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# Experimental real-time studies on toponymic knowledge

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**Abstract:** To provide empirical evidence for changes in toponymic knowledge, real-time studies are needed. These studies can be done by examining the relative toponymic knowledge of generations of the same age but born at different times: this is called a trend study. In a panel study, we repeat the study with the same individuals who participated in the first study. A combination of panel and trend studies is the most efficient, which is why I repeated my 2013 survey of toponymic knowledge in Tépe in 2023. As a first step in the more recent survey, I again conducted interviews with 7% of the population in four generational groups. Here I wanted to find out how the generational groups' toponymic knowledge evolved in relation to each other. In addition, I conducted a panel study with 11 respondents. In this study I focused on changes in individual toponymic knowledge. Out of 11 respondents, only 2 individuals showed an increase in toponymic knowledge, while for the other respondents there was a decrease to a lesser or greater extent. One important finding of the present study is that the change in toponymic knowledge is not a one-directional process: not only did new names appear on the mental maps of younger and middle-aged respondents, but some also disappeared.
**Keywords:** toponymic knowledge, real-time study, trend study, panel study.

**1.** The topic of toponymic knowledge has appeared sporadically in Hungarian onomastics since the middle of the 20th century (see Győrffy 2018: 75–79), but the systematic study of it has only gained momentum since the 2010s (see, e.g., E. Nagy 2021; Szilágyi-Varga 2017, 2018). This is because the collection of a synchronous toponymicon and the study of toponym use have again become the focus of investigation. Until now, toponymic knowledge surveys have concentrated on how many place names the respondents could locate at a given time or which place names were known by hearsay by the inhabitants of a given settlement. The studies have also explored the differences between generations, gender groups, and in some cases, between the different ethnicities and religious denominations living in the settlement, also introducing the possible reasons for these differences.

The follow-up studies of Katalin E. Nagy contributed to further nuancing this issue. In 2013, she conducted a toponymic knowledge survey with 24 residents of the settlement of Pród, which was repeated in 2019, six and a half years later, with 16 respondents (out of the 24 previously interviewed individuals). Apparent-time and real-time studies allow us to capture the generational changes in the toponymic

knowledge of both individuals and communities (Bodó 2013: 8–16, E. Nagy 2021: 120–133): it is in the course of the apparent-time surveys that the results of the different toponymic knowledge surveys in real time become processes taking place in time, i.e., representing historical change. A real-time study can be conducted in two ways. If a survey is carried out with respondents of the same age but born at different times, it is called a trend study. If the linguistic behavior of the same individuals is analyzed at different points in time, it is called a panel study. Researchers have also formulated different criteria to ensure that results from real time are comparable; these include (1) measuring the same variables, (2) selecting respondents from the same population, (3) applying the same or at least comparable methods, (4) an interval of 10 years between the two studies (cf. Bailey et al. 1991), and (5) involving several generations in the survey (Bodó 2013: 55). The most in-depth analysis can be obtained by combining trend and panel studies.

Trend analysis serves as a valuable tool for examining toponymic knowledge within society and illuminating generational differences. While panel studies also offer insight into these trends for large respondent groups, their execution often presents challenges. It is not always easy to get exactly the same respondents to participate in a survey ten years later. Nonetheless, panel studies can effectively capture shifts in toponymic knowledge at the individual level. Notably, previous studies have not concentrated on identifying individual-level changes and elucidating their underlying reasons.

**2.** My research was carried out in Tépe, Hungary. The settlement is situated in Hajdú-Bihar County, next to Road 47 and the brook of Kék-Kálló, in the area called Sárrét. The urban area of Tépe covers 96 hectares and is surrounded by 2,224 hectares of extra-urban area.

As a first step, I collected the place names of Tépe, which were published in Győrffy (2015a). The corpus contains 262 name variants of 206 denotations. Most of the names are from the extra-urban area, while the names in the urban area mostly consist of street names. Names of buildings, institutes, playgrounds, etc., were not collected.

In 2013, I carried out a toponymic knowledge survey in the settlement of Tépe, involving 7% of the population (80 people), which I repeated in 2023. Due to population decline, in the latter case I worked with only 72 respondents (corresponding to 7%), with women and men almost equally represented in the survey. I published a detailed analysis of the results of the survey in 2013 in the journal *Voprosy onomastiki* (Győrffy 2015b) and the trend study in the journal *Magyar Nyelvjárások* (Győrffy 2023), I will now give a brief overview of these studies in order to provide sufficient insight into the changes in toponymic knowledge.

