The Zone of Ethnolinguistic Social Networking (ZonES) in Khalaj Turkic: A Model for Language Endangerment

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ABSTRACT: Social network and ethnolinguistic vitality have been separately studied in various language constellations with different speech communities and participant profiles so far. However, studies focusing on the interplay between social networks and ethnolinguistic vitality are quite scarce, even though the number of endangered languages is increasing in number. Adopting a mixed-hybrid model involving social network theory and ethnolinguistic vitality, this study aims to investigate whether the interplay between language vitality and language use in constructing or maintaining social networks could be observed in Khalaj-Persian by observing 26 multilingual Khalaj-Persian individuals. The data was collected through semi-structured interviews, field work notes, and a language use questionnaire. The effect of generational difference was also manipulated by dividing the participants into three generation groups (older, middle-aged, and younger) based on their ages. The findings revealed that there was an intimate relation between language use in networking and ethnolinguistic vitality for predicting language endangerment with its limitations. The intergenerational analysis showed that the older participants were more inclined to use their heritage language, i.e., Khalaj, with Khalaj-speaking individuals whenever possible, while the younger participants tended to use Persian predominantly in their social networks.

Keywords: Khalaj, zone of ethnolinguistic networking vitality, field work, endangered language(s)

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Halaççada Etnodilbilimsel Ağ Canlılığı Alanı (ZonES): Bir Dilin Tehlikeye Girmesini Saptamak için Model

ÖZ: Toplumdilbilim alanında, toplumsal ağ ve etnodilbilimsel canlılık konuları şimdiye kadar farklı konuşma toplulukları ve katılımcı profilleri ile çeşitli dil kümelerinde ayrı ayrı incelenmiştir. Ancak, ilgili alanyazında sosyal ağ ve etnodilbilimsel canlılık arasındaki etkileşimin yok olma tehlikesi altındaki dillere odaklanan çalışmaların sayısı göreceli olarak azdır. Bu çalışma, (toplumsal ağ ve etnodilbilimsel canlılık kuramlarını içeren) karma bir model önermektedir. Bu doğrultuda, bu çalışma toplumsal ağların oluşumu veya sürdürülmesinde dil canlılığı ile dil kullanımı arasındaki etkileşimini odağına alarak, 26 çok dilli Halaççа-Farsça katılımcıyı inceleyerek söz konusu çok dilli ortamda oluşup oluşmadığını incelemeyi amaçlamaktadır. Çalışmadaki veriler yarı yapılandırılmış görüşmeler, alan araştırması notları ve dil kullanım anketi yoluyla toplanmıştır. Katılımcılar yaşlarına göre üç kuşak grubuna (yaşlı, orta yaşlı ve genç) ayrılmış ve böylece kuşağın etkisinin ortaya çıkartılması hedeflenmiştir. Çalışma verilerinden elde edilen bulgular, toplumsal ağ oluşturma aşamasında dil kullanımı ve toplumsal etkenlerin dilin tehlikeye girmesini öngörmesi açısından etnodilbilimsel canlılık bağlamında yakın bir ilişki olduğunu ortaya koymuştur. Kuşaklararası analiz ise, daha yaşlı katılımcıların mümkün olduğunca Halaççа konuşan bireylerle birlikte miras dillerini, yani Halaççayı kullanmaya daha meyilli olduklarına; genç katılımcıların ise sosyal ağlarında ağırlıklı olarak Farsça kullanmaya eğilimli olduklarına işaret etmektedir.
Anahtar sözcükler: Halaççа, etnodilbilimsel ağ canlılığı alanı, alan araştırması, tehlike altındaki dil(ler)

1 Introduction

Analysis of social network and that of ethnolinguistic vitality have been of interest to scholars investigating social anthropology, language variation, and minoritized/marginalized languages for decades (Milroy and Llamas, 2013). This interest mainly results from the micro-level social mechanisms that reinforce linguistic variations specific to various social groups, which might reveal insights about the interactional dynamics of speaker agency, orientation, belongingness, and attitudinal factors within and/or between speech communities. A speaker's social network encompasses interpersonal and interactional ties that basically constitute a collection of relationships a speaker has formed with others in personal communities. These personal communities are constructed by different interpersonal links of varying degrees. In creating these personal communities, "ego" is interactionally linked to persons in an endless web of communicative ties, connecting persons to one another – "ego being the person who, for analytic reasons, forms the "anchor" of the network" (Milroy and Llamas, 2013, p. 410). Ego might interact with persons either

directly on first-order network ties or indirectly on a second-order network. Within the first-order zone, it is crucial to distinguish between "strong" ties (with family members, kin, friends, etc.) and "weak" ties (with acquaintances, etc.).

Integrating social networks into the study of language maintenance and shift is not a novel concept. In a model designed to account for additive vs. subtractive bilingualism for school-aged children in francophone and anglophone parts of Canada, Allard and Landry's work (1992) neatly integrates social and individual factors impacting attitudes toward language maintenance or shift.

By the same token, the intimate relation between the degree of ethnolinguistic vitality and language use while constructing and/or maintaining social networks have been claimed to have an impact on the language situation (Landry & Allard, 1994). The ability of a group to sustain and safeguard its existence over time as a collective unit with a distinct identity and language is referred to as ethnolinguistic vitality (Ehala, 2015). It entails the intergenerational transmission of a speech community's language and cultural traditions, as well as a viable community-based life with active social institutions enabling social belongingness and collective identity. Low-vitality communities lack sociolinguistic agency and, thus, are prone to assimilation, but high-vitality groups are capable of concerted action to protect the collective identity in an intergroup situation. Objective vitality (OV) and subjective vitality (SV) are two types of ethnolinguistic vitality (EV) (Bourhis, 1979; Giles, Bourhis, & Taylor, 1977). OV can be defined as the strength of a speech community, which is assessed by three sets of variables: demographics, institutional support, and language status. On the other hand, SV can be defined as the subjective views of members of a speech community about their vitality, which characterizes the variables in the OV in the standard model.

