Overview of the Social Transition in the North project 1995 - 1998

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ABSTRACT

Objective. This paper describes the overall aims and design of the Social Transitions in the North study. The objective of the STN study was to assess how epidemiological, demographic and domestic changes have affected Northern communities.

Study Design. Sixteen communities in the Russian Far East and Alaska were compared. Survey data were collected in three phases with a response rate of 70%.

Methods. The experiences of indigenous peoples with demographic, epidemiological and domestic changes were measured using forced-choice questionnaires, focus groups, oral histories, protocol interviews, interviews with institutional informants, genealogies and analysis of secondary data.

Results. The principal researchers died during a boating accident before the analysis phase. Alaska researchers were asked to review the data for utility.

Conclusions. The STN data was developed using rigorous cross-cultural research team. It was be used by social science researchers and others to better understand the impact of rapid changes in the Arctic.

Keywords: health survey, health status, Alaska and Russian Indigenous communities.

INTRODUCTION

This report was originally written in 1997 to help the Alaska Native Science Commission (ANSC) and participants in the Social Transition in the North (STN) project determine the future direction of the project. It examines the STN’s history up to 1998, looking at the original proposal, progress reports, meeting summaries, and other records in order to gain insights on how the project might proceed now. Of particular interest is the analysis phase that was originally intended to be the culmination of three years of fieldwork.

The STN project was funded by the National Science Foundation in 1992 for three years of research (1993-1995), followed by analysis and publications in the fourth year (1996). It was a comparative study of social and economic change in two regions of Alaska (Northwest Arctic and the Aleutians) and in two regions of the Russian Far East (Kamchatka and Chukotka), as reflected in health and family relationship characteristics, as well as by indicators of individual or collective well-being.

Sixteen communities—four communities in each of two regions in each country—were selected for the study sample. Some features of the communities were matched in order to have a controlled comparison. The study villages were Kotzebue, Buckland, Deering, and Kivalina in Northwest Alaska, where the indigenous population is primarily Inupiat; Unalaska, St. Paul, Sand Point, and Atka (later replaced by Akutan), where the indigenous population is mainly Aleut; Ossoro, Karago, Timiat, and Paren, later replaced by Tigil, Esso, Anavgay, and Kovran (with Koryak and some Itelmen, Kamchadal, and Even indigenous populations) in Kamchatka. No questionnaires were administered in Year 1 in Chukotka, although research was later conducted in Provideniya, Sirenki, Enmelen, and...
Nunligran (with Siberian Eskimo and Chukchi indigenous populations) in the Chukotka district. Fieldwork was also conducted in all regions in Years 2 and 3 of the project. Dimitry Bogojavlensky traveled to Chukotka in August-September 1997 to completed the unfinished Year 3 research.

In September 1995, following the Year 3 summer field research, a boat accident claimed the lives of project personnel Steven McNabb, Alexander Pika, William Richards and Richard Condon. At that time, almost all the data collection for the project had been completed and the principal investigators were preparing for the analysis phase. After several meetings involving the surviving project personnel, it was agreed that the ANSC would take over administration of the project. Since 1995, most of the activity on the STN project has been to inventory, organize, transcribe, record, clean, and archive the data that have already been collected.

This report summarizes the historical development of the project in the following sequence:
1) the original plan for the project, including goals, hypotheses, and methodology, as outlined in the 1991 NSF proposal;
2) modification of the project and new components of research added as the project progressed;
3) the original plan for analysis; and
4) what has taken place since 1995.

METHODS

The original proposal
The project was conceived around 1989, when the Alaska Federation of Natives invited Steven McNabb to conduct a study of Native health and population issues. The STN project grew in response to that invitation, as well as from discussions between McNabb and Russian social scientists concerned with similar issues in Chukotka and Kamchatka.

The STN study sought to understand the causes and effects of demographic, epidemiologic, and domestic transitions in Alaska and the Russian Far East. It recognized that communities in Alaska and the Russian Far East share many characteristics, including remote locations, demanding environments, high dependence on natural resources for subsistence and for cash income, economies based on export of resources and on government transfers, largely indigenous populations, and peripheral status in relation to the dominant government and majority population. The project used several research methods to compare the experience of change in communities in the Russian Far East and Alaska.

