labor. Another significant development has been the marked increase in employment in “public administration and service”. These sectors, that have been growing as the welfare state has been developed, also include health care and education, which often employ female labor.

On average, women accounted for 44% of all employed in 2006 (Poppel, M. and Kleist 2009).

Figure 2. Employment by trade and industries. Greenland 1834–2010: selected years



Source: Grønlands Styrelse 1942; Danielsen *et al.*, 1998; Statistics Greenland 2003, 2005, 2011; M. Poppel, 2007.

Note: *) including members of the household; **) including all hotels and restaurants

10.6 Education

The introduction and the development of “the welfare state” in Greenland has also impacted the family structure. As mentioned above the proportion of women taking part in labor market activities has been steadily increasing and the gender balance among people with further education has changed as the proportion of higher educated women has increased too (Poppel, M. 2010).

Following the introduction of Home Rule in 1979 the Greenlandic authorities assumed responsibility from the Danish state in a number of areas. This meant developing jobs, in the social and educational sector,

and thus a need for skilled, preferably local and bilingual, labor. The increasing demand for educated labor and the priorities set for improving the level of education were backed up by a large number of educational initiatives that benefitted many women.

Since the beginning of the 1990s more women than men have completed an education beyond the mandatory basic public school and thus acquired the requisite qualifications for one or more types of jobs. Furthermore more women than men began studying in the period 2004–2008. The number of women has exceeded the number of men in all types of qualifying educations except vocational education and training that are still dominated by men. At Ilisimatusarfik, the University of Greenland, the vast majority of students in both the more traditional academic master studies as well as studies at bachelor level of social work, journalism, teacher training (for public schools) and nursing are women. Female students are especially attracted to bachelor's level education in "Social work", "Journalism", "Teacher training" and "Nursing" as well as "Language, Literature and Media" (Poppel, M. and Chemnitz Kleist 2009:346).

Election meeting at Ilimmarfik, during the election campaign. November 2014. Nuuk, Greenland



Photo: MarieKathrine Poppel

10.7 Gender power in politics

The first woman was elected to the Greenland council in 1959¹⁴². Women's representation increased sharply in the 2002 Parliamentary election: from 19% to 36% (12 out of 31 members). At this election "Arnat partiiat"¹⁴³ (the Women's party) for the first – and until now only – time participated. No candidates from the Women's party were elected but the party succeeded in calling attention to different aspects of gender inequalities and not least to the lack of female candidates in the different parties (Poppel, M. 2009).

Whereas the 2009 election to Inatsisartut (The Parliament of Greenland) was the first election since 1991 where the proportion of women elected did not increase (11 of the 31 members elected were women), the gender distribution among the cabinet members (four out of nine) after this election was more balanced than ever before. Furthermore women constituted 43% of parliamentary committee members after that election. This was, so far, the peak of the proportion of women's representation in the Greenlandic Parliament and Cabinet that began when the Greenlandic women got the right to vote in 1948. Two elections have taken place since the 2009 election: in 2013 and – very recently – in November 2014. The number of women in Inatsisartut, the Parliament of Greenland, after the two elections were 12 in 2013 and 12 in 2014 whereas the proportion of women in Naalakkersuisut, the cabinet, was two (including the first female premier in Greenland) in 2013 and 3 out of nine in 2014 (<http://www.inatsisartut.gl/inatsisartuthome/sammensaetning-af-inatsisartut.aspx>). The women have reached a considerable and slowly increasing proportion of the seats in the Greenlandic Parliament although there is still some distance to an equal gender distribution in both the Greenlandic Parliament and the Cabinet of Greenland.

¹⁴² Elisibannguaq Johansen (1907-1993), she was educated as a midwife.

¹⁴³ Overall policy aims of "Arnat Partiiat" (Women's party) was "that more women become actively involved in politics" and a fair and equal gender distribution in the Parliament (Landsting) and municipal councils.

The gender Equality Act¹⁴⁴ stipulates that publicly appointed boards of directors shall consist of the same number of male and female board members.

10.8 The gender distribution of the individual's contribution to the household: how do men and women perceive their contributions/help to the household?

The question that will be in focus of the second part of this chapter was – in the SLiCA core questionnaire¹⁴⁵ – phrased like this: “Now I’d like you to think about what you feel is the most important way you contribute to your household. This may or may not be paid work. Of all the things you do what is the most important way you contribute to your household?” The background information about the respondents (demographically as well as for instance affiliation to the labour market) makes it possible to give an insight into how different segments of the Greenlandic population perceive they contribute the households they are a part of. As mentioned above in the Method’s paragraph the answers to the open-ended question about people’s perception of the most important way they contributed to their household were categorized into eight categories ranging from softer “contributions” like “emotional support” and “showing love and affection” to material “contributions” like “having a job and income and paying bills” – from providing care for the household/specific household members to being a bread winner.

The graphs and tables below probe for relations between gender roles and differences in perceptions according to gender, age, labor market affiliation and income based on the findings from this study.

¹⁴⁴ Parliamentary Act no. 7, April 2003 (Landstingslov nr. 7 af 11. April 2003)

¹⁴⁵ The SLiCA core questionnaire contains the questions that were common to most of the survey regions (www.arcticlivingconditions.org).

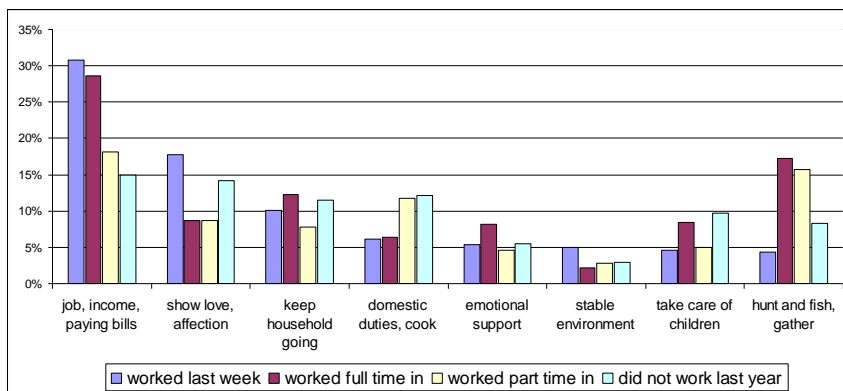
10.8.1 *The most important ways Greenlanders perceive they contribute to their household*

The first two figures show – for all Greenlanders – their perceived contributions to the households they live in and identify relations between these perceptions and labour market affiliations and income respectively.

Figure 3 indicates that a large part of those who worked last week or worked full time in last 12 months (but not last week) answer that economic contributions are the most important help they provide. As this group has a more permanent labour market relation and thus income, this is not surprising.

What might seem more surprising is that the second largest “contribution” as perceived of both those who “worked last week” and those who “did not work last year” is “showing love and affection”.

Figure 3. Greenlanders’ perceived contributions to the household distributed by labour market affiliation. 2004–2006



Source: SLiCA database.

In public discussions about livelihoods in the Arctic – especially in the small settlements – it is often assumed that subsistence hunting and fishing is an obvious alternative to paid labour. Following from that assumption one might expect that a significant part of those “working part time” or “did not work last year” would be engaged in subsistence hunting and fishing and thus consider fish and game as their contribution to the household. The figure tells a different story though, namely that less than

10% of those that did not work last year perceive their primary contribution to the household is from hunting, fishing and gathering¹⁴⁶.

In the other categories, though, the persons not employed last year to a larger degree see themselves as contributors of domestic duties and taking care of the children.

Arnannguaq (2003). Sculpture by Hans Lynge (1906-1988). Qaqortoq, Greenland



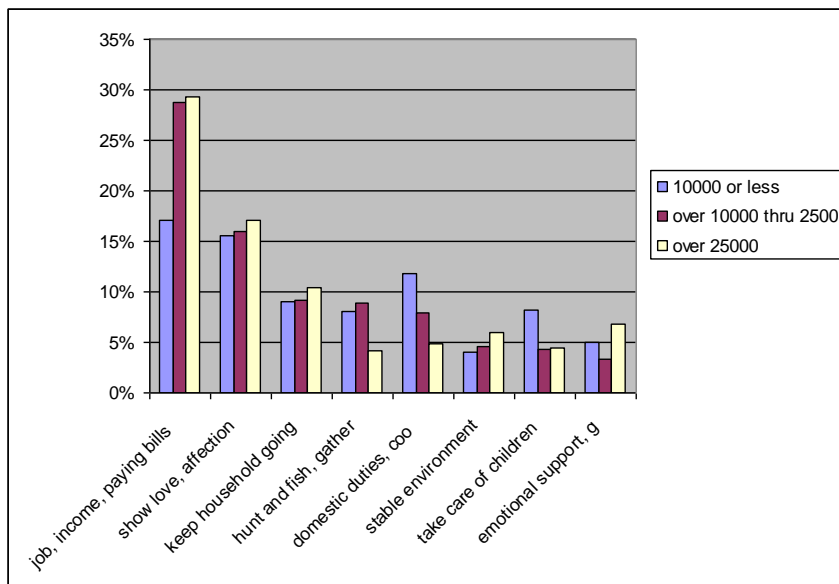
Photo: MarieKathrine Poppel.

When the personal income is taking into account (see figure 4) we see a picture where “job, income and paying bills” for all three income groups are perceived as their main contributions to the house ranging from almost 30% for the two highest income groups and more than 15% for the lowest income group. “Showing love and affection” is the second highest-

¹⁴⁶ This finding might be – at least partly – related to one of the survey results published by Kruse *et al.* (2008) that it is costly (and thus presupposes an income) to buy and maintain the gear necessary to hunt and fish (Kruse *et al.* 2008).

ranking contribution to the household from the perspective of all three income groups – between 15 and 18%.

Figure 4. Greenlanders' perceived contributions to household distributed by personal income (USD). 2004–2006



10.8.2 The most important ways Greenlandic men perceive they contribute to their household

The table combining information about male respondents' perceptions of their contribution to the households by age (three age groups) shows differences that might be closely related to labor market affiliation. The two younger groups of men (15–25 and 26–64) seem to perceive their main contribution to be “job, income, and paying bills”. They see themselves more as providers than “keeping the household going”.

In fact, overall, most men perceive the categories “job, income,” etc., and “showing love and affection” as their most important contributions to the household. Income is perceived the most important contribution by the age group most likely to be active in the labor force (25–64) whereas the oldest group considers more of their contribution to be in “keeping the household going” and “hunting and fishing”.

Table 1. The most important ways Greenlandic men contribute to their household. 2004–2006.
Distributed by age groups

	Job, income, paying bills	Showing love and affection	Hunting and fishing	Domestic duties, cooking	Pleasure	Taking care of children	Keeping the household going	Other kinds of help
Male 15–25 years	25%	17%	16%	11%	7%	4%	4%	16%
Male 26–64 years	33%	14%	9%	2%	3%	3%	9%	27%
Male 65+	15%	14%	6%	3%	2%	4%	12%	44%

Source: SLiCA database.

10.8.3 The most important ways Greenlandic women perceive they contribute to their household.

The table combining information about the female respondents’ perceptions of their contribution to the households by age (three age groups) shows that for both the youngest and the oldest age group the three highest ranking “contributions” to the household are the same and also ranked in the same order: 1. “Showing love and affection”; 2. “Domestic duties and cooking”; 3. “Job, income paying bills”.

Table 2. The most important ways Greenlandic women contribute to their household. 2004–2006. Distributed by age groups

	Job, income, paying bills	Showing love and affection	Emotional support	Domestic duties, cooking	Pleasure	Taking care of children	Keeping household going	Other kinds of help
Female 15–25 years	14%	22%	6%	17%	7%	12%	5%	17%
Female 25–64 years	22%	17%	7%	9%	3%	6%	12%	24%
Female 65+	12%	29%	2%	19%	2%	2%	2%	32%

Source: SLiCA database

10.9 Key findings in brief

Among women as well as among men “showing love and affection” and “job, income, paying bills” are the two categories that most identify as their most important contribution to the household.

- While more than 10% of the men aged 65 or older perceive their contribution to the household as “keeping the household going” this only applies to less than three per cent of the women of same age. A somewhat larger part of women in the age group 25–64 see “keeping the household going” as their most important contribution.
- “Domestic duties and cooking” ranks second for both the youngest and the oldest group of women as between 15% and 20% consider contributions in this category as their most important contribution.
- The youngest female group perceives – and to a larger degree than the two older age groups – that “taking care of children” and bringing “pleasure” to the household are important contributions from this age group.

- The age group containing those most likely active in the labor force (age 25–64), like their male counterparts, perceive that “job, income, paying bills” ranks higher than showing love and affection. Thus, like the men in this age group, seeing themselves as providers seems more important than to the older groups – except when it comes to “keeping the household going”.
- Among women, the oldest age group (65 years +) perceives their main contribution as “showing love and affection” as well as carrying out “domestic duties and cooking”.
- The perceptions of the different age groups of their contributions to the households indicate a generational pattern where women in the age group most likely involved in active employment (age 25–64) to a still larger degree have become the main breadwinners (as a single parent or as the main/co-provider in families with two adults). The youngest female age group most often take care of siblings while the older women contribute with care in a broader sense –including cooking and domestic duties.

10.10 Summary and “putting it into perspective”

The development of the Greenlandic welfare state has resulted in important social, educational and economic improvements for women as possibilities for influence have been enhanced. In the education system more women than men start higher education programs, more women and men complete them, and women are more likely to attain higher degrees. Almost half of all employed persons in Greenland today are women. The increase in the proportion of women in the labor force will impact gender relations in the labor market, as well as in households, and in future gender related income distribution. This is a development that is parallel to the development in many countries and regions of the world. This development has also led to formation of new concepts like “feminization” of the educational system.

The official statistics on education, based on data up to 2013, reports, that totally, the proportion of women, 16 years and older, having completed a formal education beyond the mandatory public school level has increased

by 8 percentage points over the last decade. The proportion of men that completed a formal education has, in the same period, increased by half of women's increase: 4 percentage points (Statistics Greenland 2014).

This development is closely related to changes in the occupational structure – from a structure dominated by traditional men's jobs – primarily within fisheries and hunting – to a labour market with more jobs in the service sector including healthcare, social institutions and the educational sector that to a larger degree attract women. This development is also reflected in the recruitment to the educational system.

The development, sketchily described above, has been supported by Greenlandic legislation on equal rights.

Equal rights and opportunities are laid down in a Parliamentary Act. The objective of the Act is to “promote equal rights for men and women in the private life as well as in all functions of society including equal influence and equal opportunities based on the equal status of women and men. The objective of the Act is furthermore to counteract direct and indirect discrimination on grounds of gender.” (Parliamentary Act no. 7, April 11, 2003).

At the same time equal rights have been promoted and have provided opportunities, the rapid societal development has fundamentally changed the gender roles of women in the Greenlandic society as the “sphere of reproduction” to a still larger degree has been taken over by the public (e.g. care of children and elder).

The new dependence on the state is related to three different but interrelated conditions. Women are dependent on the state:

- As public civil servants.
- As consumers of public goods like public institutions and transfers.
- As citizens due to a public equal rights and equal pay policy.

The implementation of equal rights and opportunities is slow, though, not least due to the existence of a gender hierarchy rooted in traditional gender roles and division of labor between the sexes.

Income differences between men and women might illustrate the rate of speed of implanting the equal rights and opportunities principles. Statistics Greenland recently published a study on incomes in 2013 (Statistics Greenland 2014). The study shows that men on average earned DKK

245,000, whereas women's average earnings amounted to DKK 186,000. The overall difference, roughly one third in men's favour, not only reflects gender differences but also differences in education and position in the different hierarchies as well as the fact that men are overrepresented in age groups characterized by higher incomes. That being said and corrected for, the difference is in all seeming still considerable.

Based on public data I have described and analyzed some long term and shorter-term trends in gender roles within different spheres. The overall conclusion is that – despite the fact that changes in some relations (e.g. income) are progressing at a slow pace – when it comes to education of women and labor market participation, major changes have occurred and women are now, in many cases, the breadwinners of a single parent family or the provider/co-provider of a two-parent family.

There is plenty of documentation indicating that major changes in gender roles – especially over a short period of time – sets the stage for crises among those who do not benefit from the changes: in this case part of the Greenlandic male population (Poppel, M. 2005). The focus of this paper has not been the problems caused by changing gender roles but the gender-based perceptions of what each individual contributes to the household.

In short, the results of analyses based on data from the Survey of Living Conditions in the Arctic, SLiCA, support an assumption that women's changed labour market participation may have influenced their perceptions of how they contribute to their household, as the largest group of women aged 25–64 perceives the contribution to be of an economic kind. Apart from this finding the women rank their contributions primarily among the soft and non-material kinds like domestic duties and taking care of children. The largest group of men aged 25–64 mentions “job, income and paying bills” as do their female counterparts. Whereas it was assumed that the different age groups among women would rank “showing love and affection” significantly higher than men, it might come as a surprise that also the men (all age groups) perceive “showing love and affection” as an important contribution to the household. This category thus ranks the second highest for both men and women.

10.11 References

- Andersen, T., Poppel, B. (2002). Living Conditions in the Arctic. In: Hagerty, M.R., Vogel, J. and Møller, V. (eds.): *Assessing Quality of Life and Living Conditions to Guide National Policy. The State of the Art*. Social Indicators Research Series, Vol. 11. Kluwer Academic Publishers. Reprinted from: Social Indicator Research, Vol. 58, pp. 191–216, 2002.
- Bentzon, Weis, A. (1968). *Familiens organisation i de grønlandske samfund*. Nyt fra Samfundsvidenskaberne vol. 10. København, Midtsjællands Bogtrykkeri.
- Caulfield, R. (1997). *Greenlanders, Whales and Whaling*. Dartmouth College, University Press of New England, Hanover.
- Danish Prime Minister's office homepage: http://www.stm.dk/multimedia/GR_Sel-Government_UK.doc
- Eliassen, B-M., Melhus, M., Kruse, J., Poppel, B. & Broderstad, A.R. (2012). Design and Methods in a Survey of Living Conditions in the Arctic – the SLiCA study. In: *International Journal of Circumpolar Health* 71: 17229. <http://dx.doi.org/103402/IJCH.v71i0.17229>. 19 pages.
- Esping-Andersen, E. (1990). *The Three Worlds of Welfare Capitalism*. Princeton, New Jersey: Princeton University Press.
- From, A., Jensen, K. J., Friis, P. og Kjær, A. (1975). *Sociale problemer i Grønland – Levevilkår og sociale problemer i Vestgrønland*. Socialforskningsinstituttet, publikation nr. 64. København: Teknisk Forlag.
- Greenland Home Rule (2003). *Parliamentary Act no. 7*, April 11, 2003: The gender equality Act.
- Greenland Government homepage: <http://www.inatsisartut.gl/inatsisartuthome/sammensaetning-af-inatsisartut.aspx> (accessed December 14, 2014)
- Holter, Harriet (1970): *Sex Roles and Social Structure*. Oslo: Universitetsforlaget.
- Jenson, J. (2006). Introduction: Thinking about Citizenship and Law in an Era of Change. In: Law Commission of Canada (Eds.). *Law and Citizenship*, pp. 3–21. Vancouver: UBC Press.
- Kruse, J., Poppel, B., Abryutina, L., Duhaime, G., Martin, S., Poppel, M., Kruse, M., Ward, E., Cochran, P., Hanna, V. (2008). Survey of Living Conditions in the Arctic, SLiCA. In: Møller, V., Huschka, D, and Michalos, A. C. (eds.), *Barometers of Quality of Life around the Globe*. Springer Social Indicators Research Series. Springer Verlag, pp. 107–134.
- Kruse, J. and Kruse, M. (2007). SLiCA data base containing SLiCA survey data from Alaska, Greenland and Chukotka.
- Lynge, F. (1992). *Arctic Wars, Animal Rights, Endangered Peoples*. Dartmouth College, University Press of New England, Hanover.
- Marshall, T. H. (1964). *Class, Citizenship and Social Development*. Chicago: University of Chicago Press.

- Petersen, R. (2003). *Settlements, kinship and hunting grounds in traditional Greenland*. Meddeleser om Grønland. Man and Society vol. 27. Copenhagen: Danish Polar Center.
- Poppel, B. (2010). Some data sources on people, peoples, communities, regions and human activities in Greenland. In: Gorm Winther (ed): *The Political Economy of Northern Regional Development*. Vol. 1. TemaNord 2010:521. Nordic Council of Ministers, pp. 287–320.
- Poppel, M. (2004). Domestic violence – violence against women by men. In: Thérien, M. (ed.) *International Ph.D. School for Studies of Arctic Societies (IPSSAS). Dynamics and Shifting Perspectives Arctic Societies and Research Proceedings of the 1st IPSSAS seminar, Nuuk 2002*.
- Poppel, M. (2005). Barrierer for grønlandske mænd på arbejdsmarkedet. In: Carlsen, A. (ed), *Arbejdsmarkedet i Grønland – fortid, nutid og fremtid*. Ilisimatusarfik, Nuuk, 2005, pp. 125–140.
- Poppel, M. (2007). Kønsbaseret arbejdsmarkedsudvikling og mænds vold [Gender-based labour market development and men's violence]. In: Rafnsdóttir, G. L. (ed.) *Arbejde, helse og velfærd* [Employment, health and welfare]. Háskólaútgáfan.
- Poppel, M. (2010). Kvinder og velfærd i Grønland. In: Rafnsdóttir, G. L. (ed.) *Kvinder og velfærd i Vestnorden*. TemaNord 2010:578. Nordisk Ministerråd, København 2010, pp. 38–66.
- Poppel, M. and Chemnitz Kleist, J (2009). Køn og magt i politik og erhvervslivet i Grønland. In: Niskanen, K. och Nyberg, A. (ed.), *Kön och makt i Norden. Del I Landsrapporter*. TemaNord 2009:569. Nordiska ministerrådet, Köpenhamn 2009, pp. 341–358.
- Poppel, M. (2014). Citizenship of Indigenous Greenlanders in a European Nation State: The Inclusionary Practices of *Iverneq*. In: Dominelli, L. And Moosa-Mitha, M. (Eds.). *Reconfiguring Citizenship – Social Exclusion and Diversity within Inclusive Citizenship Practices*, pp. 127–136. Farnham, England and Burlington, USA: Ashgate.
- Statistics Greenland (Grønlands Statistik) (2014). *Indkomststatistik 2013*. Indkomster. October 31, 2014. <http://www.stat.gl/publ/da/IN/201401/pdf/Indkomststatistik%202013.pdf>
- Statistics Greenland (Grønlands Statistik) (2014). *Befolkningens uddannelsesprofil 2013*. Uddannelse 2. December 2014. <http://www.stat.gl/publ/da/UD/201403/pdf/2013%20befolkningens%20uddannelsesprofil.pdf> (accessed December 14, 2014).
- Survey of Living Conditions of the Arctic – web site: www.arcticlivingconditions.org

11. The Survey of Living Conditions in the Arctic (SLiCA) as deployed in Sweden – initial issues¹⁴⁷

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Keywords: SLiCA, Swedish Sápmi, Saami, sameby, gender relations, place of living, living conditions, identity, discrimination, reindeer herding.

11.1 Abstract

The on-going social, economic and environmental changes in Sweden's northernmost regions crucially affect the Saami people and their living conditions. Northern Sweden is a sparsely populated region. During the latest decades the region has experienced remarkable out-migration. At the same time the region is rich in natural resources and never before have the economic interests of external extractive industries in this region been as intense. The combination of depopulation, and hence decreasing infrastructure, combined with the allure of possible economic gains from the natural resources forms a challenging reality for local people. What

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¹⁴⁸ The authors wish to acknowledge the invaluable assistance of Kristina Lasko and Charles Westin, fellow SLiCA team members for their assistance in carrying out the survey work.

are their living conditions? And what are their choices? The SLiCA survey was designed to reflect the actual circumstances and aspirations of northern indigenous peoples comparatively across the circumpolar area; for Sweden specifically, this meant a major focus on the Saami people at the beginning of the 2000s. The aim of this chapter is to improve our understanding of changing living conditions among Saami people and communities in Sweden in relation to Saami land rights and the practice of reindeer herding. It becomes necessary, therefore, to discuss the issue of who is recognized as Saami according to Swedish legislation and if and how Saami representativity in the SLiCA survey might be addressed in a country which eschews formal registration of ethnicity.

Gender difference is an aspect, which permeates much of the rich data in the survey results, but in this paper we focus on a particular set of gender-related questions. Discrimination by gender, negatively affecting Saami women with respect to membership in “sameby” herding collectives after marriage, as stipulated in the Swedish Reindeer Herding Act, did not cease until 1971. However, as the SLiCA survey indicates, other forms of gender discrimination have persisted within Swedish legislation concerning Saami – at times hidden or even generated as unintentional by-products of regulations such as those specifying voting strength within a sameby in conjunction with the re-organization of family herding units into business enterprises and the application of the Swedish “property master” concept (Swedish: “husbonde”). Following upon this discussion, it is significant to consider what are the main differences between the Saami people in cities or urban areas compared to traditional rural Sápmi? Do they think similarly about their rights as a people or in relation to the practice of traditional livelihoods?

11.2 Introduction

In this paper we shall present a brief overview of the aspirations of, and justifications for, the Survey of Living Conditions in the Arctic (SLiCA) and follow this with a discussion of certain methodological challenges encountered by this effort in Sweden before closing by highlighting some important findings from the Survey with the help of case studies.

The survey represents one part of a larger project, which is Circumpolar in scope, involving indigenous communities and university researchers and government in Alaska, Canada, Greenland, Norway, Sweden, Finland and Russia. Its purpose is to improve our understanding of changing living conditions among native peoples and communities in Arctic and sub-Arctic regions. The overall aim of the survey in Sweden is to establish – for the first time – a comprehensive database that will reflect the actual circumstances and aspirations of Saami people.

Mix of old and new in the mountain summer camp of Staloluokta, Tuorpon sameby, Swedish Saamiland. July 2014



Photo: Hugh Beach.

