PART III

Distant Reading, Public Discussions and Movements in the Past
Introduction

The consequences of forced migrations are felt globally and are faced by millions of people each year. A critical question is how these refugees adjust to their new environments and eventually integrate into the host population. A number of factors can influence the ultimate assimilation of migrant populations and these are frequently related to the characteristics of the migrants (for example, demographic variables and socio-economic background), flight (for example, cause of flight), host country or region (for example, natural resources) and the resettlement policies of host populations. One way to measure the successful settlement and assimilation of displaced populations is to look at the number of times an individual relocates after their initial arrival in a host country and to analyse which factors affect these moves. In general, the more individuals move, the less likely they are to integrate. In this
chapter, we investigate the evacuation of Karelia—a unique forced migration event that took place in Finland during the Second World War—and the socio-demographic and environmental factors associated with the relocation and settlement of Karelian evacuees during and after the war.

Our methodological approach builds on the socio-economic tradition of conducting digital history in which we use quantitative data and methods to analyse and interpret a question of historical importance (the assimilation of Karelian evacuees). Therefore, it might be more accurate to define the methodological approach used here as quantitative history, rather than ‘new digital history’, even though it can certainly be argued that all quantitative history is essentially digital history. In line with many of the new digital history projects, our data has been digitised and compiled with the help of new digital tools (see ‘Material and Methods’, below) and we have an interdisciplinary research team of biologists, computer scientists, sociologists and historians with considerable experience working on these and similar datasets. However, analysing these newly extracted data has been executed with rather common statistical methods (for example, regression models) that are in line with the quantitative tradition of social and economic history.

During the Second World War, an estimated 40 million Europeans fled their homes in what is widely considered to be the worst refugee crisis in modern history. Finland faced this problem after it ceded Karelia to the Soviet Union in the aftermath of the Winter War (1939–1940) and once again after the Continuation War (1941–1944). Almost all Karelians were evacuated to the remaining parts of Finland. It has been said that Karelians have had the ‘sad privilege of being the only refugee group in the world to have been displaced three times within a short period of four years—1940–1944’. Two of these displacements were forced and resulted from the Soviet occupation of Karelia in the Winter War and at the end of the Continuation War, but one, during the Continuation War, was a voluntary migration back to recaptured Karelia.

Previous historical and cultural studies of Karelians have concentrated on describing the Karelian evacuees and their assimilation in Finnish society, Karelians’ memories of the evacuations and the land they lost in Karelia, and the resettlement policy of the Finnish government. In addition, previous sociological and epidemiological studies of Karelian evacuees have mainly focused on the long-term effects of forced migrations on mortality, income or socio-economic status by comparing displaced Karelians with the rest of the Finnish population. These studies have frequently been conducted with the same 10% sample data (n = 411,629) from the 1950 population census, which was the first full census implemented in Finland. Karelians can be extracted from these data because there is information on the place of residence from the year 1939 which is prior to the initial evacuation. A constraint of this dataset, however, is that it is limited to variables available in the years 1939, 1950 and in follow-up datasets from 1970s onwards. Studies conducted with these data have found that after the Second World War Karelian men had higher socio-economic standing
and higher income than their non-displaced counterparts.¹⁰ Sarvimäki and colleagues suggest that one reason for this is that Karelians were more likely to move from their initial placement areas to other regions in Finland in search of better employment opportunities than non-displaced Finns. This suggests at least one explanation for the finding that younger male Karelians reached a higher socio-economic position when compared to non-displaced Finnish males. In addition, displaced people transitioned faster from agrarian to modern occupations than non-displaced Finns, which could have also affected their improved socio-economic standing.¹¹ On the other hand, a study by Haukka and colleagues found that displaced Karelians had higher overall mortality and ischemic heart disease mortality than the rest of the Finnish population. It is interesting to note, however, that when compared to international research on the long-term effects of forced migration, Karelians had lower suicide rates.¹²

Previous studies have not used micro-level data to explore whether Karelian evacuees differed in their migration histories as a function of their background characteristics. Background characteristics of Karelians as well as environmental factors of a host country may associate with likelihood of migration; furthermore, migration history could reflect the assimilation of Karelians. More specifically we explore: Who moved back to Karelia when they had the opportunity? And who remained in western Finland? Which environmental factors affected the likelihood of return? How much, on average, did Karelians move after the second evacuation (that is, how easily did they settle after the Second World War)? What were the characteristics of the evacuees who moved most frequently and what factors predict faster assimilation?

