

**Same Sámi? A comparison of self-reported Sámi ethnicity measures in
1970 and 2003 in selected rural areas in Northern Norway**

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In post-war Norway, only the 1970 national census has recorded ethnicity information about the indigenous Sámi, however restricted to selected areas in the north. In this study, we combine replies about Sámi ethnicity given by the same individuals in Norway's 1970 census and in the population-based SAMINOR study in 2003/2004, to compare self-reported Sámi ethnicity at two points in time that encompass a period when the effects of a longstanding assimilation policy gradually lost ground in favour of upcoming Sámi revitalization. We found self-reported Sámi ethnicity – measured as a) Sámi as home language in each of three generations and b) the respondent's self-identification as Sámi – to have remained generally stable, but some changes were observed. We argue that the results reflect interplays between societal and individual factors. We conclude that any statistical study involving an indigenous people, when clarifying the ethnicity measures, should address also the issue of ethnic mobility.

Keywords: indigenous; Sámi; Norway; self-reported ethnicity; ethnic self-identification; ethnic mobility

Introduction

It is often stated that indigenous peoples – despite their diverging political, social and cultural conditions – typically fall below national averages on standardized social indicators in their respective geographical areas; that they are more likely than their non-indigenous counterparts to experience poor health (e.g. Eversole, McNeish and Cimadamore (eds) 2005; Gracey and King 2009; United Nations 2009; Hall and Patrinos (eds) 2012). At the same time it is also often stressed that to portray and analyse indigenous peoples' positions quantitatively – not least the development over time – might be challenged by deficient or even absent high quality demographic and statistical data (United Nations 2004; Stavenhagen 2009).

One reason for this challenge is that while some countries have a long-standing tradition for recording information on ethnic affiliation(s) in national censuses, other countries do not collect such data, or their practice might have changed in either direction in the course of time (Kertzner and Arel 2002; Morning; 2008; Peters 2011; Simon and Piché 2011). Another reason is ambiguities regarding the criteria for affiliation to a certain indigenous people (e.g. Weaver 2001; Paradies 2006; Pratt 2007; Gover 2010; Kukutai 2010). The latter is even more complicated by individuals' (self-reported) ethnic affiliation not always being stable over time; a phenomenon some term ethnic mobility (e.g. Goldman 2009; Brown et al. 2010, Liebler 2010).

This article focuses on stability and change in self-reported Sámi ethnicity. The Sámi is an indigenous people traditionally settled in an area now covered by the northern and middle parts of Norway, Sweden and Finland and the Kola Peninsula in northwest Russia. While the overall Sámi situation in each of the countries varies (Lantto 2011), a common feature is that information on (self-)identification as Sámi is currently not regularly recorded in the respective national census. The Sámi is thus one of the indigenous peoples affected by interplays between absent up-to-date demographic data (Lie 2002; Axelsson 2010). There are also no uniform criteria for (deciding on) Sámi-ethnic affiliation (cf. Smith ed. 2005, p. 137). When the Sámi people nevertheless typically is estimated to comprise between 60-70,000 and 100,000 individuals in total – the highest share always in Norway and the smallest in Russia (Hassler, Kvernmo and Kozlov 2008) – the figures are based primarily on *historical* census data. In Norway, most of the present-day Sámi estimates stem from the 1970 census. This census is an exception from the overall Norwegian post-World War II census policy to not record information about *any* ethnicity (Pettersen 2011a). Due to request from Sámi organisations, the 1970 census was designed to collect certain self-reported Sámi

ethnicity data; however only in preselected mainly rural areas north of the Arctic Circle (Aubert 1978). While it was suggested that the Sámi characteristics in the 1970 census were significantly underreported (Aubert 1978), the quality and consistency of the ethnicity reporting has not been explicitly tested.

In this study, which is part of a larger methods project on Sámi ethnicity as a variable in population-based research in Norway, we investigated consistency in self-reported Sámi ethnicity by comparing replies about ethnic affiliation in the 1970 census with replies given by the same individuals to comparable questions in a population-based study of health and living conditions in 2003/2004; the SAMINOR-study (Lund et al. 2007). Our data are thus collected at two points in time that encompass a specific historical period when (the effects of) a longstanding assimilation policy gradually lost ground (Stordahl 1997; Minde 2005). Our first aim was to explore the degree of stability of self-reported Sámi ethnicity – measured as a) Sámi as home language in each of three generations, and b) self-identification as Sámi. Our second aim was to scrutinise the subjective ethnicity measure – i.e. self-identification as Sámi – more closely by exploring potential associations with selected characteristics when individuals with stable reporting on self-identification as Sámi were compared with those who changed this reporting in either direction. Our overall purpose was to gain more knowledge on Sámi-ethnic mobility in Norway and to enhance awareness of this very phenomenon when providing and interpreting quantitative knowledge on health and living conditions among indigenous Sámi.

