Proceedings of the LSA

Environmental factors drive heritage language vitality and shift

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Abstract. How does the environment influence heritage language use? In sociolinguistic interviews and cognitive map tasks, 28 heritage-speakers of Albanian and Bosnian/Croatian/Montenegrin/Serbian (BCMS) in Switzerland shared with me knowledge on their language use in the environment. In this paper, I provide preliminary insights from my study, focusing on two cases. My hypothesis is that heritage speakers are exposed to environmental pressures which drive shift away from the heritage language to the dominant language of the surrounding society. Findings show that speakers link shift from the heritage to the majority language, as well as post-vernacular reclamation of the heritage language, with experiences of (residential) segregation, physical and perceived distance from heritage country, and structure of diasporic networks. I argue that many of the challenges for language vitality are engrained in environments which are often inaccessible, impoverished or unjust. Further research is necessary to fully appraise the importance of environmental factors in shift ecologies.

Keywords. heritage language; language shift; language vitality; environment

1. Introduction. Migration sets off complex environmental dynamics with a high impact on language. Heritage speakers grow up using their ancestral language in an environment where a different language is dominant. Shift away from the heritage language to the majority language of the surrounding society is a reality for heritage speakers worldwide.

Sociolinguistic research is still beginning to scrape the surface of the complex interrelations between language and the environment. In this paper, I focus on environmental aspects which have been previously either neglected or ignored. My study is focused on the case of heritage Albanian and BCMS in Switzerland. This paper tackles the following research question:

RQ1 How does the environment influence the vitality of heritage Albanian and BCMS in Switzerland?

In answering the latter question, I provide preliminary evidence to shed light on a question of overarching concern for sociolinguistic theory:

RQ2 What are the environmental drivers of language vitality or shift?

In this study, I find that language vitality is driven by an interplay of factors embedded in the spatial and social environment. Based on an analysis of two cases from a data collection of 24 sociolinguistic interviews and 27 cognitive maps collected among 28 heritage speakers[1] of Albanian

* I would like to thank Jolina Saliquni of the University of Zurich for her work as a research assistant in this study. Jolina has provided invaluable assistance in consultant recruitment and interview transcription. Furthermore, I would like to thank all consultants who agreed to share their knowledge with Jolina and me. Moreover, I would like to express my thankfulness to Philipp Striedl, Johanna Holzer, Victor Friedman and Lenore Grenoble, who provided helpful feedback at various stages leading up to the publication of this paper. Author: Cristiana Lucchetti, University of Zurich (cristiana.lucchetti@uzh.ch)

[1] The total number of consultants is 28. Two interviews were carried out with groups of consultants. One consultant did not wish to participate in the cognitive map task.

and BCMS in Switzerland, I identify the following environmental drivers of language vitality and shift: a. residential segregation, b. deprivation/access to infrastructure or lack thereof, c. life in rural or urban settings, d. local and transnational networks, including frequency and intensity of visits to region where heritage language is spoken.

2. Conceptual background. This paper is situated in the general problem area of language and the environment. Research on language vitality and shift in the last thirty years has begun to look at the influence of the environment on these phenomena. However, we are still far from implementing systematic investigations on this interplay.

Pennycook & Otsuji (2015) argue that the sociolinguistic reality of cities makes it so that city-dwellers are particularly used to carrying out their different social tasks by engaging in multilingual language use. At the same time, other research has shown that cities, far from being hotspots of linguistic diversity, are the places where languages go to die, to put it bluntly (Grenoble & Whaley 1998:138).

A heritage language' is any minority language surrounded by a dominant language which is often the majority language of society at large (Montrul & Polinsky 2021). In theory, this includes both immigrant and indigenous minority languages worldwide. In practice, mainstream heritage language research focuses on immigrant heritage languages. Best-researched are national languages with large numbers of speakers. Indigenous and immigrant heritage languages with smaller numbers of speakers are underrepresented in heritage language research.

Environmental aspects are remarkably neglected in mainstream heritage language research. The latter tends to view heritage speakers through a normative lens against the backdrop of monolingual L1 speakers as a baseline. As observed by Lüpke (2016), if we are to attain as full-fledged an understanding of multilingualism as possible, it is important that we turn to environments and languages other than those of Western nation-states. This includes indigenous and immigrant minority languages which are typically underrepresented in research, such as Albanian and BCMS. Lüpke (2016) illustrates that heritage language practices can be maintained in geographically significant environments. It is in these environment that we can draw knowledge on the what, why and how of language shift.

2.1. ENVIRONMENT. I conceptualize the environment as encompassing both the spatial and the social surroundings of speakers. This definition of environment results in an ecological perspective on language by which language cannot and should not be studied as a detachable entity from its environment, be it natural or man-made, physical or social. This perspective is greatly influenced by Grenoble & Osipov (2023) in their work on indigenous languages of the Arctic.