Karelian Evacuees

Two separate wars were fought with the Soviet Union on the eastern border of Finland. The Winter War started on 30 November 1939, when the Soviet Union attacked Finland, and lasted until 13 March 1940. During this first war, Finland lost 11% of its land territory, including its second biggest city, Vyborg. The Soviet occupation of Karelia forced approximately 407,000 people to flee their homes and to be placed elsewhere in western Finland.

Before 1950, Finland was predominantly an agrarian country, and agricultural occupations were even more common in Karelia than in other parts of the country. Approximately 230,000 evacuees (57%) earned their living from agriculture. Not all of them were farmers, however, and some were agricultural workers who did not own the farm they worked on. These farms were, on average, smaller than farms in other parts of Finland.¹³

The initial placement of the evacuees was poorly planned and organised due to the sudden start to the Winter War and rapid advance of the Soviet troops. Migrants were initially housed in public buildings that were used as shelters and only later were transferred to private residences. In the summer of 1940, an
Emergency Settlement Act and compensation law were passed. With the settlement law, farmers could obtain new land to farm and, with the compensation law, the state would pay for the lost property.¹⁴

Land for evacuees was acquired from the state, the Church and municipalities, but it was also frequently seized from private owners. Although Finnish authorities attempted to carry out land acquisitions with voluntary purchases, many farmers were forced to sell their land. The purpose of the Emergency Settlement Act was not to ensure that Karelian farmers would be fully compensated for the land they had lost, but rather was to make sure that those Karelians who made their living from agriculture could continue to do so.¹⁵

Between the Winter and Continuation Wars, evacuees who made their living from agriculture, especially those who had their own farms in Karelia, had the hardest time adjusting because the Emergency Settlement Act forced them to wait before they received land. This may have caused additional friction between evacuees and the host population because of the hard labour shortage with which evacuees were expected to help.¹⁶ But it was the placement of Karelian evacuees among Swedish-speaking Finns that aroused the most criticism. This was because placing Finnish-speaking Karelians in bilingual municipalities could have endangered the delicate relationship between Swedish- and Finnish-speaking populations. The language question came to the fore once again after the Continuation War, when Karelians had to be settled permanently in the remaining parts of Finland.¹⁷

Because carrying out the Emergency Settlement Act was slow, only about 13,000 new small farms were actually founded and only 6,000 of these contracts were finalised by the summer of 1941, even though many more applications were received. With the onset of the Continuation War in the summer of 1941, Finnish troops reconquered the Russian occupied regions, which gave Karelians the opportunity to return to Karelia. Evacuees who had received emergency settlement farms were then allowed to cancel their contracts; more than half of them did so by March 1943 and returned to Karelia. Nevertheless, a few hundred households kept their emergency settlement farms and gave up their claims on their land in Karelia.¹⁸ Approximately 70% of the original evacuees (280,000) who had initially settled elsewhere in Finland voluntarily moved back to their previous home in Karelia, while the remaining 30% decided to remain in their new location. The number of evacuees who returned was higher in some locations of origin (for example, over 80% for Sortavala) and lower in others (for example, 40% to 60% for Viipuri). Farmers were more likely to return (~75%), and although returning to locations near the front line was not allowed, some disobeyed and returned anyway. A long period of trench warfare kept the front line quite stable from January 1942 until summer 1944 when the final Soviet offensive began.¹⁹

The Continuation War ended in the autumn of 1944 and the border was redrawn back to where it had been in 1940 and everyone who had returned to Karelia between the wars was evacuated once again.²⁰ This time, the evacuation
and placement of evacuees were much more systematic than they had been after the Winter War. In May 1945, the Parliament approved the Land Acquisition Act (Maanhankintalaki), which guided the settlement policy. According to the Act, groups that were entitled to receive land were evacuees who had made their living from agriculture, disabled soldiers, war widows, war orphans, soldiers who had served on the frontline or had a family and several other smaller groups. Evacuees submitted almost 48,500 applications for land; 92% of these were accepted and evacuees were placed in certain initial placement areas. In the summer of 1945, they started to move to other places, partly because they were ordered to and partly due to their own initiative. The official placement plan only applied to the agricultural population, which meant that townspeople and industrial workers were free to choose where they wanted to settle. Resettlement of the agricultural population was based on the idea that people from the same villages would be able to stay in the same areas and that their placements would correspond to the climatic, economic and religious circumstances of the area from which they were evacuated. The official placement plan was only applied in its strictest form to farmers, and among them those who were entitled to farm. This constituted about 35% of all evacuees. Although they were in the minority, the final resettlement plan resulted in most of the farmers having to move again. As a result, in the years immediately following the war, movements may have been more prevalent among farmers than other evacuees.