Ethnicity and ethnic mobility

Ethnicity is generally understood as "[...] a sense of group belonging, based on ideas of common origins, history, culture, language, experience and values" (Brown and Langer

2010:412). While traditionally considered as fixed (the primordialist view), more recent (constructivist) understandings emphasize ethnicity as a context-dependent phenomenon where mutually experienced differences gain meaning through social processes (e.g. Fenton 2003; Karner 2007). At the same time, irrespective of perspective, there remain open questions regarding what exactly at any given time constitutes a specific ethnic group and why individuals self-ascribe or are ascribed affiliation to one, or more, ethnically defined collective(s) (ibid.).

The focus of the present study is that how ethnic affiliation is reported by individuals might change over time (Goldman 2009; Brown et al. 2010). Scholars refer to cases where individuals change their ethnic identity over the life course as *intragenerational* ethnic mobility (or flux), while *intergenerational* ethnic mobility denotes cases where parents and children do not have/report the same ethnic affiliation (Robitaille, Guimond and Boucher 2010). In effect, ethnic mobility is a multidirectional phenomenon and might either supply or tap a given ethnic group (ibid.). The phenomenon of ethnic mobility demonstrates that "[...] ethnicity at any point in time is a complex social process that needs more understanding" (Carter et al. 2009:76). Such understanding is particularly critical for the monitoring of (trends in) the socio-economic situation for ethnically defined populations and for the development of policy regarding these populations' health and living conditions (Guimond 2003).

Sámi ethnicity in Norway – from assimilation towards ethnic revitalisation?

The traditional Sámi settlement area; often referred to as *Sápmi*, has – although to a varying degree in time and space – through the centuries been inhabited also by other than the Sámi; the Sámi has had notably longer contact with Europeans than most other indigenous peoples, often with a high degree of interaction (Lehtola 2002, Niemi 2002;

Hansen and Olsen 2004). However, when Norway's 1970 census took place, Sámi life in Norway had for more than a century been strongly influenced by a systematic governmental assimilation policy which aimed to make the Sámi give up their language, change the basic values of their culture and replace their national identity (Minde 2003). Gradually, many who could have presented themselves as Sámi chose to not do so (Nielsen 1986; Minde 2005). In some local communities, especially at the coast where the non-Sámi settlement historically has been most noticeable, it could be considered a social stigma to be associated with being Sámi, and it was rather common to not reveal Sámi affiliation if it could be avoided (Eidheim 1971).

Starting in the late 1960s, the overall goal of the modern Sámi movement in Norway was that no one should (feel forced to) deny, conceal or abandon a Sámi-ethnic affiliation. Instead, a new Sámi self-understanding and a new relationship based on equity and equality between the Sámi as a people and the Norwegian society should develop (Stordahl 1997). In around 1990, the framework for 'being Sámi' in Norway had changed significantly. A constitutional amendment in 1988 stated that '[i]t is the responsibility of the authorities of the State to create conditions enabling the Sami people to preserve and develop its language, culture and way of life' (§ 110a). A Sámi Act, adopted in 1987, stated that the Sámi in Norway are to have a representative popularly elected body at the national level – a *Sámediggi* – elected by and among those Sámi who choose to join a separate electoral roll established for this purpose. Those entitled to enrol are every person aged at least 18 years who self-identify as Sámi and who, also, declare that Sámi is or was a home language for either the individual or for at least one parent, grandparent or great-grandparent (§ 2-3). In 1990 the Sámi Act was expanded to include certain rights regarding the use of Sámi language, particularly in certain municipalities.

A side effect of these political arrangements is that the issue of having Sámi-ethnic affiliation became a topic in both public and private settings. Ever since the Sámediggi was established in 1989, active mobilization to join the electoral roll has taken place and by 2009, the number of enrolled had tripled (Pettersen 2011b). It is commonly assumed that this growth has to do with, on the one hand, less resistance towards the very recording of Sámi affiliation in an official registry, combined with more supportive attitudes towards the Sámediggi as an institution, and, on the other hand, ethnic mobility resulting from that the changed framework for 'being Sámi' in Norway has made it more uncomplicated to clarify, acknowledge and publicly expose Sámi affiliation. Given the deficient Sámi demographic data, it is however no obvious way to examine these assumptions numerically. Our study aims at adding new knowledge on the Sámi-ethnic mobility aspect.