In terms of the average values for toponymic knowledge (see Figure 1), a decline was observed everywhere except in the under–20 group (2013: 18%, 2023: 17.5%). In the 2013 survey, on average, people between the ages of 21 and 40 could locate one in two names (50%), while in 2023 the same age group could only locate slightly more than a third of the names (38%). The third generation (aged between 41 and 60) was

aware of 63% of the names on average in 2013, compared with 46% in 2023. The oldest generation (aged above 60) demonstrated a considerable knowledge of place names in 2013, knowing on average 81% of the names, while in the current survey they could only locate two thirds of the names (68%).

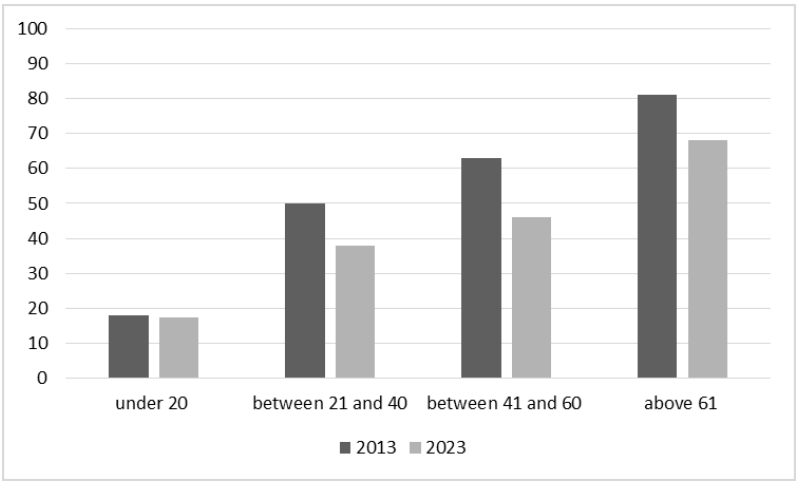


Figure 1. The average values for toponymic knowledge by age groups

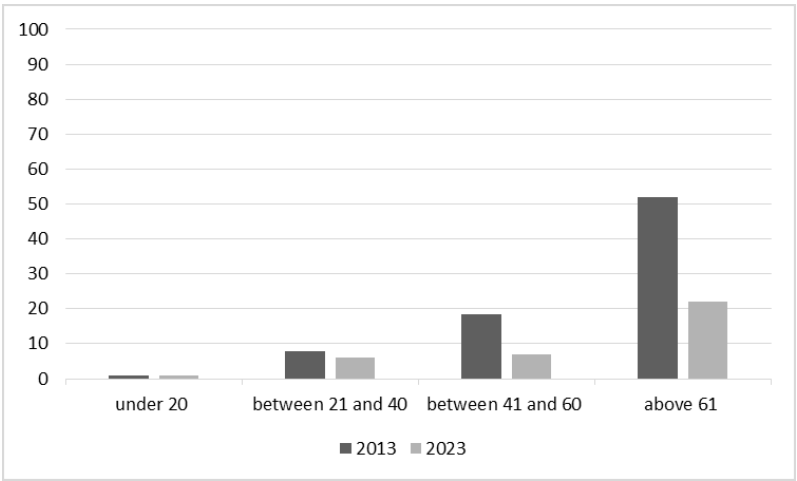


Figure 2. The number of place names known by all in each age group

The trend in the number of place names known by all respondents in a given age group is in line with the findings above (see Figure 2). Among those under 20, 1% (i.e., 2–3) of the names were known by all respondents in this group in both surveys. In the second age group, 8% of the names could be located by all respondents in 2013,

compared with 6% in 2023. As for the 41–60 age group, in 2013 18% of the names were known by all respondents, but in 2023 less than half of these (7%) were present on all mental maps. For the oldest generation, there is a truly striking difference: in the 2013 survey every second name (52%) was known by all respondents, while in 2023 only every fifth name (22%) was known by everyone.

**3.** In the follow-up survey, I also interviewed 11 people who had previously participated in my research. Before presenting my results, however, it is worth summarizing the conclusions of a similar research project that preceded my work.