Material and Methods

Here we use the recently digitised Migration Karelia (MiKARELIA) database, which contains over 160,000 adult Karelians and a wide range of data on births, marriages, occupations and movements of these forced migrants. The original source material for the database comes from a register compiled in the book series Siirtokarjalaisten tie (Anon. 1970; the title directly translates to: Karelian migrants’ road), which systematically recorded the experiences of evacuees. Interviews took place between 1968 and 1970 and were performed by approximately 300 trained interviewers. Each entry lists the full name (maiden name if applicable), profession, birth date, birth place and all movements (towns or cities of residence) from birth until the date of the interview, as well as their spouse’s names, professions, birth dates, birth places and years of marriage for those who married. Children’s names, birth years and birth places are also listed. These basic demographic data are presented in a standardised format for each entry. There is a variety of other data as well, including, for example, whether men had served in the army during the war and whether women had participated in the Lotta Svärd organisation (an all-female paramilitary organisation).

The resulting registers contain a vast amount of data on the Karelian migrants, but in book format, they are poorly suited to quantitative analysis. Therefore,
a project was initiated to digitise these data, which ultimately resulted in the generation of the MiKARELIA database. Data entries were scanned at 300 dpi using a Canon c5250i copier and saved in pdf format. ABBYY Fine Reader 12 (ABBYY production LLC 2013) was used to scan pdf documents for optical character recognition (OCR) and the output saved in html format. An open source software program\textsuperscript{23} was written to convert Fine Reader produced html files to a simpler xml format containing the data entries. The program reads and extracts the source text to produce a JSON file containing all extracted data. These data can then be used to populate a structured database.\textsuperscript{24}

Obviously, the MiKARELIA database represents only those Karelians who were alive in 1968 to 1970 when the interviews were conducted. However, Loehr and colleagues have estimated that these data include records on approximately 75% of the Karelian migrants who were alive at this time. Therefore, MiKARELIA can be considered to be a population-based database and not just a statistical sample of Karelians.\textsuperscript{25} The MiKARELIA database is being further improved and replenished by combining it with other datasets (for example, the Karelia database ‘Karjala-tietokanta’, which contains digital demographic information from about 70 parish registers of the ceded Karelia from the end of the 17th century until the start of Second World War).

One key advantage of the MiKARELIA database, for example, as compared to the Statistics Finland 10% sample data from the 1950 population census, is that while in the sample data individual level variables (for example, migration of Karelians) are only available for the year 1950 and from 1970 onwards,\textsuperscript{26} in MiKARELIA there are individual level data on evacuees during the Second World War (for example, whether they served during the war and whether they returned back to Karelia during the Continuation War). Therefore, the MiKARELIA database offers excellent opportunities to explore with considerable detail the migrations of Karelians during and after the Second World War in addition to a variety of socio-demographic and environmental factors that were associated with their decisions to migrate.

To determine whether Karelian evacuees differed in their migration histories as a function of their background characteristics, the current study involved analysing the already existing MiKARELIA database and combining it with a database on the location of all the cities and towns involved in the evacuations, and their population sizes. Populations of towns located in Finland and Karelia were obtained from the Statistical Yearbooks of Finland 1939.\textsuperscript{27} In addition, for each place, we obtained coordinates to locate them on the map and calculate the effect of several geographical dimensions on the probability of returning home during the war (1941–1944). To do this, information was gathered from multiple sources on the internet and maps. Most of the coordinates could be found directly from the history books of the Suomen sukututkimusseura (the Finnish Genealogy Society), while the rest were searched from Google Maps—a map utility served by Google Incorporation (Google Maps, Finnish Genealogy Society).
Sample selection

Although interviewees provided some information on other members of their family (for example, spouses and children), in our analyses we focused solely on individuals who were interviewed and on which we had the most complete and systematically recorded information. Thus, the statistical unit for this research is the family, rather than each family member separately, given that families were presumed to have moved together. In addition, children (individuals who were born after 1925) were excluded from these analyses. These individuals would have been 15 years old or younger in 1941 when the first opportunity to return to Karelia was possible. The birth location, rather than the location in Karelia at the moment of the evacuation, was used because the location of the evacuees immediately prior to the evacuation was only recorded for a small subset of individuals, whereas birth place was available for more than 90% of the total sample. Finally, only those who were born in Karelia were chosen. These selection criteria left us with a sample of 59,477 Karelian evacuees. Each population size parameter (birth population, population of first destination in Finland and population of return destination in Karelia, which was used in the maps) was log transformed for reasons of statistical inference (that is, the effects of population size are not expected to be merely additive) and to aid fitting the models.