Materials and methods

Data and study sample

We used data collected in 2003/2004 for the SAMINOR study, a population-based cross-sectional study on health and living conditions in selected rural and semi-rural areas on the Norwegian side of Sápmi (cf. Figure 1), where the 1970 census or other available knowledge indicated a significant Sámi population (Lund et al. 2007). The SAMINOR study – initiated by the Centre for Sámi Health Research at UiT The Arctic University of Norway and conducted in collaboration with the Norwegian Institute of Public Health – was the first time since 1970 that a significant share of Norway's general population was asked about their ethnic affiliation(s). A total of 27,987 persons aged 30 or 36-79 years were invited to participate, whereof 60.6 percent returned at least one of the study's three questionnaires (ibid. Tab. IV).

[Figure 1 about here]

Our study included participants aged 36-79 years who, firstly, were resident in one of the 17 entirely involved municipalities north of the Arctic Circle (by 1 January 2003 the home of 1.1 percent of Norway's total population), secondly, had returned the SAMINOR questionnaire including the ethnicity questions, and thirdly, had responded to at least one of the Sámi ethnicity questions in Norway's 1970 census.

From the 1970 census we used information on the municipality of residence and the replies to the 'Sámi ethnicity questions'. The sample was created by Statistics Norway, who on behalf of the Centre for Sámi Health Research linked the selected census data with the SAMINOR data. The Norwegian unique personal identification number was used as linkage and then removed to anonymize the data. The linked file contained 16,159 individuals of whom 10,541 fulfilled the inclusion criteria.

Measures

We measured stability in self-reported Sámi ethnicity by comparing replies to the questions about *any* ethnicity in the SAMINOR study with replies given by the same persons to the questions about *Sámi* ethnicity in the 1970 census.

The SAMINOR ethnicity questions were: 1) What language do/did you, your parents and your grandparents use at home? 2) What is your, your father's and your mother's ethnic background? 3) What do you consider yourself? For all questions, one or more boxes could be ticked for the options 'Norwegian', 'Sámi', 'Kven' and 'Other, please describe' (in our study area 'Kven' represents descendants of Finnish pre-1945 immigrants, now formally recognized as a national minority in Norway). The responses about language were to be specified for each parent and grandparent.

The 1970 census ethnicity questions were: 1) Was Sámi the first language spoken by the person? 2) Was Sámi the first language spoken by one of the person's parents? 3) Was Sámi the first language spoken by one of the person's grandparents? 4) Does the person consider himself to be a Sámi? The answers could be 'Yes' or 'No', with 'Don't know' as an alternative in Questions 2 and 3 and 'Uncertain' or 'Do not wish to answer' in Question 4. Parents or guardians were to determine whether children under 15 should be considered as Sámi

We compared the replies by constructing separate variables for each of four ethnicity measures:

- Sámi as home language for the person, i.e. the respondent.
- Sámi as home language for at least one parent.
- Sámi as home language for at least one grandparent.
- The person consider him-/herself to be Sámi, i.e. self-identification as Sámi

We defined four potential outcomes for each ethnicity measure:

- 'Stable yes' = ticked for Sámi in SAMINOR and ticked for 'Yes' in 1970.
- 'Stable no' = not ticked for Sámi in SAMINOR and ticked for 'No' in 1970.
- 'New yes' = ticked for Sámi in SAMINOR and for either 'No', 'Don't know', 'Uncertain' or 'Do not wish to answer' in 1970.
- 'New no' = not ticked for Sámi in SAMINOR and ticked for 'Yes', 'Don't know', 'Uncertain' or 'Do not wish to answer' in 1970.

We included gender without any specific hypotheses in mind. We divided the age range of 36-79 years (equivalent to being 3-44 years in 1970) into three categories: '36-48 years' comprises participants who were below 15 years in 1970 and for whom a parent

or guardian were to decide on the census question about identification as Sámi. Those aged '49-61 years' make up a cohort we assume could have strong opinions either in favour of or against the Sámi movement's aspirations from 1970 and onwards. The remainder constitute the category '62-79 years'.

To explore whether stability in self-reported ethnicity varied by local context, we grouped the 17 municipalities into 5 regions, based on location, Sámi cultural distinctions, and population size (Figure 2).

[Figure 2 about here].

