UNIVERSITY OF CALIFORNIA SAN DIEGO

Laz Turkish: A case study of partially productive vowel harmony and sociolinguistic attitudes

A dissertation submitted in partial satisfaction of the
requirements for the degree
Doctor of Philosophy

in

Linguistics

by

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2023

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University of California San Diego

2023

DEDICATION

To the Laz community, and my beloved parents.

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LIST OF ABBREVIATIONS

1PL	1st person plural
1SG	1st person singular
2PL	2nd person plural
2SG	2nd person singular
3PL	3rd person plural
3SG	3rd person singular
ABL	ablative
ACC	accusative
ADJ	adjectival
ADJ.SUF	adjectival suffix
AOR	aorist
CAUS	causative
COM	comitative
COMPM	compound marker
COND	conditional
CONJ	conjunction
CONN	connective
COP	copula
CVB	converbial
DAT	dative
DER	derivational
DIM	diminutive
EVCOP	evidential copula
FUT	future
GEN.1	genitive (1st person)
GEN.3	genitive (3rd person)
IMP.2	2nd person imperative
INF	infinitival
INFL	inflectional
INT	interrogative
LOC	locative
NEG	negative
NMLZ	nominalizer
OPT	optative
PASS	passive
P.COP	past copula
PL	plural
POSS.1PL	1st person plural possessive
POSS.1SG	1st person singular possessive
POSS.2SG	2nd person singular possessive
POSS.3SG	3rd person singular possessive
PROG	progressive
PST	past
TOP	topic marker

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ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my advisor Sharon Rose, who academically challenged me throughout my PhD with her elaborate feedback and helped me put things into perspective. She continued advising me and caring about me even under situations she should have taken care of herself first. I wouldn't have been able to put together this dissertation without her support.

I am much obliged to my other committee members Farell Ackerman, Eric Baković, Marc Garellek, John Haviland, and Öner Özçelik for their insightful comments and guidance on my work. I am especially indebted to Öner Özçelik for being there and supporting me from Indiana.

I am also grateful to UCSD Friends of International Center and UCSD International Institute. Without their funding, this field research would not have been possible.

Many thanks to the Laz community for welcoming me and encouraging me to study their languages and culture. I am grateful to the Laz Institute, which made it possible for me to attend online Laz classes and meet Laz community members. I am sincerely thankful to my Laz instructor Miray Şentürk and all my classmates who shared their experiences about the Laz language and culture. Their insights were extremely important for me in understanding the attitudes in the Laz community. I am also incredibly thankful to all of my consultants who collaborated online or in the field.

This dissertation took many days and nights accompanied by much patience and occasional tears, and I cannot thank enough to my family for their presence. I am eternally grateful to my husband Alican who has always encouraged me to take a step further not only in academic life but also at a personal level. He helped me regain strength whenever I felt disappointed with myself. Seeing that our cat Sahlep was sleeping beside me when writing this thesis put me at ease during stressful times. Many thanks for warm cuddles and for being the family therapist. Thanks to my parents Fatma and Selami, my sister Emire and my brother-in-law Alkım from the bottom of my

heart as they always supported my decisions. It was always difficult being in a distant county which put ten hours between us. Pursuing my academic dreams meant I had to miss many special occasions to celebrate with family. It meant that I had to meet my twin nieces Ada and Nil in person for the first time when they were two years old. I hope they will follow their own dreams in the future.

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Demir, Neşe. "Vowel Harmony in Laz Turkish: A case study in language contact and language change", *Linguistics Vanguard*, 8(s5), pp. 531-543. 2022; doi:10.1515/lingvan-2021-0055

Demir, Neşe. "Vowel Harmony in Trabzon Turkish", *Proceedings of the Workshop on Turkic and Language in Contact with Turkic*, 5(1), pp. 56-70. 2020; doi:10.3765/ptu.v5i1.4772

Demir, Neşe. "Turkish reduplicative adjectives and adverbs", *Proceedings of the Linguistic Society of America*, 3(19), pp. 1-14. 2018; doi:10.3765/plsa.v3i1.4300

ABSTRACT OF THE DISSERTATION

Laz Turkish: A case study of partially productive vowel harmony and sociolinguistic attitudes

by

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Doctor of Philosophy in Linguistics

University of California San Diego, 2023

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Laz Turkish (LT) is a nonstandard variety of Turkish mainly spoken by the Laz minority in the northeast of the Black Sea Region in Turkey. LT emerged a second language variety of Turkish and developed into its own distinct dialect in a language contact situation between Turkish (Turkic) and Laz (South Caucasian), and it has been shifting towards Standard Turkish (ST) under the influence of the dominating Turkish culture. Laz has a smaller vowel system compared to Turkish and this has impacted the vowel harmony (VH) system in LT. In contrast to ST, which has a very productive VH system, LT has only partially productive VH. Based on a corpus of fieldwork data, this dissertation investigates how LT displays partial VH in morphologically

complex forms. This dissertation also situates LT in a sociolinguistic context by investigating the attitudes in the Laz community towards Laz, LT and Laz identity, and examines the underlying causes of the language shift from LT to ST.

This dissertation shows that LT contains forms that are identical to ST, which satisfy VH wherever applicable, as well as forms that show unique characteristics (LT-unique forms), which often do not conform to VH. The main findings of this dissertation regarding the LT-unique forms are as follows. First, three Turkish vowels that are absent in the Laz vowel system, [ɯ, y, œ], are rare in LT-unique forms. ST [ɯ, y, œ] correspond to LT [i, u, o], preserving rounding feature of vowels. This correspondence pattern is especially observed in the first syllable of LT words. Second, non-initial suffixes with high vowels are typically of two kinds: [i] and [u]. The distribution of these vowels cannot be attributed to VH, but it is predictable by syllable type: [i] primarily occurs in open syllables and [u] in closed syllables. Such distribution of high vowels based on syllable structure is likely to be an L1 (Laz) influence. Non-high vowels [a, e] in LT-unique forms do not show correlation with syllable type, and they typically satisfy VH. Overall, there is weak evidence for VH in LT-unique forms, especially for high vowels.

Characteristics unique to LT are produced more consistently by the elderly LT speakers compared to the younger ones. This generational shift from LT to ST is due to increased exposure to ST, which is especially promoted in the context of educational and governmental institutions. However, LT or LT speakers are characterized in the media or other social domains as an object of ridicule. In general, members of the Laz community have positive attitudes towards Laz, LT, and Laz identity. Nevertheless, they also notice the negative stereotypes outside the community.

The findings of this dissertation contribute to our understanding of i) what happens when L1 has a smaller vowel system compared to L2, ii) which patterns emerge when native speakers of a language without VH acquire a VH language as an L2, and iii) whether these patterns can be attributed to the acquisition of the L2 vowel system or other factors linked to L1 phonology.

Chapter 1

Introduction

1.1 General introduction

Vowel harmony (VH) is described as a phonological assimilation process which requires the vowels within a domain to agree in terms of their quality such as height, backness, rounding, or position of the tongue root (Van der Hulst, 2016; Kaun, 2004; Rose & Walker, 2011; Walker, 2012). While some languages develop vowel harmony over time (e.g., Tangale (Kleinewillinghöfer, 1996)), harmony in other languages such as Uzbek, Kazakh, Assamese, and West Rumelian Turkish may be disrupted (Binnick, 1991; Dombrowski, 2013; Mahanta, 2008; McCollum, 2019, 2015). Both situations have sometimes been attributed to language contact. However, there is little detailed work on the patterns that emerge in vowel harmony in language contact situations. Some questions regarding this are as follows: How is the vowel system of a language impacted when in contact with another language? More specifically, how is vowel harmony impacted when a vowel harmony language and a non-vowel harmony language are in contact? What kind of patterns arise when vowel harmony undergoes change?

The main interest of this dissertation is to fill this gap by investigating vowel harmony in one of the non-standard Turkish dialects spoken in the north east of Turkey, namely Laz

Turkish (LT). LT is a second language variety that developed into its own distinct dialect in a language contact situation between Turkish (Turkic) and Laz (South Caucasian), a minority language spoken in Turkey. Today, LT is spoken both by first language Laz speakers and by Laz community members, who may speak little to no Laz. In other words, some people could use LT as an L1 variety, which has retained Laz characteristics. Both the Laz-speaking population and the LT-speaking population are decreasing in number of speakers. Under the influence of the dominant culture, there has been language shift towards (Standard) Turkish in Turkey (Salminen, 2007). While Turkish has vowel harmony, Laz lacks vowel harmony of any kind and it also lacks three of the Turkish phonemic vowels /ɯ, y, œ/ (Lacroix, 2019; Öztürk & Pöchtrager, 2011). This raises the question of what happens when native speakers of a language which has a smaller vowel system compared to Turkish (i.e., Laz) acquire Turkish. Do these speakers produce vowel harmony, and if so, is it different than in Standard Turkish (ST)? Based on a corpus of LT words extracted from interviews with LT speakers from Rize, Turkey, (Appendix 6.1), this dissertation examines how vowel harmony is manifested in morphologically complex forms in LT. This dissertation also situates LT in a sociolinguistic context by investigating attitudes in the Laz community of Turkey towards Laz, LT, and Laz identity and examines underlying causes of the language shift from LT to ST.

Vowel harmony is attested in LT, but this dissertation will show that it is less extensive compared to ST. ST has productive backness and rounding harmonies, and the eight phonemic ST vowels /i, y, ɯ, u, a, e, o, œ/ are divided into groups for harmony (i.e, back /ɯ, u, a, o/ vs. front /i, y, e, œ/ vowels, round /y, u, o, œ/ vs. unround /i, ɯ, a, e/ vowels). Both types of harmonies are found in roots as well as suffixes, and the features of vowels systematically extend from left to right (except for suffixes containing non-alternating vowels, see 3.2.4). In ST, backness harmony applies between all vowels, but rounding harmony only applies between high vowels. In LT, however, both types of harmonies are attested but only partially productive. Examples (1-3) provide evidence for this with the dative suffix, which is realized as either -a or -e in both ST and

LT, but not always according to backness harmony in LT.[1] Hereafter, B refers to backness and R to rounding.

(1) a. sufur-**a** *harmonic* (cf. ST sɯfɯr-**a**)
zero-DAT
'to zero'
[080619-S1-O]

b. siɣir-**e** *harmonic* (cf. ST sɯːr-**a**)
cattle-DAT
'to cattle'
[082119-S4-O]

c. ʧarʃi-**ja** *B disharmonic* (cf. ST ʧarʃɯ-**ja**)
downtown-DAT
'to downtown'
[082119-S4-O]

d. jol-**e** *B disharmonic* (cf. ST jol-**a**)
road-DAT
'to road'
[082119-S4-O]

In (1), the DAT suffix -(j)A[2] always satisfies backness harmony in the ST forms, but this is not the case in LT. The back suffix vowel [a] is harmonic following the back vowel [u] in (1a), where the root vowels differ from ST. The front suffix vowel [e] is also harmonic following the front vowel [i] in (1b) even though the root vowels differ from ST. This shows that the DAT vowel can vary according to backness harmony in LT. Nevertheless, in (1c) and (1d), the DAT is disharmonic because the back suffix vowel [a] follows the front [i] in (1c), and the front suffix vowel [e] follows the back vowel [o] in (1d). There is variation in the use of DAT within the community (1a vs. 1b-1d) and also within single speakers (1b-1d).

[1]ST forms in these examples are based on my own transcriptions, and LT examples come from my fieldwork in Rize in the summer of 2019. LT examples are labeled with the data collection date followed by speaker and age information. For instance, [080619-S1-O] represents data collected on August 6, 2019 from Speaker 1 who is in the old age group.

[2]Using capital letters in the representation of suffixes is a traditional Turkic practice in phonology. They indicate archiphonemes; for example, the DAT which contains an underlying non-high vowel, can either be realized as /-a/ or /-e/.

As for rounding harmony, a vowel in LT may lack rounding where ST has it (2a-2b), or have rounding where ST does not have it (2c-2d). Backness and/or rounding harmonies are observed in roots in (2a-2c) but both harmony types are not observed in the suffixes in these examples. Note that the past tense marker (PST) does match the backness of the following 3PL suffix in (2b). In (2d), the suffix vowel matches the root for backness, but not for rounding harmony. Therefore, the examples in (2) are partially harmonic, as the roots conform to harmony, but the suffixes do not.

(2) a. ʧoʤuɣ-**i** *B and R disharmonic* (cf. ST ʧoʤ**uː**)
child-POSS.3SG
'his/her child'
[080619-S1-O]

b. otur-**di**-ler *B and R disharmonic* (cf. ST otur-**du**-lar)
sit-PST-3PL
'they sat'
[082119-S4-O]

c. rize-**nun** *B and R disharmonic* (cf. ST rize-**nin**)
Rize-GEN.3
'Rize's'
[082119-S4-O]

d. jap-**tu**-m *R disharmonic* (cf. ST jap-**tɯ**-m)
do-PST-1SG
'I did'
[080619-S1-O]

LT also provides cases where the same suffix does or does not undergo vowel harmony in the same environment. For instance, the genitive suffix for the 1st person (GEN.1) may be harmonic (3a) or disharmonic for both rounding and backness (3b) in LT. These examples come from different speakers but the LT data have both between-speaker and within-speaker variation. For example, there is at least one LT speaker who consistently uses the form in (3a), at least one other LT speaker who consistently uses (3b), and at least two other LT speakers who switch between (3a) and (3b).

(3) a. biz-**im** *harmonic* (cf. ST biz-**im**)
we-GEN.1
'our'
[082019-S5-M]

b. biz-**um** *B and R disharmonic* (cf. ST biz-**im**)
we-GEN.1
'our'
[090319-S8-M]

To sum up, LT vowels may have different realizations that are not always dependent on the vowel quality of the preceding vowel. In LT, there is variation that does not appear to be due to harmony, something that is not attested in ST.

This dissertation aims to contribute to the understanding of how vowel harmony may display partial productivity by documenting the patterns in LT. To get a quantitative sense of the harmonic and disharmonic forms in LT, this research examines the word tokens in an LT corpus of 9.5 hours of conversation and interviews from 10 speakers. The main finding of this dissertation is that LT has vowel harmony, but it is partially productive and suffixes exhibit variation. Three observations are key to understanding this variation. First, LT has fewer attested instances of the vowels [ɯ, y, œ] than ST; they are substituted in roots primarily with vowels that match for rounding: [i, u, o]. Second, when there is disharmony, high suffix vowels tend to be either [i] or [u]; [i] typically occurs in open syllables and [u] in closed syllables without necessarily exhibiting harmony. Third, a generational gap has been observed where elderly members of the Laz community produce more LT forms distinct from ST compared to the younger members of the Laz community. In other words, a shift from LT to ST has been observed. To situate how LT arose and how it is currently viewed and used in the community, the dissertation also explores to language attitudes in the Laz community. The results indicate that most members of the Laz community have positive feelings about the Laz language, LT, and Laz identity. However, they believe that there are negative feelings about Laz and LT outside the community. LT is especially stereotyped as 'rotten' Turkish, where vowels are pronounced differently than ST. Instead, ST

is promoted as the prestige variety which is seen as a necessity for a successful career. Due to the influence of ST and negative stereotypes about LT, younger members of the Laz community have been shifting from LT to ST. This dissertation is the first study where LT vowel harmony is studied based on a corpus, which is extracted from natural LT speech. The findings of this dissertation contributes to our understanding of what happens when the L2 (e.g., Turkish) vowel system is larger than L1 (e.g., Laz), what are the patterns observed in L2 acqusition of vowel harmony, and whether these patterns can be attributed to acquisition of the L2 vowel system or other factors linked to L1 phonology.

The rest of this chapter is structured as follows. Section 1.2 provides information about the Laz language. Section 1.3 provides a discussion of LT as a second language variety of Turkish under influence of Laz. Section 1.4 is concerned with the L2 acquisition of vowels and Section 1.5 the L2 acquisition of vowel harmony. Section 1.6 delves into vowel harmony in language change and the main factors that may impact vowel harmony. Section 1.7 is a summary of the current chapter and how it connects to the rest of the dissertation. Section 1.8 introduces the structure of the dissertation.

1.2 The Laz language

This section provides background information on Laz by introducing certain basic characteristics of the language that will be important for understanding the discussion of LT in this thesis. This section will also describe the current status of Laz, including the circumstances under which Laz has been surviving, especially in the Laz regions in Turkey. Laz Turkish (LT), which initially emerged as a second language variety, shows certain characteristics of the Laz language as will be shown in this dissertation (also see Brendemoen (1989)).

Laz (Ethnologue code [lzz]) is a South Caucasian language mainly spoken in the North East of Turkey and in Georgia close to the Turkish border. Along with Mingrelian, Laz forms the

Zan branch of the South Caucasian languages (Boeder, 2005). According to Ethnologue, Laz is a 'threatened' language with 22,000 speakers in all countries (Eberhard et al., 2020). However, other resources describe Laz as an endangered language (Kutscher, 2008; Lacroix, 2019; Moseley, 2010; Öztürk, 2019; Öztürk & Pöchtrager, 2011; Salminen, 2007) because many Laz children acquire Turkish as their first language rather than Laz. Many of the children who are exposed to the language do not acquire proficiency, although they have passive knowledge. So, most of the native Laz speakers today are elderly people, and Laz will likely become dormant in a few generations' time as the current speakers are not passing Laz on the next generation of speakers.