Variables

As a dependent variable, we use a binary variable: whether an individual returned to Karelia or not (0 = no, 1 = yes). In our sample, 52% returned, which is a somewhat lower number than the overall proportion of evacuees who returned, which was reported to be approximately 70%. This may be because we are both missing the oldest Karelians who might have been more likely to return than the younger ones (and had died by the time of the interviews in 1968 to 1970), and also missing those who were children (less than 15 years old) during the war. Our other dependent variable is the total number of moves after 1945 and up until 1970. In our sample, Karelians had on average 1.02 (SE 0.005) moves, which varied between 0 and 19. The majority, however, moved at least once (54%).

As independent variables we use: sex, age, occupation in 1970 (farmer or non-farmer; we are expecting that farmer was the most ‘stable’ occupation, that is, one can assume that they were already farmers in Karelia), whether he or she had children in 1940, longitude and latitude of birth location, longitude and latitude of first destination in Finland and population size in birth location and first destination in Finland (see Table 8.1 for descriptive statistics).

We used generalised linear logistic and Poisson regression models to analyse these data. In the case of returning to Karelia during the Continuation
Table 8.1: Descriptive statistics for those who returned Karelia and those who did not (%/mean, (SE)).

|                              | Returned Karelia 1941–1944 |    |
|------------------------------|-----------------------------|----|
|                              | Yes                         | No |
| Sex (%)                      |                             |    |
| Women                        | 53.1                        | 46.9|
| Men                          | 52.2                        | 47.8|
| Age (mean)                   | 30.7 (0.06)                 | 28.9 (0.06) |
| Farmer (%)                   |                             |    |
| Yes                          | 73.5                        | 26.5|
| No                           | 42.9                        | 57.1|
| Have children (%)            |                             |    |
| Yes                          | 60.6                        | 39.4|
| No                           | 48.5                        | 51.5|
| Birth destination longitude  | 29.8 (0.01)                 | 29.7 (0.01) |
| (mean)                       |                             |    |
| Birth destination latitude   | 61.0 (0.004)                | 60.9 (0.005) |
| (mean)                       |                             |    |
| Destination longitude       | 24.8 (0.02)                 | 25.3 (0.02) |
| (mean)                       |                             |    |
| Destination latitude        | 61.9 (0.01)                 | 61.6 (0.01) |
| (mean)                       |                             |    |
| Destination population size  | 18280.1 (351.6)             | 43327.9 (743.5) |
| (mean)                       |                             |    |
| Birth population size        | 12559.33 (116.9)            | 17915.5 (212.3) |
| (mean)                       |                             |    |

Note: Demographic variables n = 49,780; environmental variables n = 29,622.
Source: Authors.

War, we explain our binary dependent variable (returned to Karelia = 1, did not return = 0) using a logistic regression and the coefficients of the predictors are interpreted as odds ratios. An odds ratio above 1 indicates a greater likelihood of the event compared to the reference category, and an odds ratio below 1 indicated a smaller likelihood when all other covariates entered into the model are held constant. To model the number of moves after the Continuation War, we used both a logistic regression (no moves = 0, at least one move =1) and a Poisson regression which fits these count data (namely, the number of moves) better than a normal distribution. Poisson regression coefficients can be interpreted in a similar manner as linear regression coefficients such that negative coefficients indicate a negative relationship and positive coefficients indicate a positive association with the outcome variable when all other covariates are held constant.
Results

The evacuees in the MiKARELIA database we used here were from areas west and north of Lake Ladoga, which are the regions Finland lost to the Soviet Union. The distribution of evacuees’ homes at the time of evacuation are illustrated in Map 8.1. Geographically, the top destination as well as the rest of the distribution are generally widely spread across southern Finland (see Map 8.2). The distribution of returning evacuees to Karelia during the Continuation War is similar to the baseline in 1939, with a few exceptions in southern Karelia. The number of people who returned is, of course, fewer than the number who left from those same places (see Maps 8.1 and 8.3).