Studies have indicated that the notions of diglossia (Ferguson, 1959) and ethnolinguistic vitality (Giles, Bourhis, & Taylor, 1977) contribute to the understanding and prediction of language behavior in multilingual constellations. Bourhis (1979) highlights the relationship between diglossia and ethnolinguistic vitality as a method of integrating diverse research traditions into macrosociolinguistic studies of language behavior. Language behaviors of members of a speech community, according to Landry and Allard (1994), contribute to the analysis of ethnolinguistic vitality. In the extended model, language behavior is modeled by the individual network of linguistic contact (INLC), which analyzes the speaker's choice of first (L1) and second (L2) languages in a wide array of constellations, such as family, friends, acquaintances, school and work, public places, social media, etc. OV has an effect on the structure of INLC, and it also has an effect on the development of SV, incorporating "a temporal feedback loop" in which the SV influences the linguistic behavior of speakers, potentially changing the INCL structure over

time (cf. Ehala, 2015). This change might eventually extend at least to a three-generation period.

Ethnolinguistic networking appears to play a crucial role in that the ethnolinguistic vitality of a language has been reported to increase with dense social networks, which may imply that language maintenance is the consequence of dense social networks with the community members (Ehala, 2010; Sachdev, Bourhis, D'Eye, & Phang, 1987; Yagmur, De Bot, & Korzilius, 1999). As network ties get dense with members of the speech community, community members' active participation within the community's social and cultural institutions is strengthened to a greater extent (Ehala, 2010; 2015). To the best of our knowledge, there is no study investigating the interplay between social network ties and ethnolinguistic vitality effects, with a focus on the role of intergenerational transmission in the Khalaj-Persian constellation.

This study has two major aims. First of all, it aims to investigate whether there is an underlying interplay between social network ties and ethnolinguistic vitality among the Khalaj-speaking communities. The second aim is to examine how intergenerational transmission and network ties influence the vitality of the Khalaj language.

2 The Language and Its Speakers

Khalaj (ISO-3: klj; Glottolog: turk1303) is a highly endangered Turkic language, and it is spoken in Central Iran, including villages in Markazī and Qom provinces. Khalaj is a member of the Turkic language family (Doerfer, 1971, 1987, 1988; Tekin, 1995) and is reported to occupy a special status among other Turkic languages for it has preserved several archaic Common Turkic (or even Proto-Turkic) grammatical features, such as primary vowel length and morphemes (Doerfer, 1971). There is no grammatical gender in adjectives, nouns, or pronouns in the Khalaj language. Khalaj verbs are marked for person, number, tense, aspect, and mood (Doerfer, 1971, 1998).

According to the first reports of a field expedition, in the 1960s, there were forty-six settlements with a total population of around 17,000 Khalaj speakers (Doerfer, 1971). According to current reports, however, the number of speakers range from 40,000 (Johanson, 2021) to 66,000 (Hatami Khajeh, 2016). Khalaj is substantially spoken as a family language in rural regions of Qom and Markazī provinces of Iran, whose official language is Persian. Khalaj is not officially recognized in Iran. The Khalaj people may also be described as an immigrant society in the sense that, as a result of internal migration, young people migrate to large cities in Iran, for example, Tehran, Arak, Qom, etc., in search of a better life, resulting in an imbalanced bi-/multilingualism among the younger generations. Because Persian speakers predominate in towns and cities, urbanized Khalaj speakers are highly competent in Persian. Those who do not

speak Khalaj (and are mainly Persian or Azeri) but want to live a more sedentary rural lifestyle are also welcome, limiting the use of Khalaj to solely family contexts. As a result, Khalaj has become a dominated language. For all Khalaj speakers, Persian, Iran's official and national language, serves as a socially dominating vernacular. It is also utilized in formal and informal educational and administrative contexts. The use of Khalaj, on the other hand, is limited to family communication. It is rarely utilized in social media and textual communication in general. There are just a few poem collections, translations, and folklore stories in Khalaj. As an endangered language (Bosnalı, 2016), Khalaj has been on the edge of extinction. Based on the observations made by the Göttingen expedition (Doerfer, 1971) and those of Rahimi (2020), and Akkuş (2022), it is evident that the Khalaj language ecology has been shrinking. Congruently, the number of Khalaj speakers has been decreasing due to several sociolinguistic factors, such as migration, the use of Persian as the medium of instruction at schools, negative attitudes towards Khalaj-oriented family language policies, etc.

3 Previous Studies

The effects of changing network structures on language choice in bi-/multilingual communities has been extensively investigated from a wide array of views (Milroy & Milroy, 1978; Eckert, 2000; Matsumoto, 2010; Sallabank, 2010; Chambers, 2013; Milroy & Llamas, 2013). Among these views are variational sociolinguistics, and shift-/maintenance-oriented angles Eckert (2000) stresses that it is social practice that essentially shapes language use. In her detailed analysis, she highlighted the significant role of peer group in constructing identity. Matsumoto (2010) makes use of social networks as an explanatory framework to explain processes of language maintenance and change in the rural post-colonial multilingual island community of Palau in the Western Pacific. Network-based variation investigates the impact of interpersonal network ties on the linguistic variation. Studies conducted with a variational paradigm have found a strong relationship between network strengths and linguistic variation in speech communities for example, Aboriginal youngsters in Australia (Schmidt, 1985), Black youngsters in Britain (Edwards, 1986), and African-American community in the USA (Edwards, 1992). Congruently, Tribur (2017) unveiled the impact of different network types on the emergence of dialectal variation in Amdo Tibetan. The shift-/maintenance-oriented view, on the other hand, is based on the idea that networks made up primarily of close-knit ties serve as a mechanism to support (sociallymarginalized or even stigmatized) minority languages; once these networks deteriorate, it is highly likely that language shift occurs (Milroy & Llamas, 2013; Velázquez, 2013; Tribur, 2017). In this sense, Sallabank (2010) concluded that strong social network ties led to maintenance of an endangered

Norman French variety, Guernesiais, with more potential new speakers who were eager to learn the language.