The exact number of Laz speakers today is not known as the last official statistic investigating ethnicity in Turkey was recorded in 1965. Table 1.1 presents the records of Laz speaking population as reported in Dündar (1999) and the distribution of Laz speakers (per thousand) in Turkey[3]. While the total number of Laz speakers in Turkey was reported to be 81,165 in the 1965 census, this number is likely to be far fewer today due to language shift. There is also a number of Laz speakers outside of Turkey. In neighboring Georgia, the Laz speaking population is estimated to be between 1,000 and 2,000 (Comrie, 2008; Kutscher, 2008; Salminen, 2007). Around 1,000 Laz speakers were also reported to reside in Germany; this population originally migrated from Turkey to Germany, as guest workers (Joshua Project, 2005; Salminen, 2007). Note that different sources report various numbers regarding the Laz speaking population. These are summarized in Table 1.2. According to Türk (2019) there are three possible reasons for the discrepancy in the number of Laz speakers: (i) lack of census data reporting the population of minority language speakers, (ii) possible reluctance of minority populations in disclosing information on their ethnicity or language, and (iii) the difficulty of determining who counts as a Laz speaker.

Laz has historically been mainly a spoken language (Hann, 1997; Lacroix, 2019). Although there is a Laz alphabet which was published for the first time in 1935 and re-established

[3]Laz is not included in 1927 and 1940 censuses (Dündar, 1999; Sadoğlu, 2017).

Table 1.1: The number and distribution (per thousand) of Laz speakers as reported in Turkish censuses between 1927-1965 (adapted from Dündar (1999))

Census	Turkey population	Laz speakers			Laz ‰
		L1	L2	Total	
1927	13,629,488	-	-	-	-
1935	16,157,450	63,253	5,061	68,314	4.23
1940	17,820,950	-	-	-	-
1945	18,790,174	39,323	4,956	44,279	2.36
1950	20,947,188	70,423	-	70,423	3.36
1955	24,064,763	30,566	19,144	49,710	2.07
1960	27,754,820	21,703	38,275	59,978	2.16
1965	31,391,421	26,007	55.158	81,165	2.59

Table 1.2: The number of Laz speakers reported in the literature

Laz speaking population	Census	Source
46,987 in Turkey	1945	Geiger et al. (1959)
∼250,000 all around the world	-	Feurstein (1983)
85,108 in Turkey (26,007 as L1 and 59,101 as L2)	1965	Andrews (1989)
less than 100,000	-	Hann (1997)
150,000 in Turkey	-	Karimova & Deverell (2001)
105,000 all around the world	-	Joshua Project (2005)
between 20,000 and 30,000 in Turkey	-	Salminen (2007)
∼30,000 in Turkey, a couple of thousands in Georgia	-	Comrie (2008)
between 750,000 and 1.5 million	-	Kaya (2009)
22,000 in all countries	-	Eberhard et al. (2020)

in 1984 (Avdan, 2011), there were no materials written in Laz in Turkey until the 1990s (Türk, 2019) (See Chapter 2 for further discussion.)

Laz communities in today's Turkey are mostly located in the cities in the eastern portion of the Black Sea Region (i.e., Pazar, Ardeşen, Çamlıhemşin, Fındıklı, and İkizdere districts of Rize province as well as Hopa, Sarp, Borçka and Arhavi districts of Artvin province) and in Marmara Region (i.e., Akçakoca in Düzce, Sapanca in Sakarya, Karamürsel and Gölcük in

Kocaeli, Bartın, Yalova, some districts in Bursa and Balıkesir) (Kavaklı, 2017). A map is provided in Figure 1.1. Dialectal variations of Laz are observed based on the area Laz is spoken in Turkey; four main dialects are described as Pazar, Ardeşen, Hopa and Fındıklı-Arhavi (Lacroix, 2009). Keeping the dialectal differences in mind, the rest of this section gives information on the general characteristics of Laz which will be important to the discussion of LT in the following chapters.

Compared to Standard Turkish (ST), Laz has a smaller vowel inventory with five phonemic vowels; /i, e, a, u, o/, and no diphthongs (Lacroix, 2019; Öztürk & Pöchtrager, 2011). Because Laz has a smaller vowel inventory, front round Turkish vowels /œ, y/ are realized as their back counterparts [o, u] in Turkish loans in Laz (4a). Specifically /y/ may be realized as its back counterpart [u] in initial positions but as its unround counterpart [i] in non-initial positions (4b) (Lacroix, 2009). Back unround Turkish /ɯ/ is realized as either [i] (4c) or [u] (4d) (Kutscher, 2008). According to descriptions of Pazar Laz (Öztürk & Pöchtrager, 2011) and Ardeşen Laz (Lacroix, 2019), [y] and [œ] or fronted back vowels [u̟] and [o̟] may still be found especially in the environment of a palatal or palatalized consonant in loanwords from Turkish. Nevertheless, [y] and [œ] (or, [u̟] and [o̟]) in Laz are described as showing no consistency and being in variation with [u] and [o] (4e-4f).

(4) a. j**u**z d**o**rt (cf. ST [j**y**z d**œ**rt] ‘one hundred and four’)

b. s**u**zg**i** (cf. ST [s**y**zg**y**] ‘strainer’)

c. ak’**ili** (cf. ST [ak**ɯ**ll**ɯ**] ‘wise’)

d. saɣl**u**ɣi (cf. ST [saːl**ɯ**k] ‘health’)

e. g**y**miʃi ∼ g**u**miʃi (cf. ST [gʲ**y**myʃ] ‘silver’)

f. ʧ**o̟**ji ∼ ʧ**o**ji (cf. ST [k**œ**j] ‘village’)



Figure 1.1: Laz settlements in Turkey, map created via mapchart.net

Although Laz has a smaller vowel inventory compared to Turkish, Laz has a larger consonant inventory. In addition to containing all consonant phonemes of Turkish, Laz also has ejectives /p', t', k', ʦ', ʧ'/, affricates /ʦ, ʤ/ and velar fricatives /x, ɣ/. See Appendix 6.2.1 and 6.2.2 for the complete consonant inventories for Pazar Laz and Arhavi Laz.

One other characteristic of Laz that is crucial to the discussion in this dissertation is that all nominals end in vowels, and Turkish nominals in Laz are adapted to fit the phonology of Laz (Kutscher, 2008; Öztürk & Pöchtrager, 2011). If Turkish nominals end in a consonant, they are typically realized with a final [i] when they are borrowed into Laz (Kutscher, 2008; Lacroix, 2009; Öztürk & Pöchtrager, 2011). Borrowings from other languages such as Arabic and Persian also show the same characteristic but these may have been transmitted into Laz through Turkish, (Akkuş & Akkuş, 2020; Kurdadze, 2015). Some examples of Turkish loanwords in Laz are provided in (5a-5c). This pattern is also observed for proper names (5d) (Öztürk & Pöchtrager, 2011). Turkish nominals ending in a vowel may be adapted without any change as seen in (5e) (Öztürk & Pöchtrager, 2011).

(5) a. bilgisajar**i** (cf. ST [bilgisajar] 'computer')

b. k'elem**i** (cf. ST [kalem] 'pencil')

c. t'op'**i**[4] (cf. ST [top] 'ball')

d. sonʤul**i** (cf. ST [songyl] 'Songül')

e. oda (cf. ST [oda] 'room')

Other word forms such as verbs in Laz may also be borrowed from Turkish. In this case, verb roots are not required to end with a vowel, but [ɯ, y, œ] within Turkish verb roots are substituted with [i, u, o] in Laz. For instance, Laz verb root -ʧal**i**ʃ- and -d**u**ʃ**u**n- from Turkish

[4]Öztürk & Pöchtrager (2011) note that the younger Laz generation prefer [t'op'u] instead. Considering that today's younger Laz generation typically speak Turkish as their L1, their preference of [t'op'u] over [t'op'i] may be indicative of L1 (Turkish) transfer to Laz. While the Laz word [t'op'u] satisfies backness and rounding harmonies based on Turkish vowel harmony rules, [t'op'i] presents violations for both types of harmonies.

ʧalɯʃ- ‘work’ and dʏʃʏn- ‘think’ (Kutscher, 2008; Lacroix, 2009). The verbal roots borrowed from Turkish follow the Laz inflection paradigms (6) (Kutscher, 2008).

(6) Turkish ʧalɯʃ-mak ‘work-INF’ → Laz bitʃaliʃam ‘I work’

1.3 Laz Turkish as an L2 variety

This section aims to provide a discussion of the previous studies on the Turkish variety spoken by the Laz community in Turkey and a discussion of some of the characteristics of LT that seem to have originated in L1 (Laz).

Characteristics of Turkish as spoken by Laz individuals are understudied. There is at least one study focusing on the Turkish variety spoken by Laz and Turkish bilinguals (Bayramin, 2014). Bayramin explores the general characteristics of Turkish spoken in the Derecik village of Arhavi, Artvin, based on spoken data collected from 23 speakers (age range=24-89, average=63) as well as sources such as transcriptions of traditional songs called ‘atma türkü’ and idioms used in the area. In her study, she differentiates the Turkish variety spoken in the Derecik from other varieties spoken in the northeastern Black Sea. For instance, in Derecik variety, the first person plural suffix is Iz/-Uz (e.g., topla-r-**iz** ‘we collect’), but in other northeastern Black Sea varieties such as the ones spoken in Trabzon and Rize, 1PL may also take the form of -Uk (e.g., al-ur-**uk** ‘we buy’). Bayramin also points out similarities between the Derecik variety and other varieties in the northeastern Black Sea. Like other varieties of the northeast (e.g., varieties spoken in Trabzon (Brendemoen, 2002) or Rize (Günay, 1978)), Turkish spoken in Derecik presents examples that do not conform to backness and rounding harmonies. These disharmonic words are due to unpredicted rounding in (root or suffix) vowels (e.g., ijid**u**r ‘it’s good’ cf. ST ijid**i**r) or unpredicted fronting of what corresponds to ST [ɯ] (e.g., daj**i**m**i**n ‘of my uncle’ cf. ST daj**ɯ**m**ɯ**n, paz**i** ‘chard’ cf. ST paz**ɯ**). Bayramin includes an investigation of individual suffixes based on their morphological type and concludes that, although there is variation in the data due to influence

from ST, certain suffixes have tendencies to occur with [i] or [u], or both. Some examples from Bayramin for such suffixes are extracted and provided as a list in Table 1.3. Among the suffixes included in this table, only the past tense suffix occurs with either [i] or [u]. Bayramin indicates that this distribution is predictable based on the person marker following the past tense suffix and this is an archaic feature coming from Old Anatolian Turkish. In Old Anatolian Turkish (13th - 15th centuries), the past tense marker occurs with a round vowel [u, y] when the following person marker is 1st/2nd person and with an unround vowel [i, ɯ] when the following person marker is 3rd person (Özdarendeli, 2005; Timurtaş, 1976)[5]. Examples can be seen in Table 1.3 from the Derecik variety; 'evlen-dur-d**u**-n' (where the verb is inflected with 2SG -n) and 'evlen-dur-d**i**' (3SG). The common occurrence of past tense [u] with the 1st/2nd person and [i] with the 3rd person may be an archaic feature. However, there seems to be also an L1 influence in the Derecik variety as the other round vowel [y] and the other unround vowel [ɯ] are not often used in the past tense suffix. There may be other explanations for the distribution of the past tense vowel (see Chapter 4, Section 4.3.3). Furthermore, Bayramin notes other suffixes with archaic features, such as the use of [i] in the accusative -i and [u] in the conjunction -up, as these are used as they were in Old Anatolian Turkish, when rounding harmony was not fully developed[6]. However, not all suffixes occurring with [i] or [u] represent archaic features. For instance, Bayramin indicates that the nominalizing suffix -lIK used to occur with an unround vowel in Old Turkish; but in Derecik variety, this suffix generally occurs with a round vowel; -luk. Overall, Bayramin discusses that the Turks started to politically and demographically rule the northeastern Black Sea region in the 11th century and frequently compares the suffix forms in the Derecik variety with the forms in older stages of Turkish. However, she does not propose an argument about when exactly the Derecik variety of Turkish emerged. Finally, Bayramin points out a shift from nonstandard to

[5]In even older stages of Turkish, between the 6th and 11th centuries, past tense suffix occurred with an unround vowel [i, ɯ] in the 3rd person but with a round or an unround [i, ɯ, u, y] before 1st/2nd person (Özdarendeli, 2005).

[6]Rounding harmony in Turkish is suggested to have gradually developed between the 14th-17th centuries, and it is generally accepted that rounding harmony took its standard Turkish form after the 17th century (Erdem, 2006; Johanson, 1978).

standard Turkish in Derecik, especially observed in vowel harmony, as the younger generation (<50 years old) is using vowel harmony in suffixes as in ST.

Although Bayramin (2014) makes interesting observations, especially with respect to the use of vowels in individual suffixes, certain questions regarding the distribution of round or unround vowels in suffixes remain unresolved. For instance, under which circumstances or how often does [i] or [u] occur in suffixes? When individual suffixes are realized as either [i] or [u], how much of these are due to vowel harmony? Is the distribution of [i] or [u] determined by syllable structure as the suffixes occurring with [u] contain a coda in Table 1.3 but the ones occurring with [i] do not? Can any of these characteristics be attributed to Laz (L1) influence? In Bayramin (2014), some characteristics of the Derecik variety are considered as archaisms, but L1 (Laz) influence is not discussed.

Table 1.3: Examples from Bayramin (2014) for suffixes mostly occurring with [i] or [u] or both

Vowel	Suffix	Examples	
i	nominalizer -lI	hamsi-l**i**	'with anchovy'
	nominalizer -ʤI	toptan-ʤ**i**	'wholesaler'
	3SG possessive -(s)I	etraf-**i**n-a	'to its surrounding'
	accusative -I	satiʃ-in-**i**	'its selling'
u	1SG possessive -Im	kardeʃ-**u**m	'my sibling'
	2SG possessive -In	evlen-dur-duɣ-**u**n	'the one you married off'
	aorist -Ir	gel-**u**r-ler	'they come'
	copula -DIr	iji-d**u**r	'it's good'
	conjunction -Ip	gid-**u**p	'go (and)'
	nominalizer -lIK	sene-l**u**k	'annual'
	nominalizer -sIz	para-s**u**z	'without money'
	2nd/3rd person genitive -(n)In	sen-**u**n ʤanin	'your soul'
		zaman-**u**n ʃartlaruna	'to the time's circumstances'
i/u	past -DI	evlen-dur-d**u**-n	'the one you married off'
		evlen-dur-d**i**	's/he married (someone) off'

Other than Bayramin, who focused on the use of Turkish in a Laz village in Artvin, Günay (1978) explored the Turkish varieties spoken within the Rize province. Günay divides

the Rize province into five dialectal areas, one of which refers to the east of Rize, namely, the Laz settlements in Rize including Pazar, Ardeşen, and Fındıklı (i.e., "area V" as described in Günay). Günay summarizes six common characteristics of the varieties spoken in Rize. First, these varieties typically have no [ɯ, y, œ] vowels. Second, /b, ʤ, d, g/ are typically devoiced word-initially; for instance, **t**oxtor 'doctor' (cf. ST **d**oktor) and **p**ırak 'leave' (cf. ST **b**ɯrak). Third, /ʤ, ʧ, g, k/ become fricated word-initially or word-internally, e.g., a**ʃ**luktan 'from hunger' (cf. ST a**ʧ**lɯktan). Fourth, there are many forms that do not conform to vowel harmony, especially attributed to the lack of [ɯ, y, œ]. Fifth, word stress is typically on the penultimate syllable whereas the stress in ST typically falls on the last syllable. Sixth, verbs are often found at the beginning of the sentence while the canonical word order in ST is subject-object-verb; for instance, ***verdi*** *bi karpuz* '(s/he) gave a watermelon' cf. ST *bir karpuz* ***verdi***.

To sum up, Günay is a seminal work documenting the Turkish varieties spoken in Rize; however, it is not clear in this study whether the variety spoken in Laz settlements (area V) actually refer to the Turkish spoken by Laz and Turkish bilinguals. Nor was it indicated that certain structural characteristics of the Turkish variety spoken in area V was due to Laz influence.

Like Bayramin (2014), this dissertation will focus on the variety of Turkish spoken by the Laz minority group (LT). The following chapters will also present similar observations with respect to the characteristics of individual suffixes. Different from Bayramin (2014) who reported the vowel tendencies in individual suffixes descriptively, this dissertation investigates the vowel harmony patterns in LT based on a corpus of LT words. In discussion of LT vowel harmony, this dissertation will show that the distribution of suffix vowels in LT words is correlated with syllable type (i.e., whether the suffix vowel is occurring in an open or closed syllable). This dissertation also focuses on the potential impact of Laz (L1) on (Laz) Turkish (L2). Unlike Laz, which is unintelligible to Turkish speakers outside the Laz community, LT is intelligible to Turkish speakers. However, certain characteristics distinguish LT from ST that can be directly attributed to Laz influence. First, the three Turkic vowels are not common in LT. This has an impact on how

vowel harmony operates as many disharmonic forms are due to other vowels being used instead. This will be discussed in the following chapters. Nevertheless, a lack of vowel harmony on its own does not necessarily qualify LT to be an L2 variety. The same characteristics are also found in other varieties spoken in the northeastern Black Sea such as Trabzon Turkish (Brendemoen, 2002) or varieties spoken across Rize (Günay, 1978) where it is not always clear if there is a Laz or other substrate language. Second, a more conclusive argument that LT originated as an L2 variety is as follows. LT has consonants that are absent in ST but present in Laz: Ejectives /p', t', k', ʦ', ʧ'/, affricates /ʦ, ʤ/ and velar fricatives /x, ɣ/. These consonants are observed in elderly speakers' Turkish speech in the corpus used in this dissertation. Further evidence for the presence of Laz consonants will be provided in Chapter 2, where most members of the Laz community who were interviewed made statements indicating the presence of Laz consonants in LT, especially ejectives. Defining all characteristics of LT is beyond the scope of this dissertation, and I leave it to future research.