Six municipalities which in 2003 made up the Sámi Language Administrative District – an area where the Sámi Act introduced special measures to promote Sámi language – constitute the regions '1 Inner language area' (Kautokeino and Karasjok) and '2 Outer language area' (Kåfjord, Porsanger, Tana and Nesseby). This distinction was made because the Sámi language during recent decades has had a significant stronger position in the two inland municipalities of Region 1. Six municipalities with traditional coastal Sámi settlement constitute the region '3 Areas of Northern Troms/Finmark' (Storfjord, Lyngen, Kvænangen, Loppa, Kvalsund and Lebesby). Region '4 Alta' covers the municipality of Alta – also on the coast and traditionally rural, but self-declared as a town in 2000. Region '5 Areas of Nordland/Southern Troms' consists of municipalities with Lule and Marka Sámi settlements (Tysfjord, Evenes, Skånland and Lavangen). To minimize a potential influence of having changed local context between the two points of time, we constructed – in addition to the geographical regions – a category labelled '0 Changed Region' to identify those who were resident in different regions when they responded to, respectively, the 1970 census and the SAMINOR study in 2003/2004.

To explore a potential influence of education on the reporting of ethnicity – primarily on whether education could be a ticket away from 'being Sámi' (Stordahl

1996) – we used the SAMINOR question 'How many years of education have you completed?'. The responses were grouped into 'Maximum 9 years' (commenced compulsory education), '10-12 years' (commenced high school) and 'Minimum 13 years' (commenced college/university studies).

In contrast to the 1970 census, the SAMINOR study allowed for multiple replies to the question on ethnic self-identification. To capture the scope and potential impact of multi-ethnic self-identification we used the question 'What do you consider yourself?' and constructed a dichotomous variable to distinguish between respondents who had ticked for one option or more options, respectively.

Finally, there has been a widespread assumption that 'new' knowledge about Sámi as home language in the parental or grandparental generation, might lead to 'new' self-identification as Sámi. To explore this assumption, we constructed variables for the reporting of parental and grandparental language, respectively. We compared SAMINOR responses with 1970 responses and categorized the outcomes as 'Not changed', 'Changed to Sámi', and 'Changed from Sámi'.

Statistical analysis

Statistical analyses were performed in STATA, Version 12. We measured the extent of stability in self-reported Sámi ethnicity using cross tabulations. To investigate associations between selected characteristics and 'stable yes' versus respectively 'new yes' and 'new no' regarding self-identification as Sámi, we used contingency tables and chi-square tests with respect to parental and grandparental language. For the other independent variables, we used logistic regression to estimate the odds ratio (OR) with corresponding 95 per cent confidence intervals. In the multivariate models, all variables were included and mutually adjusted for, irrespective of statistical significance in the

univariate analyses.

Ethics

The SAMINOR study was approved by the Regional Committee for Medical Research Ethics, Northern Norway (REK North). A Sámi consultant participated in the review of the application. Permission for retention of personal data was provided by the Norwegian Data Inspectorate. All invitees were informed of and asked to consent to subsequent linkage to various health and administrative registers, including census data. All study participants gave their consent. The present study's data linkage was approved by REK North. Beyond this, in contrast to many other indigenous peoples, the Sámi in Norway have not (yet) adopted specific guidelines or procedures for research involving Sámi participants (Porsanger 2008).

Results

Some characteristics of the study sample are presented in Table 1.

[Table 1 about here]

The gender and age distributions are relatively even, whereas the regional distribution varies significantly. Participants reporting at least one grandparent with Sámi as home language are almost twice as many as those reporting Sámi as their own home language. About one of four reported self-identification as Sámi. One of ten reported multi-ethnic identification.

When examining the degree of stability in self-reported Sámi ethnicity by comparing replies in the SAMINOR study and the 1970 census, we found, firstly, a majority of stable replies to all the four questions; 'stable no' being in majority.

Secondly, we found that the changed replies comprised more 'new yes' than 'new no' (Table 2).

[Table 2 about here]

Further calculations revealed that the yes replies to the question on self-identification as Sámi in the SAMINOR study (in total 2,691) represented a gross increase of 33.6 per cent yes replies compared to the 1970 census – or a net increase of 22.6 per cent if the 501 'new no' are taken into account.

Table 3 shows the amount of the sample's 'undecided' replies in the 1970 census – i.e. 'Don't know' (about Sámi language in the two former generations) and 'Uncertain' and 'Do not wish to answer' (about self-identification as Sámi) – and how these replies were distributed as respectively 'new yes', 'new no' and 'data missing' when the 1970 census and the responses were compared.

[Table 3 about here]

The overall picture is that when missing values are taken into account, the undecided 1970 census responses were distributed slightly in favour of 'new no' compared to 'new yes'. Further calculations show that 'Don't know' replies in 1970 accounted for 60.5 percent of the 'new no' replies about grandparents' language in SAMINOR and 30.3 percent of the 'new yes' (cf. Table 2). The corresponding proportions for parents' language were 30.2 percent of 'new no' and 15.6 percent of 'new yes'. The undecided 1970 replies about self-identification as Sámi amounted to 68.5 percent of the 501 'new no' and 39.5 percent of 904 'new yes'.