A number of important questions need to be addressed in the course of devising policies and measures aimed at improving Saami well-being. For instance, to what extent are Saami people and households affected by the ongoing social, economic and environmental changes in Sweden's Arctic and sub-Arctic regions? Who is Saami (Beach 2007)? What economic, social and cultural characteristics attach to Saami people and households? How satisfied are Saami people with their present living conditions? Do

Saami people feel that they are discriminated against? (cf. Lange 1998). And if so, how does that affect their ethnic and social identity? (cf. Lange and Westin 1981). What are Saami people lacking in their lives? What are their aspirations for the future, for themselves, their children, grandchildren, and their communities?

The survey seeks to answer these questions and to give as full an account as possible of the conditions of Saami people in Sweden by including commentaries by Saami persons of their own experience and worldview. This approach is made possible through close cooperation with Swedish-Saami national institutions and interest organizations. Specifically, this approach is underpinned by official endorsements and approval of the Swedish Saami Parliament and the Nordic Saami Council as well as by an active dialogue and consultation with a project advisory committee made up of representatives of various Swedish Saami political and cultural organizations.

This first presentation of Swedish SLiCA survey results is divided into three main parts. Each part has been composed by different team-member constellations, and each part has benefitted from full-team discussion. The first part addresses a number of shortcomings and limitations with conducting research into living conditions of indigenous populations in general before going into specific problems related to the issue of Saami survey sampling in Sweden today. It is an important discussion in its own right, but also a necessary one for enabling critical evaluation of the following two main parts of this combined presentation which concern migration/place and gender.

In the first part, an alternative approach is outlined for conducting research into the level of living of indigenous populations, presenting an analytical framework comprised of four interacting dimensions: human relationships, Saami identity, socio-economic contexts and change across time. This highlights the need to emphasize the vital importance of accounting for Saami ethnic diversity in the construction of sampling frames for Saami populations; Saami diversity must be accounted for in terms of geography, cultural identity, socio-economic circumstances and range of lifestyles. Unfortunately, for reasons explained below, this approach could not be realized. Yet, despite the sampling problems elaborated here, a workable method was attained to deliver significant results when inter-

preted carefully within known limitations. In the two remaining parts of the survey, results related to the specific aspects of migration and gender are considered, in no way to exhaust the depth of our survey material on these subjects, but so as to illustrate the kind of understanding (and its limitations) that can be gained from such work.

Part I

11.3 Survey design and sampling problems

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11.3.1 Surveying living conditions of indigenous populations in the circumpolar Arctic: An alternative conceptual approach and difficult constraints

An international network of researchers from both universities and government came together under the auspices of Statistics Greenland in 1998, with the aim of acquiring a better understanding of the living conditions of indigenous populations in the circumpolar Arctic. Researchers from seven Arctic countries have since participated in several international conferences and in at least as many regional meetings, all convened for the purpose of sharing information and experiences concerning the diverse realities within which Arctic indigenous people live. These conferences and meetings provided an opportunity for sociologists, anthropologists, political scientists, economists, demographers and public health practitioners among others to present their different conceptual perspectives – and highlight their different methodological approaches – to the study of the well-being of indigenous people in the Arctic. The knowledge gleaned from the proceedings of these various conferences and meetings underpinned the creation of an international survey of indigenous peoples' living conditions, taking into account the deficiencies and omissions of previous conceptual and methodological approaches.

A significant finding from conference proceedings was that level of living research in the Scandinavian countries (including Finland) – and comparative welfare state research more generally – has neglected ethnicity in

¹⁴⁹ The authors wish to acknowledge the invaluable assistance of Kristina Lasko and Charles Westin, fellow SLiCA team members for their assistance in carrying out the survey work.

its analytic framework, focusing primarily on class (for example, Korpi 1979, 1983; Esping-Andersen 1985; Esping-Andersen and Korpi 1984, 1987), and more recently on gender (for example, Sainsbury 1994, 1996; Korpi 1997; Hobson and Lindholm 1997). The Scandinavian approach to level of living research was also found to give priority of place in its conceptual and analytical framework to the notion (common in welfare economics) of the individual's command over resources and how that translates into an individual's strength of preference for one good or another (Ringen 1995).

In Alaska, Canada and Greenland, on the other hand, living conditions research has been particularly concerned to evaluate the well-being of indigenous people in Arctic regions. One key aspect that must be accounted for in the study of indigenous people's well-being is that of their simultaneous pursuit of non-market values (for example, traditional knowledge) and market goods (a formal education) as well as their pursuit of mixed livelihoods – based partly on income from wage employment and enterprise and partly on sustenance from hunting, fishing, herding and related trading and/or bartering activities (Kruse 1986, 1991; Langdon 1986; Usher, Duhaime and Searles 2002). A second vital (and related) aspect that must be taken into account is that the unit of analysis to be surveyed is both the individual and the household; level of living surveys that do not include the household as a unit of analysis cannot account for the relative importance of the pursuit of mixed livelihoods.

This survey, then, is intent on improving our understanding of Saami living conditions at the household level and on illuminating the links between cultural identity and socio-economic circumstances. The focus of analysis of this survey centres on Saami individuals and households; it is intent on conceptualising the current position of respondents and their households. Importantly, this analytic focus recognizes that the Saami culture is at once a diverse and a dynamic phenomenon. There is often an implication that Saami individuals who do not conform to certain pre-ordained cultural characteristics are less Saami than those who do, or that, conversely, most Saami ascribe to similar values, beliefs and lifestyles.

Thus the analytic focus recognizes on the one hand that Saami cultural beliefs and practises have adapted to the advent of new social forces and macro-processes, and on the other hand that Saami individuals carry mul-

multiple identities of which their ethnic identity is but one. These other identities may be related to gender, occupation, class, etc. Indeed, related to this last point, the framework recognizes that people's needs, attitudes, and aspirations change throughout their life cycle such that respondents are likely to vary from one another in their responses to specific questions according to their present stage of life (cf. SFR, 1999). Finally, the survey does not presuppose the parameters of Saami culture. Rather, it attempts to link an assortment of cultural and ethnic measures with other indicators so as to create a more comprehensive account of the Saami condition.

Adapted from the research framework of a recent longitudinal survey of Maori households by Massey University's School of Maori Studies (Durie 1995), the analytic framework for this survey incorporates three levels of analysis (see next page). The macro level consists of four dimensions: human relationships, Saami culture and identity, socio-economic contexts, change across time. Each of these macro level dimensions is subdivided into numerous smaller parts or subsets, which reveal in turn several micro level elements that form the focus of inquiry. The strength of this analytic framework lies not so much in the specification of the four axes, but in the apparent links that can be drawn from one axis to another. This should provide for the creation of as complete a profile of the Saami condition as practically possible.

Moreover, this approach builds on Ringen's (1995) work in which he argues that the indirect measurement of well-being is preferable to that of a direct approach, and that an indirect approach can be further improved by taking into account information on contexts (or arenas) as well as resources. This, then, brings the analytic focus to bear on the notion of "capabilities", for it is not simply a question of the command of resources (the main preoccupation of the more traditional level-of-living approach), but what use can be made of resources (cf. Hay and Rutman 1993).

Macro level	Intermediate level	Micro level
Dimensions	Subsets	Focused units of inquiry
[Axis 1] Human Relationships	Individual Family Household Extended family	Household Roles and relationships Extended family cohesion Interdependence
[Axis 2] Saami identity	Personal identity Cultural heritage Freedom from discrimination Natural resources Saami institutions Ethnopolitics	Ethnic affiliation Language Customs Discrimination Land Herding Environment Siidat links (i.e., communal ties) Participation in Sameting elections, Saami associations, etc
[Axis 3] Socio-economic contexts	Well-being Societal standing Economic position	Health Education Housing Employment Information technology use Lifestyle Income
[Axis 4] Change across time	Changing household dynamics Wider interactions Shift in cultural identity Altered circumstances	Mobility Stability Realisation of aspirations Vulnerability Impact of external factors New groupings

This survey recognizes that in northern Saami communities, individual, household and community activities are interdependent. Hence, to better understand living conditions in these Arctic regions, it seeks to account for household activities and transfers in Saami communities on the one hand, and for Saami individuals' command of resources on the other. The main purpose of accounting for household activities and transfers is to estimate the extent that the household engages in market and local harvest activities and to determine the importance of transfer payments (Usher and Weinstein 1991, and Usher 1992). This focus on the activities of individuals (as well as households) is likewise expected to provide information on how Saami people strive to maintain and sustain their common cultural identity (see Axis 2, above). The data that would enable us to examine such research questions could be collected using a combination of struc-

tured questions (i.e., questions with structured response categories) and ethnographic-style questions (wherein respondents' testimonies are transcribed verbatim).

In accounting for Saami individuals' command of resources, the study will rely mainly on data collected from structured questions that address a broad range of (so-called) "objective" indicators. This range of indicators covers several "focused units of enquiry" (see Axis 3, Micro Level, above): health, education, housing, employment, information technology use, lifestyle and income. It is equally important to note that the study will assess present-day living conditions against individuals' personal backgrounds (i.e., life-histories). Thus the study also relies on information pertaining to individuals' careers in the workforce and education as well as information describing migration patterns, and temporal changes in family and household relationships (see Axis 1 and 4, Micro Level, above). Taken together, (i.e., the focus on household activities and transfers and the focus on individuals' command of resources), this approach is expected to produce a more comprehensive understanding of how individuals and households function in the Arctic.

11.3.2 Questionnaire Design¹⁵⁰

The design and development of the survey instrument, the international SLiCA core questionnaire, occurred over a period of three years (1999–2001) and involved researchers from all of the project's member-country teams including indigenous scholars and other experts as well as survey research experts from a number of external Arctic research institutions. The final version of the survey instrument applied in the different regions/countries, however, is the product not only of intensive international collaboration, it is, especially in the Swedish case, the product of further collaboration among researchers and representatives of regional indigenous organizations. It evolved from the initial structure of a ques-

¹⁵⁰ A more thorough description of the process towards the international SLiCA core questionnaire and the different regional and national approaches is accessible at the SLiCA web-site: www.arcticlivingconditions.org and in Kruse *et al.* 2008 and Poppel 2014.

tionnaire devised at the outset by the Alaska-Canada-Greenland research teams¹⁵¹. The structure and contents gradually changed and evolved over the course of several drafts; partly to ensure that there was a flow from one conceptual dimension to another and partly to ensure that all variables included in the international (circumpolar) version of the survey had a shared meaning and relevance for all the indigenous populations included in the survey.

The final version of the international questionnaire was completed in 2001 and the final version of the Saami regional questionnaire – which complements the international instrument and pertains to pan-Saami populations in Norway, Sweden, Finland and Russia's Kola Peninsula – was completed somewhat later. Differences between these two versions were kept as slight as possible, to maintain the strong comparative dimension, but there were instances when adjustments had to be made. For example, the ownership of animal resources will vary enormously between Inuit hunters and Saami herders of semi-domestic reindeer stock. No survey should attempt uncritically to seek comparative validity regarding questions concerning the distribution networks for the sharing of meat among different communities that span the hunting-herding divide in an effort to derive values of family or community cohesion.

The survey instrument in its entirety – the international questionnaire as well as the Saami regional questionnaire – was translated soon thereafter from English to Swedish. The high costs of translation made it unfeasible to translate the survey into a Saami language. In addition to the problem of high translation costs there was also the thorny question of which Saami language to use. It was a difficult (and potentially divisive) question because many of the Saami people living in the southern, central and eastern parts of the Saami territory lament and/or resent the spread and everyday usage of the North Saami language, the Saami language spoken by the vast majority of Saami people throughout the pan-Saami region. Following the recruitment and sub-

¹⁵¹ Based on experiences from surveys conducted among indigenous peoples in the Alaskan North Slope, the Canadian Arctic and Greenland.

sequent training of interviewers in effective interviewing skills, pilot surveys were conducted in Norway and Sweden beginning in mid-2004.

11.3.3 The Problems of Saami Survey Sampling in Sweden

Very little is known about the current living conditions of Saami people in Sweden, with perhaps the one exception of the reindeer herding part of the Saami population. In Sweden and elsewhere, official data on Saami people is limited by and large to those data contained in the occupational registers of the government's national bureau of statistics and in the national Board of Agriculture's national register of reindeer herding cooperatives. The official census does not include a question on national or ethnic background, the result being that very little data on living conditions affecting the Saami can be gleaned from the census.

Nor is it possible to learn more about the current living conditions of Saami or members of other ethnic communities from the otherwise rich data collected in Swedish level of living surveys. These level-of-living surveys are generally based upon a representative cross-section sample of the whole population – the one exception being that of the focus on the living conditions of unemployed persons (Tåhlin 1990; Vogel 1991, 1997; Erikson 1993; and Stenberg 1998). As such, Swedish level-of-living research is not concerned with measuring the well-being of members of Saami native communities *per se*, nor the well-being of those belonging to other national minority groups or immigrant groups.

On the other hand, we have learned a great deal about one key aspect of the current living conditions of the Swedish Saami population from recent epidemiological research into patterns of health and illness and associated factors among the Swedish Saami (Hassler, Sjölander and Ericsson 2003; Edin-Liljegren, Hassler, Sjölander and Daerga 2004; Hassler, Sjölander, Johansson, Grönberg and Damber 2004). To support these epidemiological studies, a Saami cohort was constructed departing from a group of index-Saami identified as either reindeer herding Saami or Saami eligible to vote for the Saami parliament. Relatives of index-Saami were identified in the National Kinship Register and added to the cohort. The cohort contained a total of 41,721 people, of which 7,482 represented

reindeer herding Saami and 34,239 non-herding Saami (Hassler, Sjölander and Ericsson 2003).

Finally, nothing is known statistically about how the living conditions of the Swedish Saami population compare to the living conditions of indigenous populations in other parts of the circumpolar Arctic region and elsewhere. Even in those countries or regions where level of living surveys and/or census data have been employed to measure the living conditions of indigenous populations, outcomes have been compared with living conditions enjoyed by the majority, non-indigenous (ethnic European) population of those countries or regions. Researchers engaged in surveying the living conditions of Maori populations in New Zealand (Fitzgerald, 1996), northern Native and Inuit populations in both Canada (Maxim and White, 2001, 2007; O'Sullivan and McHardy 2004) and Alaska (Kruse and Hanna, 1998) as well as Greenland populations (Andersen, Kruse and Poppel, 2002) all agree that it is high time to begin drawing comparisons among indigenous populations, as opposed to comparisons only between indigenous populations and majority, non-indigenous (ethnic European) populations. The assumed reason is, of course, that factors influencing the living conditions of one indigenous population are more similar – and thus more readily comparable – to the factors influencing living conditions in other indigenous populations.

11.3.4 Saami sampling alternatives

SLiCA survey countries have shared the goal of achieving representative samples of adult (15 years and older in Greenland and Canada, 16 years and older elsewhere) indigenous people living in their indigenous homelands. The different countries engaged in SLiCA project work carry different possibilities and constraints with regard to sampling methods. A good deal of effort has been invested by project scholars to design sampling strategies which can enable a high degree of international comparison of data sets. See the SLiCA project website www.arcticlivingconditions.org (Sample Frame) for further discussion on this point. Other useful sources are Poppel (2010) and Eliassen *et al.* (2011).

Alternative ways of achieving representative samples include: 1) selection from a population list, 2) area probability sampling (e.g. by communi-

ties, households, living blocks), and 3) random digit dialling by telephone. All representative sampling approaches rely on one or more of these alternatives in combination.

In Sweden, certain conditions pertain:

Population Lists

- *National register*: The national register does not contain information that can be used to identify Saami individuals.
- *Saami Parliament (Sameting)*. Only approximately 3,500 Saami are registered out of an estimated population of 17,000 to 20,000. We are certain, however, that all 3,500 registered should be considered Saami.
- *Saami herding groups (Samebys)*. We are certain that all members of Samebys should be considered Saami. Presumably most of these individuals are also registered for the Sameting.
- *Saami association lists*: Saami associations in urban areas are incomplete sources of Saami individuals in those areas.
- *Saami informant lists*: It may be possible to augment association lists of Saami households from multiple informants.
- *Saami names*. People sharing certain names are more likely to be Saami than non-Saami. The National register and church lists might be used to develop a sub-population that is disproportionately Saami.

Area Probability Sample Frames

- *National register of occupied housing units*: The National register population list identifies the physical address of all individuals. The register can thus be used in a multi-stage area probability sample (e.g. communities, blocks, households, individuals). The problem with this approach is that many Saami live in geographic areas that include much larger, non-Saami populations. In these areas the expense of screening for Saami households would be too high.

Random Dialling

- Given that no Swedish municipality even in the far north of the country hosts a Saami majority, and that the Saami population is often sparsely spread and mixed in the larger population, random dialling is only of

limited value (e.g. in small local areas of known high Saami density) and perhaps prohibitively costly in establishing a sample for this study.

Further complications prevail with regard to representative Saami sampling in Sweden, since one of our prime survey interests was to report on characteristics of a Saami sub-population (i.e. active reindeer herder households – those who alone of all Saami in Sweden are granted the right to *practice* their right to herd reindeer and therefore to enjoy special Saami land-based resource rights according to Swedish law). Should we estimate that only one in ten Saami households is a reindeer herder household, a sample of 500 Saami might be expected to yield only 50 interviews with reindeer herder households. Should one wish to increase the sampling rate for reindeer herder households, it would require that one be able to identify and separate into a separate group all reindeer herder households.

Based on the above, it is not feasible to construct a comprehensive list of Saami in Sweden. Our discussion led us to recommend the following approach:

- *Certain Saami Sub-sample Population List:*
We would construct a single (no duplicates) list of Saami from the Sameting and Sameby lists. We would randomly sample this subpopulation directly from this list.
- *Probable Saami Sub-sample Population List:*
We would construct a single list of probable Saami by filtering the National Register and church lists for specific names or ancestry. We would subtract from this list those identified in the “certain” Saami list above. We would randomly sample this subpopulation directly from this list, recognizing that it would be necessary to screen for Saami households.
- *Dense Saami Occupied Geographic Areas:*
We would identify geographic areas in which we think that most households are Saami. We would sample within these areas from the national register, recognizing that it would be necessary to screen for Saami households.

- *Urban-dispersed Saami Occupied Geographic Areas:*

We would combine multiple lists (associations, informants) to create a single (no duplicates) list of Saami. This list could not be considered comprehensive, but would be the most cost-effective approximation of a population list. It could be used as a basis for sampling either directly off the list, or as a means of contacting a Saami household indirectly (that is, a Saami household not on the list but known to a household on the list).

- *Rural-dispersed Saami Occupied Geographic Areas:*

We would identify rural geographic areas in which we think Saami live but in which most households are not Saami. We would sample within these areas from the national register, recognizing that it would be necessary to screen for Saami households. We would sample at a reduced rate given the expense of identifying and contacting Saami households. It may be preferable to use random digit dialling as a screening tool for this subsample.

To construct a representative sample from this five-strata sampling approach, it would have been necessary to estimate the Saami population sizes of each of the five strata. We would know the population sizes of the first two strata with certainty. We could estimate the Saami population sizes for #3 (Dense Saami Occupied Geographic Areas) and #4 (Rural-dispersed Saami Occupied Geographic Areas) based on the observed frequency of encountering Saami households in the sample (adjusted for households encountered that are part of the self-representing lists #1 and #2). We would use the count of individuals for #4 (Urban-dispersed Saami Occupied Geographic Areas) as a minimum estimate of population size.

Before we embarked on the above ambitious sampling scheme, we discovered another research team that already had developed a Saami sample frame. Over the past 20 years much of the epidemiological research into the health and wellness of the Swedish Saami population has been conducted by researchers at the Southern Lapland Research Centre in Vilhelmina, Sweden. It was these researchers that constructed the Saami cohort, the only Saami cohort that exists in Sweden. Both the epidemiological researchers and the Swedish SLiCA research team took a great interest in each other's research, resulting in unique collaboration between the

two. An important piece of that collaboration was the Southern Lapland Research Centre's decision to allow the Swedish SLiCA research team to construct the sample for the SLiCA questionnaire from its Saami cohort.

Unfortunately, unbeknownst to either the Southern Lapland Research Centre or the Swedish SLiCA research team, the Saami cohort is "owned" not by its creator, but by the Swedish government's central statistics bureau – Statistics Sweden. And by reason of Sweden's strict data handling laws, Statistics Sweden rejected the Southern Lapland Research Centre's request for the SLiCA research team to be granted access to construct its questionnaire sample from the Saami cohort. This brought to an abrupt end one year of active collaboration between two Saami research enterprises. To make matters worse, discovery of the loss of access to the Saami cohort sample frame occurred after interviewers had been hired and scheduled for training.

Given the necessity of coming up with a sample frame within a matter of days, the research team decided to ask for access to the registry of the Saami Parliament. As noted above, the registry – the Sameting – contains approximately 3,500 of the estimated 17,000–20,000 adult Saami living in Sweden, or approximately one-in-five Saami. The advantages of the Sameting list are: (1) all persons listed are definitely Saami; (2) the list likely includes all adults on the Samebys (reindeer herder) list; (3) the list includes addresses; and, (4) the list was immediately available in a database form.

The major limitation of the Sameting list is that it captures only about 20% of people who might consider themselves Saami. As a result, the sample in this study could well underrepresent people who may not consider themselves Saami but who have Saami ancestors. However, Beach has found over the years in the field that a great number of those with Saami ancestry and who feel themselves very much to be Saami will nonetheless refrain from adding their names to the Saami Parliament registry. A good number feel that the Saami Parliament, as a construct of the Swedish State and obliged to be regulated by State authority, is not something they want to be a part of. Others are simply not in the least interested in politics and do not believe that their ethnicity should depend on this.

Before proceeding, it would be wise to consider potential limitations to the findings caused by the sampling methods used in the Swedish part of Sápmi on this question of gender-based discrimination within the rein-

deer herding units, the *samebys*. Obviously, with herding practiced by only approximately 15% of the Saami population, any results based on this smaller group can hardly be considered to be representative of the Swedish Saami as a whole. Yet, we have been particularly interested in conditions of the Swedish Saami herding sub-group, since it is this group alone, which can practice the special rights reserved for the entire Saami ethnic minority by Swedish law (Reindeer Herding Act 1971: paragraph 1, clause 3). Moreover, it is this law which not only creates but also decrees the terms of enforcement of this strict and highly selective division of herding vs non-herding Saami. Hence, on the one hand, the herding sub-group of Saami has been legally decreed as representing the rights of all those of Saami ancestry in Sweden, while on the other hand, the same law also enforces non-representative selection of the Saami who can practice the Saami herding right. This condition both limits the applicability of our findings and also sets the stage for the qualitative content of these findings regarding minority/State relations which the survey seeks to illuminate.

Sweden is caught in a dilemma (perhaps willingly created), for it wishes to comply with all noble humanitarian declarations espoused by international law for the protection of indigenous peoples, while it eschews any ascribed ethnicity, such as a defined Saami ethnic marker in its national census. Those lauding the refusal to accept ethnic registration do so often with justified reference to the horrors of WW2. Others point out that such a stance is necessarily assimilationist and highly opportune when seeking to appropriate indigenous lands for the common good under the banner of equality for all in a liberal democracy. In effect, while one can be sure that any reindeer herder is of Saami descent, one cannot know for sure which non-herders are Saami. In fact, Sweden has strenuously sought to avoid imposing any criteria for "Saamihood". To link the right to herd reindeer to Saami descent was not meant to define Saami ethnicity, but merely to determine the scope of people who could herd reindeer. It still begs the question of who from the start is Saami (Beach 2013).

It was not until the establishment of the Saami Parliament in 1992 which necessitated a measure of who might form a Saami electorate and who might be elected to hold office in an organisation to represent them, that the matter of defining the actual criteria of Saami ethnic membership *per se* had to be faced. While Sweden has ratified international declara-

tions and conventions with protective clauses for the rights of indigenous peoples, as one would expect, Sweden has also sought ways of specifying such ethnicity with non-essentialist criteria, for example, without reference to blood quotas. Instead, so-called constructivist criteria are employed, for example, a Saami is one who feels him- or herself to be Saami and who has the Saami language spoken at home. Note that the concept of Saami belonging (what might loosely be termed “Saamihood”) if defined in this way, is thereby proclaimed to be entirely voluntary, and although this may avoid imposed ethnic stigmatization, it also opens the door widely to any so-called “wannabes” who might wish to proclaim feelings of Saamihood in order to gain special resource rights. The seemingly objective language requirement was designed to counter-balance a Saami ethnic free-for-all, but without strict specifications of Saami language competence, this restraint crumbles (Beach 2007). Hence, if pressed, the issue is thrown over to the hotly contested and variable opinion of whatever the (vaguely defined) current Saami community will accept. According to formal rule, there can conceivably be Saami accepted as such by the Saami Parliament who would not qualify for the right to herd reindeer according to the Reindeer Herding Act, just as there may well be active reindeer herders who have lost family language continuity enough to be disqualified from the Saami Parliament electorate.

In short, the concept of Saami ethnicity has varied over time, and the laws, which still regulate the social lives and livelihoods of the Saami, have been legislated over the years according to significantly different criteria. Given this state of affairs, the uncertainty and changeable nature of the ethnic concept itself, the construction of a representative Saami survey naturally proves challenging, especially if one seeks eventual longitudinal comparisons. The current formal structures to build upon, i.e. the Reindeer Herding Act and the Law for the Saami Parliament, do not amount to the kind of concrete census (even if these too might certainly be conceptually flawed) which in many other countries often serves as a base on which to build representative samples and to pursue survey work. Nonetheless, at any point, there are attributed, self-aspired and legally formulated or fuzzy concepts of who is Saami – concepts which can be quite determinative of the livelihoods of Saami people so recognized.