2.2. LANGUAGE VITALITY AND SHIFT. I view language vitality as a continuum ranging from an idealized condition of stable multilingualism through attrition, shift, loss to language death (see Figure 1). Language shift is located right in the middle of this spectrum, as it's the tipping point between language maintenance and gradual loss. Ironically, language vitality is often studied in contexts where it is threatened. Conceptualizing vitality as a spectrum is helpful because it underlines that it's not a static, unidirectional process steering toward language loss or death necessarily. In fact, research shows that speakers, sometimes supported by policy-makers, can counter and even reverse language shift, loss and death (Grenoble & Whaley 2005), and that neither attrition nor shift need automatically happen in multilingual ecologies (Lüpke 2016).

Figure 1. Language vitality spectrum

3. Albanian and BCMS in Switzerland. Albanian and BCMS are among the most frequently spoken non-national languages of Switzerland. According to the latest statistics, each is spoken by about 4% of the resident population of Switzerland, with a higher concentration in German-speaking Switzerland (Federal Statistical Office – BFS 2025a). Some of the first speakers of Albanian and BCMS came to Switzerland as so-called "seasonal workers" (German *Saisonnier*) in the 1960s, when Yugoslavia ratified a labor agreement with Switzerland. Economically motivated migration from countries of the former Yugoslavia to Switzerland continues to this day. Centrally, a large number of immigrants came to Switzerland as refugees due to wars and the dramatic political, social and economical disruption brought about by socialist Yugoslavia and its breakup process.

At least three generations of Albanian and BCMS heritage speakers live in Switzerland today. The bulk of migration came from Kosovo, Northern Macedonia and Serbia (OECD 2025). Croatia, Bosnia-Herzegovina and Montenegro are represented, too. Most immigrants from Kosovo and Northern Macedonia to Switzerland are heritage speakers of Albanian, while BCMS is spoken in Bosnia-Herzegovina, Croatia, Montenegro and Serbia.

Albanian and BCMS are two distinct languages within Indo-European. BCMS is South-Slavic, while Albanian is an isolate. Both Albanian and BCMS involve a high degree of regional variation. To date, there are no studies comparing heritage Albanian and BCMS. This is at least partially due to ideological conflicts primarily between the Serbian-speaking and Albanian-speaking community. I argue that a comparative study on these two heritage languages in Switzerland is valuable and highly informative due to 1) their comparable sizes, 2) similar immigration patterns and motifs, 3) a shared but contested post-Yugoslav heritage.

Standard Albanian is based on the Tosk variety, but most heritage speakers of Albanian in Switzerland come from areas where the Gheg variety is widespread.

The label BCMS is widespread in English-speaking linguistics, but highly contested in the countries of the former Yugoslavia. In their current legislation, South-Slavic successor states of Yugoslavia refer to their languages separately, i.e. Bosnian in Bosnia and Herzegovina, Croatian in Croatia, Montenegrin in Montenegro and Serbian in Serbia. Depending on age and attitude toward a shared post-Yugoslav heritage, other labels are used informally, mainly in the diaspora, such as Serbo-Croatian, "naš (jezik)" (BCMS for "our language") and "Jugo"/"Yugo". In view of phonetic, lexical and morphosyntactic variation , the four varieties are largely mutually intelligible. Informal language maintenance within the family can and does rely on dialects. However, the divide between language standards and everyday language use poses challenges for formalized programs, which largely rely on standard languages and are often sponsored by the countries' embassies. In Switzerland, these programs are called *HSK* ("heimatliche Sprache und Kultur", German for "language and culture of the home-country").

A survey I conducted between 2024 and 2025 (Lucchetti in preparation, Lucchetti 2025) among more than 450 speakers of Albanian and BCMS between generation 1.5 and third generation shows that *HSK* courses have a very low degree of attendance. Reasons include, next to

sparse local availability and inconvenient schedule, the perceived divide between home language practices and formal teaching, as well as concerns over nationalistic ideologies in classrooms.

Based on my survey, Albanian and BCMS are – unsurprisingly – very vital in generation 1.5, where more than 90% respondents rate their competence as high to very high on a 6-point Likert scale. The rating decreases to 55% in the second and third generation. Overall, these results show a higher vitality grade than has been assessed e.g. for BCMS in Germany (Achterberg 2005).A comparatively high vitality is decisively influenced by the size of these communities in a small country like Switzerland.

4. Study design. This paper focuses on two cases from a study based on sociolinguistic interviews and cognitive maps. I conducted data collection in the spring-summer of 2025. The fieldwork region covers a portion of German-speaking Switzerland. Interviews were most always conducted at consultants' locations of residence.

With the help of RA Jolina Saliquni, I was able to reach a total of 28 consultants, among which 16 are speakers of Albanian and 12 of BCMS. Consultants' age ranges between 16 and 50 years. I always let consultants choose their language of preference for participation. Most interviews and cognitive map tasks took place in Swiss-German or Standard German; one interview was in Albanian and four were in BCMS. I instructed consultants on the topic and aim of my study and gave them time to familiarize themselves with and ask questions about the privacy policy and consent form. I explained that the study included both an interview part and a cognitive map task, and that both parts would be audio-recorded. Recordings were transcribed, anonymized and stored on protected databases at the University of Zurich. Consultants received a compensation of 20 CHF.