Restricted to a sub-sample of 10,251 participants who had responded to the one question on self-identification as Sámi in both data collections, Table 4 provides an overview of the distribution of the selected study characteristics – in total and for each of the potential outcomes defined for each ethnicity measure.

[Table 4 about here]

When comparing the results for the total sample with the results for each of the four outcomes, we found no major differences for gender and age, while the results for the regions were rather mixed. Region '2 Outer language area' showed elevated proportions of changed replies ('new yes' and 'new no'), whereas Region '4 Alta' showed lower proportions.

Notable with respect to education is that for those with at least 13 years of education, the percentage of 'new yes' was 10.2 percentage points higher than in the sample. Among those who reported multiple ethnic identification in the SAMINOR study the proportion of 'new yes' was particularly elevated; 63.9 per cent versus 10.9 percent in the sample (it can be noted that among the 1,064 multiple ethnic identifications there were 884 combinations including Sámi; whereof 681 combined Sámi and Norwegian only). The results also demonstrates a clear pattern of an association between change in parents and grandparents language and change in own self-identification as Sámi.

To explore associations between changes in reported self-identification as Sámi and selected study characteristics, we performed univariate followed by mutually adjusted multivariate logistic regressions of respectively 'new yes' and 'new no' responses in relation to 'stable yes' responses; all presented in Table 5.

[Table 5 about here]

The unadjusted analyses of 'new yes' respondents revealed significant differences for most characteristics. The pattern was maintained in the mutually adjusted analysis, but most ORs were slightly modified – except that age had the sign reversed and also ceased to be significant. For education, the odds for 'new yes' were elevated in both categories compared to the reference category: OR = 1.37 (CI: 1.01 to 1.86) for '10-12

years' and OR = 1.70 (CI: 1.25 to 2.31) for 'Minimum 13 years'. Those reporting multi-ethnic identification had the highest odds for 'new yes': OR = 5.51 (CI: 4.40 to 6.92). The main finding with respect to the unadjusted as well as mutually adjusted analyses of 'new no' respondents was that the adjusted lowest odds of 'new no' applied to those who had reported more than one ethnic identification; OR = 0.10 (CI 0.06 to 0.17).

Due to notably few 'stable yes' among those with changed reporting of parental or grandparental language, these characteristics were not included in the logistic regression. Instead, we analysed the associations between these characteristics and changes in reported self-identification as Sámi by using contingency tables and chi-square tests. We found a statistically significant association ($p < 0.001$) in the distribution between all observed changes (data not shown).

Discussion

The main findings when investigating stability in self-reported Sámi ethnicity – measured by comparing replies given by the same individuals to four ethnicity questions in the SAMINOR study in 2003/2004 and Norway's 1970 census, respectively – were: 1) Self-reported Sámi ethnicity at the two points of time was generally stable, but some changes were observed in both directions; the largest proportions being 'new yes'. 2) There were significant associations between changes in reported self-identification as Sámi and changes in the reporting about Sámi as parental or grandparental language. 3) Compared to the respondents with 'stable yes' replies to the question about self-identification as Sámi, those with 'new yes' were more likely to have commenced higher education and, also, to have reported multiple ethnic affiliations.

In general, concerning the observed '*new yes*' replies in our study, there is reason to relate them to the last decades' changed framework for 'being Sámi' in Norway,

implying increased openness with respect to (possible) Sámi affiliation. Concerning the *'new no' replies*, it must be taken into account that these replies – to a greater extent than 'new yes' – originated from 'undecided' 1970 responses (cf. Table 3). This suggests that for many, the Sámi ethnicity issue were actually undecided in 1970.

Considering to the *replies about Sámi as home language*, it might, on the one hand, seem strange to find these replies changed at all as this is an empirical issue which should allow a straightforward Yes or No response – given available information on the matter. On the other hand, being a key definitional basis for Sámi ethnicity (Smith ed. 2005), to uncover Sámi as home language in a family's history or to expose such history publicly, might be perceived as equivalent with articulating self-identification as Sámi. In such a perspective, revealing Sámi as a language spoken at home might serve as far more than 'neutral' linguistic information.

Considering to the *self-identification as Sámi*, the significant association between changes in such identification and changes in the reporting about Sámi as parental or grandparental language confirmed the widespread anticipation about such an effect – although still, a fairly large number of those who changed reporting of family language, did *not* change their ethnic self-identification. Further, as the odds for both 'new yes' and 'new no' compared to 'stable yes' to self-identification as Sámi, varied greatly with region, this indicates that the place of residence might have significant influence in both directions. A more detailed exploration of these variations is of interest but beyond the scope of this study because it necessitates a comprehensive outline of each region's distinctive historical and cultural characteristics. This includes the noticeably different proportions of 'stable yes' and 'stable no' replies to the Sámi ethnicity questions, and also, that Sámi related (political) issues have been far more polarized in some regions than in other (e.g. Stordahl 1996; Minde 2003; Olsen 2010).