For the purposes of the Swedish part of the SLiCA survey, we have, sought informants who can link to the register of the Saami Parliament. A good number of these will also be reindeer herding members of samebys, but there are many Saami who are not caught in such nets. It is also important to realize that Saami opinions can be far from unified on the proper criteria for Saami ethnic belonging. Those who have maintained a deep continuity of family reindeer herding may tend to place determinative ethnic belonging there; those who are fluent in the Saami language and who have maintained this from time immemorial feel this to be the core of Saami identity, while those who have lost the Saami language but who may be proficient in the skills of Saami handicraft and other cultural idioms (even new creative expressions) base their Saamihood there.

In the Swedish SLiCA survey, carried out in April-June of 2004, there were a total of approximately 250 questionnaires of which around 220 to 225 have been valid in relation to the different questions. In total, 221–223 informants answered the questions under consideration here. Of these, 115 were male and 104 were female (while gender indication was lacking for two of the respondents. With respect to the herding vs non-herding Saami division: In each household the person who was questioned had the possibility of responding on behalf of up to four persons in that household. In most households additional persons were (with reference to certain specific questions) represented by such proxy. With respect to question A17 (reported in Part III, below) designed to determine family links to sameby resources, the total number of persons encompassed either directly by person 1 or by proxy was 446. Out of these 446 persons, 96 of them, or 21.5%, were involved in reindeer management. The gender breakdown of these 96 persons (those with likely sameby membership) – 14 females and 82 males – pertains especially to the other parts of this presentation.

11.3.5 References

- Durie, M. H. *et al.* (1995) Te Hoe Nuku Roa Framework: A Maori Identity Measure. *Journal of the Polynesian Society*, vol. 104, no. 4, December 1995, pp. 461–70.
- Edin-Liljegren, A., S. Hassler, P. Sjölander and L. Daerga (2004) Risk factors for cardiovascular diseases among Swedish Saami – a controlled cohort study. *International Journal of Circumpolar Health*, Nuuk 2004.
- Eliassen B, Melhus M, Kruse J, Poppel B, Broderstad A. R. (2011). Methods and methodological issues in the Survey of Living Conditions in the Arctic. *Int J Circumpolar Health*.
- Erikson, R. (1993) Descriptions of Inequality: The Swedish Approach to Welfare Research. In Nussbaum, M. and A. Sen (eds.) *The Quality of Life*. Oxford: Clarendon Press, pp. 67–83. <http://dx.doi.org/10.1093/0198287976.003.0006>
- Esping-Andersen, G. (1985) *Politics Against Markets*. Princeton, NJ: Princeton University Press.
- Esping-Andersen, G. (1985) and Korpi, W. (1984) Social Policy and Class Politics in Post-War Capitalism: Scandinavia, Austria and Germany. In J. Goldthorpe (ed.) *Order and Conflict in Contemporary Capitalism*. Oxford: Oxford University Press.
- Esping-Andersen, G. (1985) and Korpi, W. (1987) From Poor Relief to Institutional Welfare States: The Development of Scandinavian Social Policy. In R. Erikson (*et al.*) *The Scandinavian Model: Welfare States and Welfare Research*. Armonk, NY: Sharpe.
- Fitzgerald, E.D. *et al.* (1996) Whaihua Tatau: A Representative Sampling Method for Maori Populations. *He Pukenga Kōrero*, Vol 2, No. 1, 1996, pp. 34–42.
- Folkbladet, (2008) Samekvinnor diskrimineras i lagtext. Dec. 9, 2008
- Hassler, S., P. Sjölander and A.J. Ericsson (2003) Construction of a Database on Health and Living Conditions of the Swedish Saami Population, in Lantto, P. and P. Sköld (ed.), *Befolkning och bosättning I norr – etnicitet, identitet och gränser i historiens sken*. Centre for Saami Research, Umeå University, Miscellaneous Publications 1, 2003.
- Hassler, S., P. Sjölander, R. Johansson, H. Grönberg and L. Damber (2004) Fatal Accidents and Suicide Among Reindeer-Herding Saami in Sweden. *International Journal of Circumpolar Health*, Nuuk 2004.
- Hay, D. and Rutman, D. (1993) Well-Being, Community and Measurement. In *Well-Being: A Conceptual Framework and Three Literature Reviews*. Vancouver: Social Planning and Research Council of British Columbia.
- Hobson, B. and M. Lindholm (1997) Collective Identities, Women's Power Resources, and the Making of Welfare States. *Theory and Society*. (Autumn). pp. 1–34.
- Korpi, W. (1979) *The Working Class in Welfare Capitalism*. London: Routledge and Kegan Paul.
- Korpi, W. (1983) *The Democratic Class Struggle*. London: Routledge and Kegan Paul.
- Korpi, W. (1997) The Institutionalization of Citizenship: Class, Gender, and Citizenship Rights. In Korpi, W. and J. Palme (eds.) *Contested Citizenship: A Century of Social Policy Development in the Western World*.

- Kruse, J. (1986) Subsistence and the North Slope Inupiat: The effects of energy development, in S. J. Langdon (ed.), *Contemporary Alaskan Native Economies*. Lanham, Maryland: University Press of America.
- Korpi, W. (1991) Alaska Inupiat subsistence and wage employment patterns: Understanding individual choice. *Human Organization*, 50(4): 317–26.
- Kruse, J. and V. Hanna (1998) *Forces for change in arctic North America and the sustainability of northern communities*. Paper presented at the International Arctic Social Science Association, Third International Congress of Arctic Social Sciences, 21–23 May 1998, Copenhagen.
- Langdon, S. J. (1986) Subsistence as an economic system in Alaska: Theoretical observations and management implications, in S. J. Langdon (ed.) *Contemporary Alaskan Native Economies*. Lanham, Maryland: University Press of America.
- Lange, A. (1998) *Samer om diskriminering*. Stockholm: CEIFO, Centrum för invandringsforskning, Stockholms universitet.
- Lange, A. and C. Westin (1981) *Etnisk diskriminering och social identitet*. Stockholm: Liber/Publica.
- Maxim, P and J. White (2001) The Matching Communities 2001. Report prepared for the Strategic Research and Analysis Directorate, Indian and Northern Affairs Canada, Ottawa:INAC.
- Maxim, P and J. White (2007) Community Well-Being: A Comparable Communities Analysis. Report prepared for the Strategic Research and Analysis Directorate, Indian and Northern Affairs Canada, Ottawa:INAC.
- O'Sullivan, E. and M. McHardy (2004) The Community Well-Being (CWB) Index: Disparity in Well-Being Between First Nations and Other Canadian Communities Over Time. Report prepared for the Strategic Research and Analysis Directorate, Indian and Northern Affairs Canada, Ottawa:INAC.
- Poppel, B. (2010). Some data sources on people, peoples, communities, regions and human activities in Greenland. In: G. Winther (Ed.), *The Political economy of northern regional development – Yearbook 2008* (TemaNord, pp. 254–282). Copenhagen: Nordic Council of Ministers.
- Ringen, S. (1995) Well-Being, Measurement, and Preferences. *Acta Sociologica* (1995) 38: 3–15. <http://dx.doi.org/10.1177/000169939503800102>
- SFR (1999) *Äldre och äldre: Ett nationellt forskningsprogram*. Stockholm: Socialvetenskapliga forskningsrådet.
- Sainsbury, D. (1994) Women's and Men's Social Rights: Gendering Dimensions of Welfare States. In D. Sainsbury (ed.) *Gendering Welfare States*, London: Sage. <http://dx.doi.org/10.4135/9781446250518.n10>
- Sainsbury, D. (1996) *Gender, Equality and Welfare States*. Cambridge: Cambridge University Press.
- Stenberg, S. Å. (1998) Unemployment and economic hardship: a combined macro- and micro-level analysis of the relationship between unemployment and means-tested social assistance in Sweden. *European Sociological Review* (1998)
- Svenska Samernas Riksförbund (1986) *Samernas Vilja. Svenska Samernas Riksförbund resolutioner 1966 - 1985*. Umeå: SSR kansliet.

- Tåhlin, M. (1990) Politics, Dynamics and Individualism: The Swedish Approach to Level of Living Research. *Social Indicators Research* (1990) 22: 155–180. <http://dx.doi.org/10.1007/BF00354838>
- Usher, P. J. (1992) Modelling Subsistence Systems for Social Impact Assessment. Ottawa: A Report Prepared for the Grand Council of the Crees of Quebec.
- Usher, P. J. and Weinstein, M. S. (1991) Towards Assessing the Effects of Lake Winnipeg Regulation and Churchill Regulation and Churchill River Diversion on Resource Harvesting in Native Communities in Northern Manitoba. Winnipeg: Canadian Technical Report of Fisheries and Aquatic Sciences, Report 1794.
- Usher, P. J., G. Duhaime and E. Searles (2002) The Household as an Economic Unit in Arctic Aboriginal Communities, and its Measurement by Means of a Comprehensive Survey. *Social Indicators Research* 00: 1–28, 2002.
- Vogel, J. (1991) Converging Welfare in the Nordic Countries. A summary in *Social Report for the Nordic Countries*. Copenhagen: Nordic Council and Nordic Statistical Secretariat.
- Vogel, J. (1997) The Future Direction of Social Indicators Research. *Social Indicators Research* 42: 103–116. <http://dx.doi.org/10.1023/A:1006880910667>

Part II

11.4 Mobility in Northern Sweden and among the Swedish Saami

Lead author: Johanna Roto

In the era of urbanisation the ongoing changes in settlement structure and people's choices where to live have changed dramatically. The change from rather traditional ways of living to more mobile urban life has taken place just during a couple of decades. These changes in the place of living have affected greatly also the living conditions of the Saami people.

The following part of this article is focusing on mobility in Northern Sweden, in Swedish Sápmi, as a case study. Firstly, an overview of the demographic change and migratory flows is given. Secondly, more qualitative aspects from the SLiCA survey regarding reasons to move or stay have been analyzed. People's mobility – has a person lived elsewhere, is an individual planning to move somewhere else or, if the intention of the individual is to stay on his/her current place of living, and the reason(s) behind – were included in the SLiCA survey (questions B5 to B12 in SLiCA Questionnaire).

11.4.1 Sápmi – The homeland of the Saami

The homeland of the Saami people in Sweden, the Swedish part of Sápmi, can be defined in different ways. Traditionally, the homeland of the Saami, Sápmi included a large part of the inland areas of Mid- and Northern Sweden. Today, the homeland of the Saami are harder to define. As already cited, no official statistics according to ethnicity is available in Sweden. Three main variables or lists can be used when defining the areas where the Swedish Saami of today live.

Firstly, the Swedish law (lag om nationella minoriteter och minoritetsspråk SFS 2009:724) defines 19 municipalities that belong to the administrative area of the Saami language, namely Arjeplog, Arvidsjaur,

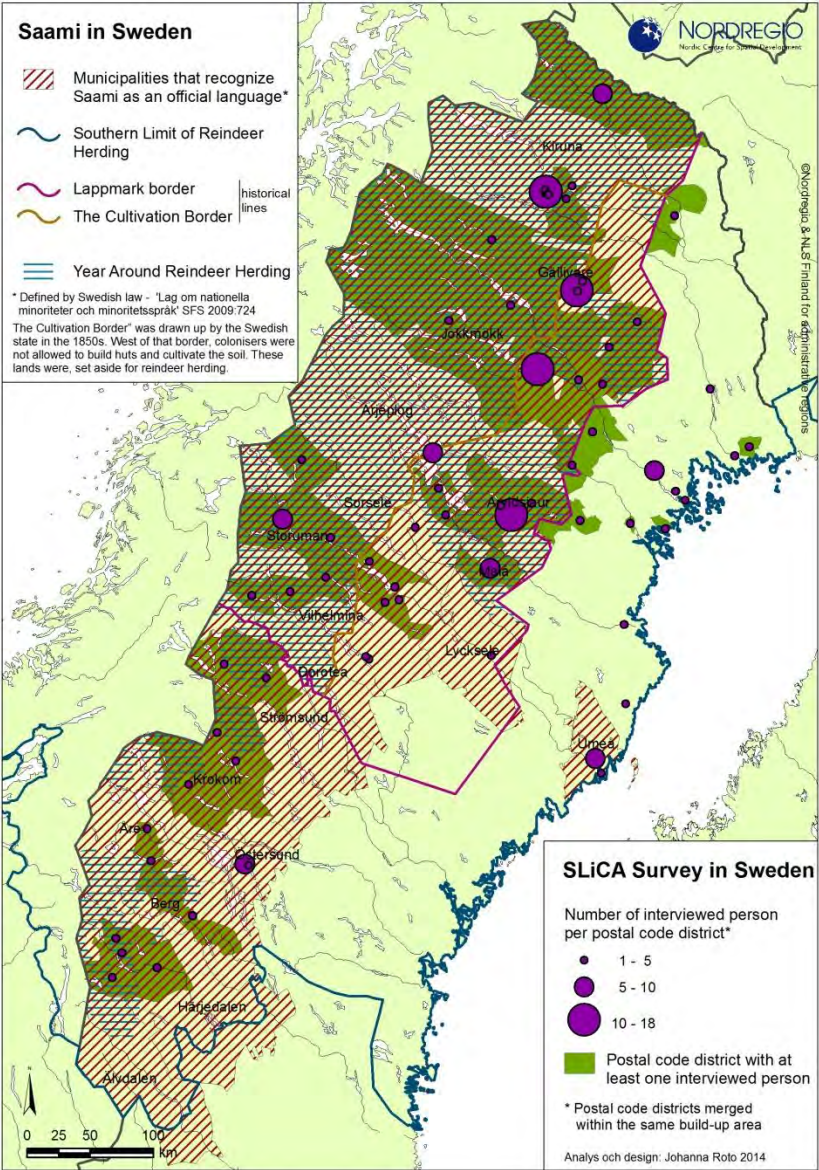
Berg, Dorotea, Gällivare, Härjedalen, Jokkmokk, Kiruna, Krokom, Lycksele, Malå, Sorsele, Storuman, Strömsund, Umeå, Vilhelmina, Åre, Älvdalen and Östersund. In these municipalities the Saami have the right to use the Saami language in official contexts and have the right to childcare and care of elderly people in the Saami language.

Secondly, the reindeer herding area in Sweden is shown. Only Saami people, who are member of Saami reindeer herding village (Sameby), has right to pursue reindeer herding in Sweden. The reindeer herding area in Sweden is divided into 51 Saami reindeer herding villages. This area can further be divided into year around pastures in the mountainous inland part of Northern Sweden and to winter pastures that cover more or less the entire Northern Sweden.

Thirdly, the voting lists of the Saami parliament can be used. According to the voting lists of Saami Parliament from 2013, there are 8,322 Saami in Sweden with voting rights (aged 18 years and over). Almost 80% of the Saami lived in the counties of Norrbotten, Västerbotten and Jämtland. However, a remarkable share of them lived in Umeå, Luleå and Östersund. Approximately 8% of the Saami in Sweden live in the Stockholm region (Sametinget 2014). The increase in the number of Saami living outside the traditional Swedish part of Sápmi is reflecting the overall demographic development in Northern Sweden.

Figure 1 is combining these different definitions into one picture and indicating the number of interviewed persons per postal code district. It is showing the approximated southern limit of the areas, traditionally exploited by the Saami, the municipalities belonging to the administrative Saami area as in 2014 and the reindeer herding area. The figure is also showing the geographical distribution of the SLiCA survey. All the postal code districts with at least one interviewed person have been marked. In addition, the size of the circle refers to the total number of interviews per region.

Figure 1. Swedish Sápmi and SLiCA survey



11.4.2 Settlement Structure and Population Change in Northern Sweden¹⁵²

Northern Sweden, covering the three northernmost counties of Norrbotten, Västerbotten and Jämtland, is home to some 640,000 people, who in a geographical sense unevenly inhabit a large land area. Large land areas are uninhabited and over half of the population is concentrated in larger cities: Umeå, Luleå, Skellefteå and Östersund, all with more than 50 000 inhabitants. Altogether 80% of the population live in municipalities with at least 10,000 inhabitants. The sparsely populated part of Northern Sweden, in this article referred to as Swedish Sápmi, is home to some 220,000 people and includes 18 inland municipalities.¹⁵³

Northern Sweden is as such characterised with unfavourable demographic patterns although there is a dual demographic process of growth and decline going on at the local level. On the one hand the intra-regional migration flows to regional centres and other larger settlements are increasing the population in most of the cities in the region. On the other hand most of the remote and sparsely populated parts of Northern Sweden, especially many of the municipalities belonging to Swedish Sápmi, have suffered both substantial population losses and demographic thinning out. (Dubois & Roto 2012:10)

This ongoing urbanisation within the region in relation to long-term demographic changes over the last decades has become a serious and complicated problem in Northern Sweden. Håkansson (2000) points out that (in Northern Sweden) this has happened despite the significant national and European Union investments in a large variety of both sector and regional policy measures. The development is, however, not regular throughout the region and within the area experiencing population decline there are “pockets” of positive population changes (Johansson & Stenbacka 2001), which in some cases have been directly connected to the development of the tourism sector or to other natural resource based activities (Dubois & Roto 2012:41).

¹⁵² All the statistics in this sub-chapter is developed by Statistics Sweden and based on register data. All calculations are made by the author.

¹⁵³ These 18 inland municipalities belong to the administrative Saami language area. The city municipality of Umeå that also belongs to the administrative area is excluded.

Also distance to other settlements matters. As the population in Northern Sweden, and especially in Swedish Sápmi, is nonetheless extensively centralised in a number of isolated settlements the long distances can make it challenging to reach a sufficient number of people within daily commuting range to for instance run public and private services cost-efficiently and to establish a well-functioning labour market (Hansen *et al.* 2011; Roto 2011).

Since 1990 the Swedish population has increased with 1.1 million or 13%. At the same time the population change in Northern Sweden has been rather stable whereas, in the Swedish Sápmi, the total population has decreased by 11%. Figures 2 and 3 illustrate population change in Northern Sweden on lower geographical levels. Figure 2 shows the total population change in the postal code districts in their geographical context and figure 3 shows population change in the settlements, illustrating how the population size of the settlement correlates with population change. A settlement is further defined (in the statistics) as a built-up area with more than 200 people with less than 200 metres distance between the houses. Administrative regional divisions do not influence the definition of settlements – the same settlement can be divided between two or more municipalities. Both of the figures illustrate the strong link between the urban hierarchy and its functional dimensions. In almost all the regions, the population is either increasing or showing the otherwise best demographic performance in the largest settlements while the largest population decrease or worst performance can be found outside the settlements or in settlements with less than 500 inhabitants.

As an example of this development Habteselassie (Habteselassie *et al.* 2006: 48) finds a strong correlation between city development and rural development in adjacent areas, in Västerbotten County.

“Population increase in the City of Umeå itself and in its immediate surroundings within convenient commuting distances includes both more employed people and a significant expansion of students at the university. The general pattern of stagnation in the other parts of the region seems primarily related to the restructuring of the large traditional industry sector that has initiated cumulative processes of decline in other sectors and to overall out-migration in relation to educational and job opportunities.”

Outside the regional centres the population increase can be directly connected to the development of the tourism sector or to other natural resource based activities.

Figure 2. Population Change in postal code districts in Northern Sweden 2007–2012

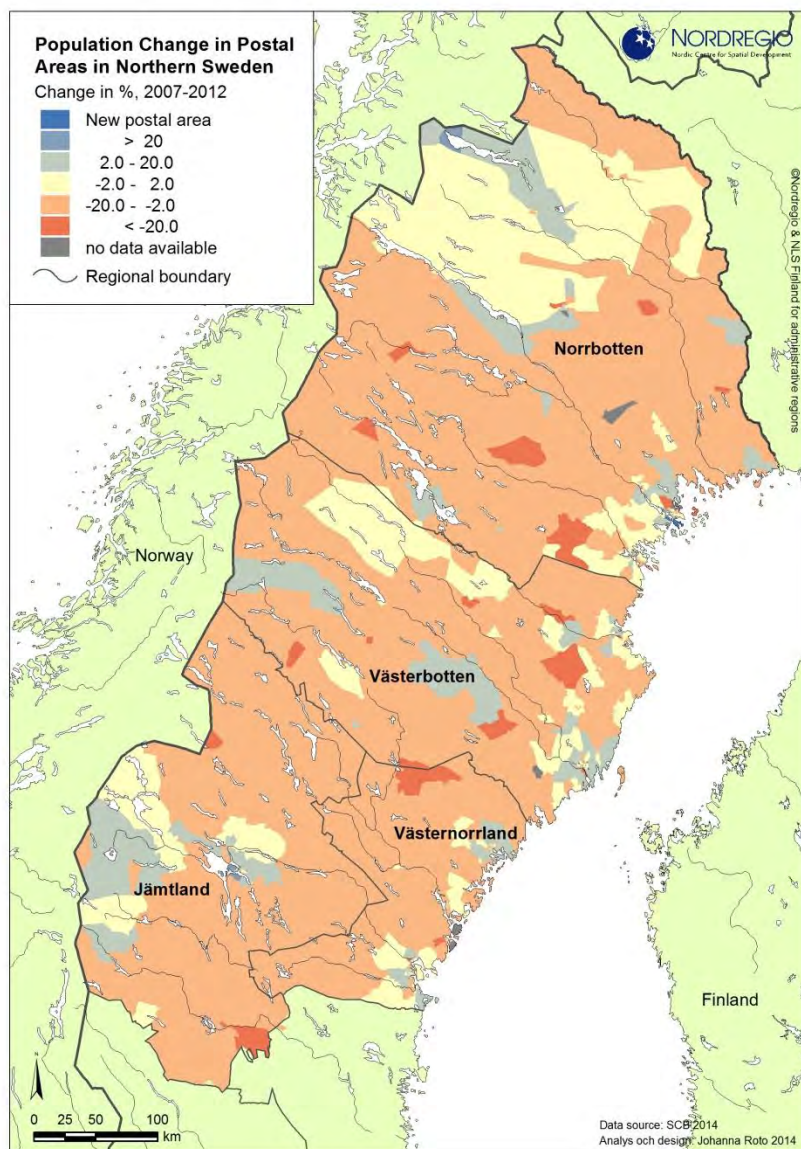
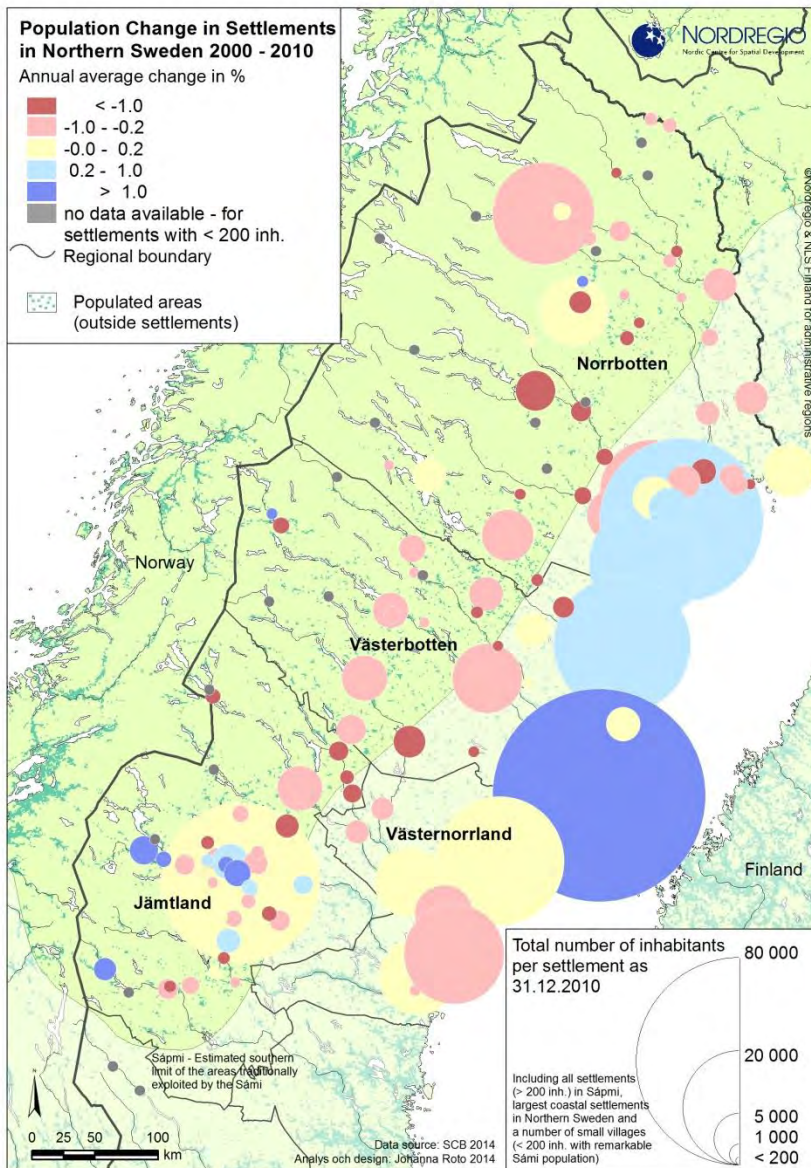


Figure 3. Population Change in settlements in Northern Sweden 2000–2010



Overall population change is a combination of natural population change – the difference between births and deaths – and net migration – the balance between in-migrants to, and out-migrants from the region. During the last two decades migration has been the main driver of population change in Europe as well as in Sweden. It is also the component that shows the clearest picture of population concentration to larger city regions, regional centres and their commuter catchment areas. Besides the obvious development of urban centres, a north-south divide seems to characterise Sweden as such. Outside these main trends, some smaller communities, also in the Northern Sweden, with either a significant tourism industry or various primary production activities have also managed to keep the net migration positive.

Net migratory trends give a picture of regions that are either gaining or losing population. This picture however needs to be nuanced as net migration shows only a small share of overall migration flows. Study made by Hansen *et al.* (2011) summarizes that taken as a group, more than 11 % of the Nordic population changed their place of residence moving across a municipal boundary in 2010 whereas the average rate for net migration was 0.5 %. This balance between in- and out-migration shows that a remarkable number of people are not only out-migrating but also in-migrating to sparsely populated areas.