In a network study focusing on a bilingual Hungarian-German community in Oberwart, Austria, Gal (1978) investigated how various levels of "peasantness" shape language choice for men and women in the speech community. The results indicated that the "peasantness" variable functioned differently for men and women, but it was shown to connect more closely with patterns of language choice than individual peasant status.

In a study of social trajectories of language shift, Milroy and Li Wei (1995) reported that different network types are linked to distinct patterns of language choice. In the study, there are three distinct Chinese immigration groups that overlap with the grandmother, parent, and child generations. Each group forms distinct sorts of network relationships, with the first mostly involving relatives, the second primarily involving fellow British Chinese, and the last including non-Chinese peers. The findings revealed that network patterns were linked to different alternative language choice patterns, in which English and a couple of Chinese languages were employed monolingually or in diverse combinations, based on the network type in various constellations. It was therefore concluded that networks' "strength" had an impact on the language maintenance and/or shift. In a similar vein, Li Wei's study (1995) demonstrated that there was a considerably higher pattern of Chinese language maintenance among young British-born True Jesus Church members than among the young population as a whole, a trend attributed to True Jesus youngsters' close relationships with church members who were monolingual in Cantonese.

Raschka, Li Wei, and Lee's study (2002) provided supporting evidence for Li Wei's (1995) work on the British-born Chinese children in Tyneside. The study examined the interplay between social-network links and language choice among the Chinese community in Tyneside, England. The community under scrutiny was characterized by a transition from Chinese-dominant to English-dominant usage in three generations. The findings revealed that the children were more likely to speak "pure" Chinese to their close or distant kin and friends who were older when their Chinese proficiency was good, whereas when their Chinese language ability was low, they were more inclined to use "pure" English to family members of the same generation.

In Hulson, de Boot, and Weltens' (2002) study, the interplay between language maintenance and social networks in an immigrant environment was analyzed. The study revealed that L1 abilities decreased with each generation, and that limited exposure to L1 caused changes in how lexical items were recalled from the mental lexicon.

Velázquez (2013) focused on the role of 15 Mexican American mothers' social network on the linguistic maintenance in immigrant environments in a variety of cities in the US. She concluded that the Spanish maintenance was

shaped by mother's social networks in which their heritage language, Spanish, was primarily considered as a social capital.

In a recent study, Akkuş and Sağın Şimşek (2021) investigated the impact of language choice and network ties of a number of Laz-speaking individuals on the vitality of the Laz language, an endangered South Caucasian language spoken in Turkey. The study suggested that merging social network and ethnolinguistic vitality approaches would provide better insights in studies of language endangerment.

As for the studies regarding Turkic languages, we see that studies have mainly focused on the interplay between language maintenance and ethnolinguistic vitality of immigrant varieties either in Europe (Yagmur, 2009; Yagmur & Akıncı, 2003; Yağmur & Bayram Jacobs, 2015) or Australia (Yagmur, 1997; Yagmur, Bot, & Korzilius, 1999). There are also some studies focusing on a number of autochthonous Turkic languages spoken in the Russian Federation (Yagmur & Kroon, 2003; Yagmur & Kroon, 2006). However, studies examining the relationship between social network and language endangerment of minoritized Turkic varieties in Iran are nearly nonexistent (see Bosnalı, 2016, Rahimi 2020, Akkuş, 2022 for Khalaj).

4 The Present Study

Given the impact of network structures on language maintenance and shift for various language constellations, this study first aims to investigate whether the interplay between ethnolinguistic vitality and language use while constructing or maintaining social networks is observed in the multilingual Khalaj-Persian constellation. Second, the study aims to examine how generational transmission plays a role in constructing networks in endangered language constellations.

4.1 Methodology

In the present study, a qualitative research paradigm is employed along with quantitative data for triangulation and to provide a more comprehensive and holistic understanding of the construct being investigated, which makes it a mixed methods study. Clark, Creswell, Green, and Shope (2008, p. 372) classify six different types of mixed method studies by taking the following four criteria into account: "implementation, priority, stage of integration and theoretical perspective" which are (1) sequential explanatory, (2) sequential exploratory, (3) sequential transformative, (4) concurrent triangulation, (5) concurrent nested, and (6) concurrent transformative. As for the research paradigm of the present study, a *concurrent nested design type* is selected since qualitative data collection tools such as recorded focus group interviews, field work notes are primarily integrated into the quantitative data. The interviews held in the study consisted

of questions investigating language use patterns and preferences and domain-specific usages of heritage languages, such as at home, school, the workplace, and in government institutions., i.e., *Which language(s) do you prefer to use at home? Do you speak Khalaj with your (grand)parents?* The focus group questions were directed to family members at the dinner table and family gatherings at Muharram observances (a number of commemoration rituals observed primarily by Shia Muslims). The length of the data collection process was two months (from July to August, 2021). The quantitative data obtained via the language use questionnaire is nested in the primary method in order to triangulate the data and provide a broad perspective in the analysis phase. An institutional ethics committee approval was received from the Human Subjects Ethics Committee (HSEC) at Artvin Çoruh University (AÇÜ) to carry out the study. The participants' consents were also obtained via consent forms prior to the data collection.

4.2 Participant Selection

This study explores a narrowly defined speaker group of an endangered language, namely Khalaj. Since random selection of participants was not an option, purposeful sampling has been chosen to reach the participants. Purposeful sampling is a commonly used qualitative research technique in which participants are chosen relying on the researchers' own judgement (Creswell & Poth, 2018). To be able to extensively understand the cases under investigation, researchers purposefully choose participants based on pre-specified criteria they form, as "each research setting is unique in its own mix of people and contextual factors" (Bloomberg & Volpe, 2019, p. 309).