LT is a nonstandard variety of Turkish. Standard varieties of languages are often perceived (by standard or nonstandard speakers) as prestigious, desirable, 'correct', and pleasant to listen to, and they are associated with higher education and social class (Edwards, 1999; Lippi-Green, 2012; Milroy & Milroy, 2012; Schluter, 2021). Nonstandard varieties, on the other hand, are divergent from the standard and can be judged less positively. Such judgments extend to characteristics about their speakers. Nonstandard variety speakers are often perceived as less intelligent, less trustworthy, less competent, and lower in social status (Edwards, 1999; Gluszek & Dovidio, 2010). Nevertheless, nonstandard varieties represent solidarity when used between members of the same speech community and as such, have covert prestige (Giles et al., 1977). Individuals develop awareness of linguistic variation and social identities at an early age. Infants can differentiate their own home accent from other accents as early as 5 months old (Butler et al., 2011; Nazzi et al., 2000). In early childhood (by age 5), children develop a preference for native language or native-accented speakers as their friends (Kinzler et al., 2007). However, starting from the first

years of elementary school (Cremona & Bates, 1977; Day, 1980) and sometimes as early as 3 years old (Rosenthal, 1974), children learn the stereotypes of adults and prefer standard varieties.

In Turkey, the standard variety is also known as Istanbul Turkish. It is the prestigious variety preferred and used in educational, governmental or institutional settings (e.g., school curricula and textbooks are based on ST). Varieties other than Istanbul Turkish such as regional varieties or varieties spoken by linguistic minorities of Turkey may be seen as inferior to ST (Demir, 2010; Şen, 2006; Topçu & Didar, 2022). As a nonstandard variety spoken by the Laz minority, LT speakers may be associated with low education, rural or 'incorrect' speech outside the Laz community. On the other hand, as I will show in this dissertation, LT is used for solidarity within the Laz community. Nevertheless, younger members of the Laz community are shifting from LT to ST due to increased exposure to ST through the influence of education and media, and due to future employment opportunities ST may bring in professional life.

In summary, the characteristics of Turkish spoken by the Laz community and its status among other varieties spoken in the northeastern Black Sea are understudied. As a variety of Turkish, LT shows characteristics of Laz with respect to both vowels (e.g., uncommon [ɯ, y, œ]) and consonants (e.g., presence of ejective consonants). Like many other nonstandard varieties, LT may be seen as inferior to the standard Turkish variety. This will be discussed further in Chapter 2.

1.4 L2 acquisition of vowel systems

Turkish has a larger vowel system compared to Laz, as mentioned in earlier sections. The purpose of this section is to provide findings of previous research with respect to the strategies used in acquisition of L2 vowels, especially when the L2 vowel system is larger than the L1 vowel system, as in the case of LT speakers who are native speakers of Laz and acquired Turkish as a second language.

Burgos et al. (2014) studied pronunciation errors of Spanish natives learning L2 Dutch. Spanish has a five vowel system (/a, e, i, o, u/) whereas the Dutch vowel system is larger with fifteen vowels (tense /i, y, u, e, ø, o, a/, lax /ɪ, ɛ, ɔ, ʏ, ɑ/, diphtongs /ɛi, oey, ɔu/) and one reduced vowel [ə]. There are vowel length and vowel height contrasts in Dutch as well as front round vowels; however, Spanish does not have these characteristics. The study showed that L2 Dutch learners typically made errors regarding vowel length (e.g., mispronunciation of the lax /ɑ/ as tense [a]), vowel height (e.g., mispronunciation of /e/ frequently as [ɛ] and sometimes as [i]), and front round vowels (i.e., substitution of /y, ʏ, ø/ with [u], mispronunciation of /oey/ as [ɔu] and less commonly /ø/ as [o]). The speech errors of L2 Dutch learners reflected the differences between the L1 (Spanish) and L2 (Dutch) vowel systems as the L2 Dutch learners produced vowels closer to Spanish phonemes. Likewise, Flege (1991) investigated the perception of (American) English vowels /i, ɪ, ɛ, æ/ by Spanish speakers. Participants of the experiment were presented with auditory English stimulus (e.g., *beat, bit, bet, bat*) and asked to choose one of the orthographic vowels <i, e, a, o, u> (representing Spanish phonemes /i, e, a, o, u/) if they heard these vowels or choose 'none' if they did not. The results showed that English /i, ɪ/ were mostly perceived as <i>, /ɛ/ as <e>, and /æ/ as <a> by Spanish speakers. Subjects with experience of English selected 'none' more often than Spanish monolinguals, suggesting that L2 learners started to distinguish English phonemes. However, even highly experienced learners of English identified /æ/ as Spanish <a>. This indicates that L2 learners could not establish some of the L2 vowels as a new phonetic category. Another study investigated L2 Turkish vowel productions by adult native American English speakers (de Jonge et al., 2022). Participants of the study were advanced speakers of L2 Turkish who had been exposed to Turkish starting from their late 20s. The study focused on the production of Turkish vowels /ɯ, y, œ/ that are absent in English. The participants of the study were asked to read Turkish and English word lists to measure the acoustic characteristics of vowels. The results of the study showed that whenever participants did not produce the L2 vowels in relation to their phonological categories and phonetic properties in Turkish, they did

the following. Instead of the front round vowel /y/, L2 Turkish speakers used back round variants such as /u, ʊ/ but not front unround vowel /i/. Instead of front round /œ/, they used back round variants such as /o, ɔ/ but not /e/. Instead of back unround /ɯ/, more front variants such as /i, ɪ, œ, ɚ/ were used. Overall, L2 Turkish speakers preserved the rounding feature of vowels more often compared to backness. Another study investigated the acquisition of French vowel contrasts /y/-/u/ and /œ/-/ɔ/ by (American) English speaking French learners (Darcy et al., 2012). Neither /y/ nor /œ/ occurs in English, and the study shows that L2 learners make persistent errors in /y/-/u/ and /œ/-/ɔ/ distinctions as they are not present in English.

Similar strategies have also been attested in loanword adaptation studies when the borrowing language has a smaller vowel system than the source language. For instance, Dohlus (2005) describes the adaptation of front round vowels in loanwords in Japanese. Japanese has a five-vowel system lacking front round vowels: /i, u, e, o, a/. High front round vowels /y, ʏ/ are adapted into Japanese as /ju/ in German and French loanwords. However, mid front round vowels /œ, ø/ are adapted into Japanese as /e/ in German loanwords but /u/ in French loanwords.

In summary, second language learners may have difficulty distinguishing vowel contrasts in L2 if these contrasts do not exist in their native language. Or, certain vowel segments of L2 may collapse into a single vowel category present in L1. In the case of LT, native Laz speakers who are learning Turkish may use other vowels instead of /y, œ, ɯ/ as these are not in their L1 (Laz) vowel system. If rounding is preserved, as argued in previous research as discussed in this section, L2 Turkish learners may realize front round vowels /y, œ/ as back round [u] and [o], and back unround vowel /ɯ/ as front unround [i].

1.5 L2 acquisition of vowel harmony

Examining literature of second language (L2) acquisition of vowel harmony may help illuminate some of the strategies used in the development of LT. Laz speakers who learn Turkish

as an L2 may be adopting or may have adopted similar strategies to those used by other L2 learners of vowel harmony languages who are native speakers of a non-vowel harmony language.

Previous studies on L2 acquisition of vowel harmony are limited, and they generally focus on how native speakers of non-vowel harmony languages acquire languages with vowel harmony in controlled experiments in the context of language instruction. For example, Altan (2012) studied the Turkish speech of 48 adult L2 learners of Turkish (26-54 years old). The participants of the study had been learning Turkish for 3 years in Brussels, and their native languages included English, French, Spanish, Italian, Portuguese, German, Greek, Catalan, and Basque. The results showed L2 speakers of Turkish mastered the vowel harmony rules; however, they overgeneralized these rules and applied them to some of the forms in Turkish that are disharmonic; for example, /*kardaʃ/ instead of /kardeʃ/ 'sibling', /*kɯbrɯs-ta-kɯ/ instead of /kɯbrɯs-ta-ki/ 'Cyprus-LOC-ADJ' (where -ki is a non-alternating suffix in ST). In another study, Özçelik & Sprouse (2017) tested the acquisition of canonical and non-canonical vowel harmony in Turkish by L1 English speakers. In Turkish, canonical forms conform to both backness and rounding harmonies, for which L2 learners receive explicit instruction; however, non-canonical forms may show disharmony. For instance, the canonical form kol-d**a** 'arm-LOC' contains a dark [ɬ] and the suffix vowel satisfies backness harmony. The non-canonical form rol-d**e** 'role-LOC' contains a light (palatal) [l] and the suffix vowel violates backness harmony. Fronting of vowels in the environment of palatals is predictable; however, L2 learners of Turkish receive no instruction and only little input about non-canonical forms. In addition, no distinction is made between dark and light /l/ in Turkish orthography. To test the acquisition of non-canonical vowel harmony, Özçelik & Sprouse (2017) asked L2 learners to select a suffix vowel for each given Turkish noun or pseudo-noun. The results showed that L2 learners of Turkish learned that a lateral can trigger vowel harmony despite the poverty of stimulus (e.g., lack of instruction of non-canonical forms containing laterals). The study also found a correlation between proficiency and accuracy, where accuracy of vowel harmony in non-canonical forms increased with higher levels of L2 proficiency.

Overall, Özçelik & Sprouse (2017) provided evidence of involvement of universal grammar in L2 phonology as L2 Turkish learners, despite poverty of stimulus, show the same learning patterns as L1 Turkish speakers.

LaCross (2015) examined the acquisition of non-adjacent vocalic dependencies, such as vowel harmony, by American English speakers vs. Khalka Mongolian speakers (Khalka has ATR and rounding harmonies). With artificial grammar learning tasks, the participants of the study were exposed to a continuous speech stream of words containing vowel triplets (i.e., words with a CVCVCV sequence), and then their word preferences for the CVCVCV sequences in this artificial grammar were tested. The general results indicated that L1 phonology has a crucial role in speaker biases. While Khalka speakers paid attention to vowels and could acquire non-adjacent vocalic dependencies such as vowel harmony, English speakers did not have a bias toward attending to vowels and they could not acquire non-adjacent vocalic dependencies under identical statistical conditions. Similar biases of L1 learners on L2 phonological acquisition (not necessarily with respect to vowel harmony) were also indicated by other researchers (Pajak & Levy, 2012; Pater & Tessier, 2006). These observations suggest that L2 learners of Turkish who do not speak a language with vowel harmony may face some difficulty in acquiring a harmony system. Overall, the studies mentioned here were carried out in either a classroom or lab and may not transfer to a dynamic language contact situation. So, the question still remains regarding the acquisition of vowel harmony in language contact situations.

The manifestation of partial vowel harmony or vowel disharmony is still an under-studied topic. Research is lacking concerning vowel harmony in language contact contexts where the dominant ambient language has vowel harmony and the minority language does not. In addition, if the dominant language has a larger vowel system, it could impact how vowel harmony functions if certain vowels are altered due to the smaller vowel system. The current research is an attempt to fill this gap by examining the vowel harmony patterns found in LT, which are influenced by language contact.

1.6 Factors impacting vowel harmony

Languages may undergo change with respect to vowel harmony, and this is in two potential directions: either becoming more harmonic or more disharmonic. Languages/dialects exhibiting partial vowel harmony (e.g., LT) can be considered as representing a stage in either a developing vowel harmony system, as we are assuming in the case of LT, or a previously more productive system which is undergoing vowel harmony decay. In either case, various factors influence vowel harmony; for instance, coarticulatation or perception of vowels, vowel mergers, surrounding consonants, domain of vowel harmony, and language contact. The following two sections will discuss how these factors may affect vowel harmony.

1.6.1 Language change towards harmony

The purpose of this section is to provide an overview of how vowel harmony emerges in languages. Both language-specific (internal) factors and language contact (external factor) may lead to the emergence of vowel harmony.

First of all, phonetic factors such as coarticulation or misperception of coarticulation may cause developing vowel harmony systems. Coarticulatory influence of vowels (vowel-to-vowel coarticulation) is a well-known phenomenon in languages (Öhman, 1966), and it has been argued that vowel harmony emerges in languages due to extended coarticulation. For example, Przezdziecki (2005) analyzes the acoustic characteristics of vowels in three Yoruba dialects (Standard Yoruba, Akure, Moba) and argues that vowel harmony emerges from vowel-to-vowel coarticulation. All of these Yoruba dialects exhibit regressive ATR harmony, but they differ with respect to the role of high vowels. In Standard Yoruba and Moba, there is no phonological contrast in high vowels and no [-ATR] allophones of high [+ATR] vowels. High vowels in Standard Yoruba and Moba neither undergo nor trigger harmony. In Akure, however, there is a split between high ATR vowels [i, u] and high non-ATR vowels [ɪ, ʊ], and high vowels in Akure

undergo ATR harmony. Although high vowels in Standard Yoruba and Moba do not undergo ATR harmony, they show evidence of coarticulation where Akure has ATR harmony. For this reason, Akure vowel harmony is argued to have emerged from coarticulation in an earlier stage of Yoruba.

Other researchers argue for perceptual factors in the emergence of vowel harmony. For example, Ohala (1994a,b) suggests that vowel harmony results from listener misperception of vowel-to-vowel coarticulation. The association between two different vowels due to coarticulation is erroneously parsed separately by listeners as two separate vowels, albeit now linked via a shared property (i.e., dissociation parsing error). This may result in a new pronunciation norm (e.g., harmony between vowels), which listeners follow in their speech and other speakers mimic. Blevins (2004) argues that vowel-to-vowel coarticulation is the primary source of the emergence of vowel harmony, but perceptual factors may also play a role. Kimper (2017) also argues for a perceptual grounding in vowel harmony. In artificial language experiments, Kimper auditorily presented English-speaking subjects disharmonic and harmonic nonce words with respect to backness and rounding. The subjects were then asked to indicate if they heard the target vowel [i] or [u] in the word. The results showed that subjects were faster and more accurate to identify the target vowels in harmonic nonsense words compared to disharmonic nonsense words. For example, [u] in *hugoka*, where [u] matches with [o] in terms of backness and rounding, was better identified compared to [u] in *hugeka*, where [u] does not match with [e] with respect to backness and rounding features. This demonstrates that vowel harmony is perceptually advantageous.

In addition to articulatory and perceptual accounts for vowel harmony, vowel harmony may also arise in the context of language contact. In Chadic languages, there is no evidence for a proto-ATR system, and the Chadic family is considered to be in the ATR-deficient zone of Cental Africa (Kidda, 1993; Leger, 2011; Rolle et al., 2019). However, two Chadic languages out of 43 surveyed have some sort of ATR harmony (Rolle et al., 2019).[7] Western Chadic Tangale has a

[7]Eastern Chadic languages Kera and Wuzlam (aka Uldeme or Ouldémé) are also known to exhibit vowel harmony. Although these languages do not have ATR harmony, Kera has vowel height, fronting, and rounding harmony (Pearce,

complete ATR system and Eastern Chadic Dangaleat has mid harmony (incomplete ATR system), where mid-close vowels /e, o/ cannot co-occur with mid-open /ɛ, ɔ/. Although there is no further information available on Dangaleat at this time, Tangale is suggested to have developed ATR harmony due to language contact since Tangale is surrounded by Niger-Congo languages with ATR harmony such as Tula, Waja, and Dadiya (Kidda, 1993; Kleinewillinghöfer, 1996).[8]

With respect to how vowel harmony functions in LT today, L2 acquisition of vowels (as discussed in Section 1.4) and language contact with Turkish seem to be strong factors. Today's elderly speakers of LT are the ones who spoke Laz natively and were exposed to Turkish earliest when they started schooling. In other words, they superimposed their L1 (Laz) vowel system on Turkish. Under the influence of the dominating Turkish culture, younger members of the Laz community have increased exposure to ST and their speech has been becoming more like ST. The generational differences in the Laz community will be discussed in the following chapters of this dissertation.

1.6.2 Language change towards disharmony

Languages may also experience breakdown or decay in vowel harmony over time. Partial vowel harmony systems could be representative of this process. While LT is the result of acquisition of Turkish and gradual expansion of vowel harmony, examination of vowel harmony decay may also lead to systems that bear some resemblance to LT, and so is also instructive. For this reason, this section will elaborate on how breakdown in vowel harmony systems may occur. Factors that may lead to vowel disharmony such as system internal factors vowel mergers, surrounding consonants, domain of vowel harmony as well as a system external factor language contact will be discussed below.

2003; Rolle et al., 2019), and Wuzlam has front vowel harmony (Gravina, 2014).

[8] See Leger (2011) for an alternate opinion on the development of the ATR system.

Vowel Mergers

Vowel mergers occur when two contrastive sounds merge into a single sound. Since vowel mergers result in a change in vowel systems, they can impact how vowel harmony functions. In this section, two main patterns will be presented: i) vowel mergers may lead vowel harmony to disappear, ii) mergers occur on the surface but the merged vowels still function according to their old behaviors and therefore phonological vowel harmony is still intact. The latter may represent an initial stage of harmony decay.