The observed impact of higher education on self-identification as Sámi might indicate that education – independent of comprising explicit curriculum about Sámi issues – enhances the understanding of societal issues in general, and also, perhaps, improves individuals' self-confidence with respect to articulating Sámi affiliation. Thus, in our material, education is not a way from (articulation of) 'being Sámi', but rather the opposite. Finally, the odds for 'new yes' when multi-ethnic identification is reported, suggest that (reported) self-identification as Sámi might increase if facilitated for multi-ethnic reporting.

In sum, the findings in this study are in line with other studies demonstrating that Sámi linguistic connection is not decisive for self-identification as Sámi (e.g. Høgmo 1986; Stordahl 1996; Andersen 2003; Paine 2003; 2003; Olsen 2010). The issue of ethnic self-identification includes that the decades covered by this study, have been characterized not only by Sámi emancipation but also by dilemmas and new conflicts; by splits and political cleavages among (potential) Sámi (Høgmo 2011). Hence, some of the 'new no' replies might have come from people who wanted to detach themselves from the altered Sámi political situation. But, of course, 'new no' can also express real changes in ethnic self-identification; Sámi is something one was in the past, when one's life circumstances were different (Agenda Utredning & Utvikling 2002). Nevertheless, for each Sámi ethnicity measure investigated in this study, the *intragenerational* ethnic mobility supplied more than tapped the respective Sámi population.

Limitations

A limitation to this study is that *any* study aiming at statistical knowledge on Sámi issues in Norway, is hampered by the deficient Sámi demographic data; without knowing the ethnic distribution of a given population, the representativeness of a given

ethnic sample cannot be formally assessed.

The different wording of the ethnicity questions in the study's two data sets – though taken care of in the coding of the variables – calls for some reservations as to the internal validity of the analysis. Also noteworthy is that many respondents were of an age where they might not have access to first-hand information about parental and grandparental language. Using education as the sole socio-economic measure could be considered a weakness. A potential additional measure is household income; not least because of a former rather widespread idea suggesting that getting out of poverty would/could mean leaving (self-)identification as Sámi behind (e.g. Nielsen 1986). However, we found the use of current household income to be a measure of limited relevance in a study spanning three decades.

Of particular importance is that all study participants were born before 1968 and hence touched by both the (effects of) the assimilation policy, the new framework for 'being Sámi', and, consequently, the related new dilemmas and conflicts. Thus, studies with younger respondents, a different time horizon or a different study area, might produce other results when comparing self-reported Sámi ethnicity between two points in time.

Conclusion

When comparing the replies given at two points of time by the same individuals about self-reported Sámi ethnicity – measured as a) Sámi as home language in each of three generations, and b) self-identification as Sámi – we found the reporting to be generally stable, but that some changes occurred in both directions; the largest proportions being 'new yes'. Taken together, the results of this study of a particular cohort's reporting of Sámi ethnicity before and after certain changes in the framework for 'being Sámi' in

Norway took place, suggest that the stability in self-reported Sámi ethnicity might be influenced not only by impacts from the national policy towards the Sámi (the *macro* level), but also from overall and Sámi-specific conditions in the local communities (the *meso* level), and from individual characteristics; in this case change in reported parental and grandparental home language, level of education, and the reporting of multi-ethnic background (the *micro* level).

Our study adds to the knowledge on Sámi-ethnic mobility in contemporary Norway but might thereby also enhance the general awareness of ethnic mobility as an aspect to take into consideration when using ethnicity as a variable in studies aiming at portraying and analysing indigenous peoples' positions quantitatively – for instance their health and living conditions in time and space. Hence, our main message is that in such studies, it would be wise not only to transparently justify the choice of ethnicity measure(s), but also to routinely evaluate possible impacts of ethnic mobility on the measure chosen. Only then future statistical analysis can serve to accurately assess whether an indigenous people is worse off than the non-indigenous counterpart(s) in the same geographical area.