The quantitative data was gathered from 26 Khalaj speakers who participated in the study on a voluntary basis. The participants were selected based on the following criteria: (i) being able to speak Khalaj as a first language, (ii) residing in a Khalaj-speaking environment, and (iii) speaking Khalaj on a regular basis. The participants were then divided into three generation groups: older, middle-aged, and younger, based on their ages. Prior to the field work data regarding the participants' linguistic repertoires, age, and education were gathered. No supranational organization (e.g., United Nations, the World Health Organization) has adopted a standard criterion in terms of age groups, but the United Nations defines *young* as individuals between the ages of 15 and 24. As for the definition of *old,* the UN mostly makes use of 60+ years to mark the older population (UN, 2001). As for the definition of *middle age*, the UN does not provide any definition at all. The Merriam-Webster Dictionary, however, defines it as "the period of life from about 45 to about 64" (Merriam-Webster). These criteria draw the line between different participant groups.

The older generation group comprised of 10 individuals, 6 of whom were females. In the middle-aged generation, there were 7 participants, 3 of whom were females. Finally, 9 youngsters constituted the young generation group, of which 2 females and 7 males were involved in the study. As for the language competencies of the participants, since Khalaj does not have a standard orthography, it was not possible to evaluate the language proficiency of the participants. Furthermore, the participants tended to answer our questions with 'a grain of salt' due to the fact that the current socio-political situation has been on thin ice in Iran.

Table 1 provides details about the participants and the contexts of data collection.

Table 1. Information about the participants and the contexts of data collection

	Older gen.	Middle-aged gen.	Younger gen.
Mean Age	69.1	46.1	19.8
Gender	6F; 4M	3F; 4M	2F; 7M
Villages	Mūsiābād, Keše, Noudeh, Sefidāle, and Härrāb	Mūsiābād, Keše, Sefidāb, and Härrāb	Mūsiābād, Keše, Sefidāb, and Härrāb
Language repertoire	Khalaj Persian Azeri	Khalaj Persian Azeri	Khalaj Persian

Table 1 presented demographic information about the participants, including their age, gender, hometowns, and language repertoires. The participants have all been residing in their villages during the data collection. Besides, as exogamy has been widespread among the community members, the researchers asked the participants' marriage patterns and their spouses' language preferences. The quantitative data was collected through a language use questionnaire, focusing on language use in certain social domains, such as education, family, and the workplace. The questionnaire consisted of 32 items, all questioning the participants' social network ties.

The quantitative analysis of language use patterns of members of three generations (26 participants) in their social networks is examined along with their linguistic constellations Using the percentage formula: P% * X = Y, the quantitative data was calculated for each age category.

In the following sections, analysis of qualitative and quantitative data will be presented. Furthermore, based on the data generated from field notes and interviews, the social networks of three participants from three generations are presented in figures that elucidate the density of contact and communication.

5 Findings

5.1 Language Use Patterns

The notion of "linguistic domain" is used as the governing factor in order to define "observed language behavior," with a special focus on individuals in each linguistic domain in this study (Fishman, 1964; Fishman, Cooper, & Ma, 1971; Stoessel, 2002). According to Fishman et al. (1971), domains are "institutionally relevant spheres of social interaction in which certain value clusters are behaviorally implemented" (17). Among Fisherman et al.'s (1971) linguistic domain categories are *family, home, friends, neighborhood, work, school,* and *church.* In accordance with the research context of an endangered language, only the domains of *home, friends, neighborhood, work, school,* and *religious ceremonies* are implemented, excluding the *family* domain, which basically means "the extended family in the home country" (ibid.) in an immigrant context. The linguistic domain *home* includes both the nuclear and extended family members.

Since frequency of language use may change in accordance with the dominance of respective language proficiency and repertoire of interlocutors, this study first attempts to determine "core members," who are individuals with whom a speaker might regularly be in contact on a daily basis, e.g., *father, mother, sibling, partner*, etc., in the home domain.

Findings regarding the linguistic domain of the older generation are presented in Table 2. The table indicates the frequency and percentages of language use in each linguistic domain by their interlocutors.

Table 2. The older generation participants' frequency of language use

Interlocutors	Only Khalaj		Dominant Khalaj use with Persian		Dominant Persian use with Khalaj		Only Persian	
	(n)	%	(n)	%	(n)	%	(n)	%
Mother	8	80	2	20	-	-	-	-
Father	8	80	2	20	-	-	-	-
Grandparents	9	90	1	10	-	-	-	-
Sibling(s)	2	20	6	60	2	20	-	-
Partner	2	20	8	80	-	-	-	-
Children	1	10	1	10	8	80	-	-
Grandchildren	1	10	2	20	5	50	2	20
Friends	1	10	5	50	4	40	-	-
Neighborhood	1	10	6	60	3	30	-	-
School	-	-	-	-	-	-	4	100
Work	-	-	-	-	-	-	4	100
Religious Ceremonies	-	-	-	-	-	-	7	100

As presented in Table 2, the use of *Only Khalaj* (80.0%) with parents, i.e., *father* and *mother*, outnumbered that of *Dominant Khalaj along with Persian* (20.0%) in the home linguistic domain. The results also demonstrated that *Dominant Persian along with Khalaj*, and *Only Persian* were not used by the older participants while interacting with their parents. As for the use of *Only Khalaj* with grandparents, the percentage rose up to 90.0%, which might imply a level of relatively dominant monolingualism and a strong language maintenance among the elders. The data further revealed that the participants predominantly preferred to use *Dominant Khalaj along with Persian* with their partner(s) (80.0%) and siblings (60.0%). This indicates that there is a change in language use within the-same-generation group. 20.0% of the participants even reported using *Dominant Persian along with Khalaj* with their siblings. When it comes to parent-child relations, the findings pointed to a particular language use pattern, meaning that participants were reported to use *Dominant Persian along with Khalaj* (80.0%). This finding is congruent with the grandparent-grandchild interaction by a percentage of 50%. This might indicate that there is an ongoing

paradigm shift pertaining to parent-child relations in shaping family language policy, probably owing to the pressure of sociopolitical factors within the society.