Habteselassie (Habteselassie *et al.* 2006: 37) argues that the most favourable rural options for in-migration have both accessibility and amenity qualities as most migrants to rural areas settle close to towns. Studies of migration and counter-urbanisation within the local labour market of Umeå show a preference among out-migrants from the city over small towns and villages within a convenient distance for commuting to the city of Umeå. Other attractiveness factors include proximity to water (lakes, rivers and the sea), villages characterised by agricultural landscapes, heritage values, or their offering of recreational opportunities such as winter sports.

Persons in different age groups or of different gender are not moving in and out of each municipality and region similarly. In Sweden half of all the migrating people are 20–34 years old but people do not stop moving either when they become old. In the Swedish Sápmi, a clear out-migration peak from the municipalities can be identified on the age groups 15–24. The in-migration peak can be found some years later but not with the

same intensity. Compared to the national averages, people start moving from Swedish Sápmi, and from the other sparsely populated municipalities as such, a bit earlier mainly due to the lack of education possibilities.

As relatively more young people and females leave the sparsely populated regions, the population is not only becoming older and increasingly more male dominated, the declining number of young people threatens the whole fabric of social services and impacts significantly the potential future availability of manpower (Dubois & Roto 2012:10-11).

11.4.3 Place of living and mobility

In order to see how well the mobility of the Saami people fits in to these general trends in Northern Sweden, the Swedish SLiCA material regarding people’s previous migrations and plans to either move or stay was analysed based on the respondents’ current place of living. Based on the postal code numbers, we categorized the respondents’ place of living either as city, village or sparsely populated area. With a city we mean that the postal code district is located within a municipality with at least 25,000 inhabitants. Village refers to postal code districts that are located within build-up areas with at least 200 inhabitants. Sparsely populated areas are postal code districts with no build-up areas with over 200 inhabitants and not located within municipalities with more than 25,000 inhabitants. After this basic division, 12% lived in cities, 49% in villages and 39% in sparsely populated areas.

Table 1. Number and % share of the persons living in different regional categories

Place of living	Frequency	Share
City	26	11.8
Village	109	49.3
Sparsely populated area	86	38.9
Total	221	100.0

The earlier described demographic unbalance was partly visible in the SLiCA material. The interviewed persons were on average two years younger in the cities than in the sparsely populated areas and up to four years younger on average than respondents living in the villages. Half of the interviewed males lived in the sparsely populated areas, whereas half

of the interviewed females lived in the villages. 15% of the interviewed females lived in the cities whereas only 7% of the males did so.

As a first step to analyse the mobility of the Saami people in Sweden, the answers to questions “B4 – Where did you spent most of the first 10 years of your life” and “B5 – have you ever lived somewhere other than (this community) for a year or more” were divided into this regional categorisation. In total 66% of the respondents lived, at the moment of interview, in the same municipality as where they had lived as a child. Some 70% of the persons living in villages and in sparsely populated areas had lived in the same municipality as a child whereas the share was only 11% for those living in the cities. In total half of the respondents had, during their life, lived elsewhere. This means that some 10% of the people who now live in the same municipality as where they lived as a child had, however, lived at least one year elsewhere.

Table 2. Answers to B4 and B5 after the current place of living as % share of total

Place of living	Place of living as child vs the moment		Lived on another municipality
	Same municipality	Another municipality	(At least one year)
City	11.1	88.9	93.3
Village	69.1	30.9	56.3
Sparsely populated	70.6	29.4	47.9
Total	66.0	34.0	56.0

Gender is an important variable in relation to question B5, as 72% of the females had lived elsewhere during their lives, whereas only 43% of the interviewed males had lived elsewhere. All the interviewed females then living in a city had lived elsewhere, whereas 80% of the currently city-dwelling male interviewees had lived elsewhere. In the villages, 74% of the females and 39% of the males had lived elsewhere. In the sparsely populated areas, 59% of females and 41% of the males had lived elsewhere.

At the same time, almost 30% of the interviewed persons had considered moving from the municipality – either to take the first step in their mobility carrier, or to move again – as indicated in question “B10 – Have you considered moving away from (COMMUNITY) in the last five years”. Remarkable differences between people living in cities versus those living in villages or in sparsely populated areas can be seen. 55% of the people living in the cities have answered that they have consid-

ered moving from the municipality, whereas in the villages and in sparsely populated areas, over 70% of the people had not considered moving away from their home municipality.

Table 3. Answers to B10 – Has a person considered moving from the municipality during last five years

	Have considered moving (in % of all answers)		
	Total	Males	Females
City	54.5	50.0	57.1
Village	27.3	21.3	32.7
Sparsely populated	24.4	29.1	17.1
Total	28.9	27.3	30.7

The gender differences are not as clear when it comes to considering to move compared to those who have already moved. In total 27% of males and 31% of females have considered moving. In the cities and villages females are more keen to move whereas in the sparsely populated areas females are more keen to stay.

11.4.4 Reasons to move and stay

As cited earlier, almost 50% of the interviewed persons have moved during their life over the municipal boundaries and 34% of the interviewed persons are not, at the moment of the interview, living in the same municipality that they originally came from. In the following, the reasons behind – why a person has moved, or stayed – have been analysed. This part of the paper refers to SLiCA questionnaire questions B6, B7, B11 and B12.

As a person can have given more than one reason why he or she have moved (or stayed), all the reasons have been included. All the reasons have been included to the statistical tables with same importance and no differentiation between main or other reasons to move or stay had been done – and in most of the answers this differentiation would have been impossible.

In general work, “studies”, “family” and “sense of home” where the most important reasons to move – or to stay.

B6 – Why did you live somewhere else?

115 respondents had lived in another place for a number of reasons. 73% of them indicated one reason, 23% indicated two reasons and 3% indicated three or more reasons.

Table 4. Answers to B6 - Why did you live somewhere else?

Previous place of living			
Person has lived on another place due to (% share of answers):			
Family issues ¹	Studies	Work	Other reasons ²
14.6	38.4	38.4	8.6
¹ Family issues			
Moved with own parent(-s) (as a child)			9.3
Moved with/to family as an adult			5.3
² Other reasons			
Including answers like: to see another places, due to housing situation, health etc.			

Almost half of the respondents had lived in other settlements during their life, mostly due to working or educational activities. In many of the cases this had been a necessity – small settlements do not offer higher education opportunities, or sometimes even basic education facilities are missing in local society. Also the spectrum of available jobs is limited.

Time is an important factor. Some of the elderly interviewed answered that they had lived elsewhere as they went to “nomad school”, or Sámi school, that was before 1977 a type of primary school in Sweden where pupils, coming from Sámi families, normally lived in dormitories a large part of the year due to long distances. Today all the pupils in compulsory comprehensive school (*grundskola* in Swedish covering ages between 6/7 to 15/16) have the possibility to commute to school on a daily basis – with publicly organized transport if needed. Therefore answers “lived on another place due to study activities” are mostly related to secondary and higher education.

When a person has indicated two or more reasons why they have lived at another place, the combination “study and work” was the most common explanation given.

Following working and educational activities, “family” was the third main reason why people had lived elsewhere. Family reasons can further be divided into migration as a child when the person had moved with his/her family at an early age and to family issues as an adult.

The category “other reasons” covers a wide spectrum of answers like “adventure” or to see other places, housing situation and health.

B7 – Why did you move (back) to (COMMUNITY)?

157 respondents have moved to “this community” and given a reason why – or they have given a reason why they live in “this place” since childhood. 76% indicated one reason, 20% indicated two reasons and 4% indicated three or more reasons.

Table 5. Answers to B7 - Why did you move back to community?

Current place of living						
Person has moved (back) to this place / stayed due to (% share of answers):						
Work	¹	Family issues	²	'This is home'	³	Other reasons
30.3		27.9		18.9		22.9

¹ **Work**
Moved to community both after own (22%) and partners employment (6%).
Also due to reindeers .

² **Family issues**
Moved to community 'after love' (15%), with own parents as a child (9%), due to own childred (3%)

³ **'This is home'**
Moved/stayed in the community as they identify place as 'home'.

Work and family issues were the most important reasons why persons had moved (back) to “this community” – or why they were living in the community on first place. Work related reason could be further divided into cases where person had moved to a community after own employment or together with partner who on the first place had found a new job. A number of persons specified that he/she had moved to or stayed in the community due to reindeer herding, meaning that either the informant or his/her partner had reindeer in the region.

“Family related issues” cover four main types of reasons for moving. “After love” means that a person had moved to the community because his or her partner-to-be was living in the community in the first place.

“Due to own children” can be further divided into two main reasons, namely to migration that takes place as a person “wants to provide a better future for his/her children” or as persons own child/children had moved to the community before and mother/father wanted to follow after, often as they were retired. The fourth family related reason for mobility was a more passive one as the person had moved to the community as a child together with his/her parents.

The category “this is home” refers to the answers where individuals indicated that they moved to/stayed in the community as they identify the community as “home” – either they are return migrants who have moved back to the community as they missed “home” or their roots are in the community and due to family ties they identify the place as home even if they were born elsewhere.

Saami wearing his national costume shopping during traditional winter market in Jokkmokk, Northern Sweden



Photo: Johanna Roto.

The category “other reasons” covers a wide spectrum of answers like social issues, studies, housing and health. Also answers where individuals were forced to move are included in “other reasons”. A number of elderly respondents had moved to the community as they had “no other choice”, as illustrated by the following quotes:

“When military, Norrland Dragoon Regiment, moved to Arvidsjaur the Mausjaur Sámi Village lost a remarkable share of reindeer pastures. Therefore some reindeer herders felt forced to move to other areas”

“We had to move here (to this community), closer to the road”

“Due to the construction of a hydropower plant we had to move”

B11. Why have you considered moving away from (COMMUNITY)?

75 respondents have considered moving away from his/her community and have provided a reason why. 73% of them indicated one reason, 23% indicated two reasons and 4% indicated three or more reasons.

Table 6. Answers to B11 - Why have you considered moving back?

Plans to move			
Person has considered moving away (from community) due to (% share of answers):			
Work	Family	Personal development ¹	Other reasons ²
31.6	11.2	16.3	40.8
¹ Personal development			
Studies			10.2
Other activities to improve/develop own potentials			6.1
² Other reasons			
Don't like / feel comfortable in the community			7.1
'Homesickness'			6.1
Change, to see another places			8.2
Other			24.5

New working possibilities are the most important reason why an individual has considered moving away. This is partly related to the small size of the local labour markets and limited possibilities both to be employed and to get more qualified job. Reasons related to personal development are closely related to employment possibilities and the answers can further be divided into studies and other activities to improve and develop own potentials, for instance with more qualified job opportunities.

A remarkable share of “family related reasons” had to do with the future of children. Either the respondent was considering moving away in order to provide better schooling possibilities to his/her child with a possibility to (still) live at home – or to provide a more peaceful environment to his/her kids to grow up.

Some 20% of the respondents had considered moving away as they didn't like to stay in the community. Three main reasons can be identified:

- Don't like or feel comfortable in the community, e.g. due to loneliness or prejudgments.
- “Homesickness” refers to answers where the person “wants to get closer to his/her childhood family home”, wants to get closer to his/her Sámi roots or to get closer to his or family's reindeer herding areas.

- Persons wanted to try something else, see new places and people or just to get some change.

Further reasons why individuals had considered moving away were related to for instance cold climate, housing, limited access to services and old age.

B12. What are the reasons why you choose to remain in (COMMUNITY)?

242 respondents – or 97% choose to remain in their community. 50% of them indicated one reason, 34% indicated two reasons and 16% indicated three or more reasons.

Table 7. Answers to B12 - What are the reasons why you choose to remain (in community)?

Plans to stay				
Person chooses to remain (in community) due to (% share of answers):				
Work	Family	¹ 'This is home'	'Like it here'	Other reasons ²
13.6	19.2	15.0	18.0	34.2
¹ Family, relatives and friends				
				15.5
				3.6
² Other reasons				
				5.6
				4.9
				7.3
				4.1
				12.4

Respondents choose to remain in their community mostly as they like to live there, they identify the place as home and/or they have their family there. There is also a high correlation between family reasons and considering the place as home or why persons like to live in the community in general. Family reasons should be understood as extended family including all relatives, friends and in some cases also the Sámi society.

“This is my land; I can’t live anywhere else”

“My Sámi roots start here and here am I”

Nature, both with its visual values and as resource base for hunting, fishing or just relaxing is seen as an important reason to stay. Nature is also seen as the precondition for livelihood as a couple of dozen of the interviewed participated in reindeer herding.

Other examples of reasons to stay in the community were “that the community could provide all that a person needs”, “freedom” and “old habit”. Especially a number of elderly respondents answered that they live where they have always lived and they have no reasons to move. Three persons indicated also that they live in elderly home and therefore they have no options to move elsewhere.

11.4.5 References

- Dubois, A. & Roto, J. (2012). *Making the best of Europe's Sparsely Populated Areas. On making geographic specificity a driver for territorial development in Europe.* Nordregio Working Paper 2012:15
- Habteselassie, D., Petterson, Ö. & Wiberg, U. (2006). Restructuring in sparse regional structures - a Swedish case. In Katsuhisa, I., Westlund, H., Kobayashi, K., Hatori, T. (eds.): *Social Capital and Development Trends in Rural Areas.* Vol2. Marginal Areas Research Group. Kyoto University, Japan.
- Hansen, K. G., Rasmussen, R. O., Roto J. (2011). *Demography in the Nordic countries – A synthesis report.* Nordregio Working Paper 2011:9.
- Håkansson, J. (2000). *Changing Population Distribution in Sweden – Long Term Trends and Tendencies.* Umeå Universitet, Gerum 2000:1.
- Johansson A-K, Stenbacka S. (2001). *Sex inflyttningsrika bygder – en intervjustudie.* Glesbygdverket.
- Roto, J. (2011). 37 years old male meets 40 years old female in a city – Demographic changes in Norway and in the Nordic Countries. In *Plan – Tidskrift for samfunnsplanlegging, bolig og byplan og regional utvikling* no 5/2011, s. 22–29.
- Sametinget (2014). <http://www.sametinget.se/>
- Statistiska centralbyrån SCB (Statistics Sweden). 2014 <http://www.scb.se/>

Part III

11.5 How might gender matter?

Lead authors: Hugh Beach and Rasmus Ole Rasmussen

Although it has never been the only livelihood of the Saami people, reindeer herding has been developed by them over the centuries as it has been by many other northern indigenous peoples. In fact, without the reindeer, first as objects of the hunt and later, with increasing domesticity, herded, as objects of living property, these indigenous peoples could hardly have inhabited the vast inland taiga and tundra regions of the north. In recognition of this unique cultural adaptation, and as a basis for the assertion of Saami resource and land rights, only those of Saami descent hold the right to herd reindeer in Sweden. (This is not a condition, which obtains throughout Sápmi; for example, in Finland non-Saami who own land in herding zones may herd reindeer.) Anthropological research has indicated significant gender-related differences within the herding profession (Beach, 1982), which in turn could prove significant to investigate when looking at out-migration from within the northern Saami communities.

Admittedly, reindeer herding is but one of many livelihoods, which engage the Saami people as a whole. Indeed, it is estimated that only 15% of the Saami people in Sweden practice their reindeer herding rights and have reindeer herding as a main source of income. Nonetheless, this possible gender-based distinction within this herding minority within the Saami minority was one of many issues, which the SLiCA survey intended to illuminate.

In this paper we focus on two particular (but possibly quite linked) sets of questions regarding inequalities evident with regard to the distribution of, and legally constrained actual *practice* of, Saami rights. The first set of questions concerns perspectives on the rights Saami who are sameby members (as opposed to those Saami who are not). The second set of questions concerns inequalities within the samebys themselves. Gender difference is an aspect which permeates much of the rich data in the survey results, and one of our main interests here is to ascertain if gender plays a role in the responses generated by these two question sets.

With respect to the first set of questions, what can be termed “intra-Saami inequalities”, as has been noted, only those Saami who are sameby members have the right to enjoy (the actual practice of) their Saami rights: to hunt, fish and to herd reindeer. For example, do Saami agree that they should be excluded from the right to practice their Saami rights? Might their perspectives reflect a gendered dimension? Responses will not at all necessarily align themselves along the sameby membership divide. Many non-herding Saami recognize quite well that were all Saami to keep reindeer on the limited Swedish grazing lands, sustainable grazing limits would be exceeded, the reindeer population might crash, the continuation of herding would be jeopardized, and the ability of *any* Saami to exercise Saami immemorial rights might cease.

On the other hand, do sameby members agree that only they (ca 15% of the Saami population in Sweden) should be able to practice their Saami rights as opposed to the majority of other non-sameby (non-herding) Saami? Here too, government investigations and Saami rights activists have considered carefully the question if Swedish Saami indigenous rights would not benefit from promoting a so-called “expanded sameby” with membership vastly exceeding the current low share of 15% of the Saami population. Some sameby members have presented the case that with increased membership of those able to practice their immemorial Saami rights, the Saami cause will increase in strength, especially if sameby membership were to encompass lawyers, journalists and academicians rather than just reindeer herders. In 1997, the Swedish government issued directives (Dir. 1997: 102) for the construction of a new Reindeer Act. The committee was told explicitly to consider the question of the so-called “expanded sameby”, but

despite the resulting massive report, nothing has come of it. A major point of contention, of course, is how to construct a sameby with a greatly increased Saami membership without increasing pressure on limited resources. (Already here, we can note incentives for separating Saami hunting and fishing rights – which might be opened to a larger Saami collective – from the right to practice the herding right to which they are now appended.) These questions are presented below along with survey results organized in tables according to gender and age of the interviewed person in the household presented in percentages:

Table 8. H20. Should all Saami, in your opinion, be given the right to practice their reindeer herding rights? % Organised according to gender and age of the interviewed person in the household

Response		No			Yes				Don't know			Total
Gender	Female	Male	Unknown	Total	Female	Male	Unknown	Total	Female	Male	Total	
Age group												
20-29	2	2	-	4	4	3	-	7	-	-	-	11
30-39	2	4	-	6	5	7	-	12	2	1	3	21
40-49	2	3	-	5	5	10	-	15	1	-	1	21
50-59	2	3	-	5	9	5	-	14	1	1	1	20
60-69	2	1	-	3	4	3	-	6	1	-	1	10
Above 70	1	3	-	4	3	6	-	9	1	2	3	15
Unknown	1		1	1	1	1	1	2	-	-	-	3
Total	12	15	1	27	31	34	1	65	5	4	8	100
n	26	32	1	59	68	75	1	144	10	8	18	221

It is evident that more than twice the number of respondents, i.e. 65.2 %, as opposed to 26.7%, was of the opinion that *all* Saami should enjoy the right to practice their Saami rights. The gender distinction seemed rather insignificant in this regard. Obviously, it becomes important to consider which of the respondents were active herding sameby members, those who by law could already practice their Saami rights, as opposed to which respondents were not sameby members. This requires that we crosscheck with the responses from question A17. (See the tables for A17 below.).

Reference to question A17 indicates that of the households surveyed, approximately two out of three households lacked any member engaged in reindeer management. Hence, at the level of categories based on the distinction between sameby members and Saami who are not sameby members, opinions expressed in question H20 corresponded quite accurately to the actual breakdown of (the government imposed) status with respect to resources: It is most likely, though not substantiated, that it is those Saami removed from the samebys who thought that all Saami (themselves included) should share equal resource rights, while it seems that the current sameby members agreed with the status quo, that only they should hold the right to practice Saami rights.

Table 9. Question H21: Should all Saami, in your opinion, have the same hunting and fishing rights? % Organised according to gender and age of the interviewed person in the household

Response	No				Yes				Don't know			Total
Gender	Female	Male	Unknown	Total	Female	Male	Unknown	Total	Female	Male	Total	
Age group												
20-29	2	2	-	4	3	2	-	5	1	1	2	11
30-39	4	5	-	9	5	5	-	10	1	1	2	21
40-49	2	3	-	5	6	9	-	15	1	1	1	21
50-59	4	3	-	6	8	5	-	12	-	1	1	20
60-69	2	1	-	3	4	3	-	6	-	-	-	10
Above 70	1	3	-	3	3	6	-	9	1	2	3	15
Unknown	1		1	1	-	1	1	2	1	-	1	3
<i>Total</i>	<i>14</i>	<i>16</i>	<i>1</i>	<i>31</i>	<i>28</i>	<i>30</i>	<i>1</i>	<i>59</i>	<i>4</i>	<i>6</i>	<i>10</i>	<i>100</i>
n	32	36	1	69	63	66	2	131	9	13	22	222

Responses to question H21 parallel quite closely those answers to the previous question H20. Again, approximately twice as many challenge the current status quo as support it. As before, while the totals match quite closely the government-imposed classification proportions of the sameby member contra non-sameby member Saami (and are reasonably to stem from it), we cannot be certain that some herders are not in favor of pan-Saami hunting rights, or that some non-sameby members do not hold that they should accrue only to the herders. That is, at the individual level, responses to the different questions have not been cross-checked against sameby membership. It is apparent, however, that the gender distinction appears to be insignificant.

There is yet another question, H19, which addresses conditions within the samebys as they exist today. While responses were open, of course, to the perspectives of all Saami in the survey, sameby members as well as non-members, the focus of H19 is solely on the kinds of rights members, only, are allowed to practice. Its focus is on a distinction in these rights – that between herding on the one hand, and hunting/fishing on the other – a distinction which has recently received much attention (Beach 1994:66), not least as a mode to increase solidarity between sameby members and currently non-sameby member Saami by the proposal for an “expanded” or “open sameby” mentioned above. According to the recommendations of the government’s Reindeer Herding Committee’s investigation, current non-sameby Saami should be admitted to their respective samebys of ancestral origin (SOU 2001:101, p. 81). Naturally, much debate has ensued about possibly granting such newcomers the practice of all Saami rights or limiting them to hunting and fishing rights only, so as not to jeopardize the herding livelihood of the samebys’ *herding* members (e.g. <http://dadring-mikaelsson.info/2013/05/08/den-oppna-samebyn/>; <http://sverigesradio.se/sida/artikel.aspx?programid=2327&artikel=2677815>). While the response tables are given below, this question involves a complex discussion, which can be approached only once other questions have been contextualized.

Table 10. Question H19: In your opinion, should the hunting and fishing rights of the Saami be open to all members in the samebys? % Organised according to gender and age of the interviewed person in the household

Response	No				Yes				Don't know			Total
Gender	Female	Male	Unknown	Total	Female	Male	Unknown	Total	Female	Male	Total	
Age group												
20-29	-	1	-	1	5	3	-	8	1	-	1	11
30-39	1	0	-	1	7	9	-	16	2	1	3	21
40-49	1	0	-	1	6	12	-	18	1	-	1	21
50-59	0	1	-	1	9	7	-	17	1	0	2	20
60-69	0	-	-	0	5	4	-	9	0	-	0	9
Above 70	-	1	-	1	3	9	-	12	1	1	3	15
Unknown	-	-	1	1	0	1	1	2	0	-	0	4
<i>Total</i>	<i>3</i>	<i>4</i>	<i>1</i>	<i>8</i>	<i>36</i>	<i>44</i>	<i>1</i>	<i>82</i>	<i>8</i>	<i>3</i>	<i>11</i>	<i>100</i>
<i>n</i>	<i>6</i>	<i>9</i>	<i>2</i>	<i>17</i>	<i>81</i>	<i>99</i>	<i>2</i>	<i>182</i>	<i>17</i>	<i>7</i>	<i>24</i>	<i>223</i>

Table 11. Question H22: Would you in general say that the rules regarding the rights and privileges of female members are implemented in a fair way by the Saami boards of the samebys? % Organised according to gender and age of the interviewed person in the household

Response	No				Yes				Don't know			Total
Gender	Female	Male	Unknown	Total	Female	Male	Unknown	Total	Female	Male	Total	
Age group												
20-29	2	2	-	4	3	2	-	5	1	1	2	11
30-39	4	5	-	9	5	5	-	10	1	1	2	21
40-49	2	3	-	5	6	9	-	15	1	1	1	21
50-59	4	3	-	6	8	5	-	12	-	1	1	20
60-69	2	1	-	3	4	3	-	6	-	-	-	10
Above 70	1	3	-	3	3	6	-	9	1	2	3	15
Unknown	1	-	1	1	-	1	1	1	1	-	1	3
<i>Total</i>	<i>15</i>	<i>16</i>	<i>1</i>	<i>31</i>	<i>29</i>	<i>30</i>	<i>1</i>	<i>59</i>	<i>4</i>	<i>6</i>	<i>10</i>	<i>100</i>
<i>n</i>	<i>32</i>	<i>36</i>	<i>1</i>	<i>69</i>	<i>63</i>	<i>66</i>	<i>1</i>	<i>130</i>	<i>9</i>	<i>13</i>	<i>22</i>	<i>221</i>

11.5.1 Inequalities of Saami rights within the sameby (gender issues)

The other set of questions, which addresses what we can term the “internal sameby rights issues”, relates to gendered perspectives pertaining precisely to those Saami rights which only the sameby members are able to practice. Do men and women feel that they have the same rights within the *sameby* reindeer herding units? Survey questions H22 and H23 were formulated to address this issue and also to provide the possibility to express in what ways any such reported differences were evident. These questions were as follow and, as before, where appropriate, are presented below along with survey results organized in tables according to gender and age of the interviewed person in the household presented in percentages.

Reindeer calf-marking corral where snares on the end of poles have often replaced the lasso. Swedish Saamiland, Jähhkåkaska sameby. End of June 2014



Photo: Hugh Beach.

As much as 31.2% of all responses indicated that the samebys did not implement the rules of the Herding Act fairly with regard to female members. Almost twice the share (58.8%) felt that the samebys did implement the Herding Act properly in this regard.

H22 Possible choices available for the answer along with the gender breakdown in percentages for each chosen category of response can be seen in the table below:

Table 12. Question H22: Possible choices available for the answer along with the gender breakdown in percentages for each chosen category of response can be seen in the table below

Implementation	Per cent of males	Per cent of females
Implemented in a fair way	30.4	13.3
Not implemented in a fair way	42.6	40.0
Not known/ no comment	24.3	41.9
No answer	2.6	4.8

In numbers, the respondents to question H22 were distributed as follows.