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Table 1 Some sample characteristics (n = 10,541)

	n	%
<i>Gender</i>		
Male	5,215	49.5
Female	5,326	50.5
<i>Age (SAMINOR)</i>		
36-48 years	3,556	33.7
49-61 years	3,794	36.0
62-79 years	3,191	30.3
<i>Region (SAMINOR and 1970 census)</i>		
0 Changed region	1,916	18.2
1 Inner language area (2 municipalities)	1,137	10.8
2 Outer language area (4 municipalities)	2,151	20.4
3 Areas of Northern Troms/Finnmark (6 municipalities)	2,161	20.5
4 Alta	2,711	25.7
5 Areas of Nordland/Southern Troms (4 municipalities)	465	4.4
<i>Self-reported length of education (SAMINOR) *</i>		
Maximum 9 years	3,891	42.1
10-12 years	2,815	30.4
Minimum 13 years	2,541	27.5
<i>Sámi as home language: The Person (SAMINOR) *</i>		
No	8,061	77.8
Yes	2,300	22.2
<i>Sámi as home language: At least one parent (SAMINOR) *</i>		
No	6,878	66.3
Yes	3,491	33.7
<i>Sámi as home language: At least one grandparent (SAMINOR) *</i>		
No	5,773	57.0
Yes	4,359	43.0
<i>Self-identification as Sámi: The person (SAMINOR) *</i>		
No	7,570	73.8
Yes	2,693	26.2
<i>Self-reported multi-ethnic identity (SAMINOR) *</i>		
No	9,198	89.6
Yes	1,065	10.4

Subgroups marked with * have lower *n* because of missing values.

Table 2 Comparison of replies to questions about various measures of Sámi ethnicity in the SAMINOR study in 2003/2004 and the 1970 census

	All replies	Stable yes		New yes		New no		Stable no		
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<i>Sámi as home language</i>										
The person	10,334	1,930	18.7	359	3.5	118	1.1	7,927	76.7	
At least one parent	10,342	2,825	27.3	655	6.3	450	4.4	6,412	62.0	
At least one grandparent	10,107	3,235	32.0	1,113	11.0	721	7.1	5,038	49.9	
<i>Self-identification as Sámi</i>										
The person	10,251	1,787	17.4	904	8.8	501	4.9	7,059	68.9	

All subgroups have varying *n* because of missing values.

Table 3 Replies other than yes or no to questions about various Sámi ethnicity measures in the 1970 census compared with yes and no replies in the SAMINOR study in 2003/2004

	Total <i>n</i>	Yes in SAMINOR		No in SAMINOR		Data missing in SAMINOR	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>Sámi as home language (1970 census)</i>							
'Don't know' for at least one parent	240	102	42.5	136	56.7	2	0.8
'Don't know' for at least one grandparent	833	337	40.5	436	52.3	60	7.2
<i>Self-identification as Sámi (1970 census)</i>							
'Uncertain'	465	225	48.4	216	46.5	24	5.2
'Do not wish to answer'	270	132	48.9	127	47.0	11	4.1

Table 4 Sample characteristics and comparison of replies to questions about self-identification as Sámi in the SAMINOR study in 2003/2004 and the 1970 census (n = 10,251)

	Total		Stable yes (n=1,787)		New yes (n=904)		New no (n=501)		Stable no (n=7,059)	
	n	%	n	%	n	%	n	%	n	%
	<i>Gender</i>									
Male	5,075	49.5	855	47.9	475	52.5	253	50.5	3,492	49.5
Female	5,176	50.5	932	52.2	429	47.5	248	49.5	3,567	50.5
<i>Age (SAMINOR)</i>										
36-48 years	3,497	34.1	630	35.3	338	37.4	172	34.3	2,357	33.4
49-61 years	3,700	36.1	640	35.8	347	38.4	160	31.9	2,553	36.2
62-79 years	3,054	29.8	517	28.9	219	24.2	169	33.7	2,149	30.4
<i>Region (SAMINOR and 1970 census)</i>										
0 Changed region	1,871	18.3	237	13.3	205	22.7	83	16.6	1,346	19.1
1 Inner language area (2 municipalities)	1,110	10.8	929	52.0	102	11.3	23	4.6	56	0.8
2 Outer language area (4 municipalities)	2,075	20.2	474	26.5	363	40.2	231	46.1	1,007	14.3
3 Areas of Northern Troms/Finnmark (6 municipalities)	2,090	20.4	23	1.3	139	15.4	67	13.4	1,861	26.4
4 Alta	2,650	25.9	33	1.9	65	7.2	65	13.0	2,487	35.2
5 Areas of Nordland/Southern Troms (4 municipalities)	455	4.4	91	5.1	30	3.3	32	6.4	302	4.3
<i>Self-reported length of education (SAMINOR) *</i>										
Maximum 9 years	3,772	41.7	629	46.8	256	33.5	208	49.4	2,679	41.1
10-12 years	2,765	30.6	313	23.3	218	28.5	123	29.2	2,111	32.4
Minimum 13 years	2,512	27.8	401	29.9	291	38.0	90	21.4	1,730	26.5