In the conventional understanding of modernization, a society’s demographic transition from traditional to modern is seen as a change from high mortality and a high birth rate to low mortality and birth rates. An epidemiologic transition from traditional to modern is seen as a change from high rates of infectious disease to higher rates of chronic degenerative disease and behavioral problems. A domestic transition from traditional to modern is seen to bring shifts in household and kinship roles. It represents a change from a communal orientation with high age and gender stratification to one which emphasizes individual choice, self-help, and reduced stratification by age and gender.

The proposal points out, however, that the conventional understanding of modernization is flawed. In particular, ideological commitment to modernization may lag behind other aspects of change. Demographic and epidemiological changes may result from the imposition of a Western system, but they are not necessarily accompanied by changes in cultural beliefs and health-seeking behaviors. The new system is not yet self-generating. In addition, people’s lifestyle expectations may be raised without their having the means to achieve those expectations.

Goals and Hypotheses
The STN project looked at how epidemiological, demographic, and domestic changes have affected Northern communities. It compared indigenous peoples’ experience of these transitions in two regions each of Alaska and the Russian Far East. It also examined how each of these transitions was related to the others.

The hypotheses of the project concerned the future characteristics of the populations of the study
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communities. The main hypothesis presented in the 1992 proposal is: "The demographic transition is self-sustaining and self-regulating--sample residents are making effective fertility and health choices that increase life expectancy and produce planned families..."(10).

Other tenets mentioned in the original plan for research were:

1. Fertility and demographic transitions typically occur when prevailing health and nutritional patterns change, but fertility also fluctuates in response to economic resource availability, social characteristics of conjugal unions, and female status and power.
2. Epidemiologic transition is marked by a decline in infectious disease and infant mortality, an increase in life expectancy, and a higher incidence of chronic (particularly "lifestyle") disease. Violent deaths by suicide, homicide, or accident become a leading agent of morbidity.
3. Demographic and epidemiological transitions are played out in the context of the domestic unit -the household (10).

An important applied goal of the project was to establish and maintain international collaboration in the areas of Native health and social change. An intended practical application of the study was to identify the factors associated with recognized problems such as suicide in order to help institutions mitigate those problems. At the same time, the project aimed to discover the characteristics of resilient populations, which might include "survival skills" that could be learned and transmitted. It was hoped that the results of the study could be applied to the immediate needs of Native residents of the study regions in both countries. As a small financial contribution to communities, the project hired local research assistants in each of the study villages, and also compensated questionnaire respondents for their time.

Methodology

From the outset, the Social Transition in the North project was a "multi-trait, multi-method" study, employing several different data collection techniques. Taking as a given that the family is the primary locus of behavior and population change (10), the study took the individual, the family and the household as the units of study.

**Forced-choice questionnaires:** The primary methodology employed was a questionnaire (in long and short form), administered over three years using a Solomon Four Group approach. The nested panel research design was chosen to maximize validity while using a relatively small sample (5). The approach drew from the methodology used in the 1988-1992 Social Indicators Study (7). As in the Social Indicators Study’s survey instrument, the STN survey asked respondents to report on their own health and lifestyle, although the STN survey sought much more detailed information than the Social Indicators survey about health behavior, symptoms and complaints, and family and sexual relationships. Portions of the STN questionnaire were taken from the U.S. National Health Interview Survey, which includes screening scales for mental health and substance abuse (6).

There was a target sample of a total 1,600 questionnaire respondents. In fact, only 720 were interviewed the first year. A portion of this group was re-interviewed in 1994, and in 1995 a post-test sample of 100 households was chosen for interviews (6). This adds up to a total of 820 survey interviews.

Respondents interviewed in Year 1 (1993) got a "long form" questionnaire that was very detailed. The next year, a shorter form was used for re-interviews. New respondents in Year 3, however, were asked questions from the long form. In each of Years 2 and 3, it was planned that some respondents would be re-interviewed, and a new sample would also be drawn. As it turned out, all the respondents who could be contacted, which ended up being about 70% of the original sample, were re-sampled in Year 2.