In congruence with these findings, the participants were reported to predominantly choose *Dominant Persian along with Khalaj* with friends (50.0%) and neighbors (60.0%) in their secondary (extended) networks. In relatively more official networks such as school, work, and religious ceremonies, *Only Persian* pattern (100.0%) was reported to be the most frequently used choice by the participants. It is worth noting that the numbers included in the calculations in Table 2 are less than 10 since some participants reported that they did neither have schooling (n = 4) nor work (n = 4) at all. Since the number of participants available in these domains was only 4, the percentages were calculated accordingly (100.0%).

Regarding the language use of the middle-aged generation, the frequency and percentages of language use in each linguistic domain are presented in Table 3.

Table 3. The middle-aged generation participants' frequency of language use

Interlocutors	Only Khalaj		Dominant Khalaj use with Persian		Dominant Persian use with Khalaj		Only Persian	
	(n)	%	(n)	%	(n)	%	(n)	%
Mother	-	-	4	57	3	43	-	-
Father	-	-	4	57	3	43	-	-
Grandparents	-	-	5	71	2	29	-	-
Sibling(s)	-	-	-	-	6	86	1	14
Partner	-	-	2	29	5	71	-	-
Children	-	-	1	14	2	29	4	57
Friends	-	-	1	14	5	71	1	14
Neighborhood	-	-	1	14	5	71	1	14
School	-	-	-	-	-	-	7	100
Work	-	-	-	-	-	-	7	100
Religious Ceremonies	-	-	-	-	-	-	7	100

Analysis of the data, as displayed in Table 3, indicated that the participants in the middle-aged-generation group did not choose to follow *Only Khalaj* pattern while constructing their primary or secondary (extended) networks, which might eventually indicate the impact of changing sociolinguistic factors on the

ethnolinguistic vitality of the Khalaj language. In this respect, the use of *Dominant Khalaj, along with Persian* (57%) with parents outnumbered that of *Dominant Persian, along with Khalaj* (43%) within their closely-knit networks in the *home* domain. The results also indicated that the middle-aged participants did not choose to use *Only Persian* pattern with their parents. In communicating with their grandparents, the participants were reported to mainly use *Dominant Khalaj, along with Persian* (71%), followed by the use of *Dominant Persian, along with Khalaj* (29%). While interacting with sibling(s) within the primary network, the data revealed that the use of *Dominant Khalaj, along with Persian* pattern (86%) outnumbered other language use patterns. This result is congruent with the results of the older generation group, which might signal a weakening of the use of the socially dominated Khalaj language from one generation to the next in forming networks. The parent-child language use, on the other hand, changed the whole picture in that the participants predominantly chose to use *Only Persian* pattern (57%). As for the secondary network, the middle-aged participants preferred to use both *Dominant Persian, along with Khalaj* (71%) and *Dominant Khalaj, along with Persian* (14%), with their neighbors and friends. Persian dominance is apparent within the secondary network. Similar to the language use patterns of the older participants, the middle-aged participants also reported using *Only Persian* (100%) in official constellations.

Lastly, Table 4 displays the language use of the younger generation and the frequency and percentages of language use in each linguistic domain.

Table 4. The younger generation participants' frequency of language use

Interlocutors	Only Khalaj		Dominant Khalaj use with Persian		Dominant Persian use with Khalaj		Only Persian	
	(n)	%	(n)	%	(n)	%	(n)	%
Mother	-	-	1	11	2	22	6	67
Father	-	-	1	11	2	22	6	67
Grandparents	-	-	2	22	2	22	5	56
Sibling(s)	-	-	-	-	1	11	8	89
Partner	-	-	-	-	-	-	4	100
Children	-	-	-	-	-	-	2	100
Friends	-	-	-	-	-	-	9	100
Neighborhood	-	-	-	-	-	-	9	100
School	-	-	-	-	-	-	9	100
Work	-	-	-	-	-	-	4	100
Religious Ceremonies	-	-	-	-	-	-	9	100

As presented in Table 4, the use of *Only Persian* pattern with closely-knit members of the core and extended family, i.e., *father* (67%)*, mother* (67%)*, siblings* (89%)*,* and *grandparents* (56%), outnumbered the other language use patterns. This might pertain to a language shift among youngsters. When the network circle extended to the secondary (extended) networks, e.g., partner, neighborhood, friends, etc., the data revealed that the youngsters predominantly chose to use *Only Persian* pattern (100%). These findings are quite different from what the data revealed for the older and middle-aged participants' language use.

5.2 Ethnolinguistic Social Networking Patterns

In order to investigate the social networks of individuals who particularly speak endangered languages, it is of crucial significance to focus on field work observations and notes along with survey-oriented analysis. The rationale behind using qualitative data derives from the assumption that the density and complexity of social networks can only be "observed" and "witnessed" in natural language constellations and thus provide more reliable results (Milroy and Llamas 2009).

In this section, in order to focus on the interplay between ethnolinguistic vitality and language use while constructing or maintaining social networks, the number of participants was purposefully narrowed down to three Khalaj speakers, selected from the 26 Khalaj speakers who had participated in the quantitative survey. The criteria for participant selection for the qualitative data collection were: (i) age range from three generational groups (older, middle-aged, and younger); and (ii) belonging to one extended family, with varying family language planning and different marriage structures. The data was collected from the participants residing in either the village of Herrāb or the town of Āshtīān. Abbreviated pseudonyms are utilized to protect the participants' identities.