Males	Females	no info	Total
35	14	1	50
49	42		91
28	44	1	73
3	5		8
115	105	2	222

Unfortunately, question H22 alone does not adequately address many of the most important issues regarding discrimination of female sameby members. The question's formulation carries the underlying assumption that the Herding Act itself is free from discriminatory paragraphs, and that if only the sameby were to implement them fairly, then the rights and privileges of its female members would be upheld. It is quite possible that some of the respondents who claim that the samebys do indeed implement the Herding Act fairly nonetheless feel that female members suffer

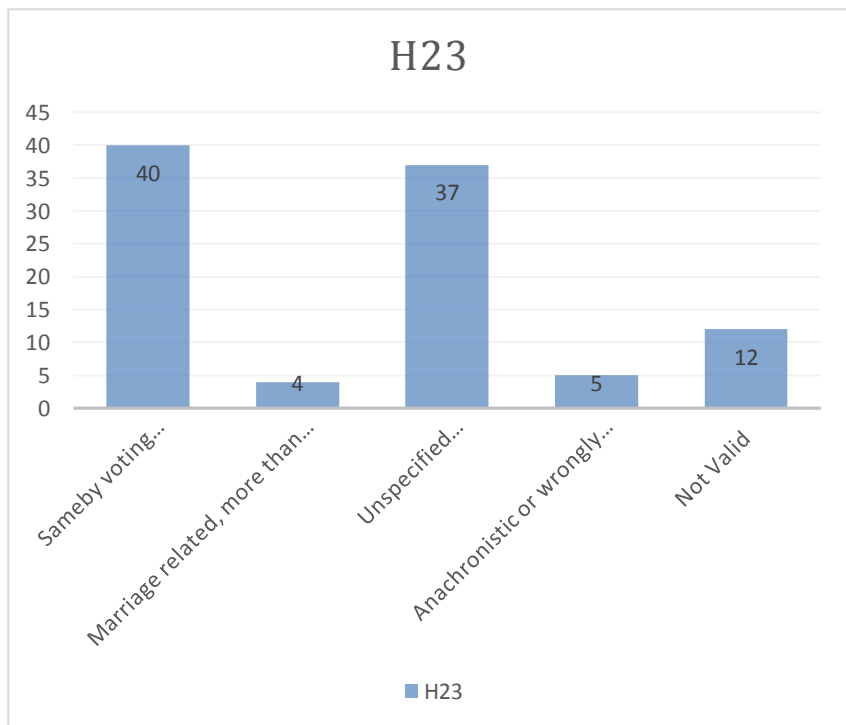
discrimination – but, discrimination at the hands of the Herding Act. Given the formulations of the Herding Act (especially those prior to its current 1971-based version), this position would not be unjustified (Beach 1982). Moreover, the Herding Act is fuzzy on many issues regarding implementation, often turning such things over to the sameby boards. On the basis of many years of fieldwork among herders, Beach has found that sameby members are frequently unsure of which regulations derive from the Herding Act, and which have been imposed by the sameby. Sameby “jurisdiction” is so poorly defined in certain realms and government herding authorities so indecisive about what the Herding Act actually *demand*s as opposed to what it *recommends* that “implementation” of it can vary in the extreme. (Note the discussion under the section *Changes in implementation concerning internal sameby rights issues* to follow.) Discussion of the qualitative answers to question H23 will help illustrate some of these points while also revealing important methodological problems in the interpretation of survey results.

H23: In which way do the *samebys* implement the regulations of the Reindeer Herding Act unfairly with respect to the female members of the *samebys*?

Unlike the other questions above, H23 allows for free, qualitative response rather than pre-determined alternative choices.

Certain key topics are repeated in the answers, and a breakdown of answers according to these main topics can be seen in the table below.

Figure 4. Categorization of responses related to question H23



Categories

- Sameby voting rights/membership classification: 40 responses.
- Marriage related, more than voting related: 4.
- Unspecified discrimination/general dissatisfaction: 37.
- Not Valid: 12.
- Anachronistic or wrongly grounded complaints: 3.

Of the total of 77 written responses, 18 of them brought up issues that ranged over more than one category. Those 37 responses listed under category 3 generally assert nothing other than the fact that women suffer discrimination. It is often related to the discrimination of women in Swedish or western societies at large, and further specific Saami-related detail is lacking. 12 responses were classified as not valid where the respondent commented simply for example that he or she had no idea, that it de-

depends whom one marries, or that “women are more stupid than men”. For this study of Saami conditions, response categories 1, 2, and 5 are of particular interest. It is quite plain that of the responses with real Saami-related content, the main point of contention regarding the discrimination of women in the samebys has to do with category 1 which targeted the two linked issues: sameby voting rights and membership classification.

11.5.2 Sameby voting rights and membership classification

The modern reindeer “industry” is organized, operated and taxed like a Swedish business corporation, composed of individual family herding business firms. The sameby chairman of the board is to function as a work leader who for the sake of efficient labor use is empowered (but not forced) to portion out salaried jobs for the other herders to perform for the collective good. The gradually advancing implementation of the wage system funded by sameby membership herding fees has resulted in greater labor efficiency, but it has also altered settlement patterns and, on occasion, increased herding extensivity,¹⁵⁴ loss of skills, and reduced internal sameby solidarity (Beach 1981; 2013). Each family herding business firm, subunits within the collective sameby business corporation, constitutes one voting block and is to be represented in the larger sameby collective by a single voting headperson.

Sameby voting regulations form a fascinating topic of study, and while they may seem simple and straightforward, when played out in context of variable individual herd size, family herd size, number of people within a family, and herding group alliances with the sameby, they generate a field of great complexity which can be dealt with only briefly here. Basic to the voting system is the logical business-firm model by which those who take the greatest risk of property should also have the most to say about it. Hence, according to paragraph 59 of the Herding Act, an individual’s

¹⁵⁴ “Extensivity” is a term used in studies of reindeer herding to indicate a loose control of the animals as opposed to “intensivity”, used to indicate a tight control of the animals. Of course there is a sliding scale of herding form along this intensive-extensive continuum (Beach, 1981: 499-510).

amount of reindeer property, like amount of stock in a shareholding company, determines the voting power of each sameby herding member (who votes also with the reindeer of his household people). Voting for sameby officials is not considered an issue involving risk of property and is to be executed according to the one-member/one-vote rule. However, economic matters, such as how to invest sameby assets and how to organize the herding work (and if new members are to be admitted) is to be decided according to the so-called “weighted-vote system” whereby each herding member has one vote no matter how many reindeer he or she owns, but then additional votes for every newly started hundred head of deer. There is a one-fifth limit imposed on the voting power of any single individual herder, whereby no single voter can cast more than one fifth of the entire vote on any issue. One might have allowed a vote per each reindeer, but the one-new-vote-per-newly started-hundred rule along with the one-fifth rule were imposed to protect small herders from total domination by big herders – at least to some degree.

According to the Herding Act, each and every reindeer must come under the care of a *herding* member of a sameby, and within a single family firm voting unit, only one such member can exist. This is usually a man, as most of the actual herding work with reindeer in the field is performed by men who are, thereby, far more often than women ranked as “reindeer-herding sameby members” (sometimes referred to as class 1 sameby members). Such “reindeer-herding sameby members” are distinguished from other sameby members who, in turn, are collectively termed “household people” (Swedish: “husfolk”) according to the Swedish Reindeer Herding Act (Beach 1981 and 1982).

It is to be understood that by reindeer herding member in the sameby is meant the member who by him- or herself or through his or her household people engages in reindeer herding with own reindeer within the sameby's grazing territory. [Such members are often termed “class 1 members”; author's comment]

The reindeer, which belong to the household people of the reindeer herding member are considered according to this law to belong to the reindeer herding member. (Reindeer Herding Act, 1971 paragraph 13)

Other kinds of sameby members are defined according to paragraph 11 of the same Reindeer Herding Act to be: A Saami who has once been major-income-earning herding member on the sameby's lands and who has (retired and) not taken up another major form of income bringing employment [Such members are often termed "class 2 members"; author's comment]; he or she who is spouse or child living at home of a sameby member (as previously designated) or who is a surviving spouse or under-aged child to a deceased such member [Such members are often termed "class 3 members"; author's comment].

Reindeer Herding Act, 1971 paragraph 11, as revised 1993.

Of course, what we might conceive of as a single family composed of parents and children (even of adult age living at home) in social terms, can constitute a number of separate "family" herding firm units according to the Herding Act. Two adult sons, for instance, active as herders in the field can certainly maintain their own separate firms as herding members rather than constituting "household people" of their father, even if they still live at home. It has been far less common (though not at all unheard of) for unmarried adult daughters to obtain herding member classification in their samebys. Commonly they have been considered "housepeople" to their father (or brother) when under-aged or unmarried, and then as "housepeople" to their herding member husbands upon marriage. In later years (as we shall see in a final section of this paper), women have come to assert their rights in many samebys to a far greater degree. It is evident, however, that the Herding Act with its voting structure and membership classification promotes gender-based discriminatory results without appearing to do so. The situation was illuminated by Beach already in 1982. A Motion (1985/86:Jo230) to the Swedish Parliament by MP Marianne Strålberg of the Social Democratic Party sought to revamp sameby voting regulations and to rectify female discrimination in sameby membership classification and its accompanying voting discrimination, but this Motion 1412 was rejected on the grounds that:

The Committee finds that the question raised is worthy of taking into account. There will, however, be required certain further consideration before the question of change in the voting regulations can be determined. It is the Committee's meaning that it seems natural that the question is brought up in conjunction with the deliberations between the State and reindeer herding which has earlier been mentioned.

Jordbruksutskottets Betänkande 1984/85:25: p. 21.

The deliberations referred to by the Committee, above, were a part of the State's massive Saami Judicial Investigation which resulted in three reports: SOU 1986:36 om samernas folkrättsliga ställning (concerning the Saami position with regard to international law), SOU 1989:41 om same rätt och same ting (concerning Saami rights and a Saami Parliament, and SOU 1990:91 om same rätt och sameiskt språk (concerning Saami rights and the Saami language). In short, 25–30 years have passed since the deliberations were finished, but the problems addressed by the Motion remain. The situation of women in the samebys was taken up again in a doctoral dissertation by Andrea Amft in 2000, but the injustices still persist today, although some samebys of their own accord have liberalized their policies. Much depends on the internal distribution of reindeer within the sameby, its herding group alliances, and the gendered distribution of "household people" among its families. Obviously, each sameby is different with regard to these variables.

Ultimately, however, gendered discrimination within the samebys boils down to how one (and the Herding Act) conceives of being active as a reindeer herder in the field. Ann-Mari Spiik, a Saami woman who spent her life with reindeer, put her finger on the vital point long ago:

Only those who are active with herding in the field have the right to make decisions. But I consider myself active in herding work. I pack the provisions for my husband and drive him where he must go to watch his reindeer. When he comes back at night he must have food and dry clothes. Surely all of this must be counted as a contribution to reindeer herding.

Spiik, Samefolket 1975: 119; Cf. Beach 1982:130.

The discrimination noted with respect to sameby membership status can in turn spark a line of further discriminatory effects.

... it may well be to the advantage of the big herders to eliminate the vote of the wives of the small herders even at the expense of losing the support of their own wife's vote. For the big herders it is generally more advantageous to gauge voting power on the basis of reindeer numbers and to minimize the influence of the number of owners. Now, should one family be comprised of eight active herding children, then this one family would have a very large political voice even if its total herd size is small. The guardianship policy [what in this paper I have referred to as the "property master" model or the sameby herder member/household people policy] and delegation of (most) women to class 3 status is one way of diminishing the chances of a single family's gaining too much power on the basis of people rather than reindeer. Should the family members own many head, its power as an entity would be checked by the rule which states that no single guardian [family head and herding sameby member] can cast more than one fifth of the total vote on any issue. Should a single, extended herding family be composed of many active men, however, the guardianship model would not limit the family's power if unified in policy. Each active male family member is his own reindeer's guardian, and the one-fifth rule will apply to each guardian alone, but not to the family as a whole. A father who votes with the power of his own reindeer plus those of his eight daughters is thus restricted, while a man and his eight independent sons can form a formidable political entity. A man with a family of daughters may be far weaker than a man with a family of sons, even if his family as a whole owns far more reindeer. Hence, contingent differences in the ratio and distribution of the sexes can have very far-reaching consequences for the balance of power in the sameby.

Beach 1982: 137–138.

Given these circumstances, one can expect it to be far more likely that a male child born into a herding family will come to invest their life-long careers in herding as a steady livelihood than it is for a female child. With a kind of circular argumentation, sameby boards have been known to justify their predilection to encourage and award independent herding membership status to their young male family members but to discourage and not to award such status to their young female members (utilizing the

Swedish “husbonde” concept). Traditional Saami gender equality is put out of practice.

How it is that only the practical gathering, marking, handling and slaughtering of reindeer in the field, etc. (practical work aspects generally dominated by men) are considered to define who is a herding sameby member is worth careful consideration. This becomes especially important as even these tasks, seemingly (and perhaps, once, in relation to the culture of Swedish agriculturalists) most uniquely idiomatic of Saami culture, become increasingly characterized by modern western technology (e.g. helicopters, snowmobiles, GPS tracking). While the Saami should not be forced to maintain a “museum” form of life to justify their special indigenous rights, such modernization often provokes the sympathies of the Swedish majority population who tend to approve of special Saami resource rights only to the degree they can be perceived as supporting an underdeveloped people in need of the benefits of Swedish care to bring them to an equal footing according to the goals of (“corrective”) welfare ideology (Beach 2014).

11.5.3 Marriage related, more than voting related concerns

As we have seen, marriage considerations for women can be intimately linked to matters of sameby herding membership status and voting rights. Most of the responses to question H23 which mention marriage made this link explicitly (in cases similar to that brought up to the Norrbotten County Administrative Board as mentioned below) and do not bring up any other marriage-related discrimination. These responses have therefore been placed in category 1 related to sameby membership status and voting rights. Only 4 responses brought up marriage-related issues without reference to *herding* membership status in the context of voting power. These responses were instead devoted to the issues about a) being married into the sameby from “outside” as opposed to marrying within the

herding profession;¹⁵⁵ b) the repercussions of divorce for a woman who married into the sameby; and c) the repercussions of becoming a widow for a woman who married into the sameby.

The points brought out similar complaints; women whose membership in a sameby was “second-hand”, that is, was predicated upon their marriage to a member of the sameby had not been permitted to assume full herding membership status, or had even lost their membership entirely, once the connection to “their” property master (Swedish: husbonde) had been broken by divorce or death. While such cases are known to have occurred, it must be pointed out that they are neither demanded nor recommended by the Herding Act. Sameby policies vary markedly in these respects and show variation as well over time within a single sameby. Even these responses come back to sameby membership status issues but approach them from a situation once removed, the “second-handers” predicament. One might suspect that the most drastic exclusions by some samebys of “second-handers” upon severance of their property-master link falls upon those who are non-Saami, i.e. those who in themselves do not possess the Saami immemorial reindeer herding right. In this case there may be an ethnic-based as well as a gender-based dimension to consider. Will a non-Saami Swedish man brought into a sameby through marriage to a female sameby member necessarily be granted herding member status (with the necessary demotion of his wife to “householder” member status)? Were he to divorce or become a widower, will he be permitted to maintain herding membership status? Will he be permitted to remain in the sameby at all? These are questions of importance for future survey work. Actual cases of this nature to review are, of course, few and far between, but one could learn much from posing even hypothetical questions.

It is remarkable that the Swedish Herding Act and the Swedish Parliament (despite prompting) leave such important aspects of civil rights unaddressed on the grounds that matters are under investigation or that

¹⁵⁵ This subject was previously regulated by its own paragraph in the Reindeer Herding Act of 1971, paragraph 2. However, paragraph 2 of the Reindeer Herding Act was deleted when revisions were made in 1993.

such things are a matter for Saami self-determination – without any recognition of the responsibility Swedish policies have for creating these problems. Sweden prides itself on having a Herding Act, which is “gender equal” in its language.

11.5.4 Anachronistic or wrongly grounded concerns

Although the number of answers here categorized as “anachronistic” is few and hardly significant on that basis to the analysis of results to question H23 on that count, these few responses are worth considering, nonetheless, for methodological reasons. One is commonly prepared to accept the responses of informants as being indicative of their special circumstances. They are generally regarded to be correctly illuminating those circumstances, but in the case of these anachronistic responses, they certainly are not. In these responses the informants claim female discrimination on the grounds that while a reindeer herding male member of a sameby who marries someone from “outside” (e.g. a non-Saami Swede) can bring his wife into sameby membership status, a female herding sameby member loses her membership should she marry a non-Saami Swedish man. This was indeed the case according to the older Reindeer Grazing Act of 1928, but this discriminatory paragraph was eliminated with the institution of the Reindeer Herding Law of 1971. Hence we have termed reference to this clause as “anachronistic”, for it no longer applies, and has not for over 40 years. It is quite probable that this was a regulation, which influenced the relationship of older informants, or the parents of younger informants, however. It has been given much attention with respect to discriminatory aspects of Saami legislation, but it is not indicative of conditions today. It is hard to imagine that any current sameby member can remain unaware of this, and we assume that those who have given voice to these anachronistic responses are not current sameby members and have not followed the course of legislative change. While fully qualified survey informants, they are not strictly qualified to respond to question H23, but their responses are interesting nonetheless, for they demonstrate how outdated responses can wrongly influence survey results.

Question A17 was a sub-part of a span of questions from A13 to A32, all beginning with the same basic query:

“Who in your household was normally engaged in each one of the following activities during the last 12 months?” The activity listed for A17 was “guarding reindeer”.

Those who formulated the questionnaire realized that responses representing any household regarding rights to resources and the ability to exercise those rights would likely be influenced not merely by the active herding engagement of the family member who happened to take the survey, but would likely also be highly influenced by resource utilization rights of other members in the same household. Hence one table for A17, below, relates to the individual informant’s reindeer guarding activity, while another table indicates active reindeer guarding within the household performed by other family members - both tables listing percentages. A breakdown according to gender and age group is included in each table.

For question A17 the total number of valid questionnaires was 223. Of these, 150 responded NO: there has been no one in the household who within the last year has been involved in reindeer management. In these 150 households, 74 of them had a female as “person 1” in the household (first respondent, i.e. main interviewee) and 74 households had a male as person 1. (2 did not respond to gender.) 73 of the 223 households responded that at least one in the household had been involved in reindeer management within the last year. In these households 31 had a female as first respondent while 42 had a male as first respondent.

In each household the person who was questioned (person 1) had the possibility of responding on behalf of up to four persons in the household. In most households, the first respondent answered on behalf of additional persons, so in this question (A17) the total number of persons, who had responded either directly or by proxy, totaled 446. Out of these 446 persons, 350 had *not* been involved in reindeer management, while 96 persons – 14 females and 82 males – had been involved in reindeer management.

Table 13. Question A17: How many households have at least one who were involved in reindeer management. % Organised according to gender and age of the interviewed person in the household

Response		No				Yes			
Gender	Female	Male	Unknown	Total	Female	Male	Total	Total	
Age group									
20-29	4	2	-	5	3	3	5	10	
30-39	6	6	-	12	4	5	9	21	
40-49	5	9	-	14	4	3	7	21	
50-59	9	5	-	14	2	3	5	20	
60-69	5	1	-	6	1	2	4	9	
Above 70	5	9	-	13	0	3	3	16	
Unknown	1	1	1	3	-	-	-	3	
<i>Total</i>	<i>33</i>	<i>33</i>	<i>1</i>	<i>67</i>	<i>14</i>	<i>19</i>	<i>33</i>	<i>100</i>	
n	74	74	2	150	31	42	73	223	

In the tables from question A17 we can see not only the strength of household connection to Saami resource use in general (according to individuals involved) – appropriate for crosschecking with the first question set concerning which Saami should enjoy the practice of their Saami rights, but we can also see self-evaluations of gender-based involvement in reindeer management per surveyed households – of significant value when appraising the results from the second question set regarding gender discrimination within the samebys.

Table 14. Question A17: How many individuals have been involved in reindeer management? % Organised according to gender and age of the persons in the household

Response		No				Yes			
Gender	Female	Male	Unknown	Total	Female	Male	Unknown	Total	Total
Age group									
Below 10	1	3	-	4	-	-	-	-	4
10-19	6	6	-	12	-	1	-	1	13
20-29	5	4	-	9	1	3	-	4	13
30-39	8	4	-	12	1	4	-	5	17
40-49	7	6	-	12	1	3	-	4	16
50-59	9	6	-	15	0	3	-	3	18
60-69	5	3	-	8	0	3	-	3	11
Above 70	3	3	-	6	-	1	-	1	7
Irrel..	0	-	-	0	-	-	-	-	0
Unknown	1	0	1	2	-	0	-	0	2
<i>Total</i>	<i>44</i>	<i>34</i>	<i>1</i>	<i>79</i>	<i>3</i>	<i>18</i>	<i>-</i>	<i>22</i>	<i>100</i>
n	194	152	4	350	14	82	-	96	446

11.5.5 Changes in the Herding Act relating to Intra-Saami inequalities

According to a change made in paragraph 12 of the Herding Act in 2006, the Saami Parliament now has the power to grant sameby membership to an applicant whose request has been denied by the current sameby members according to their weighted voting rights (as described above), if there are special reasons to do so.

Admittedly, this paragraph rests upon “rubber clauses”; The Saami Parliament “has the power to grant”, but will not necessarily, and there is no specification of what might be “special reasons”. Nonetheless, the limited duties accorded to the Saami Parliament (an ethnic-based democratically elected representative organ for all Saami, not just the 15% engaged in herding) over sameby herding affairs is a momentous, if not always applauded change in the implementation of Swedish government policy concerning the Saami. Many herding Saami fear that their ability to practice their vulnerable Saami resource rights, and by extension, reindeer herding in general and the continuity of Saami culture, will be destroyed if herding is opened to a broader Saami base. Such sentiments were clearly evident in the SLiCA survey.

The advent of the Swedish Saami Parliament in 1993 introduced a new player in the field of Saami rights, but it was not until much later that the dominating political power of the Saami Parliament has shifted to the non-herding block. It would therefore be important to follow this aspect of the survey over time.

11.5.6 Changes in implementation concerning internal sameby rights issues

In 2001, two Saami women who as single adults had enjoyed full herding member status (an voting rights appropriate to such membership status) in their sameby but who had been demoted in membership status by their sameby board when they married herding men, have won restoration of their former herding member status after appealing their case to the Norrbotten County Administrative Board (Länsstyrelsen i Norrbotten). However, this victory did not generate any general legal change, and different women so treated by their sameby boards in different samebys must file

their own appeals to the County Administrative Board (Cf. Folkbladet, 2008). Yet, as noted above, numerous samebys have of their own accord instituted policies promoting gender equality. For example, it is not so unusual today to find samebys that choose to enable women to be their own independent herding units with sameby herding member status whether or not they marry a herding sameby member. Nor is it unheard of for a sameby nowadays to permit a woman who once married into the sameby to remain as a member (perhaps even a herding member) upon divorce.

11.5.7 References

- Amft, A. (2000). *Sápmi i förändringens tid; en studie av svenska samers levnadsvillkor under 1900-talet ur ett genus och etnicitetsperspektiv*. Umeå.
- Andersen, T., J. Kruse and B. Poppel (2002). Survey of Living Conditions in the Arctic: Inuit, Saami and the Indigenous Peoples of Chukotka. *InfoNorth ARCTIC*, vol. 56, no. 3, Sept 2002, pp. 310–317. <http://dx.doi.org/10.14430/arctic713>
- Beach, H. (1981). *Reindeer-Herd Management in Transition: The Case of Tuorpon Saameby in Northern Sweden*. Acta Univ. Ups., Uppsala Studies in Cultural Anthropology 3. Uppsala.
- Beach, H. (1982). The Place of Women in the Modern Saameby: An Issue in Legal Anthropology. In *Antropologisk Forskning*, Ymer, årgång 102. ed. Margareta Elg. Svenska Sällskapet för Antropologi och Geographi. Borgströms Tryckeri AB, Motala.
- Beach H. (1994). *Shots Heard Round the World, in Beslutet om Småviltjakten - En studie i myndighetsutövning*. Ed. Agneta Arnesson-Westerdahl. utgiven av Sametinget.
- Beach, H. (2007). Self-determining the Self: Aspects of Saami Identity Management in Sweden. *Acta Borealia*, Vol. 24, No. 1, pp. 1–25. <http://dx.doi.org/10.1080/08003830701411605>
- Beach, H. (2013). Devitalization and Revitalization of Traditional Saami Dwellings in Sweden. In Robert Wishardt, Virginie Vaté, and David Anderson (eds) *About the Hearth: Perspectives on the Home, Hearth and Household in the Circumpolar North*. Berghahn. ISBN: 978-0-85745-980-0
- Beach, H. (2014). with Forbes, B., Kofinas, G., et al., Nordic reindeer governance in the context of contemporary protected areas and species, in Resource Governance. In: *Arctic Human Development Report II: Regional Process, Global Linkages*, J.N. Larsen and G. Fondahl (eds), pp.269–313. TemaNord 567 (Copenhagen: Nordic Council of Ministers). DOI: <http://dx.doi.org/10.6027/TN2014-567>
- Dir. 1997: 102, Jordbruksdepartementet.
- Folkbladet, (2008). *Samekvinnor diskrimineras i lagtext*. Publicerad 9 december 2008. <http://dadring-mikaelsson.info/2013/05/08/den-oppna-samebyn/>
- Den öppna samebyn (2013). 8. maj 2013 <http://sverigesradio.se/sida/artikel.aspx?programid=2327&artikel=2677815>

Sameradion & SVT Sápmi, Sametingsvaldebatt (2009). *Hur ska samebyn öppnas?*
Publicerat torsdag 5 mars 2009 kl 09:07

Jordbruksutskottets Betänkande 1984/85:25, om statsbudgeten för budgetåret
1985/86 såvitt avser jordbruksdepartementets verksamhetsområde (prop.
1984/85: 100 bilaga 11)

Motion (1985/86:Jo230) to the Swedish Parliament by MP Marianne Strålberg
Reindeer Herding Act (1971). SFS 1971 : 437, Rennäringslag; given Sofiero den 18
juni 1971 and repeatedly modified since.