The first possible scenario in vowel mergers is that mergers lead to distruptions in vowel harmony. The most well-known example of such vowel harmony decay is Uzbek. Uzbek is in the Turkic language family, and these languages typically have both backness and rounding harmonies. Sjoberg (1997) indicates that backness harmony is lost in Standard Uzbek but a slight degree of rounding harmony persists at the phonemic level only for a few morphemes (although it is not clear which morphemes these are). He lists the phonemic vowels of Uzbek as /i, e, a, u, o, ɔ/ and notes that [ɯ], [y], and [œ] may emerge as allophones primarily based on surrounding consonants. However, other researchers report that Uzbek vowels /ɯ, y, œ/ were lost as they merged with /i, u, o/ respectively (Comrie et al., 1981; Harrison et al., 2002; Thomason & Kaufman, 1992). Through a corpus study of Old Uzbek of the 17th century, Harrison et al. (2002) argue that three (i.e., [ɯ, y, œ]) of the eight[9] original Uzbek vowels underwent merger and disappeared; however, it is not clearly stated when such mergers started to take place and how it influenced vowel harmony in modern Uzbek. Today, Uzbek along with all of its dialects (except for the Osh dialect) are reported to have lost productive vowel harmony (Kavitskaya, 2012; McCollum, 2019). McCollum's examples from the Osh dialect indicate that backness (7-8) and rounding (8) harmonies do not regularly apply. No matter what the root vowel is, the LOC is *-da* and the ACC is *-ni*. Note that [y] and [ø][10] are attested in McCollum's data, but these do not

[9]In Harrison et al. (2002), eight phonemic vowels were described for Old Uzbek: /i, ɯ, ɑ, e, o, ø, u, y/. In Berdak (2010), there are nine original Uzbek phonemes based on early literary work; /i, ɯ, a, æ, e, o, ø, u, y/.

[10]McCollum's transcription of [ø] corresponds to [œ] which is used to refer to a front mid vowel in the rest of this

trigger further harmony in (8b-c).

(7) a. til-da ‘tongue-LOC’
b. gyl-da ‘flower-LOC’
c. køl-da ‘lake-LOC’
d. χal-da ‘answer-LOC’
e. kul-da ‘slave-LOC’

(8) a. til-ni ‘tongue-ACC’
b. gyl-ni ‘flower-ACC’
c. køl-ni ‘lake-ACC’
d. χal-ni ‘answer-ACC’
e. kul-ni ‘slave-ACC’

However, rounding harmony in the Osh dialect does apply to the 1st person singular possessive suffix (9). This particular suffix appears to represent the last vestiges of vowel harmony in the language

(9) a. bæl-im ‘waist-POSS.1SG’
b. gyl-ym ‘flower-POSS.1SG’
c. køl-ym ‘lake-POSS.1SG’
d. qul-um ‘slave-POSS.1SG’
e. jol-um ‘road-POSS.1SG’

Vowel harmony decay due to vowel mergers is also observed outside the Turkic and Finno-Ugric families. Korean is one such example (Park, 1990). The Korean vowel harmony system in Early Middle Korean (10th-14th century) is described as follows. There is a distinction between light vowels (/o, ʌ, a/) and dark vowels (/u, ɨ, ə, i/, where /i/ serves as a neutral vowel in non-initial

paper. There is no phonemic difference between [ø] and [œ] in Turkic.

syllables).[11] Light vowels do not appear with dark vowels within the same word including affixes. Vowel harmony in Korean was strict until the mid-15th century, which corresponds to Late Middle Korean (LMK; 15th-16th century). Vowel harmony gradually experienced disruptions and became less strict because of the loss of phonemic /ʌ/ which started to be replaced with its counterpart from the dark group /ɨ/. For example, the topic marker (TOP) had two alternants in LMK as /-ʌn, -ɨn/ as seen in (10), where there is harmony between the stem and the suffix (Park, 1990). Since the phonemic /ʌ/ is lost in present Korean, the topic marker is only realized as /-ɨn/ in contemporary Korean (11) (Yeon & Brown, 2013), and therefore examples like (11a) do not show harmony.

(10) a. na-nʌn 'I-TOP'
b. nə-nɨn 'you-TOP'

(11) a. na-nɨn 'I-TOP'
b. nə-nɨn 'you-TOP'

In addition, in the LMK period, there was an influx of Chinese loanwords that didn't undergo vowel harmony and contributed to disharmony of roots in present Korean. Due to vowel mergers and loanwords[12], vowel harmony in contemporary Korean is described as unproductive, appearing only in sound-symbolic words root-internally (e.g., *ppakkom* 'opening bright small eyes' vs. *ppəkkum* 'opening dull big eyes'), and between a verb stem and the infinitive morpheme (e.g., *phal-a* 'sell-INF' vs. *pəl-ə* 'earn-INF') (Kim, 1977; Lee, 1984; Park, 1990).

The second possible scenario in vowel mergers is that vowel mergers occur but vowel harmony is still intact. As described in Harrison & Kaun (2003), such behavior of vowel mergers is observed in Namangan Tatar (NT) in the Turkic family, which is a variant of the Standard

[11] Korean vowels are traditionally categorized as light or dark vowels because light vowels or dark vowels do not constitute a natural class. For further discussion, see Finley (2006).

[12] Monopthongization of dipthongs are also suggested to be a factor contributing to the decay in Korean vowel harmony (Kim, 1977; Park, 1990). For example, in the 19th century, /ʌ/ was lost, and dipthongs /əj/ and /aj/ became /e/ and /ɛ/, respectively. Since /ʌ/ was lost, /ʌj/ also became /ɛ/. As a result, light vowel /ɛ/ had two dark counterparts (/ɨ, e/), and light vowel /a/ had two dark counterparts (/ɨ, ə/), therefore causing disruptions in the vowel harmony system. See further details in Kim (1977) and Park (1990).

Literary Tatar (SLT). While in SLT there is a contrast between a high back unrounded vowel [ï] and mid-high back unrounded vowel [ë][13], these two vowels have undergone vowel merger in NT to [ë]. [i] is left without its back harmonic counterpart [ï], and [i] does not enter into any backness harmony alternations in NT. However, vowel harmony still operates in the language with other vowels.

Vowels that still retain their harmonic behavior even after undergoing a merger process are observed in ATR harmony sytems. Tutrugbu (aka, Nyangbu, a Ghana Togo Mountain language of the Kwa family) exhibits regressive ATR harmony that affects prefixes. The language historically had a nine-vowel inventory (i.e., /i, ɪ, e, ɛ, a, ɔ, o, ʊ, u/), where [+ATR] vowels alternated with their [-ATR] counterparts (e.g., /e/ with /ɛ/, /ɔ/ with /o/, etc.). Then, the [+high, -ATR] vowels /ɪ/ and /ʊ/ were lost as they merged with [-high, -ATR] vowels /ɛ/ and /ɔ/. As a result of this merger process the vowels cannot be distinguished acoustically, but the /ɛ/ (ε^{H}) and /ɔ/ ($\mathrm{ɔ}^{H}$) which used to be /ɪ/ and /ʊ/ respectively still behave as if they were high vowels. These are exemplified in (12), where all noun class prefixes harmonize with stem vowels (compare the regular ɔ/o alternation in Tutrugbu in (12a-b), and $\mathrm{ɔ}^{H}$/u alternation due to vowel merger in (12c-d)) (Essegbey & McCollum, 2017; McCollum & Essegbey, 2018).

(12) a. **ɔ**-da ‘Class.3-copper’

b. **o**-pétē ‘Class.3-vulture’

c. b**ɔ**$^{\mathbf{H}}$-wε^{H} ‘Class.8-axe’

d. b**u**-yu ‘Class.8-war’

Similar to the case in Tutrugbu, there are other cases of mergers in which harmony is still intact but the vowels function in the harmony system as if they retained their former features: Agoi (Yul-Ifode, 2003), Urhobo (Aziza, 2008), Bondu-So (Hantgan & Davis, 2012). These cases could be showing the first stage of vowel harmony decay, after which such vowel mergers would gradually result in neutral vowels and instigate further changes in vowel harmony systems.

[13]Harrison & Kaun (2003) use the turkological notation rather than IPA in their transcriptions. [ï] refers to [ɯ], and [ë] is presumably [ɤ].

Vowel mergers may also cause harmony to shift types rather than causing disharmony. Moro of the Kordofanian family is such an example, where the language originally had an ATR harmony system which shifted to height harmony through vowel merger, and the language still has robust vowel harmony (Ritchart & Rose, 2017). East Mongolian dialects (Khalka, Inner Mongolian) are also argued to have undergone a vowel harmony shift (from backness harmony to pharyngeal or ATR harmony) due to changes in its vowel system, including vowel mergers (Svantesson, 1985).

This section has shown how vowel mergers may impact vowel harmony systems. They can i) lead to vowel harmony loss, ii) cause some vowels to become neutral, which can cause disharmony in a word but the active alternations of affixes still occur, iii) cause vowel harmony to stay intact as if vowel merger had not happened. It is possible to consider (i-iii) as representing the stages of vowel harmony after merger where (i) would represent the most advanced stage of decay. Vowel mergers are one of the common reasons for developing VH systems. In the case of LT, however, the assumption is as follows. LT emerged with fewer vowels (five Laz vowels) and the LT vowel system has been gradually expanding as language contact with (Standard) Turkish is increasing. Therefore, although vowel mergers may not be playing a role in how vowel harmony operates in LT, vowel decay is still instructive for Laz in two ways. The origins of Laz Turkish may have first involved reduction of the target Turkish vowel system to match that of Laz, but is now undergoing continued expansion.

Surrounding Consonants

Other than vowel mergers, the influence of surrounding consonants may disrupt vowel harmony, resulting in disharmonic words. To give an example, based on Mahanta (2008)'s description, Assamese (Indo European; India) roots and derived words exhibit regressive ATR harmony, where [+ATR] vowels /i/ and /u/ cause the preceding [-ATR] vowels to become [+ATR] (e.g., see (13) where the trigger is bold and target is underlined).

(13) a. $b^h\underline{\varepsilon}k\underline{\upsilon}$la ‘frog’ + **i** ⟶ b^hekuli ‘frog.DIM’

b. m$\underline{\varepsilon}$r ‘curl’ + **u**wɑ ⟶ meruwɑ ‘curled’

However, when there is more than one consonant intervening between the triggering vowel and the target vowel, harmony is blocked (14). This is characterized by Mahanta as blocking of harmony in closed syllables.

(14) a. kɔrmi ‘active person’ (kɔrmɔ ‘work’ + i) (*kormi)

b. bɔnti ‘lamp’ (*bonti)

c. sɔnduk ‘box’ (*sonduk)

In Assamese, nasal consonants may also block regressive ATR harmony. When a nasal consonant is the onset of the harmony triggering vowel /i/ or /u/, harmony is blocked (e.g., /sɛkɔni/ but */sekoni/ ‘strainer’). This type of consonant restriction disrupts harmony, creating disharmonic words, but harmony still applies elsewhere.

In addition to the cases where certain consonants block vowel harmony (such as Assamese nasals), there are other cases in which some consonants cause nearby vowels to change features to agree with the consonant. Nawuri, a Kwa language of Ghana (Casali, 1995), is reported to exhibit such a case. Nawuri has regressive ATR and rounding harmonies. For example, ATR and rounding features of the vowel in the singular noun class prefix gI- is determined by the following stem vowel. So, the prefix vowel in examples like /gɷ-sɷ/ ‘ear’, /gu-jo/ ‘yam’, and /gɪ-baː/ ‘hand’ are all harmonizing with the stem vowel. However, rounding is also observed in this prefix vowel when the stem begins with the labial glide /w/ whether or not the stem vowel is round or unround, e.g., /gɷ-waː/ ‘doing (n.)’ and /gɷ-wɛː/ ‘sympathy’ so rounding is being conditioned by the labial glide rather than by the following vowel, leading to disharmony between the vowels.

Rounding of vowels by adjacent labial consonants is also described to be a wide-spread phenomenon in Turkic languages (Erdal, 1998), which can result in disruptions in rounding harmony in Turkish. In ST, vowels adjacent to labial sounds may be rounded even in cases in which an unrounded vowel would be expected according to the vowel harmony rules of Turkish.

This is known as “labial attraction” in ST and it was first suggested by Lees (1966), who describes it as a phenomenon occurring in a root, where the first syllable contains /a/ followed by a labial consonant (or a consonant cluster containing at least one labial), and the next vowel is a high, rounded /u/. According to labial attraction, rounding of the high vowel is due to the intervening labial sound (15a-c). According to the vowel harmony rules of Turkish, however (see Appendix 6.3), rather than an [a]-[u] vowel sequence, an [a]-[ɯ] sequence is expected. However, some scholars (e.g., Clements & Sezer, 1982) argue against labial attraction in Turkish, arguing that many words in Turkish contain an [a]-[ɯ] sequence with an intervening labial consonant (15d-e), and there are also many examples of stems which have an [a]-[u] sequence without an intervening labial sound (15f-g).[14] Based on a corpus study, Inkelas et al. (2001) do not totally agree with Lee’s description of labial attraction. They suggest that the appearance of /a/ in Turkish followed by /u/ is a statistical tendency, and this tendency is in fact consistent with Old Turkic (8th-9th centuries) vowels having been realized as rounded in Old Ottoman Turkish[15] when preceded by a labial consonant even if the modern language may no longer have this assimilation.

(15) a. tavuk ‘chicken’
b. havlu ‘towel’
c. kabuk ‘shell; crust; bark’
d. kapɯ ‘door’
e. kamɯʃ ‘cane’
f. haːtun ‘wife; lady’
g. aɢur ‘Armenian cucumber’

It is not the goal of this research to justify whether labial attraction exists in ST, which displays fully functional backness and rounding harmonies other than certain exceptions (see

[14] Although most of the examples of an [a]-[u] sequence in Turkish are borrowed words, the examples provided in (15) are not loanwords according to Turk Dil Kurumu (Turkish Language Institution).

[15] Inkelas et al. (2001) do not define a time period for this. Based on other sources,(Kerslake, 1998; Timurtaş, 1976; Turan, 1996; Yelten, 2009) the period of Old Ottoman is between the 13th and 15th centuries. The name Old Ottoman may be used interchangeably with Old Anatolian (Kerslake, 1998; Turan, 1996).

Chapter 3, Section 3.2.4). The discussion of labial attraction in ST, however, raises the question of whether there is any influence of adjacent (labial) consonants that may lead to vowel disharmony in LT. In fact, labial consonants are not the only potential source for disharmony in ST or possibly in non-standard Turkish dialects. It is also well-known that palatal(ized) consonants in ST disrupt vowel harmony. Palatal(ized) consonants can create a new harmony domain, causing the following vowel to be fronted even though the preceding vowel is back (Clements & Sezer, 1982; Özçelik & Sprouse, 2017). Examples are provided in (16), where (16a) is harmonic but the locative vowel following the palatal violates backness harmony in (16b). The effect of palatal consonants on Turkish vowel harmony was also confirmed in a recent acoustic study (Dikmen & Canalis, 2020). Further discussion of palatals can be found in Chapter 3, Section 3.2.4.

(16) a. jol-d**a** 'road-LOC'

b. petrol^{j}-d**e** 'petrol-LOC'

To summarize, it appears that consonants do play a role in vowel harmony systems. With respect to Turkish, especially labial or palatal(ized) consonants may have an impact on vowel harmony. Like in ST, surrounding consonants may affect how vowels are realized in nonstandard varieties of Turkish too, including LT. An analysis of surrounding consonants in LT will be provided in Chapter 4.

Domain of Harmony

Vowel disharmony may also arise from domain effects. The domain of vowel harmony may shrink and therefore cause vowel harmony to apply to only a certain part of a word (e.g., to target vowels close to the trigger, to certain affixes, etc.). This could be due to a vowel merger resulting in an opaque vowel which blocks vowel harmony, gradually causing the vowel harmony domain to shrink. Or, it could be due to other factors, such as the integration of separate words or cliticized affixes which do not harmonize into the word.

An example of the domain effect in vowel harmony is described in Kavitskaya (2013). In

Crimean Tatar (CT), all vowels participate in backness harmony. Similar to ST, rounding harmony in CT only targets high vowels; however, the manifestation of rounding harmony differs based on the dialect. In Southern (Coastal) CT, rounding harmony affects all vowels in a prosodic word (but low vowels block rounding harmony). As seen in (17), round vowels are followed by round vowels.

(17) a. dost-um ‘friend-POSS.1SG’
b. tuzluɣ-um ‘salt.shaker-POSS.1SG’
c. syrgyn-lyk ‘deportation-ADJ.SUF’

In Central CT, rounding harmony is active only in the first two syllables of the word. As exemplified in (18), when the initial vowel is [+round], the second vowel undergoes rounding harmony. However, the third vowel does not undergo vowel harmony no matter whether it belongs to the suffix or the root (18c-e).

(18) a. dost-um ‘friend-POSS.1SG’
b. bojun ‘neck’
c. ʧykyndir ‘beets’
d. tuzluɣ-ɯm ‘salt.shaker-POSS.1SG’
e. syrgyn-lɨk ‘deportation-ADJ.SUF’

In Northern (Steppe) CT, rounding harmony is totally lost since rounding is only licensed in the initial syllable of the word but the following vowels are not [+round] (19).