4.1. INTERVIEWS. I conducted semi-structured sociolinguistic interviews, approximately using the survey mentioned in Section 3 as a guide. To start, I asked consultants to introduce themselves and explain why they decided to participate in the study.

My focus was on language use in different social and spatial contexts, e.g. at home, on the workplace, in the neighborhood, etc. We always discussed consultants' self-evaluated language competence as well as attitudes toward / practices of language maintenance.

As usual in semi-guided interviews, consultants were free to steer the conversation toward topics which they deemed relevant. While my main interest is in understanding how the environment shapes language use and influences heritage language vitality, several consultants mentioned environmental aspects without me explicitly asking about them. This illustrates that they evidently perceive the environment as a central dimension to their language use.

Next to language use, almost all interviews also covered issues of language prestige, social justice, discrimination, migration, formal and informal language policy.

4.2. COGNITIVE MAPS. Toward the end of interviews, I gave consultants a prompt along the lines of: "Please sketch a map of important places in your life and add the languages you speak there. It does not have to be geographically precise; this is a creative task". This is an example of what I term a cognitive map task.

Cognitive maps are sketches externalizing how people conceptualize the environment, be it "objective physical reality or subjective worlds" (Golledge 1999:13). Cognitive maps are applied in many disciplines. In variationist linguistics, maps are often used to obtain speakers' representations of linguistic variation in a given area. Based on my literature research, mine is the first

application of cognitive maps to the study of environmental factors in language vitality.

The rationale behind cognitive maps in my study is manifold. Sketching a map of the environment allows consultants to take on greater agency than by solely answering questions. In cognitive map tasks, I am interested in consultants' view of their life environments and languages in them. Consultants took me through their maps while sketching them, providing important context. This is the reverse scenario to interviews, where I would guide consultants and they would follow suite.

Once the task was concluded, I uploaded a picture of each map to the platform MAXQDA, where I segmented maps by featured element and coded elements thematically. In this paper, I provide an in-depth qualitative analysis of two selected interviews and cognitive maps. Cognitive maps can be analyzed quantitatively, too. The frequency of elements and features can be illustrative of patterns in language use and interaction with the environment. Future research should further explore the potential of cognitive maps in linguistics.

4.3. OWN POSITIONALITY. The way we interact with people who actively, generously contribute to our studies is certainly shaped by our own experiences, personality, sociodemographic background and all possible aspects of our lives. Making the researcher's positionality explicit helps control, reduce or neutralize possible power imbalances, biases and constraints on analysis.

I am a non-native speaker of any of the languages involved in this study – Albanian, BCMS and (Swiss) German.

I have been speaking Standard German from Germany as my main language of interaction for the last eleven years. My command of German is near-native, and native speakers perceive me as native or near-native. My German has Bavarian features in phonology, syntax and lexicon. In German-speaking Switzerland, the German Standard differs from the one used in Germany, and the Swiss German dialect is most commonly spoken in everyday interactions. Friends, acquaintances and strangers often speak to me in Swiss German and I will interact with them in my Bavarian Standard German with lexical, syntactic and intonational features from Swiss German.

I am a proficient speaker of Serbian and well aware of variation between B, C, M and S. I can comfortably interact with speakers of any of the other three varieties.

I am an advanced speaker of Albanian. I have studied it with teachers and resources oriented toward the Tosk-based standard. Thanks to research experience in Kosovo, I am familiar with the quality and degree of variation between Gheg and Tosk. As Gheg is widespread in Switzerland, I am used to hearing it and encounter few problems understanding it.

In my perception, my language biography had a positive impact on interactions with consultants, contributing to creating a laid-back atmosphere. Consultants appeared at ease. My research assistant, Jolina Saliquni, is personally acquainted with many of the consultants. Jolina speaks Swiss German and is a heritage speaker of Gheg Albanian. Jolina's presence during most interviews also helped build a safe space for consultants. They always interact with Jolina in Swiss German outside of the interview situation and hence automatically used Swiss German with me, too, without feeling pressured to switch to Standard German.

5. Results. In this section, I focus on two case-studies which are particularly insightful. Wherever relevant, I contextualize these findings within overall tendencies found throughout the sample.

5.1. CASE-STUDY 1. Ivan (pseudonym) is 22 years old. He was born in Switzerland and is a heritage speaker of Croatian. He lived for most of his life in a neighborhood on the outskirts of Schaffhausen[2]. The latter is a city in the North of Switzerland, close to the border with Germany. Ivan now shares an apartment in a different area of Schaffhausen with his two siblings. Our interview took place in Schaffhausen. We conducted it in Swiss German (Ivan, Jolina) and Standard German (myself). Ivan and I also shortly interacted in BCMS.