The participants were selected from one extended family, including three generations. The reason behind selecting this family lies in the fact that they somehow reflect the general social network pattern supported by the quantitative data analysis. As for the relation between the family members, Tāv is Afs' mother and Āry's grandmother. Afs is Āry's father and Tāv's son.

At the time of the data collection, Tāv was residing in her own house in the Khalaj-speaking village in which she was born and raised. She was cared for by her son and daughters. Afs, on the other hand, was frequently commuting between his village and Āshtīān where he owned a house too. Āry went to school in the town. Thus, he was also commuting between the town and the village on a regular basis.

The age of the Khalaj participants ranged from 17 to 82 when the field work was undertaken in Iran. As for gender, two of the participants (Afs and Āry) were male, while one of them (Tāv) was female. While the older participant Tāv could speak only Khalaj and Persian, the middle-aged participant Afs could speak three languages: Khalaj, Persian, as well as Azeri, a regional lingua franca in northwestern and central Iran. The younger participant, however, could speak Persian, Khalaj, and English. English is taught at school as a result of the macro-level Iranian language education policy in schools.

The qualitative data analyzed in the study included a social network analysis of the Khalaj participants and their interlocutors. The network analysis encompassed an *ego* (as the "focus" or "anchor" of the network) and his or her interlocutors, (Mitchell 1986: 74). In forming interpersonal and interactional ties, an *ego* gets in contact with others in personal communities. As known, in forming personal communities, "ego" is interpersonally and transactionally linked to individuals in an endless web of communicative ties (Milroy and Llamas 2013: 410). So as to investigate the interplay between language use patterns and ethnolinguistic vitality with regard to the generational differences of endangered languages, we believe that there is a need to adopt a new framework to analyze the data. The framework we suggest aims to reveal how *intergenerational* language use patterns shape *zones of ethnolinguistic social networking.*

Figure 1 displays the social network ties and language use patterns of a member of an older generation. The figure visualizes an imaginary zone indicated by a blue curved dashed line, which we call *the zone of intergenerational ethnolinguistic social networking*.

Figure 1. The zone of intergenerational ethnolinguistic social networking of an old Khalaj-speaking participant

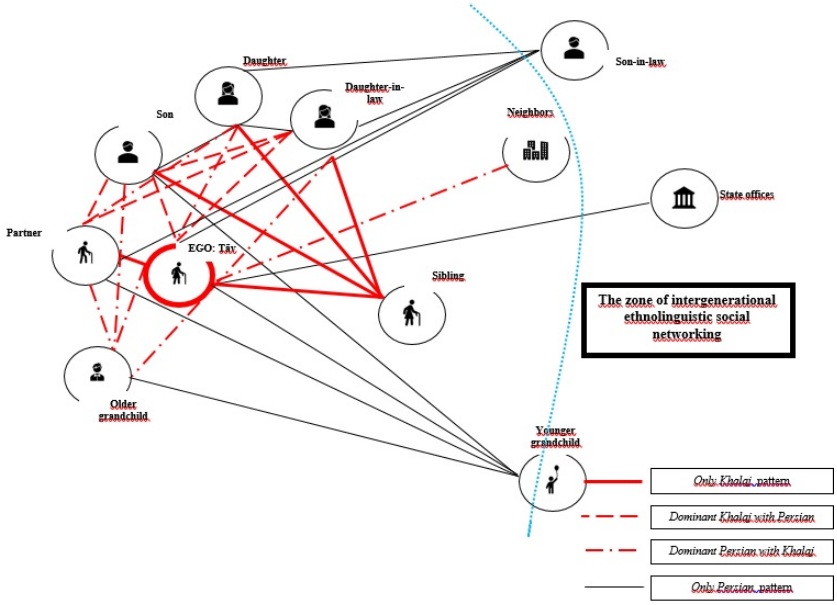

Figure 1 shows the language patterns of an old Khalaj-speaking participant, who is the EGO named *Tāv.* The figure displayed the primary (core and extended family circles) networks within the immediate surroundings as well as the secondary networks. Tav was situated in the middle of networks, and circled in red. She was surrounded by the primary network ties of her close relatives within her immediate environment. The analysis of the data revealed that *Tāv* chose to use *Only Khalaj* pattern consistently only with her partner and her sibling, who could only speak Khalaj. In this respect, she explains the reasons for using *Only Khalaj* pattern in Excerpt 1.

Excerpt 1.

Interviewer	*Which language do you prefer when communicating with your siblings?*
Tāv	*Oh, she cannot speak Persian. She only speaks Khalaj. That is why I have to talk to her in Khalaj. She did not have any schooling. She has lived in our village. She said that she had been born hearing Khalaj and would die hearing it. She gets angry when we speak in Persian in our family gatherings. She is an old goat* [implying that she is stubborn].

When it comes to Tav's relationship with her children, the findings indicated that she used *Dominant Khalaj along with Persian* with her son (and her daughter-in-law). But she preferred to use *Dominant Persian along with Khalaj* pattern with her daughter. The reason for using this pattern with her daughter might be due to the fact that her daughter consistently switched from Khalaj to Persian while interacting with her since her partner and kid could only speak Persian. Thus, it is evident that the immediate sociolinguistic factors exert a strong influence on language choice and behavior in the social environment. The language pattern used by the older participant with her grandchildren follows an unclear pattern. She used *Dominant Khalaj along with Persian* pattern with her older grandson. The younger grandchild could not speak Khalaj. Thus, Tav had no other option but to speak Persian to communicate with her younger grandchild. In interacting with the members of the family group, the Khalaj language ability seems to exert a strong influence over the language patterns used. *Only Persian* pattern was particularly used either for Persian-speaking members of the family, i.e., younger grandchild and son-in-law, or in state offices.