SOU 1986:36 (1986). *Samernas folkrättsliga ställning. Statens Offentliga Utredningar*. Stockholm: Allmänna Förlaget.

SOU 1989:41 (1989). *Samerätt och Sameting. Statens Offentliga Utredningar*
1989:41. Stockholm: Allmänna Förlaget.

SOU 1990:91 (1990). *Samerätt och samiskt språk. Statens Offentliga Utredningar*
1990:91. Stockholm: Allmänna Förlaget.

SOU 2001:101 (2001). *En ny rennäringspolitik - öppna samebyar och samverkan
med andra markanvändare*. Utgiven: november 2001, Kulturdepartementet,
Rennäringspolitiska kommittén. (with English summary, pp. 57 ff.)

Spiik, A-M, (1975), *Samefolket*, 1975.

12. Abstracts:

English, Danish and Greenlandic

12.1 Abstracts

12.1.1 Living conditions in the Arctic (Chapter 2)

Thomas Andersen & Birger Poppel

Keywords: SLiCA, Arctic, Indigenous Peoples, Inuit, Saami, Living conditions, well-being.

Abstract

This chapter introduces a model for conducting research on living conditions among peoples that have experienced rapid social, cultural and economic change in countries where a non-parallel development has occurred.

This model was developed by the researchers of SLiCA, A Survey of Living Conditions in the Arctic; Inuit, Saami and the Indigenous Peoples of Chukotka, which was initiated by Statistics Greenland in 1997. The point of departure for this model is a critique of contemporary living conditions surveys carried out by national statistical bureaus in economically, technologically and culturally segmented areas. The point of view is that these studies erroneously assume that the populations they investigate are homogeneous, and that consensus concerning individual social and economic objectives exists. This usually leads to research designs and indicators of individual well-being that reflect the dominant culture, or the prevalent way of living and thinking in these countries. The focus of this chapter is on the research design of SLiCA. The implementation of two important methodological challenges is discussed. Namely, (1) how to secure a context specific concept of well-being which

also mirrors the life forms and the priorities of the respondents and (2) how to measure impacts of structural change on individual well-being.

12.1.2 Design and methods in a survey of living conditions in the arctic – the SLiCA study (Chapter 3)

Bent-Martin Eliassen, Marita Melhus, Jack Kruse, Birger Poppel & Ann Ragnhild Broderstad

Keywords: Inuit; Iñupiat; Sami; Indigenous peoples; living conditions; survey, SLiCA, Arctic.

Abstract

The main objective of this study is to describe the methods and design of the survey of living conditions in the Arctic (SLiCA), relevant participation rates and the distribution of participants, as applicable to the survey data in Alaska, Greenland and Norway. This chapter briefly addresses possible selection bias in the data and also the ways to tackle it in future studies. Indigenous individuals aged 16 years and older, living in Greenland, Alaska and in traditional settlement areas in Norway, were invited to participate. Random sampling methods were applied in Alaska and Greenland, while non-probability sampling methods were applied in Norway. Data were collected in 3 periods: in Alaska, from January 2002 to February 2003; in Greenland, from December 2003 to August 2006; and in Norway, in 2003 and from June 2006 to June 2008. The principal method in SLiCA was standardised face-to-face interviews using a questionnaire. A total of 663, 1,197 and 445 individuals were interviewed in Alaska, Greenland and Norway, respectively. Very high overall participation rates of 83% were obtained in Greenland and Alaska, while a more conventional rate of 57% was achieved in Norway. A predominance of female respondents was obtained in Alaska. Overall, the Sami cohort is older than the cohorts from Greenland and Alaska. Preliminary assessments suggest that selection bias in the Sami sample is plausible but not a major threat. Few or no threats to validity are detected in the data from Alaska and Greenland. Despite different sampling and recruitment methods, and sociocultural differences, a unique database has been generated, which shall be used to

explore relationships between health and other living conditions variables.

12.1.3 Prevalence of self-reported suicidal thoughts in SLiCA, the survey of living conditions in the Arctic (Chapter 4)

Ann Ragnhild Broderstad, Bent-Martin Eliassen & Marita Melhus

Keywords: Suicidal thoughts, SLiCA, survey, Inuit, Iñupiat, Sami, indigenous peoples.

Abstract

The Survey of Living Condition in the Arctic (SLiCA) is an international research project on health and living conditions among Arctic indigenous peoples. The main objective of this article is to examine the prevalence of self-reported suicide thoughts among the study population in Alaska, Greenland, Sweden and Norway. Population-based survey. Indigenous participants aged 16 years (15 years in Greenland) and older living in traditional settlement regions in Alaska, Sweden and Norway and across the entire Greenland were invited to participate. Data were collected in three periods: in Alaska from January 2002 to February 2003, in Greenland from December 2003 to August 2006, in Sweden from spring 2004 to 2006 and in Norway in 2003 and from June 2006 to June 2008. The principal method in SLiCA was standardised face-to-face interviews using a questionnaire. A questionnaire had among other things, questions about health, education, traditional activities, ethnicity and suicidal thoughts. Information about suicidal thoughts, gender and age were available in 2,099 participants between the ages of 16 and 84 from Alaska, Greenland, Sweden and Norway. Greenland had the highest rates of suicidal thoughts when adjusting for age and gender ($p=0.003$). When stratifying on age and gender, significant differences across countries were only found for females in the two youngest age groups. Differences in suicidal thoughts across countries could partly be explained by educational level. Swedish respondents had less suicidal thoughts than those in any other countries. In the future, analyses of suicidal thoughts

should take socioeconomic status into account as well as self-reported health, depression and anxiety.

12.1.4 Sustainability from a local point of view: Alaska's North Slope and oil development (Chapter 5)

Jack Kruse

Keywords: SLiCA, North Slope of Alaska, Inuit, Iñupiat, Iñupiat regional government, North Slope Borough, sustainability, oil development.

Abstract

The North Slope of Alaska has been home to the Iñupiat, a tribe of the Inuit, for thousands of years. In 1968 oil was discovered near Prudhoe Bay on the North Slope. Development of the Prudhoe Bay discovery has produced over 13 billion barrels of oil. The footprint of oil development has expanded as satellite fields are developed. How has oil development on the North Slope affected the Iñupiat? In 1977 the newly formed Iñupiat regional government, the North Slope Borough, and the University of Alaska's Institute of Social and Economic Research jointly conducted interviews with a random sample of Iñupiat residents. In 2003, Iñupiat residents again participated in interviews as a part of the international Survey of Living Conditions in the Arctic (SLiCA). These two datasets provide the basis for examining the question of the effect of oil development on the Iñupiat. This article focuses on two sets of comparisons: social indicators of well-being among the Iñupiat in 1977 and 2003, and comparisons of SLiCA social indicators among the three Inuit settlement regions of Alaska and the Inuit settlement regions in Canada, Greenland, and the indigenous population of Chukotka, Russia.

12.1.5 *Economic stratification and living conditions in the Canadian Arctic (Chapter 6)*

Gérard Duhaime, Roberson Édouard & Nick Bernard

Keywords: SLiCA, Canadian Arctic, Inuit, Nunangat, Inuvialuit, Nunavut, Nunavik, Nunatsiavu, living conditions, well-being, economic stratification, income distribution, social cohesion.

Abstract

This chapter discusses the stratification of contemporary Inuit societies in Canada. An analysis of total individual and household income enabled the authors to determine income dispersion among the adult Inuit population across different strata. This analysis made it possible to go beyond merely describing income distribution and to observe a significant but weak relationship between economic stratification and the living conditions thus examined (schooling level, civic participation, social support, satisfaction in relation to certain aspects of community life, and subjective well-being). It also showed that the criteria of social differentiation include – aside from various sources of income – access to and availability of social support, participation in community life, satisfaction, and well-being. All in all, economic stratification appears, all things considered, to have a limited impact on the core aspects of life for the Canadian Arctic Inuit. Other processes are thought to interact with stratification to produce and materialize the cohesion required for the maintenance and development of local communities – such as, for example, the strength of social networks, the presence of family, or the principle of reciprocity.

12.1.6 Beyond the harsh. Objective and subjective living conditions in Nunavut (Chapter 7)

Alexandre Morin, Roberson Edouard & Gérard Duhaime

Keywords: SLiCA, Canadian Arctic, Inuit, Nunavut, Nunavummiut, objective and subjective living conditions, well-being, control of destiny, satisfaction with community.

Abstract

This chapter simultaneously analyses some objective and subjective living conditions in Nunavut (federal territory of Canada located in the Arctic) in 2001: population, housing, language, education, economic activities, health, social problems and geographic mobility. It examines original descriptive statistics from the Survey of living conditions in the Arctic and other sources. In some cases the results confirm the ordinary depressing picture of Inuit conditions, but in other cases statistics varies or even contradict such a picture. The overall findings show that despite objective difficult conditions, Nunavummiut living in Nunavut (primarily the elites and the lower class) are generally satisfied with their communities so that the majority wishes to remain there. Certain modern social institutions and individual rationalities are contributing to this situation: wage earning, market economy, utilitarian and consumption oriented approach, democratic state based on law, formal knowledge, individualism and the capacity for self analysis.

The concepts of aspiration and mastery of one's own destiny seem accurate to explain the importance of education and employment in people's satisfaction, and their dissatisfaction about the housing situation. The existence of family and neighbourhood networks appears to explain both a certain residential stability and out migration, through the social support functions of these networks, in which sharing and exchanging food play a major role. In general, if most of Nunavummiut continue to live in the Arctic despite unfavourable conditions, it is not only because they are able to ensure their material existence there, but also because they attach a meaning to and believe that, that is where they have the best chance to exert the highest degree of control over their personal and domestic reality.

12.1.7 Education in Greenland 1973 – 2004/06 – an analysis based on three living conditions surveys (Chapter 8)

Mitdlarak Lennert

Keywords: SLiCA, Greenland, Greenlandic living conditions surveys, traditional education, formal education, education levels, language proficiency.

Abstract

This chapter analyzes the educational system in Greenland in the period 1973 through 2006, and focuses specifically on the development of education levels and language proficiency among the Greenlanders during this period of rapid development.

It is the first time that the education data from the three living conditions surveys and register data from Statistics Greenland, are analyzed together. An analysis of levels of survey and register data enabled the author to determine a correlation between language proficiency and level of education among the Greenlandic population. This analysis made it possible to go beyond merely describing, and comparing, the Greenlandic educational statistics with the Nordic countries, and to also analyze the context during the period of time of such a rapid development.

The chapter looks at the transition from traditional to formal education and the expansion of the Greenlandic school system as well as the prioritization of education and political goals from the Danish State and Home Rule government of Greenland. By looking at the tradition of education and comparing educational data in Greenland over the span of over 30 years, the rapid development of the education level measured by the proportion of the population having a formal education (i.e. a formal education beyond the primary school) of the Greenlandic population has increased from 28 per cent to 47 per cent, indicating that the Greenland Home Rule and Self Government – despite challenges, setbacks and a lack of tradition for formal education beyond the public school – is on the right track.

12.1.8 “Boys aren’t taught anything anymore!” – the role of gender in native subsistence, work patterns, and aspirations in Northwest Alaska (Chapter 9)

Catherine Turcotte

Keywords: SLiCA, Northwest Alaska, Iñupiat, gender roles, gender relations, living conditions, well-being, subsistence activities, wage employment, moving, lifestyle aspirations

Abstract

Patterns of and desires for subsistence and employment differ considerably among Iñupiat and Yup’ik living in Northwest Alaska. Previous studies (Bodenhorn 1990; Kleinfeld 2006; Hamilton & Seyfrit 1994; Hamilton & Mitiguy 2009) have shown that males and females diverge in their aspirations for education, employment, and outmigration, for example – findings suggesting that the region could face increasing social, economic, and cultural pressures in coming decades as females are more likely to leave small communities in favor of stable, year-round work more likely to be located in more populated areas, while males may be more apt to remain in villages performing subsistence. This chapter examines differences in four dependent variables associated with these issues from the Survey of Living Conditions in the Arctic (SLiCA) across gender: the number of subsistence activities respondents reported participating in during the previous year, the number of hours worked in the previous week in wage employment, whether respondents had considered moving elsewhere within the previous five years, and lifestyle aspirations for wage work only or one characterized by mixed wage and subsistence work. Findings illustrate considerable difference between men and women in factors affecting work patterns and desires, and point to a changing social landscape in the region.

12.1.9 Changes in gender roles in Greenland and perceived contributions to the household (Chapter 10)

MarieKathrine Poppel

Keywords: SLiCA, Greenland, gender roles, gender power, contributions to the household, rapid change, occupational structure, education, representation in parliament.

Abstract

Greenland family patterns and thus household sizes and composition have changed rapidly over just a few generations. There is a majority of men in the Greenlandic population. This chapter departs in the assumption that these changes in the Greenlandic society have affected not only the gender roles within the Greenlandic family but also the perceptions of what men and women contribute to the family.

The analysis of gender roles and perceived contributions to the household in this chapter is based on a theoretical understanding that gender roles involve a set of social norms in a specific culture. The research question is whether changes in socioeconomic conditions and gender roles affect the perceptions of what each individual contributes to the household?

The focus of the latter part of this chapter is the contributions by gender to “the Greenlandic household” using findings from “The Survey of Living Conditions in the Arctic”, SLiCA. The findings support the assumption that changing gender roles may have influenced perceptions of how women and men contribute to their household. The largest group of women between the age of 25 and 65 perceives that the most important contribution to the household is of an economic kind – primarily having a job and an income and “paying bills”. Most men in this age group also find their primary contribution to their households to be within the category “job, income and paying bills”. That the category that ranks the second highest for both men and women is “showing love and affection” might surprise in two ways. First, because it might have been assumed that this category would have ranked highest in women’s perceptions and second because all age groups of men perceive that “showing love and affection” is an important contribution to the household.

12.1.10 The survey of living conditions in the Arctic (SLiCA) as deployed in Sweden; Resource management in Swedish Sápmi – does gender and place of living matter? (Chapter 11)

Hugh Beach, Dave Lewis, Rasmus Ole Rasmussen & Johanna Roto

Keywords: SLiCA, Swedish Sápmi, Saami, sameby, gender relations, place of living, living conditions, identity, discrimination, reindeer herding.

Abstract

The on-going social, economic and environmental changes in Sweden's northernmost regions crucially affect the Saami people and their living conditions. Northern Sweden is a sparsely populated region. During the latest decades the region has experienced remarkable out-migration. At the same time the region is rich in natural resources and never before have the economic interests of external extractive industries in this region been as intense. The combination of depopulation, and hence decreasing infrastructure, combined with the allure of possible economic gains from the natural resources forms a challenging reality for local people. What are their living conditions? And what are their choices? The SLiCA survey was designed to reflect the actual circumstances and aspirations of northern indigenous peoples comparatively across the circumpolar area; for Sweden specifically, this meant a major focus on the Saami people at the beginning of the 2000s. The aim of this chapter is to improve our understanding of changing living conditions among Saami people and communities in Sweden in relation to Saami land rights and the practice of reindeer herding. It becomes necessary, therefore, to discuss the issue of who is recognized as Saami according to Swedish legislation and if and how Saami representativity in the SLiCA survey might be addressed in a country which eschews formal registration of ethnicity.

Gender difference is an aspect, which permeates much of the rich data in the survey results, but in this paper we focus on a particular set of gender-related questions. Discrimination by gender, negatively affecting Saami women with respect to membership in "sameby" herding collectives after marriage, as stipulated in the Swedish Reindeer Herding Act,

did not cease until 1971. However, as the SLiCA survey indicates, other forms of gender discrimination have persisted within Swedish legislation concerning Saami – at times hidden or even generated as unintentional by-products of regulations such as those specifying voting strength within a sameby in conjunction with the re-organization of family herding units into business enterprises and the application of the Swedish “property master” concept (Swedish: “husbonde”). Following upon this discussion, it is significant to consider what are the main differences between the Saami people in cities or urban areas compared to traditional rural Sápmi? Do they think similarly about their rights as a people or in relation to the practice of traditional livelihoods?

12.2 Resumeer

12.2.1 *Levevilkår i Arktis (Kapitel 2)*

Thomas Andersen & Birger Poppel

Nøgleord: SLiCA, Arktis, oprindelige folk, Inuit, Samer, Levevilkår, subjektiv velfærd.

Resume

I dette kapitel introduceres en model for forskning om levevilkår hos befolkninger som har været igennem en hurtig social, kulturel og økonomisk forandring i lande, hvor der ikke har været en parallel udvikling.

Modellen er udviklet af forskere tilknyttet SLiCA, A Survey of Living Conditions in the Arctic; Inuit, Saami and the Indigenous Peoples of Chukotka, som Grønlands Statistik tog initiativ til i 1997. Udgangspunktet for modellen er en kritik af de nationale statistiske bureaux aktuelle undersøgelser af levevilkårene, hvad angår økonomi, teknologi og kultur. Synspunktet er, at disse undersøgelser fejlagtigt tager udgangspunkt i at de befolkningsgrupper, som er genstand for undersøgelserne, er homogene størrelser, og at der er lighed med hensyn til de sociale og økonomiske betingelser. Dette fører som regel til forskningsmodeller og indikatorer på individuelle levevilkår, som reflekterer den dominerende gruppe eller de fremherskende levemåder og tankesæt i vedkommende lande. Der fokuseres i dette afsnit på den anvendte forskningsmodel i SLiCA. Implementeringen af to vigtige metodiske udfordringer diskuteres. Nemlig, (1) hvordan det sikres at det kontekstspecifikke koncept også reflekterer levemåderne og prioriteterne for deltagerne i undersøgelserne og (2) hvordan strukturelle forandrings påvirkning af den individuelle velfærd, måles.

12.2.2 Modeller og metoder i en levevilkårsundersøgelse i Arktis – SLiCA (Kapitel 3)

Bent-Martin Eliassen, Marita Melhus, Jack Kruse, Birger Poppel & Ann Ragnhild Broderstad

Nøgleord: SLiCA, Arktis, Oprindelige folk, Inuit, Samer, Sundhed, Levevilkår, analysemetode, undersøgelsesmodel.

Resume

Hovedformålet med denne undersøgelse er at beskrive metoder og modeller for Den arktiske levevilkårsundersøgelse (SLiCA), relevante deltagerandele og fordelingen af deltagere, og anvendeligheden i forhold til undersøgelsesdata i Alaska, Grønland og Norge. Dette kapitel beskriver kort mulige problemer i udvælgelsen af data og også, hvordan de kan behandles i fremtidige studier. Indfødte (oprindelige folk) på 16 år og derover, fra Grønland, Alaska og traditionelle bygdeområder i Norge, blev inviteret til at deltage. I Alaska og Grønland blev der anvendt tilfældige udvælgelseskriterier, mens ikke-tilfældig udvælgelse blev anvendt i Norge. Data blev indsamlet i tre perioder: i Alaska, fra januar 2002 til februar 2003, i Grønland, fra december 2003 til august 2006; og i Norge, i 2003 og fra juni 2006 til juni 2008. Den grundliggende metode i SLiCA var standardiserede ansigt-til-ansigt interviews, hvor der blev brugt et spørgeskema. I alt 663, 1197 og 445 individer blev interviewet i henholdsvis Alaska, Grønland og Norge. Der blev opnået meget høje deltagerandele på 83 % i Grønland og Alaska, mens der i Norge blev opnået et mere sædvanligt niveau på 57 %. I Alaska var respondenterne overvejende kvinder. Generelt var den samiske gruppe af respondenter ældre end grupperne i Grønland og Alaska. Foreløbige vurderinger viser, at udvælgelsen i den samiske gruppe kan være problematisk, men ikke en afgørende trussel. Data fra Alaska og Grønland anses for valide. På trods af forskellige metoder med hensyn til dataindsamling og udvælgelse, samt sociokulturelle forskelle, er der genereret en unik database, som skal anvendes i undersøgelser af sammenhænge mellem helbred og andre variable levevilkår.

12.2.3 Forekomster af selvrapporterede overvejelser om selvmord i SLiCA, den arktiske levevilkårsundersøgelse (Kapitel 4)

Ann Ragnhild Broderstad, Bent-Martin Eliassen & Marita Melhus

Nøgleord: Overvejelser om selvmord, SLiCA, undersøgelse, Inuit, Inupiaat, Sami, oprindelige folk.

Resume

Den Arktiske Levevilkårsundersøgelse (SLiCA) er et internationalt forskningsprojekt om helbred og levevilkår blandt arktiske oprindelige folk. Hovedformålet med dette kapitel er at undersøge forekomsten af selvrapporterede tanker om selvmord blandt de undersøgte befolkningsgrupper i Alaska, Grønland, Sverige og Norge. Befolkningsbaseret undersøgelse. Indfødte (oprindelige folk) på 16 år (15 år i Grønland) og derover, fra traditionelle bygdeområder i Alaska, Sverige og Norge og fra hele Grønland, blev inviteret til at deltage. Data blev indsamlet i tre perioder: i Alaska, fra januar 2002 til februar 2003, i Grønland, fra december 2003 til august 2006, i Sverige fra foråret 2004 til 2006 og i Norge, i 2003 og fra juni 2006 til juni 2008. Den grundliggende metode i SLiCA var standardiserede ansigt-til-ansigt interviews, hvor der blev brugt et spørgeskema. Spørgeskemaet indeholdt bl.a. spørgsmål om helbred, uddannelse, traditionelle aktiviteter, etnicitet og selvmordstanker. Oplysninger om selvmordstanker, køn og alder var tilgængelige for 2099 af deltagerne, i alderen fra 16 til 84 år fra Alaska, Grønland, Sverige og Norge. Grønland havde den højeste andel af forekomster af selvmordstanker, justeret for alder og køn ($p=0.003$). Fordelt på alder og køn, blev der kun registreret signifikante forskelle blandt de to yngste kvindelige aldersgrupper. Forskellene med hensyn til selvmordstanker på tværs af landene kan delvis forklares med forskelle i graden af uddannelse. Der var en lavere andel af respondenter med selvmordstanker i Sverige sammenlignet med alle de andre lande. Fremtidige analyser af selvmordstanker bør tage den socioøkonomiske status med i betragtning, og ligeledes selvrapporteret helbred, depression og bekymring.

12.2.4 Bæredygtighed fra et lokalt synspunkt: Alaskas North Slope og udviklingen af olieindustrien (Kapitel 5)

Jack Kruse

Nøgleord: SLiCA, North Slope Alaska, Inuit, Inuppiaat regional government, North Slope Borough, bæredygtighed, udvikling af olieindustrien.

Resume

North Slope i Alaska har i årtusinder været hjemegn for Inuppiaat, en stamme af Inuit. I 1968 blev der fundet olie i nærheden af Prudhoe Bay i North Slope regionen. Der er blevet produceret mere end 13 milliarder tønder olie fra fundet i Prudhoe Bay. Landområdet med olieaktiviteter er ekspanderet efterhånden som satellitfelter er blevet udviklet. Hvordan har olieindustrien påvirket Inuppiaat i North Slope? I 1977 gennemførte det nyetablerede Inuppiaat regional government (regional regering), the North Slope Borough, og University of Alaska's Institute of Social and Economic Research sammen, en række interviews blandt tilfældigt udvalgte Inuppiaat. I 2003 deltog Inuppiaat igen i interviews som en del af Survey of Living Conditions in the Arctic (SLiCA). Disse to undersøgelser danner grundlaget for en undersøgelse af olieindustriens påvirkninger af Inuppiaat. I denne artikel fokuseres på to sæt af sammenligninger: sociale indikatorer for trivsel blandt Inuppiaat i 1977 og 2003, og sammenligninger af SLiCAs sociale indikatorer mellem de tre regionale Inuit samfund i Alaska og regionale Inuit samfund i Canada, Grønland og de oprindelige folk i Chukotka, Rusland.

12.2.5 Økonomisk lagdeling og levevilkår i arktisk Canada (Kapitel 6)

Gérard Duhaime, Roberson Édouard & Nick Bernard

Nøgleord: SLiCA, Arktisk Canada, Inuit, Nunangat, Inuvialuit, Nunavut, Nunavik, Nunatsiavut, levevilkår, velfærd, økonomisk lagdeling, indkomstfordeling, social sammenhængskraft.

Resume

I dette kapitel behandles den sociale lagdeling i nuværende Inuit samfund i Canada. En gennemgribende analyse af de individuelle indkomster og husholdningernes indkomster muliggjorde en kortlægning af indkomstfordelingen hos den voksne Inuit-befolkning på tværs af de forskellige indkomstgrupper. Denne analyse gjorde det muligt at gå videre end en simpel beskrivelse af indkomstfordelingen og konstatere en tydelig omvendt svag sammenhæng mellem den økonomiske lagdeling og de undersøgte levevilkår (uddannelsesgrad, deltagelse i civilsamfundet, sociale netværk, tilfredshed med lokalsamfundet og individuel velfærd. Analysen viste også, at – udover forskellige indtægtskilder – er eksistensen af og adgang til sociale netværk, deltagelse i samfundslivet, tilfredshed og velfærd kriterier for social status.. Alt i alt synes den økonomiske lagdeling imidlertid at have begrænset indflydelse på kerneaspekterne i livet hos Inuit i Arktisk Canada. Man kan tænke sig, at andre processer modvirker med stratificering/lagdeling for at danne og virkeliggøre den nødvendige sammenhængskraft for bevarelse og udvikling af lokalsamfund – som f.eks. de sociale netværks styrke, tilstedeværelse af familie eller princippet om gensidighed.