(19) a. dost-ɯm ‘friend-POSS.1SG’
b. bojɯn ‘neck’
c. ʧɨngɨldɨr ‘beets’

In summary, with respect to rounding harmony, it is possible to imagine that CT progressed from full harmony (as in Southern CT) to partial harmony due to domain contraction (Central CT) and then to no harmony (Northern CT).

Similar to the case in Central CT, McCollum (2015) emphasizes the role of domain contraction and neutralization in harmony decay in his analysis of Kazakh labial harmony. He describes domain contraction in Kazakh labial harmony as reduction of rounding across the word so that in contemporary Kazakh it primarily applies within the root. Suffix vowels beyond a bisyllabic root are typically realized as [-round] following both round and unround vowels. McCollum compares Korn's (1969) previous descriptions of Kazakh with contemporary Kazakh in (20). The suffix vowels [ʏ] and [ʊ] in older Kazakh were reported to harmonize with the previous vowel. However, in contemporary Kazakh, the suffix vowels [ɪ] and [ə] often do not undergo rounding harmony. However, McCollum (2015) notes that labial harmony may apply to suffixes depending on a variety of factors, such as the number of intervening consonants between the trigger and target of harmony. He argues that vowels closer to the root-initial vowel are more likely to be affected by rounding. A similar locality effect is also found in suffix order, where the first suffix following the root tends to be more harmonic than the second suffix vowels.

(20)

older Kazakh	*contemporary Kazakh*
kømʏr-d**ʏ** 'coal-ACC'	kømʏr-d**ɪ** 'coal-ACC'
qʊłʊp-t**ʊ** 'lock-ACC'	qʊłʊp-t**ə** 'lock-ACC'

In Tommo So, a Dogon language spoken in Mali, the rates of vowel harmony application decreases across the word (McPherson & Hayes, 2016). Tommo So is described as having three progressive vowel harmony processes: low harmony, backness harmony, and ATR harmony. Tommo So also displays a strict linear order of verbal suffixes: *Root - factitive - reversive - transitive - mediopassive - causative - perfective.* McPherson & Hayes (2016) describe backness harmony and low harmony as gradually diminishing from the root to the end of the word with respect to frequency of application. ATR harmony is consistent and at 100% in all suffixes except the last two morphological layers (i.e., the causative and perfective), where ATR harmony drops to 0%. Therefore, the application of harmony is connected to domains defined morphologically but still shows gradient application for two of the harmony types even within these morphological

domains. Moreover, Zymet (2014) analyzed distance-based decay in long-distance phonological processes like dissimilation in Malagasy, Latin, and English as well as backness harmony in Hungarian. His analysis is based on roots of various lengths when there is only one suffix attached. Zymet (2014)'s work suggests vowel harmony in Hungarian is distance sensitive, and concludes that the number of transparent syllables[16] is the best predictor of whether vowel harmony applies in the suffix. In other words, in Hungarian, vowel harmony is less likely to apply (in the suffix) as the number of transparent syllables between the trigger and target increases.

This section presented various cases where the domain of vowel harmony is crucial to understand vowel disharmony. In general, it is more likely for a target to undergo vowel harmony if it is closer to the trigger. Regarding LT, this section raises the question of whether partial harmony in LT can be explained by domain effects. This issue will be addressed in Chapter 3.

Language Contact

Languages may lose harmony or exhibit harmony decay as a result of language contact as it can have an influence on the harmony system of a language. Dombrowski (2010, 2013) argues that productive vowel harmony in Ohrid Turkish has been lost due to the influence of neighboring Indo-European languages, such as Macedonian, Serbian, and Albanian. For this reason, Ohrid Turkish allows variation in forms like (21a) as well as (21b), where 'daː-ler' and 'jap-maz-ler' would violate backness vowel harmony in Standard Turkish. Dombrowski proposes the following account for such variation in Ohrid Turkish. In Turkish, alternating (harmonizing) suffixes are underspecified and non-alternating (non-harmonizing) suffixes are fully specified. However, Indo-European languages of the Balkans fully specify the vowels in their lexicons; in other words, these are not vowel harmony languages. Due to language contact, Ohrid Turkish

[16]Benus (2010) describes transparent vowels (syllables) as the ones that can intervene between the trigger and the target of harmony. For instance, in Hungarian, when the dative suffix follows a disyllabic word such as *papír* 'paper', the suffix is realized with a back vowel as in *papír-nak* 'paper-DAT'. In this example, the realization of the vowel in the suffix (i.e., target) is based on the backness of the first vowel in the stem (i.e, trigger in this example), and the [-back] [i] is described as transparent since it does not affect the quality of the vowel in the suffix.

might be becoming more like the surrounding Balkan languages in the requirement of vowel specification and therefore be displaying a transitional period in which a more harmonic system is becoming less harmonic and variation in forms like (21) is allowed.

(21) a. daː-l**a**r ∼ daː-l**e**r ‘mountains’

b. jap-maz-l**a**r ∼ jap-maz-l**e**r ‘they do not’

Dombrowski also notes that, in Ohrid Turkish, there are two invariant morphemes (i.e., the evidential -miʃ and the dimunitive -ʧe, both of which have a four-way alternation in ST) and all word-final high vowels (/i, ɯ, y, u/) have merged to [i]. In his corpus study of Ohrid Turkish, Dombrowski (2010, 2013) controls for the anti-harmonic effect of the invariant suffixes and the vowel merger, and he concludes that the language has a harmonic lexicon in which roots show internal harmony, but there is no active harmony that produces alternations in affixes. This is similar to the domain contraction process discussed in the previous section, but in the case of Ohrid Turkish, certain vowels becoming fixed in affixes is induced by language contact.

As described in Andersson et al. (2017); Németh (2014); Nevins & Vaux (2004), Northwestern Karaim, which is a Turkic language spoken in parts of Lithuania and Ukraine, has been in close contact with Russian and Polish for over 600 years. In Slavic languages like Russian and Polish, there are palatalized and non-palatalized consonants, distinguished by the feature [+/-back]. Due to language contact, Northwestern Karaim is suggested to have undergone a language change process which resulted in shifting the front-back vowel harmony into palatal consonant ([back]-based) harmony. For instance, words like *senden* and *üstüne* have become present-day [śeńd́ań] and [üśt́uńa], where the acute accent above the consonantal segments represents palatalization.[17] Andersson et al. (2017) argue that Karaim speakers reinterpreted the original vowel harmony system as consonant harmony because vowel frontness was perceived as the result of coarticulation caused by surrounding palatal consonants (rather than palatalized consonants being

[17]It is pointed out that *e* to *a* shift occured in suffixes but not in roots. For this reason, *sen-den* ‘2SG-ABL’ has become [śeńd́ań] but not [śań́d́ań]. It is also noted that there is no *ü* to *u* shift word-initially, so *üstüne* has become [üśt́uńa] but not [uśt́uńa].

perceived as an influence of coarticulation due to surrounding front vowels).

Language contact influence can also be observed in loanwords that are not adapted to fit the regular vowel harmony patterns of a language. Cases of disharmony are found in vowel harmony languages due to borrowed words; for instance, French *tracteur* [tʀaktœʀ] 'tractor' is adapted in ST as *traktör* [t(ɯ)raktœr]. Although Turkish has backness harmony that operates among all vowels, [a] and [œ] in [t(ɯ)raktœr] do not harmonize in terms of their backness in the noun root. One might have expected either [t(ɯ)raktor] or [t(i)rektœr] if harmony had applied to the word. Turkish has many loanwords that have disharmonic roots; however, suffix harmony is not distrupted. For instance, although the loanword [t(ɯ)raktœr] is a disharmonic root in Turkish, the root-final vowel [œ] can trigger backness and/or rounding harmonies in the suffixes as in (22).

(22) a. t(ɯ)raktœr-ler 'tractor-PL'

b. t(ɯ)raktœr-y 'tractor-ACC'

While having disharmonic loanwords does not necessarily mean the language has lost harmony (as in the case of ST), Smith (2007) suggests that the effect of loanwords in the borrowing language depends on the number of words borrowed. A few loanwords in a borrowing language does not change the phonology of that language. In the case of large-scale loanword adaptation, the forms/sound patterns of the borrowed words may be incorporated into the borrowing language and therefore cause changes in the phonological system of the borrowing language.

In summary, the phonology of a language may be marginally or considerably influenced by contact languages. Extensive language contact or areal influence may result in widespread bilingualism, which may increase convergence between two phonological systems of the languages concerned (Smith, 2007). As for LT, the vowel system has been influenced by contact with Laz, and therefore vowel harmony in LT might show different characteristics from vowel harmony in ST. Loanwords in LT may also weaken the phonotactic constraints within the root just like ST, but there may still be harmony in affixes.

1.7 Summary

LT is a nonstandard variety of Turkish which originated as a second language variety that emerged in a language contact situation between Turkish and Laz, and it is mainly spoken in the northeast of Turkey by the members of the Laz minority group. Laz has a five vowel system containing /a, e, i, u, o/. The Turkish vowel system contains all of these vowels but also three additional ones /ɯ, y, œ/. Because Turkish contains a larger vowel system, L1 Laz speakers who are learning Turkish as a second language may have difficulty in the perception or the production of vowel contrasts in (Standard) Turkish, and they may use other vowels instead of Turkish /ɯ, y, œ/. This may result in disharmonic forms in LT. However, due to increased exposure to ST, which has systematic backness and rounding harmonies, LT is also undergoing language change and becoming more like ST with respect to vowel harmony.

The main purpose of this dissertation is to investigate the partially productive vowel harmony system in LT. In general, languages may show breakdown in vowel harmony systems due to factors such as vowel mergers, surrounding consonants, domain effect, and language contact. As for LT, vowel mergers cannot be explaining vowel disharmony under the assumption that LT started out with fewer vowels, perhaps without vowel harmony, and has gradually been expanding. However, the other three factors raise questions for LT. For instance, how do language contact between Laz and Turkish (the difference between vowel systems) impact LT vowel harmony? Do surrounding consonants (especially labials and palatals) and domain of vowel harmony (e.g., harmony across the word) influence how vowel harmony functions in LT?

The scope of the research questions in the following chapters will mainly address the following:

- the sociolinguistic context in which LT emerged and has been used
- the distribution of vowels and how much vowel harmony there is in LT
- the differences between age groups with respect to the use of vowels in LT

- additional structural factors that may be influencing LT vowel harmony

1.8 Structure of the dissertation

Chapter 2 situates the sociolinguistic context for the emergence and use of Laz Turkish in Turkey. I investigate the attitudes of the Laz community with respect to Laz, LT, and Laz identity. Based on what is reported by the Laz community members, I also provide insights about the beliefs of non-Laz people in Turkey about LT, the Laz language, and the Laz people. I examine the root causes of the language shift from LT to ST and also from Laz to Turkish.

Chapter 3 is a general overview of the distribution of LT vowels. First, I introduce the LT corpus extracted from spoken LT data collected via sociolinguistic interviews. I describe the distribution of vowels in LT tokens. Next, I compare correspondences between vowels within LT tokens and their ST cognates to lay out how LT vowels may differ from ST and to see whether there are any vowel substitution strategies arising from the differences between vowel systems of Turkish and Laz. This discussion is followed by the distribution of backness and rounding harmonies in LT tokens with respect to roots, suffixes, and vowel height (i.e., high vs. non-high suffix vowels). To investigate domain effects across LT tokens, I present vowel harmony across the word with respect to suffix order (e.g., 1st suffix vowel) as well as order of vowels within word (e.g., 2nd vowel within word). In this chapter, I also examine generational differences with respect to each discussion topic.

Chapter 4 explains the factors that contribute to the distribution of LT vowels. First, I examine whether surrounding consonants determine the distribution of LT vowels. Second, I investigate particular suffixes to determine whether any of them occurs with a fixed vowel or show variation. I also lay out whether these particular suffixes obey vowel harmony. Next, I discuss if the patterns in particular suffixes can be explained by syllable structure. I follow this discussion by comparing the impact of vowel harmony and syllable type on selection of LT vowels. I finalize

the chapter with a general discussion of whether LT has vowel harmony given all observations made based on the corpus.

In Chapter 5, I summarize the main findings of the dissertation and provide a general discussion.

Chapter 2

Language attitudes in the Laz community of Turkey

2.1 Introduction

Language attitudes broadly refer to any thoughts, feelings, beliefs, values about a language and its users. These attitudes are learned through various means such as personal experiences, social environment, and media (Garrett, 2010). Underlying attitudes can be revealed by observing human behaviors or through self-reports by individuals (Baker, 1992). This chapter examines the attitudes of Laz individuals, as reported in sociolinguistic interviews, with respect to the Laz language, the Laz identity, and Laz Turkish. These attitudes are then used to provide insight into the language ideology in the Laz community. Language ideology in this dissertation is used as an umbrella term including linguistic attitudes and referring to the socio-political context surrounding language use (Gal & Irvine, 2019; Irvine, 1989; Woolard, 1992).

Research has shown a strong correlation between language attitudes and language maintenance or shift (Baker, 1992; Bradley, 2013; Dorian, 2014). Negative attitutes about a language (or dialect) are formed when there is a dominating (prestige) language in the same environment.

Negative attitudes towards a language by its own speakers or by members outside of that linguistic community weaken the use of that language and contribute to language shift towards dominant languages. A recent example of this is reported in Hammine (2021), who investigates the language attitudes of the Miyara community. The indigenous Miyaran (Yaeyaman) language is spoken in the Miyara village of Ishigaki Island, Japan. The intergenerational transmission of Miyaran stopped in the early 1950s, and the language is now endangered as most community members born after the 1970s are Japanese monolinguals. The major cause of this endangerment is the monolingual (Japanese) education policy (Hammine, 2021). This caused Miyara community members to believe that the Miyaran language is not sophisticated such that "in Miyara, there is little awareness that one can be 'beautiful,' 'young' and 'educated' and, at the same time, be a competent speaker of the indigenous language." Another example are the endangered Kiswahili dialects Kiamu and Kimvita (Karanja, 2012). In the domain of education and employment, these dialects are not represented, so they have become restricted to home and cultural domains. This has led young people to prefer English and to view the dialects negatively in rural areas, and this attitude is found among people of all ages in urban areas.

Positive attitudes, on the other hand, contribute to the survival of a language. For instance, Komondouros & McEntee-Atalianis (2007) studied the language attitudes in the Greek Orthodox community of İstanbul, whose population was over 100,000 in the 1920s but has now decreased to approximately 1000. Despite this sharp decrease in population, Greek continues to be transmitted to the younger generation due to the positive attitudes within the community. Greek maintains a high symbolic value due to religion and a strong ethnocultural identity (e.g., long-standing presence of Greek in İstanbul dating back to the Byzantine period). Another example is Fiuman, a regional minority Romance language spoken in Rijeka, Croatia, with less than 3000 speakers (Plešković et al., 2021). Fiuman speakers are bilingual or multilingual in Fiuman, Standard Italian (mutually intelligible with Fiuman), and the dominating Standard Croatian (mutually unintelligible with Fiuman). The study suggests that Fiuman speakers have positive attitudes

about the maintenance of Fiuman and are highly engaged with the language by communicating in Fiuman whenever possible, participating in Italian community activities (Fiuman speakers declare themselves to be a part of the Italian national minority), and transmitting Fiuman to their children. The study also indicates that Fiuman community associates Fiuman with speaker identity, Italian minority identity, and Rijeka's cultural heritage due to the long-standing history of Fiuman in the region. The study finds that as education and especially age increase, positive attitudes towards Fiuman and self-perceived engagement with Fiuman maintenance also increase. The finding about age suggests that elderly members of the community are custodians of minority languages. Note that in both Komondouros & McEntee-Atalianis (2007) and Plešković et al. (2021), the minority languages are varieties of Greek and Italian, which are themselves high-prestige languages, and both the Greek Orthodox community and the Fiuman community have long-standing histories in the region. Nevertheless, multiple studies have shown that positive attitudes towards a language/dialect do not necessarily indicate language preservation. For example, Sallabank (2013) reports language attitudes about Guernesiais, the endangered indigenous vernacular of Guernsey, Channel Islands. The findings of the study reveal positive attitudes about Guernesiais both by minority (i.e., Guernesiais community) and majority (i.e., Anglophones) members. The study also suggests that positive attitudes alone do not ensure survival of a language, although positive attitudes may lead to public support, government funding, or allow minority language speakers to claim a public space for their languages and cultures (e.g., after-school lessons, festivities). Despite the positive attitudes towards Guernesiais, substantial use of the language at home has been lost and Guernesiais is not effectively taught as a second language. Similarly, Kuncha & Bathula (2004) report that Telugu immigrants in New Zealand have positive attitudes towards the Telugu language and bilingualism. However, there is still a language shift towards the dominant English language because parents and children see learning Telugu in New Zealand as unnecessary and a waste of time. Similarly, Zhang & Slaughter-Defoe (2009) investigate the attitudes towards heritage language maintenance in Chinese immigrant families in the US. The study draws

attention to the generational gap in language attitudes. Whereas parents have positive attitudes towards Chinese, their children (second-generation immigrants) fail to see the value of learning Chinese as it is not a part of their school curriculum. Therefore, second generation children resist their parents' heritage language transmission efforts and become English dominant, experiencing heritage language loss. In summary, there is a correlation between language attitudes and language maintenance/shift, but positive attitudes may not always indicate preservation of a language. This is especially true if the minority language is confined to particular domains and there is strong pressure to learn the dominant language for education and employment. For this reason, while researching language attitudes, it is necessary to consider language maintenance/shift in a larger context along with the circumstances in the society.

