

## **An Interdisciplinary Analysis of Surname Extinction in Mingrelia (North-West Georgia)**

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**ABSTRACT.** The surname is an important focus of the study in ethno-historical research in Georgia. It usually coincides with the father's genetic line, thereby allowing comparison of surname data with those from anthropological, demographic, biomedical, genetic and historical-ethnological studies. This study investigated surnames that are infrequent and on the verge of extinction in Mingrelia (Samegrelo). We investigated the reasons of these surnames becoming scarce and their implications on Georgian population dynamics. The analysis of hundreds of Mingrelian surnames through our collaborative research revealed various social, economic, migration, and biological reasons for their rarity. The results of this study allow us to reexamine the main aspects and trends of ethno-historic and demographic research on surnames. It will further contextualize results from our population-genetic studies and yield insights into the relationship between surname diversity and marriages patterns in Samegrelo, as well as the formation of genetic and morphological types of populations in the region. © 2019 Bull. Georg. Natl. Acad. Sci.

**Key words:** genealogy, demography, population, patrilineage, Mingrelia

Surnames that occur at low frequency in human populations are vulnerable to going extinct or being lost in the population, largely due to genealogical processes. We call them “small surnames” (s.c. namlevi) [1]. A surname belongs to this group if the number of its bearers does not exceed 100 persons. According to recent work, we recorded 618 such surnames in Mingrelia (Samegrelo) [2]. The appearance of Georgian surnames in written

sources from the 8<sup>th</sup> to 9<sup>th</sup> centuries does not mean that they did not exist before. Rather, they seem to have originated because of the necessity of a hereditary name's existence in the Georgian feudal system [3].

Research into the surnames of Mingrelia has been done only in an ethno-historical context. Here, we consider the surname as one component of pseudo-genetic (social) markers, as a framework

for interpreting the results of genetic population research [4, 5]. Because surnames are transmitted along the paternal line across generations just like Y-chromosome markers, we can evaluate surnames as though they are genetic markers, and use them to analyze the level of inbreeding, population movements, gene drift and genetic distances between populations in which they appear.

### Materials and Methods

Two expeditions to Svaneti and Samegrelo were conducted for investigation on the population genetic, ethnological and anthropological diversity in these regions [6-8]. These expeditions were especially valuable because genetic, ethnological, demographic and medical-biological data were simultaneously collected from the same participants, making possible correlations between them maximally high in terms of their reliability. This approach was successfully experienced in the study of Shortsi ethnical group [9].

Research of at least 10 generations is considered a standard for genealogical research with surnames, where the variability of genetic-demographic indicators can be seen across a relatively large section of time. We use surnames as genetic markers to study their distribution in Samegrelo (especially mountainous Samegrelo) and Svaneti populations. In these regions, we are dealing with relatively ethnically homogeneous and geographically isolated populations that have resided there for a more or less long period of time.

In the above-mentioned expedition research conducted by us in Samegrelo, we studied 484 individuals, including 372 men and 112 women. In this study, reproductive function indicators were fixed (menarche, menopause, age of marriage, age of first and last birth, birth place, marriage residence, migration, demographic indicators: the average length of life, sex ratio in several generations according to genealogy; cause of death, the length and weight of a child at birth).

### Results and Discussion

The influences on population diversity in Northwest Georgia of small surnames needs to be explained. The surnames may reflect a number of different genealogical or demographic processes, such as epidemics and the impact of various types of diseases, changes in birth rates or the lack of male children in a particular generation, changing marriage patterns, infertility, or population mobility and conflict. Many of these factors are attested to written sources from the 16<sup>th</sup> to 18<sup>th</sup> centuries [10-14]. Other reasons might include total or partial phonetic changes of the surname [15], where often the only difference appears in the production of suffixes. Based on the surname data from this study, the scarcity of any surname is linked to any of the above circumstances. However, only a deep study of specific surnames will provide a detailed reconstruction of the general social and demographic image of the region/country. In this regard, of primary importance is the ecclesiastical metric books from the beginning of the 19<sup>th</sup> century to the first quarter of the 20<sup>th</sup> century, where the birth, death, marriage, sickness, sex, age of a human are recorded.

To gain clarity about the distribution of surnames in Northwest Georgia, we studied quite a large amount of material from modern Samegrelo and data from migrants from Abkhazia who arrived in the 17<sup>th</sup> century [16]. For the majority of surnames currently recognized as scarce, an average of 20-40 men bore a particular surname in the 19<sup>th</sup> century. Logically, such surnames must have been multiplied from about 500 to 2000 individuals, a trend that would no longer threaten the extinction of any particular surname. The overall demographic picture noticeably changes at the end of the 19<sup>th</sup> century and early 20<sup>th</sup> century, as there was an increasing tendency for men to stay single, mostly probably due to economical and social factors (Fig. 1).