Return to Karelia during the Continuation War

Evacuees were spread across an area spanning 60 to 70 degrees latitude, with most people concentrated in the south, especially in areas below 64 degrees latitude (see Map 8.2). Map 8.2 shows the percentage who returned from each evacuation destination in western Finland. Here, it is evident that the degree to which the return rate depends on location is complex. However, return rates below 50% are more common at lower latitudes and a higher percentage of people returned to northern parts of Karelia. Evacuees were spread quite evenly across an area of Finland spanning 19 to 31 degrees longitude. At more western longitudes, the proportion of those who returned to Karelia is greater.

Overall, Karelians placed in northern and western Finland were more likely to return. Evacuees were spread across towns and cities of varying populations, but those evacuated to the areas in the largest category (population size greater than 20,000), fewer than 60% returned. No other relationships between population size and return rate were obviously evident (Map 8.2).

Results shown in Table 8.2 are from a two-stage stepwise logistic regression model in which the dependent variable is whether or not a person returned to Karelia, and the independent variables are added to the model in two stages: first, all socio-demographic variables and, second, all environmental variables. Results from Model 1 show that men were less likely to return than women. In subsequent sensitivity analyses, this difference disappeared, however, once the fact that many men were serving in the army was taken into account (results of sensitivity analyses are not shown in Table 8.2). In addition, results suggest that age was not a significant predictor of returning to Karelia. Being a farmer was, however, and the predicted probabilities (calculated from odds ratios) of returning for farmers was 73% as compared to non-farmers, which was 43%. (Note: In Model 2, which also takes into account environmental factors, the probabilities were 76% and 53% for farmers and non-farmers respectively.) Therefore, the adjusted probabilities did not differ much from the unadjusted distribution (see Table 8.1). Having children was also positively associated with returning to Karelia.
Map 8.1: Dispersal patterns of Karelian evacuees 1939–1944. First (A) the locations where Karelians were evacuated from. Secondly (B) the distribution of displaced evacuees in Western Finland. Finally (C) the locations of the retuning Karelians to homeland during Continuation War. Source: Authors.
Map 8.2: The proportion of evacuees who returned to Karelia from towns in western Finland during the Continuation War. Source: Authors.
Table 8.2: Association between socio-demographic and environmental factors with the likelihood of returning to Karelia during Continuation War.

|                          | Model 1 |           | Model 2 |           |
|--------------------------|---------|-----------|---------|-----------|
|                          | OR      | SE        | p       | 95% CI    | OR      | SE        | p       | 95% CI    |
| Sex                      |         |           |         |           |         |           |         |           |
| Women (ref.)             |         |           |         |           |         |           |         |           |
| Men                      | 0.83    | 0.02      | 0.000   | 0.80      | 0.84    | 0.02      | 0.000   | 0.80      |
| Age                      |         |           |         |           |         |           |         |           |
| 1.00                     | 0.001   | 0.86      | 1.00    | 1.01      | 0.002   | 1.01      | 0.000   | 1.01      |
| Farmer                   |         |           |         |           |         |           |         |           |
| No (ref.)                |         |           |         |           |         |           |         |           |
| Yes                      | 3.64    | 0.08      | 0.000   | 3.49      | 2.78    | 0.08      | 0.000   | 2.61      |
| Have children (%)        |         |           |         |           |         |           |         |           |
| No (ref.)                |         |           |         |           |         |           |         |           |
| Yes                      | 1.38    | 0.03      | 0.000   | 1.32      | 1.19    | 0.04      | 0.000   | 1.12      |
| Birth destination longitude |       |           |         |           |         |           |         |           |
| Birth destination latitude |       |           |         |           |         |           |         |           |
| Destination in Finland longitude |       |           |         |           |         |           |         |           |
| Destination in Finland latitude |       |           |         |           |         |           |         |           |
| Destination population size |       |           |         |           |         |           |         |           |
| Birth population size    |         |           |         |           |         |           |         |           |
| n                        | 49,780  |           |         | 29,622    |           |           |         |           |
| McFadden's Adj r2        | 0.067   |           |         | 0.102     |           |           |         |           |

Note: Results from two-stage stepwise logistic regression. Source: Authors.