Ivan recounted not being entirely comfortable with his Croatian language competences. In the following excerpt, he relates difference between his and his sister's Croatian to different spatial and social environments in which the two siblings have been socialized:

> **Cristiana:** Among the three of you, who speaks better Croatian?
> **Ivan:** My younger sister. There's a *yugo* culture in Switzerland and she's very invested in it. She has a lot of friends who speak Croatian. As a child, her Croatian was the worst among the three of us ... and then at once she started hanging out with Croatian-speaking people ... and her Croatian got better and better.
> **Cristiana:** How come, even though she's the youngest?
> **Ivan:** Our friend groups were different. At first, we would all hang out with the neighborhood kids. But then in high school I met people from [neighboring village]. [name of Ivan's neighborhood redacted] is in the valley and [neighboring village] is up on the hill. And everyone owns houses there - I mean, they're all Swiss rich people, Swiss or something. ... It's almost symbolic ... and then I started hanging out with them and I started to identify with them, they were, like, the skaters, and we bonded, and then something switched, and that wasn't the case for my sister. I also find it interesting that, in the *yugo* diaspora bubble, people speak a different kind of German, where they highlight the gangster aspect.

The area of and around the city of Schaffhausen is an important immigration hub in Switzerland (Federal Statistical Office – BFS 2025b). Statistics for the languages spoken in Ivan's neighborhood are unavailable. Based on rich ethnographic data I collected during interviews, the neighborhood hosts a considerable number of speakers of BCMS and Albanian.

At an earlier point of the interview, Ivan reconstructed that Croatian was very present in the neighborhood soundscape. He recalled being very fluent in Croatian in his childhood, and using it to interact with friends and relatives in and around his neighborhood. Up to high school, most of his social contacts were in the neighborhood, and communication within the home, with his siblings and mother, would mostly happen in Croatian. As Ivan pointed out in the above excerpt, with a shift in his environment of interaction also came language shift. Ivan described the neighboring village as having very different sociodemographics to the area where he grew up.

Ivan explained that he and his Swiss friends from the neighboring village would meet there and spend time outdoors. Outdoor activities are more accessible in that area, which is surrounded by nature and significantly less densely urbanized than Ivan's neighborhood.

Ivan's description of the difference between the two places points toward a perceived deprivation in his neighborhood. Deprivation is a concept from social policy also widely used in human geography. Townsend (1987:125) defines it as "a state of observable and demonstrable

[2] Specific location names are redacted for privacy protection

disadvantage relative to the local community or the wider society or nation to which an individual, family or group belongs". Deprivation involves many dimensions, and access to nature and outdoor activities counts as the possible manifestation of local deprivation. The assessment of multidimensional deprivation in and around Schaffhausen is made difficult by the sheer lack of indexing instruments and data available for Switzerland altogether. In one of the very few available studies mapping deprivation in Switzerland, Panczak et al. (2023) produce a map showing that the region of Schaffhausen rates visibly lower than all other urban areas in Switzerland on the Index of Socioeconomic Position. This map does not allow enough of a fine-grained differentiation to allow a comparison between the two main environments in Ivan's interview. However, the map by Panczak et al. (2023) is very revealing on a more general level. Several areas known in Swiss media and/or local communities to host sizeable populations of immigrants from the former Yugoslavia – such as Spreitenbach, Dietikon, Neuhausen am Rhein and others – also appear to be associated with lower socioeconomic ratings. Further research and open data publications are necessary to verify this assessment.

In Ivan's view, his sister was able to maintain and even improve her spoken Croatian because she continued socializing in the neighborhood, as opposed to him. Ivan added that his sister developed a speech style allegedly peculiar to post-Yugoslav diaspora youth. In Swiss media and in some linguistic articles, the label *Jugodüütsch*[3] is often used to describe an alleged variety associated with immigrants from the former Yugoslavia and their children. Sometimes the term is extended to a second-generation immigrant speech style in general and framed as a "multiethnolect" (Schmid 2017). Several consultants, including Ivan, downplayed the label's relevance, describing *Jugodüütsch* not as a full-fledged language variety, but as a transient phenomenon consisting of few features which mostly disappear with adulthood. These language attitudes partially converge with an analysis by Schmid (2017). The label is highly problematic because it obviously emerged as an exonym to express negative views toward immigrants from the former Yugoslavia – and immigrants in general – based on allegedly deviant use of Swiss German. At the same time, it points to complex prestige dynamics at play. These prestige dynamics are certainly influenced by environmental aspects. In and around the major urban areas of Switzerland, residential segregation runs along socioeconomic and nationality lines (Federal Statistical Office – BFS 2018), and immigrants are likely to have different residential patterns than non-immigrant residents. Residential segregation and deprivation have an impact on individual and community linguistic heritage because languages are made peripheral.

As do all the other 27 consultants in this study, Ivan believes that BCMS and Albanian are negatively perceived in Swiss society. At the beginning of the interview, Ivan depicted his neighborhood as follows: "where I grew up … I believe there was not even one single person in eight blocks who did not come from down there [i.e., the former Yugoslavia]". Later, he added: "[name of town close to Ivan's neighborhood] is some kind of a diaspora hotspot. But [Ivan's neighborhood] is a lot, too".