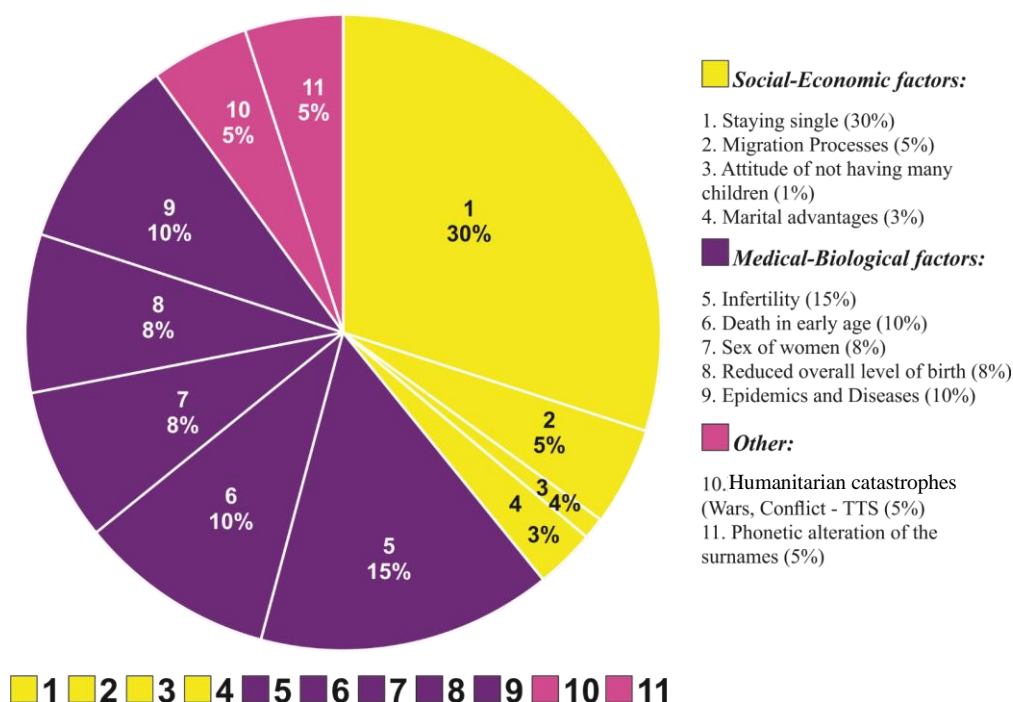


Fig. 1. Approximate equity ratio (19 and 21 cc) of factors influencing the scarcity of the surnames.

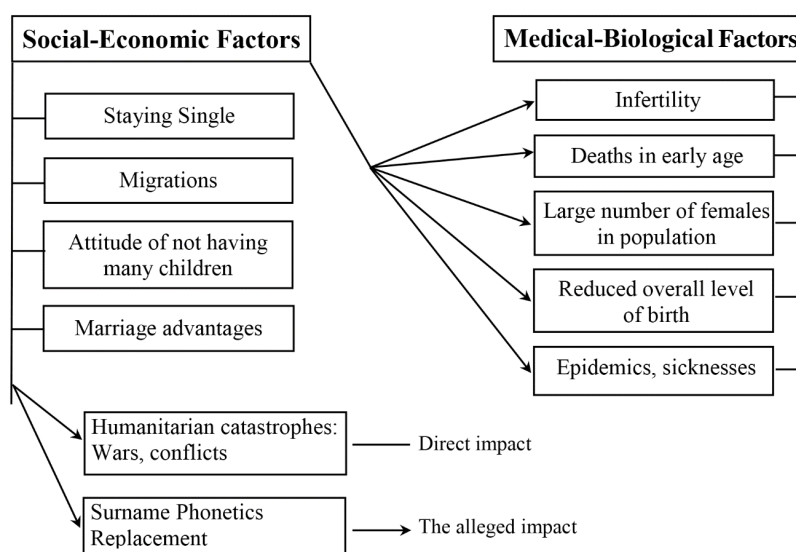


Fig. 2. Aspects of interaction between the factors leading to the scarcity of the surname.

In this research 23 small surnames were recorded. It is interesting that genealogical studies of the 20<sup>th</sup> and 21<sup>st</sup> centuries and the analysis of the 19<sup>th</sup> century archival documents (church records on birth and death, wedding and baptising) gave the

same overall. These surnames (Ambalia, Kucurua, Tkvatsiria, Asmava, Kilava, Egia, and others) are also currently threatened with extinction, mainly due to the factors listed in Fig. 2. More specifically, our research at this stage indicated that the main

reasons of the reduction in surname frequencies were: (1) men staying single, (2) infertility, and (3) deaths in early age, as well as a sex bias towards females and the interaction between these factors.

### **Conclusion**

Research into surnames is only possible through an interdisciplinary approach. The first stage involves the creation of specific genealogical schemes based on archival data, and then the analysis of the demographic picture of specific cases, the reconstruction of cause-and-effect sequencing with historical-ethnological material, and the correlation with biomedical and genetic data. As a result, we obtained a highly reliable interpretation of the ethno-historic and genetic influences on surname

frequency, as well as characterization of the demographic picture of the region/country. Genealogical research is used to identify and determine the frequency of each surname, making it easier to interpret patterns of genetic variation in the same individuals. Such data can reveal relationships between different individuals and families over many generations, and provide a deeper understanding of population variation both at the kinship and regional levels [17].

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სოციალური ანთროპოლოგია

## ნამლევი გვარსახელების ინტერდისციპლინური კვლევა სამეგრელოში (ჩრდილო-დასავლეთი საქართველო)

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ნაშრომი ეძღვნება მცირერიცხოვან და გაქრობის პირას მყოფ გვარსახელთა კვლევის მეთოდებს, მსგავსი კვლევების მნიშვნელობას და გვარსახელთა მცირერიცხოვნობის გამომწვევ ძირითად მიზეზებს. სტატიაში აღსანიშნავია გვარსახელების შესწავლის მნიშვნელობა როგორც ისტორიულ-ეთნოლოგიური, ისე ანთროპოგენეტიკური თვალსაზრისით და მასთან ერთად საარქივო მასალების მიხედვით გენეალოგიური კვლევების უპირატესობა. ამ მასალით გამოიკვეთა გვარსახელთა „ნამლევობის“ უპირატესი მიზეზები: 1. მამაკაცთა არდაქორწინება; 2. უშვილობა; 3. ადრეულ ასაკში სიკვდილიანობა და ქალთა სქესის სიმრავლე.

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