*3.1.* As mentioned above, Katalin E. Nagy managed to repeat her toponymic knowledge survey in Pród with 16 people. She found an increase in the toponymicon of nine respondents and a decrease in seven. On average, she concluded that "the corpus of place names of individuals increases in intensity at younger ages, but only up to a certain age, which, according to the results of this study, is around the age of thirty, after which it starts to decrease minimally in most cases" (E. Nagy 2021: 129). In line with these findings, the group showing an expansion of the mental map in her study includes six young language users; however, the number of known names increased in three cases for people over 30. The minimal increase for a 43-year-old man may be deemed negligible (1 percentage point), while the 7 and 9 percentage point increase for a 60-year-old and a 62-year-old man, respectively, is more significant. In the first case, the expansion of the toponymicon can be explained by the fact that the respondent had only lived in the settlement for five years at the time of the first survey but was more established by the time of the second one. The other individual had been working in a new job as a water utilities worker for two years at the time of the second survey and, as a result, had encountered many more place names in the course of his work than before.

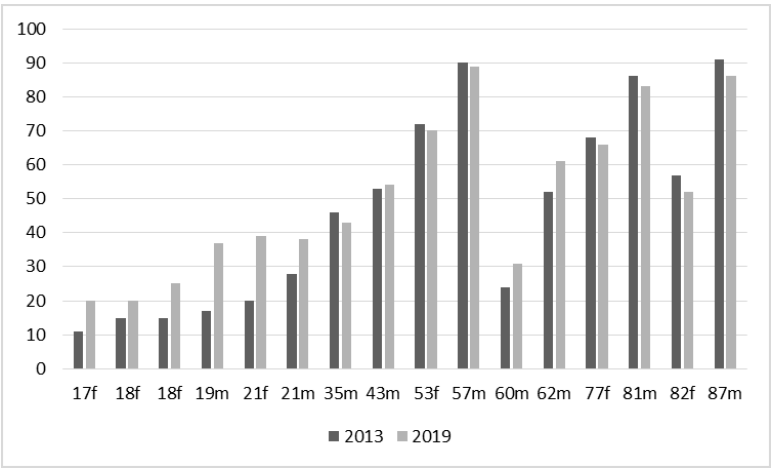


Figure 3. The change of the values for toponymic knowledge in Pród[1] (n = female, f = male)

[1] The age in the chart is from the 2019 survey.

For the remaining six language users, there was a decrease in toponymic knowledge. For the older age group, this is a natural phenomenon, but it is interesting to note the 3- and 2-percentage-point drop in the number of names localized by the 35-year-old male and the 53-year-old female respondent. Katalin E. Nagy does not provide a reason for this.

*3.2.* The panel study in Tépe produced different results: looking at the survey data of the eleven respondents, only two cases show an increase in the toponymic knowledge index (see Figure 4). This difference can be explained mainly by the age of the respondents: while Katalin E. Nagy surveyed six primary school children in 2013, and for them the increase in the toponymicon is a natural consequence of language acquisition, in my repeated study only two young people were interviewed; in 2013, they were 11 and 15 years old.

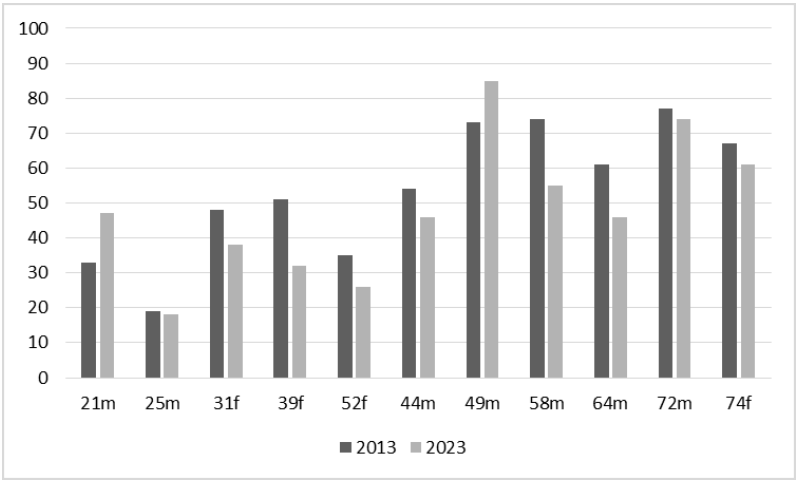


Figure 4. The change of the values for toponymic knowledge in Tépe[2] (n = female, f = male)