The findings revealed a consistent language use pattern for Tav. She was more likely to use *Only Khalaj* pattern with the members of the older generation who were old enough to have acquired Khalaj proficiently (e.g., partner, sibling). However, she was more likely to make use of *Dominant Khalaj along with Persian* pattern only for the older members of the middle-aged generation, i.e., her son and daughter-in-law. *Only Persian* pattern was utilized while speaking to Persian-speaking family members, who were either the youngest ones or the in-laws. This seems to point to an imaginary zone (blue curved dashed line), substantially separating the language patterns used by the participant(s). The extent of use of socially dominated (endangered) code(s) and socially-dominant language(s) eventually determines the extent of ethnolinguistic vitality of the language(s). The zone further investigates the language patterns used by the members of each generation. In this respect, the further the intergenerational zone, examining the intergenerational language patterns, expands to the right in

the spectrum, the higher the apparent ethnolinguistic vitality of the language appears to be. The domain-oriented language use patterns are relatively fixed inside the family, except for the younger grandchild and the son-in-law, who can thus be regarded as shift-initiators as their lack of Khalaj proficiency made the participants switch Tāv's code during interaction.

Figure 2 illustrates the social network ties and language use patterns of a member of the middle-aged generation.

Figure 2. The zone of intergenerational ethnolinguistic social networking of a middle-aged Khalaj-speaking participant

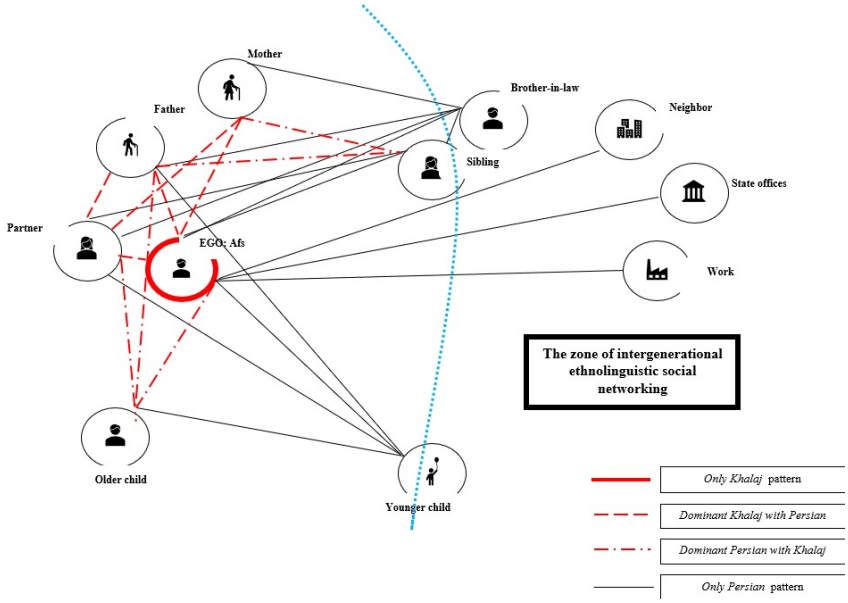

Figure 2 illustrates the *middle-aged Khalaj-speaking participant as* EGO in the center and named A*fs.* A*fs* is in the middle of networks circled in red, is surrounded by the primary network ties of close relatives inside the family. The data analysis revealed that the middle-aged participant did not use *Only Khalaj* pattern within his network ties inside and outside the family in his immediate primary and remote secondary networks. He chose to use *Dominant Khalaj along with Persian* pattern with his parents and partner, signaling a slight impact of the socially-dominant language on the linguistic domains of the Khalaj language. As for parent-child relations, while he used *Dominant Persian along with Khalaj* pattern with his older child, he used *Only Persian* pattern with his younger child,

as his younger child could only speak Persian. The following excerpt explains the reasons for different language use patterns.

Excerpt 2. Language use pattern in the parent-child interaction

Interviewer	*Do children — • do children also speak Khalaj?*
Afs	*Yeah, here in Herrāb (Beharestan), children generally speak Khalaj. Especially if parents themselves speak Khalaj at home, their children also have acquired the language on the spot. For instance, one of my sons learned Khalaj because he grew up when we lived together in my own father's house. My mother and father dominantly spoke in Khalaj. So, he was brought up in a Khalaj-speaking environment. He acquired the language in our extended family. However, before my younger son was born, we had moved to our own house in a Persian dominant city. I and my wife intentionally chose to speak in Persian since he would not need Khalaj at school and work.*

This remark indicates the influence of (grand)parent family language use on the acquisition of the heritage language. The language pattern used by the participant with his sibling and brother-in-law was *Only Persian* pattern due to the fact that the brother-in-law was a Persian-speaking individual. *Only Persian* pattern was also employed while communicating with neighbors, colleagues, and state officers.

The intergenerational analysis revealed that the language use patterns become relatively unstable even within the family, compared to those of the older generation participant. Language shift becomes more visible when Figures 1 and 2 are compared.

Lastly, the social network ties and language use patterns of the member of a younger generation are presented in Figure 3.

Figure 3. The zone of intergenerational ethnolinguistic social networking of a young Khalaj-speaking participant