12.2.6 Hinsides det barske. Objektive og subjektive levevilkår i Nunavut (Kapitel 7)

Alexandre Morin, Roberson Edouard & Gerard Duhaime

Nøgleord: SLiCA, Arktisk Canada, Inuit, Nunavut, Nunavummiut, objektive og subjektive levevilkår, velfærd, kontrol over egen skæbne, tilfredshed med lokalsamfundet.

Resume

I dette kapitel analyseres parallelt nogle objektive og subjektive levevilkår i Nunavut (Arktisk Canadisk territorium) i år 2001: befolkning, sprog, uddannelse, økonomiske aktiviteter, sundhed, sociale problemer og geografisk mobilitet. De oprindelige deskriptive statistikker fra SLiCA og andre kilder undersøges. I visse tilfælde bekræfter resultaterne det generelt negative billede af vilkårene for Inuit, men i andre tilfælde nuanceres dette billede eller modsiges direkte. De generelle resultater viser, uanset de objektivt set vanskelige betingelser, at Nunavummiut som lever i Nunavut (først og fremmest eliten og den laveste klasse) generelt er tilfredse med deres lokalsamfund, og at flertallet ønsker at blive boende dér. Dette skyldes særligt de moderne sociale institutioner og individuelle bevæggrunde, såsom lønninger, markedsøkonomi, en nytte- og forbrugerorienteret tilgang, en lovbaseret demokratisk stat, formel viden, individualisme og evne til selverkendelse.

Ønsket om og beherskelsen af egen skæbne synes egnede til at forklare betydningen af uddannelse og arbejde for folks tilfredshed og deres utilfredshed med boligsituationen. Både familie- og nabonetværk er afgørende årsager for stabiliteten i bosætningen og for fraflytningen. Igennem disse netværk sikres en social støtte, hvor deling og udveksling af fødevarer spiller en stor rolle. Generelt betragtet er sikkerheden for materiel overlevelse ikke den eneste grund, hvis flertallet af Nunavummiut (indbyggere i Nunavut) vedbliver at bo i Arktis på trods af de vanskelige betingelser, men også troen på at det er her at mulighederne for kontrol over eget liv og omgivelserne, spiller en rolle.

12.2.7 Uddannelse i Grønland 1973 – 2004/06 – en analyse baseret på tre levevilkårsundersøgelser (Kapitel 8)

Mitdlarak Lennert

Nøgleord: SLiCA, Grønland, Grønlandske levevilkårsundersøgelser, traditionel uddannelse, formel uddannelse, uddannelsesniveauer, sprogbeher-skelse.

Resume

I dette kapitel analyseres uddannelsessystemet i Grønland i perioden 1973 til 2006, med særligt fokus på udviklingen i uddannelsesniveauet og sprogfærdigheder blandt grønlændere i en periode præget af hastige forandringer.

Det er første gang at data om uddannelse fra tre levevilkårsundersøgelser og registerdata fra Grønlands Statistik analyseres sammen. En analyse af undersøgelserne og registerdata muliggjorde en afdækning af sammenhængen mellem sprogfærdigheder og graden af uddannelse i den grønlandske befolkning. Analysen har gjort det muligt at gå udover en ren beskrivelse og sammenligning af grønlandske uddannelsesstatistikker med statistikker fra de Nordiske lande, til også at analysere den samfundsmæssige kontekst i en periode med meget hurtige forandringer.

I afsnittet ses der på overgangen fra traditionel til formel uddannelse og væksten i det grønlandske skolesystem, ligesom der også ses på prioriteringen af uddannelse og de politiske mål fra den danske stats såvel som det grønlandske Hjemmestyres side. Ved at se på uddannelsestraditioner og ved sammenligning af data om uddannelse i Grønland over en periode på 30 år, og den hastige udvikling i uddannelsesniveauet målt på andelen af grønlandske borgere med en formel uddannelse (f.eks. uddannelse udover folkeskolen) ses, at andelen er steget fra 28 til 47 %, hvilket indikerer, at Hjemmestyret og Selvstyret – på trods af udfordringer, tilbageskridt og manglen på traditioner for formel uddannelse udover folkeskolen – er på rette vej.

12.2.8 "Drenge opdrages ikke længere!" – Kønroller i forhold til selvforsyning, arbejdsmønstre og forhåbninger i det nordvestlige Alaska (Kapitel 9)

Catherine Turcotte

Nøgleord: SLiCA, Northwest Alaska, Inuppiaat, kønsroller, forholdet mellem kønnene, levevilkår, velfærd/trivsel, selvforsyningsaktiviteter, lønnet arbejde, mobilitet, ønsker til livsstil.

Resume

Blandt Inuppiaat i det nordvestlige Alaska er der store forskelle, hvad angår mønstrene for og ønskerne om selvforsyning og beskæftigelse. Tidligere undersøgelser (Bodenhorn 1990; Kleinfeld 2006; Hamilton & Seyfrit 1994; Hamilton & Mitiguy 2009) har vist, at der er forskel på mænds og kvinders ønsker til uddannelse, beskæftigelse og f.eks. udvandring fra området – der er indikationer for at regionen kan komme under voksende pres med hensyn til sociale, økonomiske og kulturelle forhold, fordi det er sandsynligt at kvinderne i de kommende årtier, i højere grad vil ønske at forlade lokalsamfundene til fordel for stabil helårsbeskæftigelse i mere folkerige områder, mens mændene i højere grad ønsker at blive boende i bygderne og gennemføre subsistensaktiviteter. I dette kapitel undersøges forskellene i fire afhængige variabler på tværs af kønnene relateret til disse emner fra SLiCA-undersøgelsen: antallet af subsistensaktiviteter respondenterne har deltaget i i løbet af det seneste år, antal timer brugt på lønnet arbejde i foregående uge, om respondenterne har haft overvejelser om at flytte bosted i løbet af de seneste fem år, og om deres livsstilsønsker omfatter lønnet arbejde eller lønnet arbejde kombineret med subsistensøkonomi. Resultaterne illustrerer store forskelle mellem mænd og kvinder i forhold til faktorer, som påvirker mønstre og ønsker, og indikerer ændringer i det sociale landskab i regionen.

12.2.9 Ændringer i kønsrollerne i Grønland og forståelsen af bidrag til husholdningen (Kapitel 10)

MarieKathrine Poppel

Nøgleord: SLiCA, Grønland, kønsroller, kønnenes magt, bidrag til husholdningen, hurtige ændringer, beskæftigelsesstruktur, uddannelse, repræsentation i parlamentet.

Resume

Familiemønsteret i Grønland, både hvad angår størrelse og sammensætning, har ændret sig hastigt over nogle få generationer. Der er flere mænd end kvinder i det grønlandske samfund. Dette kapitel tager udgangspunkt i en antagelse om at disse ændringer, ikke alene har påvirket kønsrollerne, men også opfattelsen af mænds og kvinders bidrag til familierne.

Analysen af kønsrollerne og opfattelsen af kønnenes bidrag til familiernes husholdninger i dette kapitel, er baseret på den teoretiske forståelse, at kønsrollerne omfatter et sæt sociale og adfærdsmæssige normer i en specifik kultur. Derfor er forskningsspørgsmålene om (og i bekræftende tilfælde, hvordan) ændringer i de socioøkonomiske betingelser og i kønsroller påvirker opfattelsen af, hvordan man bidrager til husholdningen. Er der således kønsspecifikke opfattelser af, hvad den enkelte bidrager med til husholdningen.

I sidste del af dette kapitel fokuseres på kønnenes bidrag til "den grønlandske husholdning", på baggrund af resultaterne i SLiCA-undersøgelsen. Resultaterne understøtter antagelserne om, at ændringerne i kønsrollemønstrene også har indflydelse på forståelsen af, hvordan kvinder og mænd bidrager til deres husholdninger (familier). Flertallet af kvinderne i alderen 25 til 65 er af den opfattelse, at det vigtigste bidrag til husholdningen er af økonomisk karakter – fortrinsvis det at have et job og en indkomst til at betale regninger med. De fleste mænd i denne gruppe finder, også at deres vigtigste bidrag er i kategorien "job, indkomst, betale regninger". At kategorien "at vise kærlighed og hengivenhed" hos både kvinder og mænd indtager 2. pladsen er overraskende på to måder. For det første; fordi det kunne forventes at have højeste prioritet hos kvinderne, og for det andet:

fordi mænd i alle aldersgrupper mener, at det at "vise kærlighed og hengivenhed" er et vigtigt bidrag til husholdningen/dagligdagen.

12.2.10 Den arktiske levevilkårsundersøgelse (SLiCA) som den er udviklet i Sverige: resourceforvaltning i det svenske Sápmi – har køn og bosted nogen betydning? (Kapitel 11)

Hugh Beach, Dave Lewis, Rasmus Ole Rasmussen & Johanna Roto

Nøgleord: SLiCA, Svenske Sápmi, Saami, Sameby (Fællesskab af rensdyrholdere), forholdet mellem kønnene, bosted, levevilkår, identitet, diskrimination, rensdyrhold.

Resume

De igangværende sociale, økonomiske og miljømæssige ændringer i Sveriges nordligste regioner har afgørende konsekvenser for det Samiske folk og deres levevilkår. Det nordlige Sverige er en region med en spredt befolkning. Gennem de seneste årtier har man i regionen oplevet en stor udvandring. Samtidig er regionen karakteriseret ved stor rigdom på naturlige ressourcer, som tiltrækker en ikke hidtil set stor og intens udenlandsk investorinteresse. Kombinationen af affolkning og dermed følgende svagere infrastruktur med tiltrækningen af mulige økonomiske gevinster fra de naturgivne ressourcer, giver den lokale befolkning store udfordringer. Hvordan er deres levevilkår? Og hvilke valg har de? SLiCA's undersøgelsen har været tilrettelagt for at kortlægge og sammenligne nordiske oprindelige folks aktuelle livsbetingelser og forventninger i Arktis; specifikt for Sverige, er der fokus på Same-folket i begyndelsen af 2100-tallet. Formålet med dette kapitel er at forbedre vores forståelse af de ændrede levevilkår blandt Samiske folk i Sverige i relation til Samernes landrettigheder og livet som rensdyrholdere. Det er derfor nødvendigt at diskutere definitionen af hvem der regnes for at være same i forhold til Svensk lovgivning og efterfølgende, hvordan Samisk repræsentativitet i SLiCA's undersøgelser kan adresseres i et land hvor formel registrering af etnicitet undlades.

Forskelle mellem kønnene er et aspekt, som er gennemgående i det omfattende materiale fra undersøgelsen, vi fokuserer her på specifikke kønsrelaterede spørgsmål. Kønsdiskrimination påvirker samiske kvinder negativt med hensyn til medlemskabet af et "Sameby" (rensdyrholdernes fællesskaber), efter indgåelse af ægteskab, som det er fastlagt i den Svenske lov om rensdyrdrift, ophørte først i 1971.

Men, som SLiCA-undersøgelsen indikerer, så har andre former for kønsdiskrimination i forhold til samerne, eksisteret i svensk lovgivning – i visse tilfælde skjult, men i andre tilfælde som utilsigtede virkninger af lovgivning, som det f.eks. er tilfældet med hensyn til stemmevægte indenfor "Sameby" i forbindelse med de familieorganiserede rensdyrholderes overgang til virksomheder, og anvendeligheden af det svenske "property master" koncept "husbonde".

I forlængelse af denne diskussion er det vigtigt at overveje, hvor de vigtigste forskelle, mellem samer som bor i bysamfund og i Sápmi i landdistrikterne, ligger? Tænker de på samme måde om deres rettigheder som folk eller i forhold til opretholdelsen af en traditionel levevis?

12.3 Eqikkaarnerit

12.3.1 Issittumi inuuniarnikkut atukkat (Kapiitili 2)

Thomas Andersen & Birger Poppel

Oqaatsit ilisarnaataasut: SLiCA, Issittoq, nunat inoqqaavi, Inuit, Saamit, inuuniarnermi atukkat, inuttut ataasiakkaatut atugarissaarneq.

Eqikkaarneq

Immikkoortumi uani inuiaqatigiinni piffissami sivikitsumi inooqatiginnikkut, kulturikkut aningaasaqarnikkullu annertuumik allanngoriartorfiusimasuni, inuiaat inuuniarnikkut atugaasa ilisimatusarfigineqarneranni periuserineqarsinnaasut sammineqarput.

Periuseq SLiCA-mi (A Survey of Living Conditions in the Arctic; Inuit, Saami and the Indigenous Peoples of Chukotka) ilisimatuussutsikkut misissuisunit ineriartortitaavoq, Kalaallit Nunaanni Naatsorsueqqissaartarfimmit 1997-imi aallarnisaaffigineqartumi. Aallaaviusoq tassaavoq nunani assigiinnigitsuni naatsorsueqqissaartarfii misissuisarneranni aningaasarsiornermut, teknikkikkut ineriartornermut aammalu kulturimut tunngassutillit immikkoortiterlugit misissuiffigineqartarnerannik isornartorsiutit. Misissuinerit taamaattut inuiaqatigiinni misissuiffigineqartuni innuttaasut assigiiaartut isigalugit aallaaveqartarnerat aammalu inooqatiginnikkut aningaasarsiorinnikkullu atukkamikkut naligiittutut isigineqartarnerat eqqunngitsuusorineqarpoq. Tamatuma kinguneranik ilisimatuussutsikkut misissuinerit periutsit takussutissallu, inuit ataasiakkaat atugaannut tunngasut, annerusumik nunani pineqartuni amerlanerussuteqartut imaluunniit eqqarsariaatsit ersialaarnerusut naapertorlugit ilusilersorneqartarput. Immikkoortumi matumani SLiCA-mi ilisimatusarnikkut periuseq immikkut sammineqarpoq. Piviusunngortitsiniarnermi ajornartorsiutit pingaarutillit marluk matumani pineqarput. Tassaasut, (1) aalajangersimasumik periuseqarnermi ilumut misissuinerit peqataasut inooriaasiat pingaartitaallu naapertuilluartumik ilanngunneqarnerisut, aamma (2) qanoq ililluni inuiaqatigiit aqqissuussaarneranni allanngornerit, inuit ataasiakkaat inuuniarnikkut atugaannut sunnuteqarnerat, uuttorneqarsinnaanersoq.

12.3.2 Issittumi inuuniarnikkut atukkat pillugit misissuinermi najoqqutarineqartut periuserineqartullu – SLiCA (Kapiitili 3)

Bent-Martin Eliassen, Marita Melhus, Jack Kruse, Birger Poppel & Ann Ragnhild Broderstad

Oqaatsit ilisarnaataasut: SLiCA, Issittoq, Inuit, Saamit, peqqissuseq, inuuniarnermi atukkat, paasiniaanermi periuseq, misissuinermi najoqqutarisaq

Eqikkaarneq

Misissuinermi uani siunertaq pingaarneq tassaavoq Issittumi Inuuniarnikkut Atukkat pillugit Misissuinermi (SLiCA) najoqqutarineqartut periuserineqartullu paasiniassallugit; peqataasut amerlassusaat qanorlu agguataarsimanerat eqqarsaatigalugit, aammalu Alaskami, Kalaallit Nunaanni Norgemilu assigusunik misissuinerne paasineqartunut assersuunneqarsinnaanersut ilanngullugu. Immikkoortumi uani paasissutissanik sorlernik atuineq, tamaakkulu paasissutissat siunissami ilisimatusartunit atorneqartalerumaarneranni ajornartorsiutaasinnaasut, annikikkaluartumik sammineqarput. Nunagisaminni inunngorsimasut (nunat inoqqaavi) Kalaallit Nunaanni, Alaskami, Norgemilu nunaqarfimmiut 16-ileereersimasut peqataaqqullugit kajumissarneqarput. Alaskami Kalaallit Nunaannilu misissuinerne peqaataasut sioqqutilluni aalajangersungaanngitsumik toqqartugaapput, Norgemili kikkut peqataatinneqarnissaat sioqqutisumik aalajangersagaalluni. Paasissutissanik katersineq pingasoriarluni ingerlanneqarpoq: Alaskami, januarimi 2002-miit februarimi 2003-mut, Kalaallit Nunaanni, decembarimi 2003-miit augutsimi 2006-imut, Norgemilu, 2003-mi aammalu junimi 2006-miit junimi 2008-mut. SLiCa-mi misissuinerne periuseq tunngavigineqartoq tassaavoq inuit tikillugit apeqqutininik aalajangersimasunik apersorneqartarneri, taakkualu akissutaat skemamut allattorneqartartut. Katillugit inuit 663-it Alaskami, 1197 Kalaallit Nunaanni kiisalu 445-t Norgemi apersorneqarput. Peqataaqquneqartut akornanni amerlasuut tassalu Kalaallit Nunaanni Alaskamilu 83%-it Norgemilu 57%-it peqataapput. Alaskami peqataasut amerlanerpaat arnaapput. Saamit akornan-

ni peqataasut Kalaallit Nunaanniit Alaskamiillu peqataasunit utoq-qaanerupput. Naliliigallarnert naapertorlugit Saamit akornanni peqaasut toqqartorneqarnerini periuserineqartoq ajornartorsiutaasinnaavoq, ki-sianni ajoqutaavissortutut isigineqarani. Paasissutissat Alaskamiit Kalaal-lit Nunaanniillu pissarsiarineqartut tutsuiginartutut isigineqarput. Paasis-sutissanik katersuinermit peqataasussanillu toqqartuinermit periutsit assi-giinngikkaluartut, aammalu peqataasut akornanni inooqatigiinnikkut pissutsit assigiinngikkaluartut, paasissutissat katersat iluatinnarluinnar-tupput, tamakkulu inuuniarnikkut atukkat assigiinngiaartut peqqissut-sillu imminnut qanoq atanerannik misissuinermit atorineqassapput.

12.3.3 Issittumi inuuniarnikkut atukkat pillugit misissuinermit SLiCA-mi imminornissamik eqqarsaatersornerit nammineerluni nalunaarutigineqartartut (Kapiitili 4)

Ann Ragnhild Broderstad, Bent-Martin Eliassen & Marita Melhus

Oqaatsit ilisarnaataasut: Imminornissamik eqqarsaateqarneq, SLiCA, In-uit, Inuppiaat, Saamit, nunat inoqqaavi

Eqikkaarneq

Issittumi inuuniarnikkut atukkat pillugit misissuineq (SLiCA) tassaavoq nunat tamalaat akornanni suleqatigiinnikkut Issittumi nunat inoqqaavisa akornanni peqqissutsimik inuuniarnikkullu atukkanik ilisimatuussut-sikkut misissuineq. Allaaserinninnermit uani siunertaq pingaarneq tassa-avoq Alaskami, Kalaallit Nunaanni, Sverigimi Norgemilu innuttaaqatigiit misissuiffigineqartut akornanni imminornissamik eqqarsaatersornerit nammineerluni nalunaarutigineqartartut misissussallugit.

Inuiaatigiit katitigaanerat naapertorlugu misissuinerit. Nunagisaminni in-unngorsimasut (nunat inoqqaavi), 16-ileereersimasut (Kalaallit Nunaanni 15-leereersimasut) nunaqarfimmiut Alaskami, Sverigemi, Norgemi Kalaallit Nunaannilu nuna tamakkerlugu inuit peqataaqqullugit kajumissaarneqarput. Paasissutissanik katersineq pingasoriarluni ingerlanneqarpoq: Alaskami, januarimi 2002-miit februarimi 2003-mut, Kalaallit Nunaanni, decemberimi 2003-miit augutsimi 2006-imut, Sverigemi upernaakkut 2004-miit 2006-imut

Norgemilu, 2003-mi aammalu junimi 2006-miit junimi 2008-mut. SLiCa-mi misissuineri periuseq tunngavigineqartoq tassaavoq inuit tikillugit apeqqu-tinik aalajangersimasunik apersorneqartarneri, taakkualu akissutaat ske-mamut allattorneqartarlutik. Apeqqutigineqartut ilaatigut peqqissutsimut, ilinniarsimanermut, ileqquliussaasimasunik sammisaqartarnermut, sumit kingoqqinermut aammalu imminornissamut eqqarsaatersuuteqartarnermut tunngassuteqarput. Imminornissamut tunngasunik eqqarsaateqartarnermut, suaassutsimut qassinillu ukioqarnermut tunngasut Alaskamiit, Kalaallit Nunaanniit, Sverigemiit Norgemiillu peqataasunit, 16-niit 84-inut ukiulinnit 2009-nit akineqarsimapput. Imminornissamut tunngasunik eqqarsaatersuuteqarsimasunit Kalaallit Nunaanniit peqataasut amerlanerpa-apput, ukiui suaassusaallu eqqarsaatigalugit ($p=0.003$). Ukiuinut suaassu-saannullu agguataarnerini assigiinngissutsit malunnaatillit taamaallaat arnani ukiuinut agguataakkani nukarlerni marlunni maluginiagassaapput. Imminor-nissamut tunngasunik eqqarsaatersuuteqartarnermi nunat akornanni assigi-inngissutsit ilaatigut ilinniagaqarsimanikkut assigiinngitsumik inissisi-manermik nassuiaasersorneqarsinnaapput. Imminornissamut tunngasunik eqqarsaatersuuteqartartut nunanut allanut tamanut naleqqiullugit Sverigemi ikinnerpaajupput. Siunissami imminortarnermut tunngasunik misissueqqis-saarnerni inuit inooqatigiinnerminni pissusilersuutigisartagaat ilanngullugit eqqarsaatigisariaqarpaat, taamatullu aamma peqqissutsimut tunngasutigut nammineq naliliinerit, isumatsannerujussuuartarnermut aammalu er-numasarnermut tunngasut ilanngunneqartariaqarput.

12.3.4 Sumiiffimmi piujuaannartitsinermut isummat: alaskami North Slope-mi uuliasiornerup ineriartortinneqarnera (Kapiitili 5)

Jack Kruse

Oqaatsit ilisarnaataasut: SLiCA, North Slope of Alaska, Inuit, Iñupiat, Iñupiat nunap immikkoortuani naalakkersuisui, North Slope Borough, kingunissalimmik periuseqarneq, uuliasiornerup ineriartortinneqarnera.

Eqikkaarneq

Alaskami North Slope ukiuni tusintilinni naggueqatigiit Inuit ilaannit Inuppiannit nunagineqarpoq. 1968-imi Prudhoe Bay-ip eqqaani North Slope-p ilaani uuliamik nassaartoqarpoq. Prudhoe Bay-imi uuliamik nassaamit nappartat 13 milliardinit amerlanerusut maqinneqarput. Uuliaqarfinnik allanik qanittumi nassaartorneq ilutigalugu nuna uuliasiorfiusoq annertusigaluttuinnarpoq. North Slope-mi Inuppiaat uuliasiornermit qanoq sunnerneqarpat? 1977-imi taamani Inuppiaat Naalakkersuisui nutaajusut, North Slope Borough, aamma University of Alaska's Institute of Social and Economic Research peqatigalugit Inuppiaat akornanni nalaatsornerinnakkut toqqartukkanik apersuipput. 2003-milu Inuppiaat, issittumi inuuniarnikkut atukkat pillugit misissuinermit, (SLiCA-mut) atasumik misissuinermit apersorneqaqqipput. Misissuinerit taakku marluk Inuppiaat uuliasiornermit qanoq sunnigaasimanerannik misissuinermit tunngaviupput. Allaaserisami matumani assersuussinikkut paasiniakkat marluk immikkut isiginiarneqarput: tassaasut 1977-imi 2003-imilu Inuppiaat akornanni inuuniarnikkut atukkanik naammagisimaarinninneq, aamma SLiCA-mi inuuniarnikkut atukkat pillugit uutututigineqartut assigiingitsut, Inuit najugaqarfiini pingasuni Alaskami, Canadami, Kalaalit Nunaanni kiisalu Chukotkamilu, Ruslandimi nunap inoqqaavisa akornanni.

12.3.5 Inuiaqatigiit aningaasaqarniarneq naapertorlugu agguataarsimanerat aamma canadap issittortaani inuuniarnikkut atukkat (Kapiitili 6)

Gérard Duhaime, Roberson Édouard & Nick Bernard

Oqaatsit ilisarnaataasut: SLiCA, Canadap issittortaa, Inuit, Nunangat, Inuvialuit, Nunavut, Nunavik, Nunatsiavut, inuuniarnermi atukkat, atugarissaarneq, aningaasaqarniarneq naapertorlugu inuiaqatigiit agguataarsimanerat, isertitat agguataarsimanerat, inooqatigiinnikkut ataqatigiissuseq.

Eqikkaarneq

Immikkoortumi matumani ullumikkut Canadami naggueqatigiit Inuit akornanni inuiaqatigiit inuuniarnermi atukkat naapertorlugit agguataarsimanerat sammineqarpoq. Inuit ataasiakkaat inoqutigiillu isertitaasa sukumiisumik misissuiffiqineqarnerisigut, naggueqatigiit Inuit inersimasut akornanni isertitatigut agguataarsimaneq takussutissaqartinneqal-erpoq. Isertitat agguataarsimanerisa takussutissinneqarnerisa saniatigut, aamma isertitat agguataarsimanerat inuuniarnikkullu atukkat imminnut erseqqissumik tamatigoortuunngikkaluamilli atanerat paasineqarpoq, tamatumunnga tunngasumik misissuineri sammineqartut makku eqqarsaatigalugit; ilinniarsimassuseq, inuiaqatigiinni peqataaneq, allanut attaveqarneq, najugarisamik naammagisimaarinninneq inuttullu ataasiakkaatut inuunermik naammagisimaarinninneq (relativ velfærd). Inuiaqatigiinni qanoq inissisimaneq – isertitat assigiinngitsut saniatigut – allanut attaveqarnermik, inuiaqatigiinnut peqataanermik, naammagisimaarinninnermik atugarissaarnermillu sunnerneqartarpoq. Canadap issittortaani inuunermi pingaartitat Inuit inuuneranni ataatsimut isigalugu isertitat naapertorlugit inuiaqatigiinni qanoq inissisimanermut annikitsuinnarmik sunniuteqarpoq. Eqqarsaatigineqarsinnaavoq pissutsit allat immikkoortiterluni inuunermut illuatungiliuttuunersut, soorlu inunnik allanik attaveqarnerup qanoq nukittutiginera, ilaqutaqarneq imaluunniit illuatungeriilluni iluaqusersorneq – taamaalillunilu ataqatigiinneq pisari-aqartoq pilersinneqartarluni, innuttaaqatigiit attatiinnarusullugit ineriartortikkusukkaannilu.