Results of Model 2 (Table 8.2) take into account several environmental variables, in addition to socio-demographic variables. Results from this regression model support the conclusions drawn from the maps shown above: people from more western and northern birthplaces were more likely to return and evacuees who went to more westerly and northerly destinations in Finland were more likely to return. In addition, the population size of the destination town or city in Finland was significantly and negatively associated with the likelihood of returning to Karelia during the Continuation War. In other words, people placed in less populated areas were less likely to remain and more likely to return to Karelia. Taking these environmental factors into account did not alter the effects of socio-demographic factors, although age was significantly and positively associated with returning, meaning that older people were more likely to return.

Map 8.3 indicates that evacuees from the larger populations have relatively fewer people returning, although the association was not statistically significant in the regression model. In addition, places located nearer to the front line, especially in the Karelian Isthmus, had relatively fewer people returning.

Migration after the Continuation War

Our second dependent variable considered the number of moves after the Continuation War. First, we investigated those Karelians who had moved at least once after their first placement (Table 8.3). Here, men were more likely than...
women to move at least once. Also, the younger these individuals were, the more likely they were to move multiple times. Being a farmer was also positively associated with the likelihood of moving at least once. In addition, those who had returned to Karelia during the Continuation War were more likely to move at least once after the war than those who did not return.
Second, we examined whether the same socio-demographic factors were associated with the frequency of moves among Karelians after the Continuation War (Table 8.4). As was the case with any moves, men, younger Karelians and those who returned to Karelia during the Continuation War were all more likely to move more after the Continuation War than women, older Karelians and those who did not return to Karelia when they had a chance. However, farmers were less likely than non-farmers to move more after the Continuation War. This was the only factor that was differently associated with moves when compared to the previous model (Model 1).

**Discussion and Conclusions**

Our primary aim in this chapter was to study how the migration histories of Karelian evacuees during and after the Second World War were influenced by a variety of social, environmental and demographic characteristics. Which evacuees were more likely to move back to Karelia when they had the opportunity? Which environmental factors influenced an individual's decision to return or remain? How many times, on average, did the Karelians move after the second evacuation and who moved the most and who settled the fastest?
We used the new MiKARELIA database which has unique individual level information on moves of Karelians during and after the Second World War. Our results are mainly in line with previous studies, although very few of these have concentrated on factors related to returning to Karelia during the war. We found that both socio-demographic and environmental factors were associated with returning to Karelia during the Continuation War.

In detail, we found no sex differences in the likelihood of returning once we took into account the fact that many men were serving in the army during the Continuation War. Previous studies have shown and this study confirms that farmers were more likely to return than non-farmers. In addition, once environmental factors are taken into account, the models show that older individuals were more likely to return than younger ones. This suggests that those Karelians who were in a more stable phase of life and who were probably more attached to their home districts (for example, had family and land and were older) were more likely to return to Karelia. Environmental factors also made a difference. People placed in more westerly and northerly destinations in Finland were more likely to return, while at the same time Karelians who were from more western and northern birthplaces were also more likely to return. In addition, evacuees who were placed in smaller towns were also more likely to return. Importantly, these environmental factors, which had been documented

|                | coeff. | SE    | p       | lower | upper |
|----------------|--------|-------|---------|-------|-------|
| Sex            |        |       |         |       |       |
| Women (ref.)   |        |       |         |       |       |
| Men            | 0.10   | 0.01  | 0.000   | 0.09  | 0.12  |
| Age            | −0.02  | 0.0005| 0.000   | −0.02 | −0.02 |
| Farmer         |        |       |         |       |       |
| No (ref.)      |        |       |         |       |       |
| Yes            | −0.16  | 0.01  | 0.000   | −0.18 | −0.14 |
| Returned Karelia|       |       |         |       |       |
| No (ref.)      |        |       |         |       |       |
| Yes            | 0.40   | 0.01  | 0.000   | 0.38  | 0.41  |
| n              | 49,241 |       |         |       |       |
| McFadden's Adj. R2 | 0.022 |   |         |       |       |

Note: Coefficients from Poisson regression model. Source: Authors.
previously in other studies, were still significant predictors of returning to Karelia even when socio-demographic variables were controlled for. A major advantage of this study is that we can take several characteristics into account at once and draw the conclusion that, for instance, occupation (namely, being a farmer) did not alone explain the variation in returning to Karelia.