**Protocol interviews (open-ended questions):** Each questionnaire respondent was also asked to participate in a tape-recorded interview consisting of one or more open-ended questions. In 1994, the open-ended interview asked for information on residence history, health over the past year, and subjective responses concerning locus of control (e.g., fatalism or personal autonomy), personal relation-
ships, and decision-making (2). In 1995, the protocol had only one question, asking respondents to talk about significant milestones in their lives.

Focus groups: Kleinman focus groups were conducted in most of the study communities in 1994. This methodology, developed by Kleinman to document explanatory belief systems, shows how residents in a community think about health problems. Focus group discussions were held in 1994 with respondents of different ages. Participants were asked to discuss a disease or other health issue of concern to their community and to identify causes, influences, and possible mitigating factors (2). In practice, some of the focus groups ended up being about issues other than health (such as the future of the fishing industry in the community), or only indirectly related to health.

Oral history: Oral history or family history classes were built into the project from the beginning. They were intended to build a collaborative aspect into the study by involving residents of the communities studied. The rationale for this component was stated in the first annual report:

Study respondents will be enrolled in an oral history course...and will be trained as researchers to prepare their own oral histories. This will be applied to project aims as well as their own unique interests. We see it as a powerful technique to empower and involve local people in the science process (1).

In 1994, Alaskan study participants were invited to participate in oral history classes through the University of Alaska. This component of the project was implemented in the fall of 1994, when 12 project respondents attended family history classes held in Kotzebue and Unalaska.

Genealogies: As many genealogies as possible were collected, extending two degrees collaterally and lineally. The target was to complete one genealogy for each Year 1 and 2 survey respondent. These data were entered using the Roots IV program.

Interviews with institutional personnel (health, social, and other service providers and community leaders); participant observation: Ethnographies of each region were developed prior to beginning the research. Each was written by a scholar or scholars intimately familiar with the area. The ethnographies drew upon the authors’ previous research as well as secondary literature. Institutional interviews and participant observation were important parts of all fieldwork for the study.

Secondary data: Vital statistics, medical caseload information, and other secondary data for each region were collected.

RESULTS

New developments in the STN project after Year 1
During the first year of field research (1993), a "pre-test sample" of 715 or 720 surveys (the reports disagree) was conducted in 18 villages. The questionnaire data were tested for construct validity after the first fieldwork season. As mentioned above, many questions on the survey were derived from the Social Indicators survey, which had been subjected to many construct validity tests, and all of the Alaskan villages included in the STN project (except Auktur, which replaced Atka) had been part of the Social Indicators study. About 60% of the questions on the longer STN survey were dropped from the "resampling" survey used in year 2, mainly either because there had been a low rate of response or because it would be redundant to ask the same questions the next year (2). At a later time, the project PIs intended to compare Russian and Alaskan responses to see if some items were less appropriate in one of the two countries (2).

After Year 1, the PIs acknowledged that it had not been possible to meet the sample targets in any region. In fact, only about 50% of the sample target was accomplished. In the larger villages of Unalaska and Kotzebue it had been particularly difficult to achieve sampling goals. As a result, according to the Year 1 Annual Report, in the future there would have to be less emphasis on the forced choice questionnaires and more emphasis on the other study techniques used, "to bolster up the data we do have." It was also decided after the Year 1 fieldwork season to
expand the re-interview panel in Year 2 to 60% or even 80%; to expand the oral history component of the study; and to expand the roles of the open-ended protocols and of genealogical analysis (1). According to one source, over 70% of the originally surveyed respondents were re-sampled (2); according to another, 60% were re-sampled (6).