Ivan described his neighborhood as a residentially segregated area. For language mainte-

[3] I have discussed this label at length with consultants and fellow linguists in Switzerland and abroad. I am not interested in describing it as a variety: doing this would automatically provide legitimity to a label which, for some consultants, equals a slur. Moreover, the label throws all successor states of the former Yugoslavia into the same box, regardless of individual and group self-identification or linguistic heritage. This is a further reason why consultants expressed neutral to negative attitudes toward this label. I limit its use it in this paper to the bare minimum. When I do use it, it appears in italics, to underline that I distance myself from this term.

nance, residential segregation can function as a double-edged sword. On the one hand, BCMS is vital in the local neighborhood, where it is spoken daily and hence more easily passed on to the next generation. On the other hand, it is spoken in isolation, does not have visibility beyond the strictly local level, and feeds into negative prestige dynamics at play. In turn, however, for Ivan's sister, segregation and negative attitudes expressed by out-groups have contributed to reinforcing her interest in Croatian. Ivan's sister not only improved her Croatian language skills, but has been engaging in what I term a post-vernacular reappropriation of linguistic heritage. The term "post-vernacular" was introduced by Shandler (2004) to underscore a conscious use of the heritage language with a performative function beyond just speaking it. I interpret the fact that Ivan's sister consciously mixes elements of Croatian in her Swiss German as an act of identity and an empowering reaction to linguistic discrimination. This interpretation is supported by many other instances throughout the sample. I discuss another such instance in Section 5.2.

Interacting with non-speakers of BCMS in a more privileged environment has had a long-lasting influence on Ivan's language repertoire and on his socialization. He notices a significant attrition in his Croatian, but he also hints at feeling positively about the fact that people around him do not perceive him as Croatian.

Overall, Ivan's language use appears to have been strongly influenced by the way he was able to interact with the spatial and social environment since his childhood. His cognitive map (Figure 2) is revealing. On the top left-hand corner, Ivan has sketched the Rhine river as a symbol of Schaffhausen, his main life environment. There, he notes Swiss-German ("CH") as his language of interaction. On the right-hand side of the picture are all other contexts of interaction. Ivan explained he speaks Croatian with his father, who came to Switzerland as a migrant worker and never reached full command of German (top right-hand corner). Ivan also uses Croatian on yearly visits at his grandmother's in the Croatian region of Gačka (bottom right-hand corner). The home (left-hand middle) is the only environment where Ivan reported both Swiss German and Croatian as main languages of interaction. While guiding me through his map, Ivan noted that sharing an apartment with his siblings has been having a very positive impact on his Croatian, which had deteriorated after he had first moved out of his family apartment, as he had less daily interactions with his parents. Looking at his cognitive map, at least two aspects are remarkable: 1) Ivan's language environments reflect the same segregation to which many immigrants from the former Yugoslavia were and are exposed in Switzerland; and 2) his approach to languages in the environment seems to echo Swiss multilingualism, which functions by a territoriality principle. It is common knowledge that there are three major linguistic areas in Switzerland (by decreasing number of speakers: German-speaking, French-speaking, Italian-speaking) and a fourth area where Romansh, the minority national language of Switzerland, is spoken. In sum, Ivan shared a view of his approach to language in space as an almost entirely segregated one. Swiss German is the language of his main life environment, and Croatian has a peripheral role. This appears to be due both to practical reasons, as he has fewer occasions to speak Croatian now than he did in his childhood, but also to the stigma associated with BCMS as a language of the social periphery.

5.2. CASE-STUDY 2. Xhulia (pseudonym) is 22 years old. She was born in Switzerland and is a heritage speaker of Albanian. She and her two younger brothers live with their parents in a small village. The village is located in a valley between two lakes. I omit the name of the village and further geographical details for consultant identity protection.