The previous chapter in this dissertation has noted that there has been a language shift not only from Laz to Turkish but also from Laz Turkish (LT) to Standard Turkish (ST) under the influence of the dominant Turkish culture. This chapter aims to provide insights about the underlying reasons for the language shift in the Laz community through an investigation of linguistic attitudes. Under what circumstances Laz and LT have been existing today will be studied by examining attitudes of the Laz community towards Laz, Laz identity, and LT. This will give insight into why the older generation has more LT forms, and how and why the middle aged generation has been shifting towards ST, while still maintaining some LT distinct productions. The rest of this section provides background in previous attitude research, institutional and media context in Turkey, and information on the Laz community of Turkey. Section 2.2 describes the methods used in this study. The remainder of the chapter focuses on understanding language attitudes of the Laz community based on data collected from sociolinguistic interviews, and how these attitudes might have affected the status of Laz and LT today. Attitudes towards the Laz language are discussed in Section 2.3.1, Laz identity in Section 2.3.2, and LT in Section 2.3.3. Section 2.4 concludes.

2.1.1 Previous research

As the scope of this chapter extends to linguistic minorities, it is necessary to define minority groups and describe what is known about them. Minority groups are social groups that are subordinate to a dominant group with respect to economic, political, and social aspects of life (Meyers, 1984). Members of minority groups have shared values such as culture, ethnicity, and language. Therefore, linguistic diversity is inevitable in societies containing minorities. Allardt (1984) defines four criteria that constitute a minority language: (i) Self-categorization, (ii) common descent, (iii) distinctive linguistic, cultural, or historical traits related to language, and (iv) social organization of the interaction of language groups such that the language group becomes placed in a minority position. Minority languages may be mutually unintelligible with the powerful, dominant language of a state. So, there is often diglossia within minority groups, where minority languages are confined to home or non-official contexts and the dominant language is used otherwise (Allardt, 1984). In addition, mutually intelligible but distinct varieties of the dominant language may emerge within minority groups due to language contact and/or second language acquisition.

At least 40 different minority languages are estimated to be spoken in Turkey (Yağmur, 2001). The majority of the research on minority languages of Turkey has focused on the structural aspects of these languages. For instance, see Haig & Öpengin (2018); Karacan (2020); Paul (2013); Toosarvandani & Van Urk (2014); Werner (2012) for Zazaki and Kurmanji spoken by the Kurdish ethnic group, Akay (2021); Akkuş (2020); Jastrow (2006); Lahdo (2009) for Arabic varieties spoken in Turkey, Janse (2002, 2009); Mackridge (1987); Schreiber (2018) for Greek varieties, Hualde & Şaul (2011) for Ladino (aka Judeo-Spanish), and see studies such as Demirok (2014); Lacroix (2009); Öztürk (2019); Öztürk & Pöchtrager (2011) for Laz. There are also studies on structural aspects of Circassian languages[18] spoken in Turkey such as Kabardian (Applebaum,

[18]The term 'Circassian' is used in different senses in various sources. The Northwest Caucasian family contains three branches: i) Abkhaz-Abaza, ii) Ubykh, iii) Circassian. Circassian is further divided into West Circassian (Adyghe) and East Circassian (Kabardian). However, outside of the Caucasus, Circassian (aka Cherkes) is a general

2013; Gordon & Applebaum, 2006), Adyghe (Özcan, 2019), and Abkhaz (Andersson et al., 2021; Chirikba, 2003). In addition to structural aspects, minority languages of Turkey have been investigated in the educational domain. For instance, Kaya (2009) is an extensive overview of the place of minority languages in the Turkish educational system. The study draws attention to the monolingual language policy of the government, and the fact that educational institutions do not promote linguistic diversity. Kaya adds that linguistic minorities experience discrimination, harrassment, and humiliation in the Turkish educational system, and teachers and students from minority backgrounds hide their ethnic/religious identities due to fear of discrimination.

Bakay (2020) investigated the status of the Laz language elective courses offered to the 5th to 8th graders in 2013-2020 in Rize (Pazar, Ardeşen, Fındıklı), Artvin (Arhavi, Hopa, Borçka) and Istanbul (Beykoz/Çavuşbaşı). Bakay interviewed teachers and students of Laz elective courses, parents of the students taking Laz classes, the president of the schools providing Laz electives, and Laz language activists working on Laz electives. The scope of the interviews included attitudes towards Laz elective courses, the process of opening Laz courses, maintenance of courses, course materials, and effectiveness of Laz electives. The report concluded that teachers and students had positive attitudes towards Laz electives, but attitudes of school management and parents varied between positive and negative. Negative attitudes among school presidents were concerned with the distribution of elective courses in their school, and parents were mostly doubtful about the contribution of Laz elective courses to their children's academic success. The study suggested that the key factors in opening and maintenance of Laz electives were the willingness of teachers, sufficient student enrollment in Laz electives, and the support of school management. The content of coursebooks were found satisfactory by teachers and students in general, but the main problem with course materials was the distribution of coursebooks (i.e., absence of digital copies, failure of the Ministry of Education in providing Laz coursebooks to schools). In general, Laz electives were found most effective in raising awareness that Laz is a language distinct from Turkish.

term used for all of the North Caucasian diaspora. So Circassian may also refer to users of languages such as Abkhaz and Abaza. For further information, see Hewitt (1999) and Arkadiev & Lander (2020).

Although this awareness was restricted to the students taking Laz elective courses, this was interpreted as a step towards spreading awareness about the Laz language in Turkish society. The findings in Bakay (2020) are overall indicative of the following. Even though the Turkish government does not promote linguistic diversity, there is a demand for Laz elective courses by teachers and students, and these courses can make a change for the future of the Laz language. However, teachers and students require further support from school managements, which can be considered as representatives of the Turkish government.

Other studies on minority languages of Turkey focus on the status of these languages in the society. Some examples for these are Vaux (2001) and Simonian (2007) for Armenian, Sitaridou (2013), Özkan (2013) and Hadodo (2023) for Greek varieties, and Harris (2011) and Sarhon (2011) for Ladino. The status of the Laz language (and its maintenance) were also researched in Kutscher (2008), Kavakli (2015) and Haznedar (2018). To expand on these, Kutscher (2008) classifies Laz as a highly endangered language given that only 5-10% of competent/native Laz speakers are young speakers. She notes that Laz and Turkish are in a diglossic situation since the use of Laz is generally restricted to the home, but Turkish is used in domains such as politics, religion, science, and education. Kavakli (2015) focuses on revitalization efforts of the Laz language and discusses that various measures have been taken by scholars and organizations/associations promoting the Laz culture and language (e.g., Laz Institute, Laz Cultural Association). These include education (e.g. Laz elective classes in schools, online Laz courses), publications (e.g., Laz grammar books and magazines, translation of Saint-Exupery's The Little Prince into Laz), using music as a means of language transmission, organizing seminars and workshops to draw attention from academia, organizing international festivals to raise worldwide awareness of the Laz language, etc. However, Kavakli also reports serious setbacks for the revitalization of Laz, such as the limited number of scholars working on the issue and the limited number of Laz language teachers. Kavakli adds that there are three different views in Turkish society regarding the revitalization efforts. People with a Turkish nationalistic perspective form one group and reject any revitalization acts. Another group

of people cautiously support revitalization efforts by emphasizing the difference between Laz people and Kurds, who form the largest minority group in Turkey. The third group supports all revitalization efforts and also shows solidarity with all other ethnic minorities in Turkey including Kurds. The first two groups form the majority.

While studies on minority languages of Turkey primarily focus on the structural or educational aspects of the language or the status of the language in the country, language attitudes about these minority languages are under-researched. Nevertheless, there are some studies on Kurdish, Arabic, Ladino, Greek, and Laz. Schluter (2021) conducted a matched guise experiment to research Standard Turkish speakers' attitude towards Kurdish accented speech. Schluter (2021) compared Kurdish-accented Turkish from four regions (Mardin, Şırnak, Van, Diyarbakır) with their Standard Turkish guises. The results of the study showed that, compared to the Standard Turkish speech of the guises, (non-Kurdish) Turkish university students rated Kurdish accented speech lower on both status scale (attractiveness, success) and solidarity scale (kindness, likeability, trustworthiness). Can (2021) is another matched guise study investigating Standard Turkish speakers' attitude towards Kurdish accented speech. Can (2021) compared the Kurdish accent with Standard Turkish as well as Black Sea, Laz, Central Aegean, and Central Anatolian accents. The study showed that Standard Turkish speakers rated the Kurdish-accented Turkish speech the least pleasant, correct, and educated among all. This was followed by the Laz accent, rated as the second least pleasant/correct/educated speech. Laz-accented Turkish was reported to be the least intelligible variety followed by Central Aegean and then Kurdish accents. However, based on the accentedness scale, Laz Turkish was reported to be most accented variety followed by Kurdish and then Central Aegean accents. Standard Turkish users (including the matched guise) were rated as the most pleasant, correct, educated, intelligible, and the least accented speakers. To summarize, the results from both Schluter (2021) and Can (2021) indicated that Standard Turkish speakers have negative attitudes towards Kurdish-accented speech and they associate Standard Turkish speakers with more positive attitudes. Note that a language is often

perceived as an indicator of the personal and social characteristics of its users (Kircher et al., 2022), so negative attitudes towards an accent are often a proxy for negative attitudes towards the users of that accent. There has also been an ongoing political strife concerning the Kurdish people in Turkey, which is reflected in attitudes towards the Kurdish accent. The same is not true of the Laz ethnic group (see Sarigil (2012) for further discussion). Sofu (2009) researched language use across three generations in three Arabic-Turkish bilingual families from Turkey (urban Hatay and Adana). This study concluded that linguistic attitudes of the younger generation were different from the older generation. From first to second generation, there was a language shift towards the dominant language Turkish due to schooling and job market requirements. In other words, first and second generation members saw Arabic as a threat to integration into Turkish-speaking society. Maintenance of heritage language among the second generation members was less likely as they had little contact with Arabic speaking family members (grandparents) but increased contact with Turkish monolinguals (e.g., through school or work). The third generation, on the other hand, was more educated and language conscious and interested in preservation of their heritage language and culture. The third generation members in these three families did not have concerns about multilingualism, had positive attitudes about maintaining their heritage language, and almost all spoke Arabic. Note that this finding does not follow the typical three-generation pattern, where the family/heritage language shifts towards the dominant language and the third generation members do not speak the family language or have little command over it (Eilers et al., 2006; Fishman, 1980). In another study, Çetintaş Yıldırım (2020) compared language attitudes of Arabic-Turkish bilinguals from Mersin and Hatay. Both cities are located in the eastern Mediterranean region, Mersin being to the west of Hatay. The study found a difference between the two communities about attitudes towards Arabic. Bilinguals from Mersin showed more negative attitudes towards Arabic language and identity whereas Hatay bilinguals were more accepting. Therefore, the study concluded that the Arabic variety spoken in Mersin may become endangered in the future.

Seloni & Sarfati (2013) investigated the factors which contributed to the endangerment of Ladino (i.e., Judeo-Spanish spoken by the Sephardic Jewish minority) in Turkey. They examined two history archives documenting the life narratives of elderly Ladino community members, some of whom were born as early as 1909, during the Ottoman rule. The study concluded that many members of the Ladino community attributed a lower social status to Ladino. Instead, two other languages were promoted within the community. One was Turkish, which contributed to negative attitudes towards Ladino in Ladino-speaking families due to monolingual language policies after the Turkish Republic was founded in 1923. The other was French, which was promoted due to Alliance schools with French Jewish origins. These schools were opened in the Ottoman territories in the late 19th century and provided education in French to the Jewish population in the Ottoman empire (and later in Turkey). The study concluded that Ladino remained restricted to certain communicative functions such as jokes and secret codes among parents or communal literacy events such as community plays and a monthly Ladino newspaper. Such practices were used for in-group solidarity as a marker of ethnic and linguistic Ladino identity.

Komondouros & McEntee-Atalianis (2007) explored the status of Greek in the Greek Orthodox community of İstanbul as well as the factors contributing to maintenance of Greek in the community. The study indicated that the use of Greek was restricted to home and religious community events, and there was a language shift towards Turkish. Greek competence of the elderly community members ($>$ 56) was almost as high as their Turkish competence. Middle aged (36-55) community members were dominant in Turkish but had decreased competence in Greek compared to the older generation. Younger members ($<$35) were also dominant in Turkish but they had even more decreased competence in Greek than the middle aged community members. However, there had been some resistance to this language shift due to the community's positive attitudes towards Greek. These included a strong desire to preserve Greek (e.g., high symbolic status due to religion) and strong ethnocultural identity (e.g., Greek traditions and culture, the Greek Orthodox religion, rootedness in İstanbul, etc.). The study also pointed out other factors

that could support the survival of Greek such as institutional support (e.g., literature and media), improved political background, more powerful contacts between Istanbul and mainland Greeks, and improved educational framework (i.e., education in Greek).

In addition to language attitude studies on Kurdish, Arabic, Ladino, and Greek, recent studies have been conducted on attitudes towards the Laz language. For instance, Türk (2019) is a master's thesis on the language ideologies of Laz speakers in Turkey. Based on the results of this study, the three most common beliefs among the members of the Laz community are as follows. First, Laz is perceived as pre-modern as opposed to the dominant language Turkish being associated with modernity. Second, Turkish is the predominant family language for all participants of the study, and Laz is used to create in-group solidarity (e.g., telling jokes, holding secret conversations, intimacy). Third, "pure" Laz (not mixed with Turkish) is spoken in isolated Laz villages where language contact with other languages such as Turkish is minimal. Haznedar (2018) is an investigation of the status of Laz in the northeastern (Black Sea Region) and northwestern (Marmara Region) Laz communities of Turkey, and the study also includes Laz members' attitudes towards Laz. The overall results show that both Laz communities have positive feelings towards Laz as they expressed strong emotional attachment to Laz and interest in transmitting Laz to their children. However, there is still a shift from Laz to Turkish. Only 1% of the participants from Marmara and 8.5% from Black Sea indicate that their children speak Laz. Haznedar finds generational, educational, and geographical gaps regarding perceptions about native language. With an increase in age, there is also an increase in the number of people who declared Laz as their L1. However, with increase in education level and with residence in urban areas, there is a decrease in the number of people who identified Laz as their L1. As for the endangerment of Laz, the majority of the Laz community expressed concerns. While elderly members of the Laz community are less aware that Laz was endangered, participants with higher education and higher ranking occupations expressed more awareness. Most participants in the study indicate that preventive measures must be taken at the societal/governmental level (i.e.,

Laz elective courses in schools and TV channels broadcasting in Laz). However, participants also recognize that the biggest responsibility in Laz language maintenance is on individuals and families (i.e., parents, Laz speakers and community). Haznedar interprets this contrast as a reflection of the general atmosphere of the Turkish society, where ethnic languages are stigmatized and associated with separatist movements. In her report of Laz elective courses in Turkish public schools, Bakay (2020) indicated that students, parents, teachers, and language activists generally had positive attitudes about Laz elective courses at public schools. The report also mentioned attitudes towards Laz by sharing the following observation made by teachers of Laz electives courses: Most students in Laz elective classes did not consider Laz as being different from Turkish until they studied Laz. Some students considered Laz as 'something' spoken at home, while others thought some Turkish words were Laz and some Laz words were Turkish. This is a striking observation considering the fact that Laz and Turkish are mutually unintelligible. Although no further discussion was provided in Bakay (2020) as to why or how students could not differentiate between Laz and Turkish, they indicated that Turkish society sees Laz as a different variety of Turkish spoken in the Black Sea Region rather than a language distinct from Turkish. The scope of language attitudes as studied in Türk (2019), Haznedar (2018) and Bakay (2020) is limited to the Laz language. Thus far, there hasn't been a more comprehensive study on the Laz community's attitudes towards Laz Turkish compared to their attitudes towards the Laz language and identity. The current research fills this gap by focusing on attitudes in the Laz community of Turkey with a broader scope. This chapter will attempt to answer the question of how the attitudes in the Laz community impact preservation of the Laz language and the variety of Turkish spoken by the community. In discussing this, influence of generational differences in language change will be highlighted.

2.1.2 Institutional context and media

Language attitudes change over time for various social and psychological reasons. These include age changes, dramatic experiences (e.g., sudden religious conversion), community effects, parental effects, peer group effects, institutional effects, mass media effects, rituals, and situational effects (e.g., group conformity) (Baker, 1992). Attitude change also has a political dimension (Baker, 1992), so speaker attitudes must be evaluated in a broader context. This section provides a brief background about educational and other institutional settings as well as media in Turkey. In presentation of these contexts, the influence of language policies following the foundation of the Turkish Republic in 1923 will be discussed.