Following a meeting of study personnel in Moscow in 1994, several new components were added for the Year 3 (1995) season of research. Some of the research tasks discussed at that meeting and at the Spring 1995 Society for Applied Anthropology meetings in Albuquerque included:

- Developing timelines of health events (such as the introduction of western medical care, installation of sewers and running water, etc.) in each region, based on secondary literature
- Reviewing morbidity and patient caseload encounters
- Checking into the possibility of getting data on ethnicity from birth records for sites
- Evaluating the ethnic composition of areas

Specific plans for the 1995 fieldwork coming from discussions at the Moscow and Albuquerque meetings included:

- Identifying some "resilient" respondents from each village
- Collecting date and place of birth, date and cause of death, ethnicity of spouses for family members in genealogies
- Asking open-ended protocol respondents to identify life milestones
- Trying out cultural domain analysis, including free lists, pile sorts, and triads
- Attempting a third panel with a reduced questionnaire for respondents in both Year 1 and 2
- Following up last year’s open-ended questions
- Interviewing physicians and other medical providers working in the study areas
- Collecting genograms from open-ended interview respondents
- Doing more Kleinman focus groups in Alaska

Before the 1995 fieldwork season, the STN team participated in a workshop in Atlanta headed by Russell Bernard and Pertti Pelto, at which they learned methods and computer programs (including Anthropac and SYSTAT) for cultural domain analysis (3).

As a result of those meetings and plans, several new developments occurred during the 1995 season of research. The project experimentally tried cultural domain analysis using the Anthropac computer program. Respondents were first asked to make a free list of terms in the domains of illness and resiliency. The researchers developed triads--lists of groups of three--from these terms. (Triads for male/female relationships had already been created prior to beginning the research season.) Respondents were asked to pick which term in each triad was unlike the other two. Male and female respondents of different age groups completed the triads in each of the Alaskan communities for illness, resiliency, and relationships. In Russia, the resiliency triads were not done.

It was planned that some protocol respondents would be asked to create "genograms" by listing those people who gave them emotional support when they were children. This was hardly done at all, however.

Other objectives of the 1995 research were more fully accomplished. In almost all the study communities, researchers interviewed medical providers about their work. They also collected narratives from women about their childbirth experiences.

**Plan for analysis**

While it was expected that some preliminary analysis could take place in both Years 2 and 3, after the fieldwork data were coded and entered into databases, Year 4 was to be exclusively devoted to analysis of project data. Prior to the main analysis, all data files would have to be cleaned and tested for stability, reliability, and testing artifacts. Panels and independent samples would be compared variable by variable. Using cluster analysis and "metric and non-metric modes" of analysis (10), the study would assess longitudinal correlations across panels in order to understand general changes over time as well as changes to particular categories of people.

Time series analysis of secondary data would be
used to identify the impacts of events, although this had not previously been a very successful approach in Alaska (10). Vital statistics, morbidity, and case-load services data would be subjected to standard cross-sectional epidemiological analysis. Genealogical records would have to be coded and tested in order to document connections among respondents.

Formal longitudinal analysis of data collected would include analysis of general differences over time as well as analysis of changes to particular categories, such as Natives vs. non-Natives or males vs. females, and less obvious groupings such as people who give birth, die, change jobs, move away, etc. The PIs intended to use event history analysis to examine how individuals in the study region experienced transitions.

The final products of the STN project, completed in year 4, would include:
- Four ethnographies, one for each study region, based on secondary data, participant observation, and institutional interviews.
- Four ethnohistories, one for each study region, based on family history, genealogies, and selected household and individual data.
- One volume integrating the analysis for all regions.

The four ethnographies which had been written in 1992-1994 were reviewed by Igor Krupnik and Debra Schindler. Both reviewers noted the discrepancies in organization among the volumes, making them difficult to compare with one another. Krupnik was particularly concerned about problems in translating the Russian volumes into English, especially the Kamchatka ethnography which was mysteriously transformed and reformatted in translation. Krupnik also remarked that the Russian volumes talked much more about non-Natives in the regions than did the volumes of Alaskan ethnography. Both reviewers disagreed with the idea expressed in the Chukotka ethnography that interethnic marriages hastened the process of assimilation (9, 11).

In addition to making the changes suggested by the peer reviewers (which was never done), it was also agreed in 1994 that each of the ethnographies should be revised to give more attention to economic and macro-level changes, as well as to changing ethnic composition over time (2). It was expected that the ethnographies would ultimately be expanded to incorporate data collected in Years 1, 2, and 3, as well as transition timelines (being prepared for both Russian and Alaskan sites by McNabb and Pika) and secondary data.