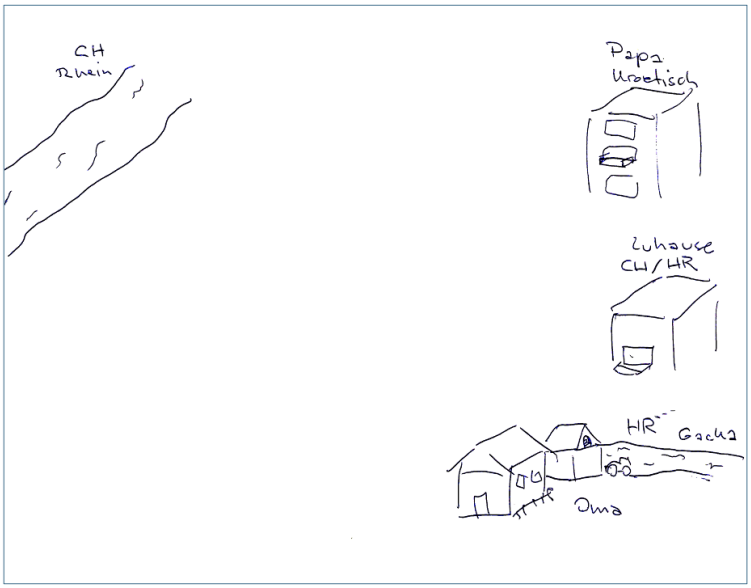

Figure 2. Ivan's cognitive map

I conducted two interviews with Xhulia. The first was in Zurich, where she studies. The second was in her home in the village with her and her family. During our first interview, Xhulia's life environment was a topic of great relevance from the very beginning. She invited me to visit her there to better understand her characterization of the village as an isolated, underdeveloped place. The village consists in a group of houses located on both sides of the main road connecting one of Switzerland's major cities and a neighboring town. During our one-on-one interview, Xhulia detailed her experience growing up in the village and the impact this had on her language use. When Xhulia and I first met for the interview, she addressed me in Standard German with evident phonological, lexical and morphosyntactic influence from Swiss German. Assuming she was accommodating my lack of active Swiss German, I told her she should feel free to speak whichever variety she prefers, as I would understand Swiss German. Xhulia explained: "this is how I actually speak". As speaking Standard German is fairly uncommon among Swiss-born residents of Switzerland with no family ties to other German-speaking countries, I enquired further on her language use:

> **Cristiana:** Why did you decide to speak differently?
> **Xhulia:** Until kindergarten I only spoke Albanian and I was quite isolated. I would play with my younger brother and a bit in the neighborhood. And our neighborhood is very *multikulti* [German slang for 'multicultural', sometimes pejorative] anyways, I mean, a co-worker of mine called it *Asylland* [German for 'refugee country'].

The term *Asylland* refers to the demographics of the village, which hosts several housing projects for refugees and has been covered by Swiss local media as a deprived area, with run-down buildings, neglected road pavement and insufficient infrastructure for local activities[4]. Xhulia perceived growing up in a place which consisted only of one busy road and no areas to play safely

[4] To ensure that consultant identity is protected, I refrain from adding references to coverage of these issues in Swiss media.

was a very different experience to that of most other schoolkids. Walking along the main road was – and still is – dangerous, and sidewalks were not – and still are not – present all along it. Hence, Xhulia's everyday walk to school lasted more than twenty minutes, going up and then down a hill in the woods to finally reach the closest schoolhouse. Xhulia shared these and other details to exemplify how isolated she felt growing up. As there is no playground or any other area where kids could spend time outdoors, Xhulia and the brother closest to her in age did not have many occasions to interact with other people; instead, they mostly interacted within the family, which happened in Gheg Albanian. In Switzerland, families whose children grew up with a language other than German as their first language are expected to sign them up for *DaZ-Unterricht*, i.e. classes for German as a Second Language. Xhulia notes that attending these classes had a major impact on her language use and self-perception:

> **Xhulia:** I did not speak German until after kindergarten. And then they told me I should learn Standard German in the *DaZ* class, because every time I tried to interact with other kids, it would be in Swiss German, and then the teacher said I should use Standard German, so that I actually learn it. It took until third grade until I could speak basic Standard German. I tried to switch to Swiss German but the other schoolkids made fun of me, because it sounded weird to them.
> **Cristiana:** You mean the kids in the *DaZ* class?
> **Xhulia:** No, I mean the other kids, like the Swiss kids, because, I mean, I was not exactly fluent in Swiss German … they would make fun of me every time I tried … I gave it a shot again in middle school but it was the same, everyone was like, this is so weird, and then I gave up again, and then I guess it was almost like too late.

Including Xhulia and her brother, most consultants schooled in Switzerland also attended *DaZ* classes. Interestingly, several consultants perceived these classes not as a supporting resource, but as a hindrance while navigating life in German-speaking Switzerland and its sociolinguistic reality. German-speaking Switzerland has been described as diglossic (Stępkowska 2022) because of the observed functional and hierarchical divide between Standard German and Swiss German dialects. Diglossia is almost a buzzword for the linguistic situation in the region, and in fact Swiss German was one of the examples that Ferguson (1959) cited when he introduced the term in the first place. I find it important to underline that this binary conceptualization fails to appraise the fluidity of language variation even within German, let alone all other languages spoken in Switzerland. Using it uncritically might even risk reinforcing normative ideologies about Standard German which, as the examples above show, are detrimental for speakers' sense of self.

Similarly to Ivan's case, Xhulia recounted that language use strongly varies within her family, especially between the siblings. With her siblings, Xhulia speaks her variety of Standard German, the youngest brother Beat only uses Swiss German, and the middle brother Martin feels more comfortable in Swiss German, but partially accommodates to Xhulia. The pseudonyms I use for her brothers reflect that their real names are traditionally German and/or Swiss, while Xhulia's is Albanian. During our group interview, they shared that they do not resort to Albanian with each other, except for individual words which seem to function as what Sarah Bunin Benor has termed "heritage words" (Bunin Benor 2026). These are individual words or expressions from the heritage language which are used performatively as a way of (re-)connecting with the heritage language and culture in those cases where language shift – or even loss – is well underway.