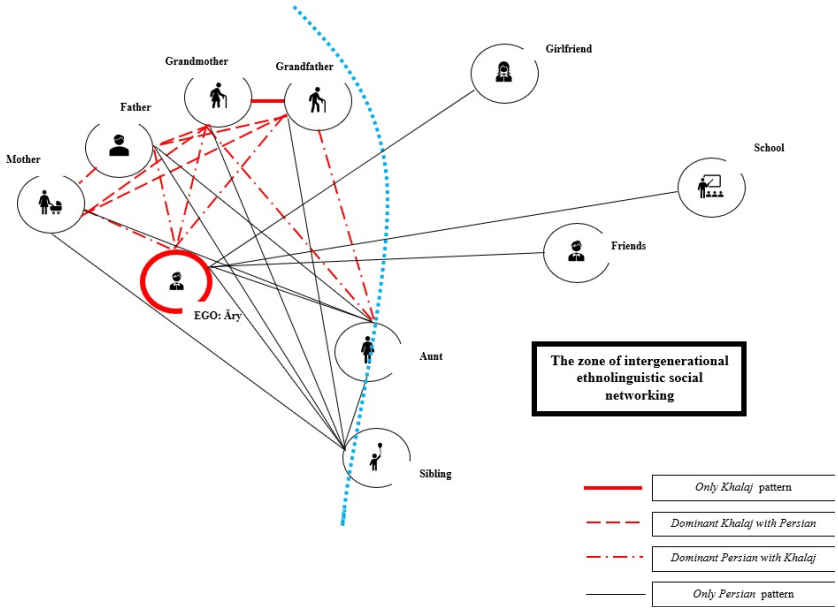

Figure 3 focuses on the language patterns of an old Khalaj-speaking participant, EGO named *Āry*, within his primary and secondary networks. *Āry* was once again situated in the middle of networks and circled in red. The data analysis revealed the participant used neither *Only Khalaj* pattern nor *Dominant Khalaj along with Persian* pattern within his immediate environment, including his close relatives. But he preferred to use *Dominant Persian along with Khalaj* pattern with his parents and grandparents. Thus, the age and generation of his interlocutors inside the family network appear to be a strong predictor of language choice. It is also evident that he was more likely to use Khalaj with family members of the older generation as an accommodation strategy and use *Only Persian* pattern with his sibling, who is a member of the new generation.

Since members of the new generation frequently commute between the villages and towns for school and work, it seems that the Khalaj-speaking communities in Iran are changing into less territorially unbounded communities. As a result, more non-Khalaj-speaking individuals enter the social networks, affecting the way Khalaj speakers use their languages. The participant *Āry,* for instance, had a non-Khalaj-speaking girlfriend as well as Persian-speaking classmates, which created a variety of social networks that necessitated variety in language choice.

The zone gets tighter and is reshaped by new agents, e.g., friendship, education, and the role of socially dominant language in urbanized lifestyles. The zone is constrained to the left of the spectrum, implying a shift from Khalaj-dominant bilingualism to Persian-dominant bilingualism within the span of three generations.

The domain-oriented language use patterns point to the fact that the community is currently undergoing a language shift from different degrees of Khalaj-dominant bilingualism to Persian monolingualism within generations. This language shift is consistently (re-)shaped by the social network patterns constructed by members of the three generations, which in turn have an impact on the ethnolinguistic vitality of the Khalaj language.

6 Discussion and Conclusion

This study has drawn a number of conclusions regarding the interplay between social network ties and ethnolinguistic vitality among the Khalaj-speaking community.

First of all, the data demonstrated that the immediate social environment exerted a direct influence on language choice and maintenance. In line with the findings of Raschka, Wei, and Lee (2002), who highlighted the interplay of social-network links and language choice among the Chinese community in Tyneside, England, our findings highlighted differences in language choices depending on the interlocutors involved in communication. Our data revealed that Khalaj speakers of the older generation's language use patterns affected the language choice of the members of the younger generation in that the language use was more likely to be Khalaj dominant when the young Khalaj speakers talked to the older people within the family environment. Peer groups in the younger generation, on the other hand, regardless of the type of network structure, mainly favored the use of Persian-dominant patterns.

Further, the data showed that the influence of the language use of the members of the younger generation changed as the focus of their social networks moved from older or middle-aged generation-oriented networks to peer-oriented ones, as suggested by Eckert (1989). Given the fact that they frequently commuted between their villages and towns for school and/or work, more non-Khalaj-speaking individuals entered their social networks, thus affecting the way they used languages.

The data also indicated that the social networks of younger generation speakers involve more non-Khalaj-speaking individuals, presumably due to the medium of instruction being Persian. The prevalence of a societal/majority language in the social environment of younger generation speakers is also commonly attested in the context of heritage languages (Polinsky, 2018).

Overall, the analysis of the data revealed that the members of the older generation group showed a higher prevalence of Khalaj in their social networks. Thus, they can be referred to as "maintainers" in their primary networks, including the *home* (father, mother, grandparents, siblings, partner, and children) domain, as also suggested by Stoessel (2002). The role of the older generation in maintaining the ethnolinguistic vitality of endangered languages was also revealed by Stoessel (2002). However, the data analysis of the younger generation group revealed that the members of the younger-generation group showed a higher prevalence of Persian in their total social networks. They can thus be referred to as "shifters" in their primary and secondary (extended) networks in all linguistic domains (Stoessel, 2002). It is thus evident that the immediate sociolinguistic factors exert a strong influence on language choice and behavior in the social environment (Raschka, Wei, & Lee, 2002).

Last but not least, regarding the limitations of the current study, the limited data obtained from 26 participants in the quantitative section and three participants representing a single-family context in the qualitative phase limits the generalizability of our findings. Given that language choices are highly dependent on micro-level social mechanisms with a wide range of sociolinguistic factors at issue, it is highly likely that the results may differ from one family context to another.

Some foundational work on language shift using social network analysis (Li Wei, 1994) underlined individual differences in language choice patterns. The researchers have shown that two male grandparents exhibited different language behaviors than other members of their own generation, which was typical of the parent generation. In many studies focusing on language shift, gender comes out to be a very important factor. Our data did not exhibit any differences in linguistic behaviors based on gender.

Moreover, this study focused only on the interplay between social networking and language maintenance in Khalaj. However, there are other sociolinguistic factors that may play important roles in affecting the ethnolinguistic vitality of a language and social networking, such as heritage language proficiency and identity. These factors were beyond the scope of this study.

Abbreviations

F	: female
ibid.	: ibīdem, meaning "in the same place"
INLC	: individual network of linguistic contact
M	: male
n	: number
ZonES	: Zone of ethnolinguistic social networking
%	: percent

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