While analysing the number of moves after the Continuation War, we discovered that nearly half of the Karelians actually settled permanently in their first location (46%). Those who had moved at least once were also more likely to be farmers. This was probably the result of the resettlement policies and the Land Acquisition Act,\(^{31}\) which required farmers to wait to acquire their own land. However, after this initial displacement, the farmers were less likely than others to move, which suggests that they probably settled the fastest. Finally, younger people, men and those who did return to Karelia during the war were more likely to move at least once after the war ended and these evacuees also moved more overall. The positive association between evacuees who returned to Karelia and subsequent movements after the war ended is particularly interesting because it seems to contradict our findings on the characteristics of those who returned and those who moved more after the war. In other words, although farmers were more likely to return to Karelia when an opportunity came and individuals who returned were more likely to move after the war ended, those who moved more after the war were also less likely to be farmers. This indicates that there may be yet-to-be-determined factors influencing the relationship between returning to Karelia and geographic mobility after the war and suggests that these relationships need to be investigated further.

The main strengths of this chapter are that we were able to utilise individual level data on a large number of Karelians to study their migration during and after the Second World War. A key advantage of this kind of database and the methods used in this chapter are that we were able to simultaneously take into account several factors that are associated with the frequency of migration.

The main limitations of this study are data related. For example, we do not have data on the oldest Karelians and currently we only have occupations for people in these data from when they were interviewed in 1970. These issues are related to the fact that the original data were collected in 1968 to 1970. However, a crucial advantage of having digitised these data is that we can in the future continuously update and supplement these data with other source material and merge them with other large quantitative databases available for the Finnish population.

Future studies could investigate more closely the migration profiles of different sub-groups of Karelians. For instance, what happened to those farmers who did not return to Karelia during the Continuation War or to those evacuees who settled in their first location after the Continuation War? By examining more closely the movements of different groups of Karelians, we may also explore how the early settlement of evacuees is linked to the long-term outcomes associated with forced migration.\(^{32}\)
Notes

1 Kuhlman 1991.
2 Lowe 2012.
3 Kliot 2007: 57–78.
4 See, e.g., Waris et al. 1952; Paukkunen 1989; Kananen 2010.
5 See, e.g., Raninen-Siiskonen 1999; Armstrong 2004; Fingerroos 2010; Savolainen 2015.
6 See, e.g., Waris et al. 1952; Hietanen 1982; Laitinen 1995a.
7 Haukka et al. 2017.
8 Sarvimäki et al. 2009; Sarvimäki et al. 2018.
9 Sjöblom 2016.
10 Sarvimäki et al. 2009; Sjöblom 2016.
11 Sarvimäki et al. 2009.
12 Haukka et al. 2017.
13 Hietanen 1982: 67, 105.
14 Waris et al. 1952: 52, 327.
15 Ibid.: 104–111; Hietanen 1982.
16 Hietanen 1982: 114–115.
17 Kulha 1969: 80–82.
18 Waris et al. 1952: 110; Hietanen 1982: 226–230; Laitinen 1995b: 52–138.
19 Waris et al. 1952: 53–56, 328.
20 Simonen 1965.
21 Waris et al. 1952; Sarvimäki et al. 2009.
22 Laitinen 1995b: 52–138; Waris et al. 1952: 65–74, 112–127.
23 Salmi & Loehr 2017.
24 Loehr et al. 2017. See also Lynch, Lummaa & Loehr 2019a; Lynch et al. 2019b who have used the same data.
25 Loehr et al. 2017.
26 See more on Statistics Finland data: Sarvimäki et al. 2009; Sjöblom 2016; Haukka et al. 2017; Sarvimäki et al. 2018.
27 Statistics Finland 1940.
28 See, e.g., Hietanen 1982; Lynch et al. 2019; Waris et al. 1952.
29 See, e.g., Hietanen 1982: 114–115; Lynch et al. 2019.
30 Waris et al. 1952.
31 Ibid.: 65–74, 112–127; Laitinen 1995b: 52–138.
32 Cf. Sarvimäki et al. 2009; Haukka et al. 2017.

References

Armstrong, K. (2004). Remembering Karelia: a family’s story of displacement during and after the Finnish wars. New York, NY: Berghahn Books.

Fingerroos, O. (2010). Karjala utopiana. Jyväskylä: Jyväskylän yliopisto.
Haukka, J., Suvisaari, J., Sarvimäki, M., & Martikainen, P. (2017). The impact of forced migration on mortality: a cohort study of 242,075 Finns from 1939–2010. Epidemiology, 28(4), 587–593.

Hietanen, S. (1982). Siirtoväen pika-asutuslaki 1940: Asutuspoliittinen tausta ja sisältö sekä toimeenpano. Historiallisia tutkimuksia 117, Helsinki: Suomen historiallinen seura.