I was interested in understanding how Xhulia explains different patterns in language use between the siblings:

> **Cristiana:** What's the difference between you and your brother [Beat], why does he speak Swiss German?
> **Xhulia:** He's way younger, he's 14. My other brother and I are not that far apart, and we spoke just Albanian until kindergarten and were kind of isolated in [village name redacted]. But my youngest brother started going to a playgroup at 3 y.o., and that was in [neighboring town; name redacted]. ... he has different hobbies, he's been playing soccer since he was 5, and that's in Swiss German. In a way, he grew up differently, he had a different environment and is just more integrated. We really tried to make him become Swiss. Though he likes to use an *Ausländer* [German for 'foreigner'] accent.

As the family achieved more social mobility and better life conditions over the years after immigration, the parents were able to provide their youngest kid with more resources for participation in social life beyond the limited context of the village. Spending time in the neighboring town and engaging in activities with L1 speakers of German and Swiss German had a major impact on Beat's language use and eventually sense of belonging, too. Beat did not actively acquire a fluent command of Albanian because most of his socialization happened outside of the village, and because he had a more facilitated access to sports infrastructures and other resources than was the case for the other two siblings. While Beat is not fluent in Albanian, he engages in post-vernacular use of Albanian in a similar way to what I observe in Case Study 1. Similarly to Ivan's sister, he uses Albanian words or expressions and adapts what Xhulia has called an *Ausländer* accent, i.e. Swiss German with multiethnolectal features.
Although she grew up with Albanian as her first language, Xhulia now only has few occasions to actively use it. She sometimes communicates in Albanian with her parents, but communication often switches into German, as the parents are fluent in it and use it everyday at work. While they are speakers of Gheg Albanian, Xhulia's parents committed to teaching her Standard Albanian. They explained this as a conscious decision to distance themselves from the stereotypical image of uneducated Albanian-speaking immigrants which is widespread in Switzerland. In sum, therefore, Xhulia has a rich experience navigating sociolinguistic variation from an early age. Due to societal pressures and normative ideologies, her active use of both Albanian and German orbits around the respective standard varieties. At the same time, she is regularly exposed to both Gheg Albanian and Swiss German, has a full understanding of them and can easily integrate variation in her active language use.

Xhulia's awareness of variation is featured in her cognitive map, too (see Figure 3). On top left-hand side of the picture, she associated Switzerland ("Schweiz") with Swiss German ("Schweizerdeutsch"). Within the territory of German-speaking Switzerland, she marked her home (within the heart-shaped symbol) as the place where she speaks Standard ("Hoch") German[5]. The smaller heart-shaped figure within the sketch for German-speaking Switzerland indicates her grandmother's home. With her, Xhulia noted speaking Albanian. Xhulia also has family

[5] The expression "Hochdeutsch" is often used outside of linguistics as synonymous with Standard German. This is incorrect. In linguistics, the "high" in High German does not define it in terms of prestige or grammaticality. The German standard is based on the varieties spoken in the German highlands below the Benrath and Uerdingen isoglosses.

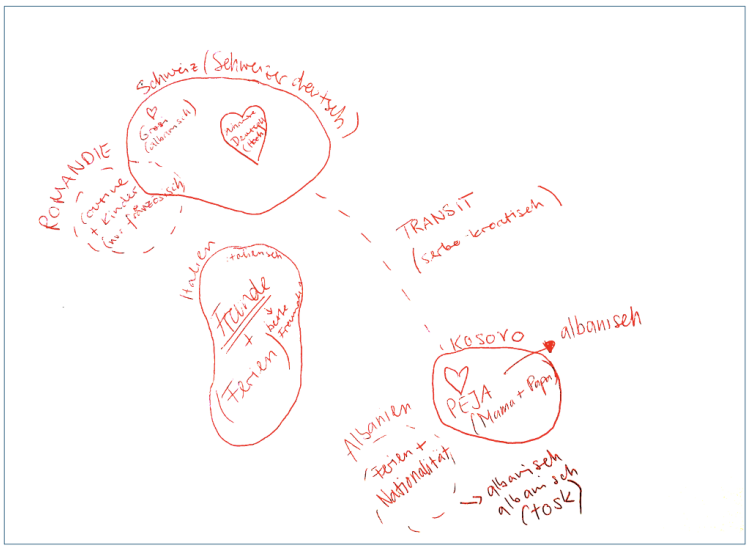

Figure 3. Xhulia's cognitive map

in French-speaking Switzerland ("Romandie"); with them, she speaks French. Below French-speaking Switzerland, Xhulia sketched Italy, where she often spends her summer holidays with her best friend, a heritage-speaker of Italian. The map features a dashed line connecting Switzerland and Kosovo via the countries of the former Yugoslavia. Xhulia does not speak BCMS, but is used to hearing it spoken by some of her relatives as well as on the way to Kosovo. Xhulia and her family regularly visit Kosovo and often spend several weeks on end there during the summer holidays. She also included Albania on her map, as she sometimes travels there for vacation, and because she feels identity ties with it. Being well aware of the linguistic variation within the Albanian-speaking region, she indicated both the Albanian she is more familiar with – i.e. Gheg Albanian from Kosovo – and the Tosk variety, since she knows that both dialects are spoken over the territory of Albania.