Educational institutions

When it comes to understanding the status of minority groups in a society, it is especially crucial to discuss the educational context as schools are the most influential institutions among all institutions that may be linked with attitude change (Baker, 1992). The current education system of Turkey aims to unite all people of Turkey under the roof of the Turkish Republic, whose official language is Turkish (Duman, 2005). This is indicated in Article 42 of the Turkish Constitution, the only exceptions to which are indicated as international treaties:

> "No language other than Turkish shall be taught as a mother tongue to Turkish citizens at any institutions of training or education. Foreign languages to be taught in institutions of training and education and the rules to be followed by schools conducting training and education in a foreign language shall be determined by law. The provisions of international treaties are reserved." (Kaya, 2009)

Andrews & Benninghaus (1989) lists 47 ethnic groups in Turkey. Minority rights are protected by the Lausanne Treaty signed in 1923. This treaty defines minority groups based on religion rather than ethnicity or language, and recognizes only the three largest 'non-Muslim' groups in Turkey as minorities: Greeks, Armenians, Jews (Oran, 2007; Yağmur, 2001). Only

these three Lausanne minorities have the privilege to open and manage their own institutions including schools according to Article 40:

> Non-Muslim citizens of the Republic of Turkey "have equal rights to establish, manage, and control, at their own expense, any charitable, religious, and social institutions, and any schools and other establishments of training instruction and education, with the right to use their own language and to practice their own religion freely." (Oran, 2007)

The curriculum is supervised by the Turkish government in these minority schools, a compulsory Turkish language course is included in the curriculum, and only the children who belong to these minority groups can attend minority schools (Kulaksızoğlu et al., 1999). Although Lausanne minorities have educational privileges, their institutions have been reported as experiencing financial constraints and resource problems (e.g., textbooks) and therefore there are fewer enrollments in minority schools than the past (Kaya, 2009). Other than Lausanne minorities, non-Muslim (e.g., Assyrians) or Muslim minority groups do not have the freedom to receive education in their native language. The language of instruction in public schools as well as nation-wide standardized exams (e.g., university entrance exams) is Turkish, except for several higher education institutions whose language of instruction is English (Kirkgöz & Karakaş, 2022).

In the early 2000s, during the European Union accession process, Turkey's language policies started to become more flexible to fit the multicultural and multilingual structure of the European Union (Ergin, 2010; Sadoğlu, 2017). Kaya (2009) and Ergin (2010) describe the process after 2000s as follows. In 2002, the Law on Teaching and Education of Foreign Languages was amended, and teaching of different languages and dialects to Turkish citizens in private courses was made possible as long as the unity of the nation would be preserved. The first Kurdish (Kurmanji) course was opened in Batman in 2004, and then in Diyarbakır, Şanlıurfa, Adana, Istanbul, Van, and Mardin. However, these private courses faced multiple constraints. The regulations required the teachers of these minority language courses to be graduates of linguistics departments, but there were no minority-language faculties in Turkey. Students of these courses

were limited to Turkish citizens above 18 years old and who were at least secondary school graduates. Younger participants (6th, 7th, 8th graders) required consent from their parents to attend weekend or summer schools. These private courses did not receive financial support from the government and students were required to pay a fee to attend courses (see also Gök (2007)). Due to such constraints, which resulted in low enrollments, all minority language courses were shut down in 2005. Since then, further steps have been taken gradually. The first institution to provide education in a minority language was Kars Kafkas University, which opened the Georgian Language and Literature Department in 2006 (Sadoğlu, 2017). In late 2009, Living Languages Institute was founded in Mardin Artuklu University and started providing education in 2010 in the departments of Kurdish Language, Assyrian Language and Culture, and Arabic Language and Culture (Sadoğlu, 2017). Bakay (2020) reports on the advancements in teaching Laz in private and public institutions. The first Laz course at a public institution was offered in 2011 at Bosphorus University as an elective course within the Linguistics Department. Laz elective courses have continuously been offered at Bosphorus University since 2011 and at Bilgi University since 2015. Starting from the 2012-2013 academic year, Abkhaz, Adyge, Georgian, Kurmanji, Laz, Zazaki, Albanian and Bosnian have been offered in public schools for 5th to 8th graders under the scope of an elective "Living languages and dialects" course. This elective course is open as long as schools have enough resources to teach these languages (e.g., teachers who speak these languages) and as long as the majority of students in a class sign up for the same elective course.

In summary, the Turkish education system is reliant on Turkish. Although some minority languages have been taught in private or public institutions recently, this privilege does not extend to all minority languages, and minority language courses often experience multiple constraints such as funding, lack of resources, or low enrollments.

Other institutions

Nation-building efforts in the early Republican era (1923-1950) brought with it a unified national language policy (Çolak, 2004; Kılıç, 2007). Speaking Turkish was one of the main markers of Turkishness whereas speaking other native languages in Turkey was interpreted as a threat to the regime (Kubilay, 2004). This "one language, one nation" policy also affected multiple aspects of daily life including non-educational institutions.

One of the most vigorous movements in the nation building period was the "Citizen, speak Turkish!" campaign. This campaign, which was initiated in 1928 and remained in effect until the end of World War II, strongly encouraged people in Turkey to speak Turkish only (Aslan, 2007; Bali, 2000; Çağaptay, 2002). Non-Turkish speaking minorities were harassed for speaking their languages in public, and failing to learn and speak Turkish was interpreted as having ill-intentions (Bayir, 2016).

The Turkish Language Association ('Türk Dil Kurumu') was established in 1932, and one of the main functions of this institution was to purify the Turkish language by coining new Turkish words to replace loanwords (Çolak, 2004). The Turkish-only policy extended towards proper names as well. Non-Turkish surnames and place names were replaced with Turkish ones. The Surname Law (Law 2525) passed in 1934 required all Turks to have a Turkish last name (T.C. Resmi Gazete, 1934a). Based on Article 3 of this law, "the use of civil and military ranks and titles as surnames, as well as the names of tribes or of foreign races and nations is forbidden, and so are the names that are not suited to public morals, or names that are disgusting or ridiculous." (Szurek, 2020). Last names could not be borrowed from other languages (e.g. Zoti, Grandi), they could not contain affixes taken from other languages or indicating other nationalities (e.g., -yan, -of, -ef, -viç, -iç, -is, -dis, -pulos, -aki , -zade, -mahdumu, -veled, -bin), instead, these had to be replaced with Turkish -oğlu 'son of' but could not be combined with nouns indicating other nationalities (e.g., Çerkes Hasan Oğlu 'The-son-of-Hasan-the-Circassian') (Szurek, 2020; T.C. Resmi Gazete, 1934b). Next, as described in Tunçel (2000) and Bayir (2016), the changing of

place names was officially accepted in 1940 (Circular no. 8589 of the Ministry if Internal Affairs) and implemented in law in 1949 (Law 5442, Article 2D). A total of 28,000 non-Turkish place names were replaced between 1952 and 1978, and 280 more until 1983. Place name changes were especially implemented in the eastern Black Sea, and eastern and south eastern Anatolia where most village names were Greek, Laz, Armenian, Kurdish, or Arabic. In addition to foreign place names, some Turkish place names were also replaced if they contained nouns associated with separatism; for example, Turkish village names containing words with Christianity connotations such as *çan* 'bell' and *kilise* 'church' or words indicating non-national ideologies such as *kızıl* 'communist/red'.

The monolingual language policy is also evident in politics. Political parties are not allowed to promote the existence of minorities or languages and cultures other than Turkish, and election campaigns must be done in Turkish (Bayir, 2016). Local government activities such as services provided by municipalities must be in Turkish only (Bayir, 2016).

In summary, the language of the state is Turkish. Although this singular language policy does not seem as strict today as it was in the early Republican period, the use of minority languages in daily life is still restricted, and members of minority groups in Turkey continue to experience the impact of language policies directly or indirectly.

Media

Like in other aspects of daily life, the monolingual language policy of Turkey is also evident in media. Language policy with respect to media is well reported in Bayir (2016) and Sadoğlu (2017). Broadcasting in a language other than Turkish was banned before 2000. After 2000, however, during the European Union negotiation process, use of minority languages in the media started to gain flexibility. In 2002, broadcasting on state television and radio in minority languages of Turkish citizens became legally possible but with limited hours and content. In 2004, the state television channel (TRT) started broadcasting in five minority languages (Bosnian,

Arabic, Kurmanji, Circassian, Zazaki). In late 2009, content and time limitations on broadcasting in minority languages were removed. However, the Supreme Board of Radio and Television (RTÜK) still controls which minority languages and dialects are eligible for broadcasting (Bayir, 2016). Apparently, it took a longer time for other minority groups to start broadcasting in their language. For example, Gelişim TV, a local TV channel founded in 1994 originally named as 'Pazar TV', started broadcasting content in Laz in 2013 (Kavakli, 2015).

To summarize, the Turkish Republic adopted a monolingual language policy in efforts to build a unified nation. However, especially after 2000s, there has been some flexibility in using minority languages in private schools in the education sector and in media. Other areas such as politics still strictly follow the Turkish-only policy.

2.1.3 The Laz community

Before addressing the language attitudes and linguistic characteristics of the Laz community in Turkey, it is necessary to discuss what 'Laz community' refers to in this chapter (and throughout this dissertation) and contextualize the environment in which Laz people live. In Turkish society, there is generally confusion about what 'Laz' actually indicates. One interpretation of 'Laz' is quite general and refers to people from the (eastern) Black Sea region whether or not they are from the Laz ethnic community and speak the South Caucasian Laz language. The second interpretation is the 'Laz' ethnic community (aka 'Lazi') who have their own language Laz (aka 'Lazuri') inherited from their ancestors. The latter interpretation does not include all (eastern) Black Sea people but only the ones affiliated with the Laz language and ethnicity. In Turkey, there is not much awareness of this difference today. Media (e.g., soap operas on television, movies, stories) characterize Laz people with the stereotype as funny, cunning Black Sea fishermen who have 'broken' Turkish. Only 10% of people who were randomly surveyed on streets recognize the presence of Laz as an ethnic group who have a distinct language (Avcı Bucaklişi, 2017b). In this dissertation, the expression 'Laz community' carries the second interpreation and refers to

the Laz ethnic group. Any person who has Laz heritage is considered as a member of the Laz community even though they may not speak Laz today.[19]

Not everyone in the Laz community speaks Laz. Kutscher (2008) reports that people older than 40 are generally bilingual speakers of Laz and Turkish, and only 5-10% fully proficient Laz speakers are child and adolescent speakers. Avcı Bucaklişi (2017b) estimates that only 20-30% of Laz people speak Laz. In addition, not all bilingual speakers of Laz and Turkish speak the non-standard Turkish dialect, LT. Based on the information provided by interviewees (Section 2.3.3), younger bilinguals speak ST or their speech is very close to ST. Many of today's elderly LT speakers were raised in small Laz villages. They did not speak Turkish at all before starting school and learned Turkish as a second language since instruction in schools had to be provided in Turkish. As discussed in previous chapters, this L2 variety of Turkish spoken by elderly speakers (i.e. LT) shows differences compared to ST. Today's younger Laz members, however, learn Turkish even before school age. They are especially exposed to the standard variety of Turkish through schooling, books, internet, TV shows, other ST speakers, etc. For this reason, children in the Laz community are more likely to acquire the standard variety of Turkish. When it comes to the generation in between, they are typically exposed to both Turkish and Laz as children but are dominant in Turkish. They have little Laz proficiency (mostly passive knowledge; understanding conversations but limited production). They may speak LT (or their Turkish variety may be closer to LT than ST) if they were exposed to LT from a young age and especially if they have continuously lived in smaller Laz communities.

The context described so far for the Laz community presents clear indicators that Laz as well as LT are endangered. However, recently, there have been individual activists and organizations fighting for the survival of Laz by producing materials in Laz and publicizing them. First, there have been publication attempts in Laz and/or Turkish about the Laz language, culture, and history. As described by Avcı Bucaklişi (2017a), the first Laz magazine in Turkey,

[19] See Meeker (1971) and Avcı (2002) for further discussion on the meaning of 'Laz'.

'Ogni' was published in 1993 and had both Laz and Turkish content. Ogni only survived for two years with six issues. Since then, other magazine/newspaper attempts have been made: Mjora in 2000 (two issues), Skani Nena in 2008 (four issues), Tanura in 2011 (three issues), and Ağani Murutsxi in 2013 (did not survive until today). Bucaklişi adds that these magazines couldn't survive because (i) there was a lack of qualified staff who could manage the publishing business and create good content, (ii) there weren't enough Laz people who could read and write Laz, and (iii) the inconvenience of paper-based publications in the era of technology. Nevertheless, there has been a rather successful online newspaper Jineps (since December, 2005), which aims to represent the minority groups in the Caucasus including Laz. Second, organizations such as the Laz Institute (*Laz Enstitüsü*) founded in 2013 have been gaining recognition. Such organizations aim to increase awareness about the Laz people and language in all possible aspects. The Laz Institute especially focuses on teaching Laz by designing curriculum for elective Laz courses to be offered in public schools as well as creating books to be used in these courses (Türk, 2019). The institute also provides courses to anyone interested in learning Laz. Especially following the prevalence of remote instruction due to Covid-19, Laz language courses offered by the institute have become more accessible to residents of Turkey as well as learners from all around the world. Third, revitalization efforts were also contributed by Laz musicians. Especially Kazım Koyuncu, who died in 2005, was loved by a large population all around Turkey due to his personality, revolutionary music genre (Black Sea Rock) and environmentalist movements, and he contributed towards building a more positive ('desirable') Laz identity (Taşkın, 2011).

In summary, there seems to be a linguistic shift from Laz to Turkish and from LT to ST in the Laz community. While some Laz language maintenance projects have been taking place, similar efforts have not been made for the survival of LT. This might be due to how the speech of Black Sea people ('Karadenizli') has been stereotyped by the media or individuals in Turkey. Such stereotypes might have caused LT to be viewed as an undesirable variety, or rather, as the Black Sea 'accent' rather than a distinct dialect worthy of preserving. As a result, this may

have caused Laz individuals to refrain from disclosing their ethnic and linguistic Laz identity. The following section will attempt to expand on the ideologies in Laz community of Turkey by focusing on their attitudes about the Laz language (2.3.1), Laz identity (2.3.2), and the variety of Turkish spoken in the community (2.3.3).

2.2 Methods

2.2.1 Data collection

Data were collected through sociolinguistic interviews conducted with 15 members of the Laz community online via Zoom between December, 2021 and February, 2022[20]. Interviewees were recruited through a call for participants which was published in the author's personal website and advertised through the author's connections from the Laz Institute. Direct method (Garrett et al., 2003) was used to collect data where interviewees were directly asked questions (in Turkish) about their feelings about the Laz language, being Laz, and the variety of Turkish spoken in the Laz community (See Appendix 6.4 for the list of interview questions translated into English). Data collection sessions were completed with each interviewee at one sitting. Each interview lasted for 1 to 2 hours, and breaks were given whenever needed. A total of 24.5 hours of spoken data were conducted with 15 interviewees. All interviews were audio-recorded for future reference.

Sociolinguistic interviews were comprised of four sections. The first section contained demographic questions to understand the linguistic experiences of interviewees. The second section was comprised of questions about how Laz was used in the Laz community and about personal thoughts and experiences about Laz. The next section included questions about the interviewee's experiences about the variety of Turkish they speak. If the interviewee was an ST speaker, their personal opinions were asked about the kind of Turkish their parents or grandparents spoke. The final section were comprised of questions with respect to Laz identity and ethnicity.

[20]This fieldwork was funded by the UCSD International Institute.

The interviewer was a native speaker of ST and an outsider to the Laz community. To mitigate any issues of influence from the interviewer during interviews, the participants were informed at the beginning of the interview about the purpose of the interview. The interviewees were informed that the interview questions were designed to get to know them better as a member of the Laz community and get a sense of their opinions and observations about the Laz community and its languages. The interviewees were assured that there were no right or wrong answers.

2.2.2 Participants

15 interviewees participated in the sociolinguistic interviews (8 F, 7 M). Ages of the interviewees ranged between 21 and 59 (mean= 34.73), only three of them being middle aged (51-59) and the rest being young adults (21-34). All interviewees self-identified as Laz and a part of the Laz community in Turkey. Table 2.1 lists the participants of this study who are represented by their initials. Interviewees are grouped by the variety of Turkish they speak (LT vs. ST) in Table 2.1. Note that speaker EY is grouped together with LT speakers. Although EY can speak both LT and ST, he indicated feeling more natural when speaking LT but using ST in careful speech, especially in the presence of other ST speakers. Table 2.1 also contains information about each interviewee's interaction with (at least one) of their grandparents as interaction with elderly members of the Laz community may impact participants' attitudes and dedication to speaking Laz and/or LT. 'High' interaction is used to represent that the interviewee has lived with a grandparent in the same household for some time, or has/had close relationship with at least one grandparent. 'Low' represents reduced interaction with grandparents either because they are geographically distant or all are deceased. 'Moderate' interaction is used to describe anywhere in between. All LT speakers as indicated in Table 2.1 had high interaction with their grandparents since their childhood. The only interviewee who had high interaction with grandparents but spoke ST was FK, who started living with his grandparents when he moved to Istanbul to attend high school. Further details about each interviewee are provided in Appendix 6.5.