The results are also interesting in that the two persons showing an expanding toponymicon are two members of the same family: father and son. The family is one of the main farming families in the settlement and although the son is studying at university, and therefore does not have a very close connection with the land these days, he has managed to acquire many more names than his age group (the average for 21- to 40-year-olds is 38%): his toponymic knowledge rate (47%) increased by 14 percentage points from 33%. Ever since his childhood, he has always shown an interest in the land and nature, and he enjoyed going outdoors with his father and grandfather. One might think that his involvement in the family business would be sufficient for this large increase in toponymic knowledge, but this is not the case. I also interviewed

[2] The age in the chart is from the 2023 survey.

another multi-generational farming family. In that family, I found that while the grandfather was quite familiar with the names of both the interior areas and the outskirts of the settlement (with a 63% average toponymic knowledge), the 45-year-old father was less so: he could locate only 29% of the names, and surprisingly, he did not know most of the names of the interior areas either. Furhermore, according to them, the secondary-school-age son had not acquired a significant part of the toponymicon at all. Personal interest therefore seems to play the most important role in the development of toponymic knowledge.

The importance of personal interest is well illustrated by the case of the young man's father: over the last ten years, the percentage of place names he can localize has risen from 73% to 85%. The farmer's knowledge of place names was already considered outstanding (the average for 21- to 40-year-olds was 50%), and nowadays it is even more so, with few individuals knowing the outskirts as well as he does. However, most of the toponyms collected in Tépe and discussed in the interviews are now known only by members of the oldest generation in a way that they also know the motivations behind the names (e.g., owner, event). My respondent in question is curious about all of these, and even during the present survey he repeatedly mentioned that he would look into the localization of certain names, because although he heard about them, he could not pinpoint their exact location. He also asked for the map and dictionary that I had prepared earlier, which reflects his commitment to learn the local place names in their entirety.

*3.3.* Katalin E. Nagy also produced a figure showing the changes in the mental maps of two child respondents in her book chapter on the results of the real-time study (Nagy 2021: 129, 130). In her work, she uses two colors to depict the 2013 and the 2019 statuses, which suggests that a uniform expansion has occurred. However, when comparing the 2013 and 2023 lists of the names known by each respondent, I did not find such a development even for the younger age group. (It is, of course, possible that Katalin E. Nagy had similar experiences with other respondents, but she did not report this in her paper.)

I reported a significant increase for the 21-year-old male respondent in the previous section. However, looking at the two name corpora, we can observe several shifts in the mental lexicon. The map in Figure 5 shows three different markers. The square represents the locations that the respondent was only able to locate in 2013, and the triangle represents the locations that the respondent was able to locate in 2023. The names of the places marked by the circle were identified as known by the respondent in both surveys. The figure shows that the majority of the toponymicon thus proved to be a stable part of the mental lexicon. A small proportion of the known names (just over a dozen) were lost from memory; they were not sufficiently embedded in the mental lexicon due to a lack of frequency of (diachronic or synchronic) use and/or a lack of strong mental content associated with them (e.g., something memorable happening at the place, the name itself being interesting, etc.). At the same time, other places and names gained positions, i.e., new names have been acquired by the respondent. The dynamics of this process are illustrated by the name of a farm: at the time of the 2013

survey, the respondent knew the place by its old name: *Olcsókút*, but in 2023 he could no longer associate it with a place, whereas he had acquired its newer name (already in use in 2013), *Szabó-tanya*.

The change in his toponymic knowledge is illustrated in Figure 5. The map shows that the young man is quite familiar with the place names of the settlement, and that he has become familiar with names in both the inner areas and the outskirts in the last 10 years. However, I would like to draw attention to the incomplete representation of the names, hoping that a solution to the problem can be found sooner or later. On the map, a place has one mark which suggests that one place has one name associated with it. However, in some cases this is naturally not the case. The watercourse called *Szalányos*, for example, is known both as *Kálló* and *Kati-ér* by the villagers. To illustrate these names with different signs would, I think, make the small map incomprehensible. However, this way the illustration cannot adequately reflect the changes that have taken place in connection with places with multiple names; it is intended to show the spatial distribution of toponymic knowledge only.