While her cognitive map renders Xhulia's experiences with variation in the heritage language and in the L2, it also paints the picture of a territorial approach to multilingualism, similarly to Case Study 1. Xhulia's map and how she drove me through it during the interview show that Albanian nowadays plays a peripheral role in her life. Xhulia recounted consciously trying to distance herself from Albanian and trying to speak as much Standard German as possible:

> **Xhulia:** Growing up as I did, I soon realized that, if I live like an Albanian in Switzerland, or if I'm open about it and proud of it, then it won't be perceived positively … and I was always a big perfectionist, I wanted to achieve as much as possible, perfect Standard German … sometimes I do think, when someone brings up *Asylland*, couldn't they have picked another place, no matter where, maybe the city, just so that I don't have to live there and don't have to identify with it, just out of frustration, because it really had an impact on me.

Evidently, the experience of isolation and deprivation had a negative impact on Xhulia's motivation to use her heritage language and include it in her identity. At the same time, it also impeded her active use of Swiss German. In short, an isolated, deprived environment can result in linguistic deprivation, too, where resources to either maintain the heritage language or naturally acquire

the main language of the surrounding society (Swiss German) are largely inaccessible, and the prestige of the heritage language is threatened.

6. Discussion and outlook. In both cases discussed, consultants reported growing up in residentially segregated areas. Ivan grew up in a relatively deprived area and was surrounded by speakers of Croatian for most of his childhood into his teenage years. Xhulia grew up in a deprived area with no direct access to a solid infrastructure for leisure activities, little accessibility or walkability of the surrounding area, and little contact to speakers of German until after kindergarten. Xhulia grew up in greater isolation than Ivan, in a rural area. Both of them have their respective heritage languages as L1s and only acquired German later. While Xhulia spoke no German before primary school, Ivan acquired Swiss German at a preschool playgroup. This is a resource which Xhulia would not have had any access to. Ivan reported that his mother was taking German classes in his early childhood and would try to include German within the home, being aware of how important it is for social mobility. The same was not the case for Xhulia, whose parents learned German on the workplace.

On the one hand, Ivan and Xhulia noted that living in (relative) segregation also allowed them to retain their heritage language in their childhood. Locally, the heritage language is a very significant means of communication. On the other hand, however, precisely because of segregation and deprivation, using the heritage language for everyday social interactions outside of the local environment becomes largely unattractive.

Insights into cognitive maps show that consultants conceptually and environmentally separate between their heritage languages and the language of the surrounding society.

Remarkably, both consultants note that their younger siblings consciously reclaim the heritage language as part of their identity. In the case of Ivan's sister, she even adopted Croatian as her main language of interaction with some of the family members, and uses it as a post-vernacular with her peers. This finding is interesting because it contradicts previous tests showing that birth order directly correlates with heritage language skills (Keller et al. 2015). Ivan's sister is the youngest of three siblings, yet her Croatian skills are perceived by her elder siblings as the strongest.

For both consultants, spending more time in urban areas for education and other reasons resulted in a gradual shift away from the heritage language, which is now not central to their everyday life. This is an expectable process in migration, but does not justify the sheer absence of resources available to these and other consultants to cultivate their linguistic heritage.

For Ivan and Xhulia, transnational networks are vital to maintaning their heritage languages. Being able to use the heritage language in a significant environment, such as during visits to Croatia and Kosovo in their cases, functions as a great boost for their interest in and self-confidence speaking Albanian.

Summarizing the analysis of both case studies, I was able to identify the following environmental drivers of language vitality and shift: a. residential segregation, b. deprivation/access to infrastructure or lack thereof, c. life in rural or urban settings, d. local and transnational networks, including frequency and intensity of visits to region where heritage language is spoken. Insights from my study indicate that these factors can have mixed effects: e.g., residential segregation can license language shift but also post-vernacularity leading to a higher language vitality. Further studies should aim for systematizing these factors within an environmentally anchored theory of language vitality and shift.

The stigmatization which immigrants – in this case, from the former Yugoslavia – face is

environmentally engrained because their live environments are more often deprived and segregated than is the case for more privileged societal groups. This is a common dynamic in migration generally, but the effects thereof on heritage language vitality are underresearched. Against this backdrop, I argue that language vitality is environmentally driven.

The most obvious limitation of this study is sample size. This paper only considered two cases from a broader sample. However, cross-sample tendencies are recognizable and supported by my quantitative survey (Lucchetti 2025). This paper serves as a preliminary exploration of the extent to which language vitality and shift are influenced by the environment. A further limitation lies within the cognitive map method, which is a novel contribution of this study for complementing rich ethnographic data on language use in the environment. At the same time, maps naturally elicit a "territorial" view of language. Future research should experiment different uses of cognitive map tasks. In sum, this paper shows interactions between language vitality and the environment to be a promising direction for future research. Understanding the environmental drivers of language shift will allow scientists and policy-makers to identify strategies to more efficiently counter language loss, social injustice and exclusion.

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