<i>Self-reported multi-ethnic self-identification (SAMINOR) *</i>											
No	9,187	89.6	1,481	82.9	326	36.1	481	96.0	6,899	97.7	
Yes	1,064	10.4	306	17.1	578	63.9	20	4.0	160	2.3	
<i>Reporting of at least one parent with Sámi as home language in SAMINOR vs. in the 1970 census (SAMINOR and 1970 census) *</i>											
Not changed	9,039	89.4	1,738	98.5	674	76.0	312	65.6	6,315	90.5	
Changed to Sámi	638	6.3	8	0.5	180	20.3	42	8.8	408	5.8	
Changed from Sámi	432	4.3	18	1.0	33	3.7	122	25.6	259	3.7	
<i>Reporting of at least one grandparent with Sámi as home language in SAMINOR vs. in the 1970 census (SAMINOR and 1970 census) *</i>											
Not changed	8,105	82.0	1,737	99.3	647	74.5	318	70.0	5,403	79.3	
Changed to Sámi	1,085	11.0	7	0.4	212	24.4	33	7.3	833	12.2	
Changed from Sámi	699	7.1	6	0.4	9	1.0	103	22.7	581	8.5	

Subgroups marked with * have lower *n* because of missing values.

Table 5 Logistic regression models with unadjusted and adjusted odds ratio (OR) and 95% confidence interval (CI) for selected characteristics of new yes (n=904) and new no (n=501) respondents in relation to stable yes (1,787) respondents about self-identification as Sámi when replies to equivalent questions in the SAMINOR study and the 1970 census are compared

	New yes (n=904)				New no (n=501)			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	OR	95 % CI	OR	95 % CI	OR	95 % CI	OR	95 % CI
<i>Gender</i>								
Male	1.00	–	1.00	–	1.00	–	1.00	–
Female	0.83	0.71–0.97	0.72	0.58–0.90	0.90	0.74–1.10	0.88	0.68–1.16
<i>Age (SAMINOR)</i>								
36-48 years	1.27	1.03–1.56	0.92	0.71–1.19	0.84	0.66–1.06	0.68	0.49–0.94
49-61 years	1.28	1.04–1.57	0.75	0.54–1.06	0.76	0.60–0.98	0.72	0.48–1.07
62-79 years	1.00	–	1.00	–	1.00	–	1.00	–
<i>P for trend</i>	0.019		0.102		0.132		0.015	
<i>Region (SAMINOR and 1970 census)</i>								
0 Changed region	1.00	–	1.00	–	1.00	–	1.00	–
1 Inner language area (2 municipalities)	0.13	0.10–0.17	0.19	0.14–0.27	0.07	0.04–0.11	0.04	0.02–0.07
2 Outer language area (4 municipalities)	0.89	0.70–1.12	1.02	0.77–1.37	1.39	1.04–1.87	1.46	1.03–2.06
3 Areas of Northern Troms/Finmark (6 municipalities)	6.99	4.33–11.28	5.58	3.29–9.72	8.32	4.87–14.21	8.89	4.75–16.60
4 Alta	2.28	1.44–3.60	1.76	1.03–3.02	5.62	3.45–9.16	6.95	3.91–12.36
5 Areas of Nordland/Southern Troms (4 municipalities)	0.38	0.24–0.60	0.34	0.20–0.58	1.00	0.63–1.61	0.96	0.65–1.65
<i>Self-reported length of education (SAMINOR)*</i>								
Maximum 9 years	1.00	–	1.00	–	1.00	–	1.00	–
10-12 years	1.71	1.37–2.14	1.37	1.01–1.86	1.19	0.92–1.54	1.34	0.89–2.04
Min.13 years	1.78	1.45–2.20	1.70	1.25–2.31	0.68	0.51–0.90	0.94	0.60–1.47

<i>P for trend</i>	0.000		0.000		0.047		0.246	
<i>Self-reported multi-ethnic self-identification (SAMINOR) *</i>								
No	1.00	-	1.00	-	1.00	-	1.00	-
Yes	8.58	7.14–10.31	5.51	4.40–6.92	0.20	0.13–0.32	0.10	0.06–0.17

Subgroups marked with * have lower *n* because of missing values.

Figure 1. Municipalities included in the SAMINOR study in 2003/2004

Figure 2. Sámi settlement regions defined for this study

Region labels: 1 Inner language area (2 municipalities), 2 Outer language area (4 municipalities), 3 Areas of Northern Troms/Finnmark (6 municipalities), 4 Alta municipality, 5 Areas of Nordland/Southern Troms (4 municipalities).

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