Figure 5. The change in the mental map of a 21-year-old male respondent
(■= 2013 ● = 2013 and 2023 ▲ = 2023)

*3.4.* Each of the other nine respondents I surveyed for a second time, as I have already mentioned, demonstrated a different degree of decline in toponymic knowledge. For my 25-year-old male respondent, who after finishing his schools now works as a design engineer, and did not know many place names earlier, I observed a minimal decrease (1 percentage point): from 19% to 18%. In several cases, I observed a notable decrease in toponymic knowledge. For instance, my 31-year-old female respondent, an office worker, experienced a decrease of 10 percentage points, with her knowledge falling from 48% to 38%. Similarly, a 52-year-old female respondent, a teacher, saw a decrease of 9 percentage points, from 35% to 26%. Another example is a 44-year-old male respondent, the pastor of the community, whose ability to locate names decreased by 8 percentage points, from 54% to 46%.

Even larger decreases were recorded for three individuals. The 39-year-old female office worker experienced a substantial decrease of 19 percentage points, from 51% to 32%. Similarly, the toponymic knowledge of a 58-year-old male maintainer, who used to work as a tractor driver in the fields, decreased by 19 percentage points, from 74% to 55%. Lastly, the toponymic knowledge of a 64-year-old male office worker decreased from 61% to 46%, representing a loss of 15 percentage points.

From this group, I chose my 52-year-old female respondent to illustrate the change in toponymic knowledge: she was aware of 35% of place names in 2013, but in 2023 she could only locate 26%. The evolution of her mental map is illustrated in Figure 6.

Looking at the names she knows and does not know, we find that she can no longer associate the names of former wells in the interior with places, but she has acquired some names from the outskirts. It is also worth addressing the issue of non-familiar place names. In the present study, I have used only two categories for ease of reference: the respondent either knows the name and can locate it, or not. However, for my own reference, I also recorded which names the language users said they had heard of but could not locate. For almost a third of the names she did not know, my respondent made comments such as "I've heard it but I don't know where it is", "Daddy used to mention it a lot", or "I used to know where it was but I can't remember". Unfortunately, her father, who had previously participated in the survey and proved to have a good knowledge of names, passed away a few years ago, so the discourse about places and place names in my respondent's life has diminished, as illustrated by her toponymic knowledge index.

For most participants, the same phenomenon may be identified behind the decline in toponymic knowledge: they have almost no contact with the outskirts. Even if they used to visit at least areas closer to the village, nowadays the paths of daily life are almost exclusively limited to the interior. In addition to the lack of personal contact with the land, the absence of personal encounters also contributes to new names not being adopted by the inhabitants. Many people (mostly the elderly) complained about the lack of opportunities for community life, where, for example, events, places, and place names from the past could be discussed. And for the younger generation, I found that they did not even feel the need to get to know their home village.

Figure 6. The change in the mental map of a 52-year-old female respondent
(■= 2013 ● = 2013 and 2023 ▲ = 2023)

3.5. Finally, I would like to present the indices of toponymic knowledge for two respondents from the older generation separately. The toponymic knowledge of the 72-year-old male respondent, who used to be a farmer, declined by 3 percentage points, from 77% to 74%. Similarly, the toponymic knowledge of the 74-year-old female respondent, an ex-office worker, decreased by 6 percentage points, from 67% to 61%. In their case, the natural process of forgetting that comes with age may be the reason for this phenomenon. In their case, no new name acquisition was observed, and in connection with the names that they could no longer locate at the time of the 2023 survey, they often commented: "I can't think of it now."

Figure 7 illustrates the changes in the mental map of a 74-year-old woman. It can be observed that her toponymic knowledge may be deemed consistent, covering the entire inner settlement area as well as the outskirts. The forgotten names include the names of referents located at different points in the outskirts.

Figure 7. The change in the mental map of a 74-year-old female respondent
(■= 2013 ● = 2013 and 2023 ▲ = 2023)

**4.** I conducted my follow-up study on an experimental basis due to the limitations in drawing statistical conclusions from a small number of respondents.

My experimental panel study, constrained by a limited number of respondents, endeavors to elucidate the intricate web of factors potentially leading to name loss. The transformation of land cultivation practices (such as single ownership, non-manual cultivation, and large parcels) constitutes only one facet among numerous contributing factors. Changes in occupational environments, the narrowing of individual life trajectories, and the diminishing presence of physical (as opposed to digital) communal spaces also play pivotal roles in diminishing name usage at both the individual and communal levels.

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