There was to be considerable division of labor among the project members in completing the analysis. By 1995, not much progress had been made on what the PIs called descriptive analysis: "a low-level summary with exploratory hypotheses or inferences" (13). The PIs from each country, along with other team members, were supposed to handle their own descriptive analysis. Among the American team members, McNabb was to work on variables dealing with household structure, household functions, socialization and adult exposure, and ideal roles and activities; Penn Handwerker would work on relationship matrices and selected scales; and Richards would work on health data (3).

In 1995, the original PIs decided that everyone working on the project had permission to publish separately. At the same time, there would be a central focus to the analysis. After the deaths of PIs McNabb, Pika, and Richards, the STN team established the protocols that no publication of project data was to occur until data collection was complete; McNabb, Pika and Richards would be listed as the first three authors of any publication; and all publications using project data were subject to review by ANSC (12).

DISCUSSION

An annual progress report on the project was submitted each year for 1992-93, 1993-94, and 1994-95. Two symposia were to be held each year, one in each country, to report the project’s findings. Several such symposia were held. At the Albuquerque meetings of the SFAA in March 1995, for example, six of the project’s investigators, including McNabb, Pika, Richards, Bogojavensky, Olga Mourashko, and Handwerker, presented preli-
A problem identified in the Year 2 Annual Report was the need to narrow the field of inquiry, since the study had already collected an immense amount of data. To address this problem, the report suggested that participants continue to "cull the data" and eliminate redundant variables. It also pointed to the need to focus both on subsets of the sample and on manageable problem sets. This would force the study to "look deeply at portions of a database that is very broad but presently shallow" (2). Also in Year 2, the PIs conducted some exploratory multivariate analysis using data collected the first year. They tested the reliability and validity of some key scales that were used to measure depression, drug and alcohol use, violence, and physical health (2).

In early 1995, McNabb compiled a two-volume set of tabulations of Year 1 data. One volume included survey responses partitioned by respondent cross-section characteristics, while the other volume’s statistics were partitioned by site characteristics. STN team members used these reports as the basis for presentations at professional meetings.

In regard to dissemination of the project’s results to the communities in the study, the original plan is unclear. It is also difficult to determine how the project data were to be archived and who would have access to them. These issues had not been resolved at the time of the deaths of McNabb, Pika, and Richards, who would have been responsible for making such decisions.

**CONCLUSION**

**What has taken place since September 1995**

After the deaths of McNabb, Pika, Richards, and Condon in 1995, the project lacked the central vision that existed primarily in the minds of the Principal investigators. Meetings and discussions, both before and after it was decided that the ANSC would administer the project, mainly revolved around the status of various components of the project. There were some (not entirely successful) attempts to gather all materials related to the project at the ANSC office in Anchorage. The problems of archiving and access to the data was not resolved until the University of Alaska was assigned stewardship of the data and it was prepared for archiving and use by researchers. There has been little discussion of analysis or agreement on possible directions for the project.

There was some work on specific problem sets. For example, Robert Kraus pointed out that Richards had a great deal of data on suicides in the NANA region of Alaska. Pika and possibly Bogojavlensky planned to collect comparable suicide vignettes in Russia, but it is unclear whether they did so.

By the end of 1996 the original grant from NSF had been closed out. A follow-on grant was obtained from NSF for data collection and archiving, but not covering data analysis. The follow-on grant was scheduled to end 3/31/98, but NSF gave the project a one-year extension. At a meeting of project participants in December 1996, team members agreed that among the project’s needs were data analysis, further data collection, training for local researchers, translation, and archiving of data (12).

The Russian data were more incomplete than the Alaskan data, and there is still some confusion about exactly what information has been collected in each Russian region. By the third year, 100 surveys (about 75% of the planned sample) was conducted in Kamchatka (12). In Chukotka, the Year 3 research was not done until 1997, when Bogojavlensky traveled to Chukotka in August and September to complete the fieldwork.

Handwerker and Bogojavlensky submitted a proposal to NSF in 1997 for support to publish a book entitled Health Transition in the North: The Last 40 Years in Alaska and the Russian Far East, presenting the principal findings of the STN project. The book’s co-authors would include McNabb, Pika, and Richards. The main findings to be presented in the book relate to an analysis of the Solomon Four Group research design questionnaires.
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