Kananen, H. (2010). Kontrolloitu sopeutuminen: Ortodoksinen siirtoväki jälkeisessä Ylä-Savossa (1946–1959). Jyväskylä: Jyväskylän yliopisto.

Kliot, N. (2007). Resettlement of refugees in Finland and Cyprus: a comparative analysis and possible lessons for Israel, In A. M. Kacowicz & P. Lutomski (Eds.), Population resettlement in international conflicts: a comparative study (pp. 57–78). Plymouth: Lexington Books.

Kuhlman, T. (1991). The economic integration of refugees in developing countries: a research model. Journal of Refugee Studies, 4(1), 1–20.

Kulha, K. (1969). Karjalaiset Kanta-Suomeen: Karjalaisten siirtolaisuuden asuttamista käytäntö suomen yleisölle vuosina 1944–1948. Jyväskylä: Gunnerus.

Laitinen, E. (Ed.) (1995a). Rintamalta raiviolle: Sodan jälkeinen asutustoiminta 50 vuotta. Jyväskylä: Atena Kustannus Oy.

Laitinen, E. (Ed.) (1995b). Vuoden 1945 maanhankintalain synty, sisältö ja toteutus. In E. Laitinen (Ed.), Rintamalta raiviolle: Sodan jälkeinen asutustoiminta 50 vuotta (pp. 52–138). Jyväskylä: Atena Kustannus Oy.

Loehr, J., Lynch, R., Mappes, J., Salmi, T., Pettay, J., & Lummaa, V. (2017). Newly digitized database reveals the lives and families of forced migrants from Finnish Karelia. Finnish Yearbook of Population Research, 52, 56–69.

Lowe, K. (2012). Savage continent: Europe in the aftermath of World War II. London: Viking.

Lynch, R., Lummaa, V., & Loehr, J. (2019). Self sacrifice and kin psychology in war: threats to family predict decisions to volunteer for a women's paramilitary organization. Evolution and Human Behavior, 40(6), 543–550 DOI: https://doi.org/10.1016/j.evolhumbehav.2019.06.001

Lynch, R., Lummaa, V., Panchanathan, K., Middleton, K. M., Rotkirch, A., Danielsbacka, M., O’Brien, D., & Loehr, J. (2019). Integration involves a trade-off between fertility and status for World War II evacuees. Nature Human Behaviour, 3, 337–345. DOI: https://doi.org/10.1038/s41562-019-0542-5

Paukkunen, L. (1989). Siirtokarjalaiset nyky-Suomessa: Jyväskylän yliopiston yhteiskuntapolitiikan laitoksen tutkimuksia. Jyväskylä: Jyväskylän yliopisto.

Raninen-Siiskonen, T. (1999). Vieraan omalla maalla: Tutkimus karjalaisen siirtoväiden muistelukerronnasta. PhD thesis, University of Joensuu.

Salmi, T., & Loehr, J. (2017). Kaira-core [computer software]. Lammi Biological Station. Retrieved from https://github.com/Learning-from-our-past/Kaira-core

Sarvimäki, M., Uusitalo, R., & Jäntti, M. (2009). Long-term effects of forced migration. IZA Discussion Paper No. 4003. Retrieved from https://ssrn.com/abstract=1351167
Sarvimäki, M., Uusitalo, R., & Jäntti, M. (2018). Habit formation and the misallocation of labor: evidence from forced migrations. Department of Economics, Aalto University, Working Paper. Retrieved from http://hse-econo.fi/sarvimaki/

Savolainen, U. (2015). Muisteltu ja kirjoitettu evakkomatka: Tutkimus evakkolapsuuden muistelukerronnan poetiikasta. Joensuu: Suomen Kansantietouden Tutkijain Seura.

Sjöblom, E. (2016). Karjalan evakoiden elämänurat: Sopeutuminen elämään pakkomuuton jälkeen. Master's thesis of Sociology. University of Helsinki.

Simonen, S. (1965). Paluu Karjalaan: Palautetun alueen historiaa 1941–1944. Helsinki: Otava.

Statistics Finland. (1940). Statistical yearbook of Finland 1939. Helsinki: Tilastollinen päätoimisto.

Waris, H., Jyrkilä, V., Raitasuo, K., & Siipi, J. (1952). Siirtoväen sopeutuminen. Tutkimus karjalaisen siirtoväen sosiaalisesta sopeutumisesta. Helsinki: Otava.