12.3.6 Ilungersuanartut ungataanni. Nunavut-mmi inuuniarnikkut atukkat uuttorneqarsinnaasut inuillu namminneq qanoq misigineraat (Kapiitili 7)

Alexandre Morin, Roberson Edouard & Gerard Duhaime

Oqaatsit ilisarnaataasut: SLiCA, Canadap Issittortaa, Inuit, Nunavut, Nunavummiut, inuuniarnikkut atukkat uuttorneqarsinnaasut inuillu namminneq qanoq misigineraat, inuunermik naammagisimaarinninneq, siunissaq pillugu nammineq aalajangiisinnaaneq, innuttaaffiusumik naammagisimaarinninneq.

Eqikkaarneq

Immikkoortumi matumani 2001-imi Nunavut-mmi (Canadap issittortaani nunap immikkoortua) inuuniarnikkut atukkat uuttorneqarsinnaasut inuillu namminneq qanoq misigineraat misissoqqissaarneqarput, makku aallaavigalugit: innuttaasut, oqaatsit, ilinniarneq, aningaasaqarniarnikkut iliuuserineqartut, peqqissuseq, inuuniarnikkut ajornartorsiutit aamma najugaqarfigisamiit nuuttarneq. SLiCA-mi misissuinerinilu allani naatsorsueqqissaarnikkut pissutsinik allaaserinninnerit siulliit misissorneqarput. Inerniliinerni ilaatigut Inuit inuuniarnikkut atugaasa amerlanertigut ilungersunartuuneri uppersarsineqarput, allatigulli aamma pissutsit allaanerulaarsinnaaneri imaluunniit allaalluinnarsinnaaneri takuneqarluni. Inerniliinerit ataatsimut isigalugit, takuneqarsinnaavoq inuuniarnikkut atukkat uuttorneqarsinnaasut qanorluunniit ilungersunartigigaluarpata, taava Nunavummiut (pingaartumik atugarissaarnerpaat atugarliornerpaallu eqqarsaatigalugit) najugaqarfigisatik naammagisimaaraat amerlanerpaallu najugaqarfimmiinniiginnarnissartik kisaatigigaat. Tamanna annerpaamik inuiaqatigiinni isumaginninnermut tunngasutigut saaffiqneqarsinnaasunik nutaaliaasunillu peqarneranik aammalu inuit ataasiakkaat atugaannik pissuteqarpoq, soorlu: akissarsiat, inuussutissarsiorneq niuunermik tunngavilik, iluaqutissarsiornermik atuisartutullu eqqarsariaaseqarneq, inuiaqatigiit inatsisinik tamallu oqartussaaqataanerannik tunngavillit, ilinniarsimanikkut ilisimasaqarneq, namminerisamik pissuseqarneq kiisalu imminut ilisarisimaneq.

Ilinniagaqarneq suliffeqarnerlu aqputigalugit qanoq inuuneqarnissamut nammineerluni aalajangiisinnaanermut kissaateqarneq piginnaaneqarnerlu, inuit naammagisimaarinninnerannut patsisaasutut paasinarpoq, taamatullu aamma ineqarniarnermi pissutsinik naammagisaqannginnermut patsisaal-luni. Ilaqutaqarneq najugarisamilu eqqaamioqarneq sumiiffinni najugaqartut aalajaatsuunerannut pissutaanerpaapput taamatullu aamma allamut nuut-tarnernut tamakkorpiaat patsisaallutik. Attaveqatigiinnerit taamaattut inooqatiginnikkut tapersersorneqarnissamut qulakkeerutaasarput, tama-tumanilu nerisassanik paarlaasseqatigiitarneq pingaarutilerujussuuvoq. Nu-navummiut amerlanerit Issittumi najugaqarusuinnarnerannut inuuniarnermi ilungersunarsinnaasumi timikkut atukkat qulakkeersimanerat kisimi pis-sutaanngilaq, kisiannili maani nammineq inuunermik aqutsisinnaaneq ava-tangiisillu aamma pingaaruteqarput.

12.3.7 Kalaallit nunaanni ilinniartitaaneq 1973 – 2004/06 – inuuniarnikkut atukkat pillugit misissuinerit pingasut tunngavigalugit nalilersuineq (Kapiitili 8)

Mitdlarak Lennert

Oqaatsit ilisarnaataasut: SLiCA, Kalaallit Nunaat, Kalaallit Nunaanni inuuniarnikkut atukkat pillugit misissuinerit, qangatuuat ilinniartitaaneq, aaqqissuussamik pisortatigoortumik ilinniartitaaneq, Ilinniarsimassuseq, oqaatsinik piginnaasaqarneq.

Eqikkaarneq

Immikkoortumi matumani Kalaallit Nunaanni ilinniartitaanikkut aaqqis-suussaaneq piffissami 1973-imiit 2006-imut sammineqarpoq, piffissami suk-kasuumik allanngoriartorfiusumi kalaallit akornanni ilinniarsimassutsikkut oqaatsitigullu piginnaaneqarnikkut ineriartorsimaneq immikkut isigalugu.

Inuuniarnikkut atukkat pillugit misissuisimanerit pingasuusuni paasi-sat Kalaallit Nunaannilu Natsorsueqqissaartarfimmiit paasissutissat siul-lermeerutaasumik ataatsimoortillugit misissueqqissaarfigineqarput. Mi-sissuisimanerit paasissutissallu tunngavigalugit kalaallit akornani oqaatsi-tigut piginnaaneqarnerup ilinniarsimassutsillu imminnut ataqatigiinnerat

qulaajarneqarsinnaasimavoq. Kalaallit Nunaanni ilinniartitaanermut tunngasut allaaserineqarnerisa aammalu naatsorsueqqissaarnikkut nalunaarsukkat Nunani Avannarlerni nalunaarsukkanut sanilliussinerup saniatigut inuiaqatigiinni sukkasuumik allanngoriartorfiusuni ilinniartitaanerup sunnigaanera ilanngullugu misissuiffigineqarpoq.

Immikkoortumi uani qangaaniit ilinniartitaasarnermiit pisortatigoortumik aaqqissuussaasumillu ilinniartitaasalernermit ikaarsaariarneq Kalaallit Nunaannilu ilinniartitaaneerup annertusaaffigineqarnera misissorneqarput, soorlu aamma ilinniartitaaneq pillugu naalakkersuinikkut Namminersorne-rullutik Oqartussaniit danskillu naalagaaffianniit anguniakkat pingaartitsine-rillu isiginiarneqartut. Ilinniartitaanikkut pigiliussimasat Kalaallit Nunaannilu ukiut 30-it ingerlaneranni ilinniartitaaneq pillugu paasissutissat imminnut assersuunnerisigut, aammalu ilinniarsimassutsikkut ineriartorneq sukkasooq eqqarsaatigalugu, kalaallit akornanni qassit pisortatigoortumik ilinniagaqar-simaneerisigut, (ass. meeqqat atuarfianni atuernerup kingorna ilinniarsima-neq) takuneqarsinnaasup, ersersippaa ilinniagallit 28 %-niit 47 %-imut amer-leriarimasut. Taamaammallu Namminersorne-rullutik aammalu Namminer-sorlutik Oqartussanit – naak aporfissarpassuaqartarsimagaluartoq, kinguariartoqartaraluartoq kiisalu meeqqat atuarfianni atuareernerup kin-gorna ilinniaqqittarneq suli ileqqusutut oqaatigineqarsinnaanngikkaluartoq – ineriartorneq isigalugu oqaatigineqarsinnaavoq aqqut eqqortoq ingerlavi-gineqarpoq.

12.3.8 "Nukappiaqqat perorsarnee-runnikuupput!" – Arnat angutillu imminut pilersornermi peqataanerat, Alaskap Avannaata Kitaani suliat agguataarneqarnerat anguniakkallu (Kapiitili 9)

Catherine Turcotte

Oqaatsit ilisarnaataasut: SLiCA, Alaskap Avannaata Kitaani, Inuppiaat, arnat angutillu peqataanerat, arnat angutillu imminnut pissuseqarnerat, inuuniarnermi atukkat, atugarissaarneq, imminut pilersorniarluni iliuutsit, sulinikkut aningaasarsiorneq, nuttarsinnaaneq, inooriaatsikkut anguniakkat.

Eqikkaarneq

Alaskap Avannaata Kitaani Inuppiaat akornanni, suliffeqarnikkut pissutsit imminullu pilersorniarnermi pissutsit assigiinngisitaartorujussuupput. Siusinnerusukkut misissuinerit (Bodenhorn 1990; Kleinfeld 2006; Hamilton & Seyfrit 1994; Hamilton & Mitiguy 2009) takutereerpaat arnat angutillu ilinniagaqarusunnerat, suliffeqarusunnerat aammalu assersuutigalugu allamut nuussinnanermut kissaateqarnerat assigiingitsuusoq – nunap immikkoortuani tassani inuuniarnikut, aningaasaqarnikkut kulturikkullu annertusiartortumik ajornartorsiortoqalersinnaanera ilimanaateqarpoq, tassami ilimanarmat arnat ukiuni qulikkaarani aggersuni, allanut inoqarfinnut annerusunut ukiorlu kaajallallugu akissarsiorfiusinnaasunut nuukkusulissasut, angutilli nunaqarfinni najugaqaannarusunnerussasut piniarnikkullu allatigullu pissarsiornikkut imminut napatinnessartik aallullugu. Immikkoortumi uani tikkuussisuusinnaasut allanngortut sisamat assigiingissusaat misissorneqarput, arnat angutillu eqqarsaatigalugit SLiCA-mi misissuinerit tassunga attuumassuteqartut aallaavigalugit: ukiup kingulliup ingerlanerani imminut pilersorniarluni piniarnikkut allatigullu sulianut qasseriarluni peqataasimanerit, sapaatit akunneranni kingullermi akissarsiaqarluni sulinermit nalunaaquttap akunneri qassit atorneqarsimanersut, misissuinerimi peqataasut ukiut tallimat kingulliit ingerlaneranni allamut nuunnissamik eqqarsaatersuuteqarsimanersut kiisalu akissarsiaqarluni sulilernissamik imaluunniit akissarsiaqarluni sulitigaluni saniatigut piniarnikkut allatigullu imminut pilersornissamik kissaateqartoqarsimanersaq. Misissuinerimi paasisat takutippaat arnat angutillu akornanni periutsitigut anguniakkatigullu tamakku sunniuteqartarnerat annertuunik assigiingissuteqartut, aamma innuttaaqatigiit akornanni allanngoriartorerit takussutissaqartut.

12.3.9 Kalaallit nunaanni arnat angutillu pissusaasa allanngoriartornerat inoqutigiinnilu peqataanerisa/tunniussaqaartarnerisa paasiniaarneqarnera (Kapiitili 10)

MarieKathrine Poppel

Oqaatsit ilisarnaataasut: SLiCA, Kalaallit Nunaat, arnat angutillu pissusilersuutaat, arnat angutillu pissaaneqarnerat, inoqutigiinnut tunniussaqaartarneq, allanngoriartorneq sukkasooq, suliffeqarnermi pissutsit, ilinniarsimaneq, inatsisartuni sinniisoqarneq.

Eqikkaarneq

Kalaallit Nunaani ilaqutareeriaaseq, ilaqutariit qassiunerat katitigaanerallu eqqarsaatigalugit, kinguaariit ikittuinnannguit ingerlaneranni allanngoriartupallappoq. Inuiaqatigiinni Kalaallini angutit arnanit amerlanerupput. Immikkortumi matumani allanngoriartuutaasut, arnat angutillu pissusaat kisiisa pinnagit aammali inoqutigiinnut angutit arnallu tunniussaqaartarnerisa, aamma sunnerneqarsimanerannik ilimagisaqarneq aallaaviuvoq.

Arnat angutillu pissusaannik taakkulu inoqutigiinnut tunniussaqaartarnerat/peqataaneratt pillugit paasiniaanermi tunngaviusoq tassaavoq, arnat angutillu pissusilersuutaat kulturini assigiinngitsuni inooqatigeeriaatsinit ileqqunillu sunnigaasartut. Taamaammat misissuineri apeqqu tassaavoq inuiaqatigiinni inuuniarnikkut allanngoriartuutit arnat angutillu pissusaannut taakkualu inoqutigiinnut tunniussaqaartarnerannut/peqataanerannut sunniuteqarnerisut, taamaassimappallu qanoq sunniuteqarnerisut.

Immikkortup naggataatungaani arnat angutillu "Kalaallit Nunaanni inoqutigiinnut" tunniussaqaartarnerannut /peqataanerannut paasiniaanermi "Issittumi inuuniarnikut atukkat pillugit misissuinermit" SLiCA-mi paasisat tunngaviupput. Paasisat ilimanarsisippaat arnat angutillu pissusilersuutaasa allanngoriartornerat inoqutigiinnut sutigit tunniussaqaartarnerannut paasinninnermut sunniuteqarsimasooq. Arnat 25-it 65-illu akornanni ukiullit akornanni inoqutigiinnut tunniussassani pingaarnerpaatinneqartoq aningaasaqarniarnermut tunngavoq – pingaar-tumik suliffeqarnikkut aningaasarsiaqarneq "akilgassanillu akilersuineq". Angutit taamatut ukiullit akornanni aamma inoqutigiinnut iluaqutaaner-

paajusutut "suliffik, akissarsiat aamma akiligaasanik akilersuineq" isigineqarpoq. Arnat angutillu pingaaruteqarnerpaatut isigisaanni tulliuvoq "asanninnermik tunniusimanermillu takutitsisinnaaneq", tamannalu marlussutsigut tupaallaataasinnaavoq. Siullermik ilimagineqarsinnaammat taamatut eqqarsarnej arnat akornanni pingaarnerpaatut isigineqarnissaa ilimagineqarsinnaagaluarmat, aappassaanillu angutit akornanni ukiut apeqqutaatinnagit "asanninnermik tunniusimanermillu takutitsisinnaaneq" inoqutigiinnut tunniussatut pingaarutilittut isigineqarmat.

**12.3.10 Issittumi inuuniarnikkut atukkat pillugit
misissuinerup (SLiCA-p) sverigemi
ingerlanneqarnera; pisuussutinik atuinerup
sverigemi saaminut aqunneqarnera – suaassuseq
sumilu inuuneq pingaaruteqarpat? (Kapiitili 11)**

Hugh Beach, Dave Lewis, Rasmus Ole Rasmussen & Johanna Roto

Oqaatsit ilisarnaataasut: SLiCA, Sverigemi Sápmi, Saamit, sameby, arnat angutillu akornanni pissutsit, sumi najugaqarnej, inuuniarnermi atukkat, kinaassuseq, immikkoortitaaneq, tuttuuteqarnej

Eqikkaarneq

Inuuniarnikkut, aningaasarsiornikkut avatangiisillu allanngoriartupiloornerat Sverigep avannarpiaani Saaminut inuuniarnerannullu annertuumik sunniuteqarpoq. Sverigep avannaarpiaa siammaseqisunik inoqarfiuvoq. Ukiut qulikkaar kingullit ingerlaneranni nunap immikkoortua tamanna innuttaasuinit amerlasuunit qimagarneqarpoq. Nunalli immikkoortua tamanna pinngortitami pisuussuterpasuaqarpoq aatsaallu taamak anner-tutigisumik avataaneersunit pisuussutinik piiaarusuttunik soqutigineqar-tigaluni. Inuerukkiartornerup tamatumalu kinguneranik attaveqatigiin-nikkut periarfissat ajorsartornerisa nalaani, pinngortitallu pisuussutaanik aningaasarsiornissamat periarfissat ilimanarsineranni innuttaasut an-gisuunik unammilligassaqaalerput. Inuuniarnikkut atugaat qanoq ippat? Sunillu periarfissaqarpat? SLiCA-p misissuisarneri nunarsuup avannaani nunat inoqqaavisa Issittumiittut atugaat angorusutaallu qulaajassallugit imminnullu assersuutissallugit aaqqissuunneqartarput; immikkullu Sveri-gemut tunngatillugu, ukiut 2000-ikkut aallartinnerani Saamit annertuu-

mik sammineqarlutik. Immikkoortumi uani naggueqatigiit Saamit Sverigemi inuuniarnermikkut atugaasa allanngoriartortut, nunamut tunn-gasutigut pisinnaatitaaffiit tuttuuteqarnerlu eqqarsaatigalugit, paasilluar-nerunissaat siunertaavoq. Taamaammat Sverigemi inatsisit naapertorlugit kikkut Saamitut naatsorsuussaanersut paasiniartariaqarpoq tamatumalu kingorna aamma SLiCa-mi misissuinerlut atallugu Saamitut naatsor-suunneqarsinnaasut qanoq annertutigisumik peqataatinneqarnersut eq-qartorneqassalluni, tassami Sverigemi sumit kingoqqineq pisortatigoor-tumik nalunaarsorneqarneq ajormat.

Arnat angutillu assigiinngissuteqarnerat misissuinermit paasissutissar-passuarni pissarsiarineqartuni tamatigoortumik sammineqarpoq, maanilu suaassutsimut tunngasut immikkut sammivagut. Suaassuseq tunngaviga-lugu immikkoortitsineq pissutigalugu Saamit arnat "sameby"-mut (tuttuu-tillit ataatsimoorfiannut) ilaasortaanerat katereernermi sanngiinneruler-sarpoq, taamatut Svenskit tuttuuteqarneq pillugu inatsisaanni aalajanger-saavigineqarsimammat, aatsaat 1971-imi atorunnaarsinneqartumik.

SLiCa-mi misissuinerit soorlu takutikkaat, allatigut suaassuseq tunnga-vigalugu immikkoortitsineq, saamit eqqarsaatigalugit, svenskit inatsisaanni takussaajuarsimavoq – ilaatigut ersinngitsumik, allatigullu inatsisiliornermi siunertarineqanngikkaluamik, soorlu tamanna ilaqutariit tuttuutillit tu-nisassiortutut naligiinnasutut ikaarsaariarneranni "Sameby-mi" arnat angu-tillu taasinerisa qanoq naleqqartinneqarnerat eqqarsaatigalugu, aammalu tamatuma svenskit husbonde "property master"-itut (tunisassiornermi aqutsisutut) taagugaanni arnat "husbonde"-iusinnaanerat.

Tamatumunnga uiggiullugu saamit illoqarfinni najugallit aamma Sápmi-t nunaannarmiut, suut pingaarnertut assigiinngissutiginerat eq-qarsaatigissallugu pingaaruteqarpoq. Inuiattut pisinnaatitaaffitik ima-luunniit qangatuut inuunerup attatiinarneqarnissaanut tunngasut assi-giimmik eqqarsaatigisarpaat?

13. Author mini CVs

- *Hugh Beach* took his BA in anthropology at Harvard College and his PhD at Uppsala University, Sweden. His main research interests and expertise include: pastoralism, Sámi and other circumpolar peoples, political ecology, climate change, identity issues, and indigenous/State relations. Since 2001, he holds the Professor's Chair in Cultural Anthropology at the Department of Cultural Anthropology and Ethnology, Uppsala University, Sweden.
- *Ann Ragnhild Broderstad* is dr. med. in epidemiology health research. She is the academic director at the Centre for Sami Health Research (SSFH) at the UiT – The Arctic University of Norway. She is a specialist in internal medicine and hematology and works as senior consultant (MD) at the University Hospital in North Norway. Broderstad is the head of research in the SAMINOR and “From the Countryside to Cities” surveys.
- *Gérard Duhaime*, PhD, is a Full Professor of Sociology at Université Laval (Québec, Canada), chairholder of the Canada Research Chair on Comparative Aboriginal Condition since 2002. He was the director of the SLiCA-Canada research program in collaboration with the Canadian national and regional Inuit associations. He is the author of several books and papers in the fields of economic sociology specially related to the circumpolar Arctic, among which *Arctic Food Security* (2008).
- *Roberson Édouard* received a PhD in Sociology (Development Studies in the Arctic) in 2008. Over the past ten year he has been pursuing two different research programs one regarding Sociology of development and the other one bound to Sociology of crimes. He is the author of several books and papers in these fields.
- *Bent-Martin Eliassen*, PhD, is a Postdoctoral Fellow in epidemiology at the Centre for Sami Health Research, UiT The Arctic University of

Norway. Eliassen also holds a Master's degree in Polar studies (Social Anthropology) from the Scott Polar Research Institute, University of Cambridge, UK.

- *Jack Kruse*, PhD, served on the faculty of the University of Alaska Institute of Social and Economic Research from 1975 to 2009 and as Institute Director from 1994–1997. He served as President of the Arctic Division of the American Association for the Advancement of Science and Chair of the Arctic System Science Committee for the National Science Foundation.
- *Mitdlarak Lennert* holds a Master in Social Sciences from Ilisimatusarfik (University of Greenland). Her Master's Thesis focused on the development of the education system in Greenland. Her research interests include capacity-building as related to the development of a Greenlandic mining-based economy.
- *Dave Lewis*, Lecturer at the School of Social Sciences, Södertörn University since 1999. He holds a Master in Comparative Politics and Public Policy and a PhD in Sociology. His Master's Thesis on Indigenous rights claims in welfare capitalist society focused on the Sami people in Norway, Sweden and Finland. It was published in 1998. From 1999–2003 he worked as Research Assistant on the Survey of Living Conditions in the Arctic.
- *Marita Melhus* holds a Master's degree in statistics and works as a senior engineer at the Centre for Sami Health Research (SSFH) at the UiT – The Arctic University of Norway. Former experience includes teaching in statistics and mathematics as well as research and statistical consulting.
- *Alexandre Morin* is the supervisor of the research and statistics unit, within the Ministry of Family (Quebec, Canada). Using SLiCA data, his doctoral thesis (sociology, Laval University) focused on strategies of Inuit (Nunavut) and how they cope with social problems (suicide, drug abuse, violence, etc.) and be part of society on the personal, social and professional levels.
- *Birger Poppel* is Project Chief of the Survey of Living Conditions in the Arctic, SLiCA at Ilisimatusarfik (University of Greenland). He holds an MA in Economics. He served as Chief Statistician from 1989–2004. He

has published primarily within his main research interests including living conditions of the indigenous peoples of the Arctic, the mixed economies, socio-economic and demographic developments of the Circumpolar North.

- *MarieKathrine Poppel*, Assistant Professor in the Department of Social Work, Ilisimatusarfik (University of Greenland) since 2007. She holds a Master in Social Sciences from Ilisimatusarfik. She has published a number of articles on gender equality (most recently *Citizenship Practices* (2014)) and on gender and violence. She is the editor of the book *Køn og Vold i Grønland* (Gender and Violence in Greenland) (2005).
- *Rasmus Ole Rasmussen*, PhD, Senior Research Fellow at Nordregio (Sweden) and Associate Professor at Roskilde University (Denmark). He holds a M.Sc. in Economic Geography. His doctoral thesis focused on Regional Analyses based on the modeling of human influenced Ecosystems. He has published intensively within his primary research interests: Sustainable development and Arctic natural resource exploitation and management and Arctic demographic and socio-economic development.
- *Johanna Roto* works as GIS & Cartography coordinator at Nordregio (Sweden) and with her own company Rotonord (maps). She has specialised in regional development in Arctic and Northern regions and in regional and statistical analysis. Her field of expertise is utilising Geographic Information Systems (GIS) in her work.
- *Catherine Turcotte*, PhD, Assistant Professor of Sociology at Colby-Sawyer College, teaches courses on Race, Global Issues, and Social Theory. Her doctoral thesis "*Wage Employment, Traditional Subsistence, and Aspirations among Inupiat and Yup'ik in the Mixed Economy of Northwest Alaska*" examined factors associated with the maintenance of a mixed economy.

14. Afterword:

Facts hard to get



While I was hosting ICC's General Assembly in Nuuk in 1998 Birger Poppel (then Chief Statistician of Statistics Greenland) presented the idea of a Survey of the Living Conditions in the Arctic. Our organization has been struggling to gather comparable statistical information about Inuit living under four jurisdictions or for the whole Arctic; even United Nations had no data in that field that could tell us about indigenous peoples in the world. We already had intensive cooperation with natural science, mainly on environment and climate. Now we embarked on another field, the social science and economic development. During my two terms as President and Chair of the ICC I had the opportunity to closely follow the work that I think was successful despite the costs and the logistical challenges. Indeed it was hard to get all facts about the people living in the Arctic.

The work has since been going on for quiet a long time, and with patience, and Birger Poppel has assembled a study involving multiple fields and with an international scope that is rarely seen. Living conditions among indigenous communities vary from country to country, but the

Arctic life in many areas are the same though dictated by the climate, the environment and the overall harsh conditions for small communities and long distances to educational institutions and good health services.

The SLiCA report is the first comprehensive study of its kind in the Arctic; we need to have continuous information in the future.

I thank Mr. Birger Poppel and all the researchers for their great work!

Aqqaluk Lynge

President of ICC 1997–2002

Chair 2010–2014



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SLiCA: Arctic living conditions

The SLiCA anthology probes into the theoretical and methodological background of the SLiCA project, the research design, the ethical principles applied and introduces examples of the wealth of information available on the livelihoods and living conditions of the Inuit, Saami and the indigenous peoples of Chukotka and the Kola Peninsula, measured with quality of life criteria they themselves chose. Furthermore the anthology provides samples of analyses – including comparative and contextual studies – that can be accomplished using SLiCA data. Examples of living conditions and topics analysed are: 'suicidal thoughts'; impacts of oil development on living conditions and quality of life; economic stratification; objective and subjective living conditions; education; gender based differences in productive activities; impacts of societal development on men's and women's perceptions of their contributions to their households; factors affecting migration, identity, ethnicity, and herding rights.

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