Table 2.1: Information about interviewees (* indicates L1 learner, [a] and [b] each indicate members of the same family)

Group	Language(s)	Interviewee	Gender	Age	Hometown	Resides in	Occupation	Grandparent interaction
1	Laz*, LT	IA	M	51	Pazar, Rize	Istanbul	author, Laz language lecturer	high
		HY[a]	F	54	Pazar, Rize	Istanbul	housewife	high
	Laz*, LT, ST	EY	M	21	Ardeşen, Rize	Ardeşen, Rize	college student	high
	Laz, LT	RA	M	24	Arhavi, Artvin	Arhavi, Artvin	engineer	high
		MhK[b]	M	32	Ardeşen, Rize	Ardeşen, Rize	teacher (Turkish)	high
		MdK[b]	F	32	Fındıklı, Rize	Ardeşen, Rize	housewife (economist)	high
2	Laz, ST	MY[a]	F	30	Pazar, Rize	Istanbul	employee (government)	moderate
		FK	M	30	Hopa, Artvin	abroad	postdoctoral researcher	high
		SK	M	30	Yalova	Yalova	engineer	moderate
		NY	F	31	Kocaeli	Kocaeli	employee (private sector)	low
		ML	F	32	Hopa, Artvin	Hopa, Artvin	teacher (Turkish)	low
		MS	F	33	Düzce	Istanbul	teacher (elementary school)	moderate
		BA	F	34	Ardeşen, Rize	Istanbul	teacher (Turkish)	low
		EU	M	59	Hopa, Artvin	Istanbul	architect	low
	ST	BY[a]	F	28	Pazar, Rize	Istanbul	dentist	low

In Table 2.1, a few clarifications are necessary about interviewees' hometowns and languages they speak. First, none of the participants reside in Laz villages due to the nature of recruitment and availability. However, a few (EY, IA, MdK) are originally from villages themselves, indicating that they are internal migrants. Although they live in either Laz towns or outside of Laz regions (e.g., Istanbul), they are representative of the Laz village population. Second, all interviewees' hometowns are in the northeastern Black Sea Region (i.e., Rize or Artvin) except for three whose hometowns are in the Marmara Region (the northwest of Turkey, see Chapter 1, Figure 1.1): NY, MS, and SK. These interviewees were included in the interviews because all three are connected to the Laz community in the northeast. NY's maternal family migrated from Artvin and her paternal family from Rize. MS's grandparents are from Artvin (Borçka), and SK's father is from Rize (Pazar). Third, languages indicated in Table 2.1 contain three labels. *Laz* is listed as an interviewee's language if they speak Laz in daily life even though they may not be fluent. *Laz** indicates that the interviewee is a native Laz speaker who claim better proficiency in Laz compared to Turkish. Other labels *ST* and *LT* indicate which variety of Turkish the interviewee sounds closer to based on the researcher's judgment. No objective assessments were made to classify the interviewees' Turkish variety. Interviewees who were identified as LT speakers are either native Laz speakers (i.e., IA, HY, EY) or the ones who reside in Laz communities in the northeast (i.e., RA, MhK, MdK). Interviewees who were identified as ST speakers reside in non-Laz regions such as Istanbul, or they live in the Laz regions in the northwest (i.e., Yalova or Kocaeli). One exception is ML, who is an ST speaker residing in Artvin. The reason she speaks ST rather than LT could be due to her occupation (Turkish language teacher) and/or her low Laz proficiency (see Appendix 6.5).

Note that the participants of the sociolinguistic interviews described in this chapter are different from the participants whose data was incorporated into the LT corpus, which will be discussed in Chapter 3 and 4. The LT corpus was created based on data collected in person, in 2019, Turkey. These interviews focused on every day conversation rather than the language per

se. The follow-up data collection aimed to return to the field to conduct i) experiments focusing on vowel harmony productivity and ii) follow-up sociolinguistic interviews on language attitudes. This plan could not be implemented due to the Covid-19 pandemic. Instead, sociolinguistic interviews were conducted in 2021-2022, online via Zoom. It would be most ideal to conduct the follow up data collection with the same group of participants from 2019. This would be beneficial because there may be a correlation between the patterns observed in the LT corpus and language attitudes of the participants. Nevertheless, it was not possible to re-connect with the participants of the initial fieldwork in-person or online after Covid-19. For this reason, other interviewees who were available to do interviews remotely were interviewed regarding language attitudes.

In the rest of this chapter, data from interviewees will be reported as quotations. In order to facilitate interpretation of quotations meaningfully, the coding system presented in Table 2.2 will be used. Each quotation will be labeled with interviewee information in the order of interviewee's initials, age, gender, variety of Turkish, hometown, current location of residence. For instance, a quotation from IA will be tagged as '[IA, 51, male, 1RN]' where the code '1RN' indicates that IA is an LT (group '1') speaker from Rize ('R') currently residing in a non-Laz region ('N'). Another example is '[MS, 33, female, 2ON]' indicating that MS is a 33-year-old female who is an ST (group '2') speaker from a Laz region ('O') other than Rize or Artvin but currently living in a non-Laz area ('N').

Table 2.2: The coding system used for representation of interviewee information

Code	Representation
1	LT speaker
2	ST speaker
R	Rize
A	Artvin
O	other Laz regions (i.e., Yalova, Kocaeli, Düzce)
N	non-Laz regions (i.e., Istanbul, abroad)

2.3 Language attitudes

Language ideologies and attitudes lead to linguistic change (Milroy, 2004). To better understand the language shift from Laz to Turkish and from LT to ST, this section will focus on the Laz community's opinions about their heritage language and the Turkish variety spoken in the Laz community. This section also aims to examine under which circumstances Laz and LT have been surviving in the Laz community, and the attitudes of the Laz people towards the Laz identity. Throughout this section, attitude statements collected from sociolinguistic interviews will be quoted often. These will be used as a representation of the linguistic attitudes in the Laz community of Turkey. Note that the quotations are originally in Turkish (see Appendix 6.6) and translated by the author into English.

2.3.1 Attitudes towards Laz

As the heritage language of the Laz community, the Laz language is one of the strongest ties to the Laz culture, history, and identity. Most Laz people in the interviews associate the Laz language with positive feelings whether they can or cannot speak the language:

[1] "Laz cultivates my sense of belonging." [MS, 33, female, 2ON]

[2] "The value I give to Laz equals to the value I give to myself [...] I am Laz, Laz is me." [MhK, 32, male, 1RR]

[3] "My ancestors who transferred their genes to me, my great grandmothers, they all spoke Laz. So Laz is cultural heritage for me. I love it and I would like to preserve it." [MY, 30, female, 2RN]

Laz symbolizes connection with ancestors and nostalgia, especially for today's older Laz generation, most of whom grew up hearing Laz and/or acquired Laz as their first language. Such

feelings are clear in EU's comments below. Elderly native Laz speakers who reside in Laz villages or regions continue to use Laz in daily life, as this is the language they are most competent in. Younger Laz speakers prefer to use Laz in family settings to show respect, especially in the presence of the elderly. As in the case of FK, younger Laz individuals feel a similar responsibility even if they may not be able to speak Laz.

[4] "I am familiar with Laz since I was very little. Childhood years are full with pleasant memories. So, when I hear Laz, it reminds me of good old days and memories [...] Old ladies would call me sweetly as Erdoğani-çkimi[21]. Often we don't address people like this in Turkish [...] That's why I find Laz people's speech warm and welcoming." [EU, 59, male, 2AN]

[5] "I am very ashamed of not being able to speak Laz [...] I feel as if I am betraying the elderly in my family [...] I feel as if my paternal grandmother will appear somehow and scold me and ask why I let them down [...] I feel speaking Laz means staying connected with the past, remembering our past experiences, remembering our elderly, respecting my grandparents [...] and not forgetting who we are." [FK, 30, male, 2AN]

Some Laz speakers prefer to use Laz when they are alone in public. As MY indicates below, she enjoys using Laz on the phone with her family when she is using public transportation. She believes this would increase the visibility and public acceptance of Laz.

[6] "I like using Laz in public transportation when I am speaking with my family over the phone. It's not because I want to avoid other people from understanding my conversation. I just like the idea of increasing the visibility of Laz." [MY, 30, female, 2RN]

Laz is also used for solidarity in presence of Laz people in a social group. RA relates that

[21] A sincere form of addressing someone in Laz; 'my Erdoğan'.

Laz is especially used in the Laz community when individuals share the same emotions.

[7] "Laz is mostly spoken when people share the same emotions [...] Laz is preferred during celebrations before a wedding, or during memorial services, in most places in villages for example when greeting someone on the street, when there is a joyful or a tragic event [...] Laz laments are sang when there is death, or Laz songs are sang when someone gets married. In older times, Laz songs were sang during winter preparations." [RA, 24, male, 1AA]

In a social group where non-Laz people who don't speak Laz are present, Laz people typically use Turkish to communicate with other Laz speakers to be respectful to non-Laz individuals in the group. In such settings, Laz may be used to talk about private matters or convey secret messages, as noted by ML.

[8] "The first time I spoke Laz was when I was with my mom and (Turkish monolingual) friends. My mom said something (in Turkish) that I didn't like at the time. Like my grandparents, I said to my mom (in Laz) 'It's enough, what you said is shameful.' When I said this sentence, I had just graduated from university. This was the first time I spoke Laz for real, even though I knew Laz before." [ML, 32, female, 2AA]

Nevertheless, there are differences within the Laz community regarding attitudes towards Laz. Such differences can be at the personal level. For instance, Laz represents a village language and lower status based on the opinions of some young Laz individuals. HY tells the following anecdote about her 17 year old niece. Differences can be also be observed at the group level. Below, BA compares coastal (urban) areas with more rural areas, and ML makes comparisons among various Laz towns as well as among Laz villages within the same Laz town.

[9] "When I go to my village, my peers never speak Turkish, we immediately start speaking Laz. But the new generation speak Laz little. They go to central Pazar for school and like speaking Turkish generally. I have a niece. She told me 'Aunt, don't speak Laz to me. I don't like speaking Laz.' [...] She pretends to be from the city and thinks speaking Laz is impolite." [HY, 54, female, 1RN]

[10] "In middle school, some of my classmates commuted from villages. There was clearly a difference between us. They spoke Laz in classroom sometimes, and we who were from the coastal area didn't speak Laz as much. There was also a perception, maybe a government policy at some point, to not use Laz [...] I clearly remember that there were some people who perceived speaking Laz as a villager thing or something that lowers standards. For example, we had friends who boasted that their mother grew up in Istanbul." [BA, 34, female, 2RN]

[11] "In Hopa, there are ethnic groups other than Laz [...] When these groups communicate, Turkish is the common language so Laz could not be emphasized [...] I believe Laz is more often used in places like Pazar and Ardeşen. In fact, maintenance of Laz can even change from family to family here (in Hopa). When a village continues to speak Laz, another village might have abandoned Laz a long time ago." [ML, 32, female, 2AA]

Although the Laz community generally associates Laz with positive feelings, solidarity, and memory of their ancestors, Laz has not been successfully transmitted to younger generations in most cases and gradual language loss is observed for the Laz language. While there are multiple factors causing the breakdown of intergenerational transmission of Laz, the two major factors are the familial role and the institutional role.

Familial factors

The role of parents and family is crucial in the maintenance of Laz in the younger generation because Laz is passed down to the next generation orally, which makes the acquisition of Laz possible primarily in family settings. While some families, especially the ones residing in Laz villages, raise Laz speaking children, most Laz parents struggle with transferring Laz to their

offspring. Mixed marriages, parents feeling incompetent to teach children Laz, misunderstandings about bilingualism, and continued traumatic influence of former language policies/movements are some of the major familial factors contributing to the breakdown of the intergenerational transmission of Laz.

First, mixed marriages play a role in the linguistic journey of Laz children. When a Laz-speaking individual marries another Laz speaker, Laz becomes one of the languages spoken in the household. As a result, children may acquire the language or at least words and phrases. If one of the parents is a Turkish monolingual, the Laz input children receive in the family is restricted and children internalize Turkish as their first language. Note that not all children whose parents are both Laz speakers end up acquiring Laz. As described in previous chapters, Laz has dialectal differences which may cause communication breakdown between Laz speakers from different regions. Below, MdK mentions the communication breakdown due to different varieties of Laz, and SK describes how he was influenced from dialectal differences in his family.

[12] "We use Laz mostly when we come together with the elderly. For instance, when we go to the village, my husbands' aunts mostly speak Laz. Because Ardeşen Laz and Fındıklı Laz are quite different, I didn't understand them much in the initial years of our marriage. Now, I am figuring it out slowly." [MdK, 32, female, 1RR]

[13] "My mother and father are both Laz. My father is from Pazar, Rize [...] My mother is from Batum, Georgia. There is a dialectal difference issue between them. Their attitude is like this Laz is different, that Laz is different. Neither of them were fluent in Laz anyways [...] What happened to me was Laz was transferred to me word by word." [SK, 30, male, 2OO]

A second parental factor in transmission of Laz is the ideology of parents about the language. On the one hand, most young parents today can't provide enough Laz input to their children if they are not already Laz speakers or if there are no Laz-speaking grandparents around when children grow up. On the other hand, some Laz-speaking parents believe their children will

not need Laz in the future and decide not to teach their children Laz. BY indicates this was the case in their family. There are also Laz-speaking parents who feel incompetent to teach Laz to their offspring and avoid interactions in Laz with their children. For example, as a Laz speaker and teacher, MS didn't provide enough Laz input to her 7 year old son and she expresses her regrets as follows.

[14] "There was for sure no special effort for teaching us Laz. We (children of the family) only heard our parents speak Laz between themselves. They didn't pay an effort because they thought Laz would not be used in the future and we would not need it." [BY, 28, female, 2RN]

[15] "He doesn't speak Laz. I made a mistake [...] I used to think I didn't have a good command of Laz [...] I know the grammar system and verb conjugations [...] but I thought I wouldn't be able to teach my kid Laz because I couldn't speak fluent Laz [...] I couldn't stay on top of this issue because there were no grandmothers (to teach my son Laz). I raised him myself." [MS, 33, female, 2ON]

Next, there is still a misunderstanding about bilingualism in the Laz community. Due to the misbelief that one cannot master multiple languages at the same time, some Laz parents have been encouraging their children to master Turkish rather than Laz. Many Laz parents who want their children to be academically successful find it more important that their children are proficient in Turkish:

[16] "I've been exposed to Laz since my birth. My mom, for instance, learned Laz later. Her parents told her not to learn Laz lest they wouldn't be able to speak Turkish or become educated. So my maternal grandfather wouldn't allow my mom to speak Laz at home. When I was a kid, I knew Laz much better than my mom because I would constantly have Laz conversations with my paternal grandmother at home." [MdK, 32, female, 1RR]

Finally, the traumatic influence of past nationalistic movements, such as the "Citizen, speak Turkish!" campaign discussed in Section 2.1.2, appear to be still in effect for some Laz individuals. Almost all participants in this study indicated personal experience with unfair treatments for using Laz at school or acknowledged that their ancestors received unfair treatment for speaking Laz at school or even within the family, as IA and SK indicate below. As a result, those who experienced discrimination for speaking Laz in the past raised their children as Turkish monolinguals so they would not be discriminated against for being Laz speakers.

[17] "They (?) built child courts in schools by assigning student roles such as judge, prosecutor, watchman, and they judged children who spoke Laz at home." [IA, 51, male, 1RN]

[18] "In my parents' era, people didn't think 'Laz is a language and it should be spoken'. My parents grew up with teachers who told them not to speak Laz and snitch on those who spoke Laz. Both of my parents grew up thinking speaking Laz was something to be ashamed of." [SK, 30, male, 2OO]

Institutional factors

Aside from familial factors, institutional factors play a crucial role in Laz people's attitudes towards their heritage language. Two major issues are the lack of formal presence of Laz in institutional settings and migration to non-Laz regions.

First of all, as discussed in Section 2.1.2, the language of instruction in public schools is Turkish. For this reason, most interviewees expressed that minority languages in school settings haven't been welcomed by teachers and other school officials, as MhK and MS explain below. Because children are exposed to Laz in the family without formal instruction or access to written sources, they may experience difficulty differentiating Laz words or phrases from Turkish, and they become aware only after they have a communication breakdown with monolingual Turkish

speakers. SK described having a similar experience.

[19] "I sometimes cover other teachers' classes. When I ask students, they tell me their primary school teachers would never let them speak Laz (at school). We grew up like that too. They (our teachers) wouldn't allow us to speak Laz lest our Turkish would deteriorate. Now I teach 6th graders. I hear from my students that their teachers did not let them speak Laz and would scold students (for using Laz). This condition is still continuing. The most agonizing point is that most of the teachers who say these things are Laz too." [MhK, 32, male, 1RR]

[20] "My parents experienced violence at school. Even though it was not physical violence, they experienced psychological violence from their teachers at school. They were pressuring students to speak Turkish. This was not only in my parents' period. I too experienced violence from my own teacher. I was at primary school and I wrote something in Laz in my notebook. My teacher harshly warned me and asked me to write that in Turkish." [MS, 33, female, 2ON]

[21] "Neither of my parents grew up constantly speaking Laz at home. I learned Laz by picking up individual words. I noticed this when people didn't understand the words I used. I went to the store, asked for a kilogram of *minci*[22]. The seller asked me what it was [...] Then I started questioning the word I used [...] Crab is *ç'akali* in Laz, that's what I used to call a crab. But others called a crab *yengeç*[23]. Then I thought *yengeç* was the one found in a sea and *ç'akali* was the one found in a river because we always saw crabs in a river. I didn't become aware of such things when I was little. I started to realize these differences towards the end of high school. Too late to be honest." [SK, 30, male, 2OO]

Laz is not recognized in other institutional settings either. Although knowledge of foreign languages such as English is desirable in many government and private organizations in Turkey and there are often rewards for this, knowledge of minority languages such as Laz, Kurdish, or Circassian languages is not promoted in the job market. This motivates the younger Laz

[5] A type of cheese similar to cottage cheese; Turkish *lor*.
[23] 'Crab' in Turkish.

generation to invest their time in study of major European languages rather than Laz. Parents too encourage their children to study English so they can become academically and professionally successful in the future:

[22] "Learning Laz is a matter of personal choice at this point [...] Everyone is free to do what they want. To be honest, people are not willing (to learn Laz) [...] I need to learn English to be able to survive. This is due to the job market [...] Is there any need for Laz? There is no need for Laz as much as there is need for Turkish, so learning Laz is up to individuals' choice. People who would like to maintain the Laz culture such as me and older people use Laz more often." [RA, 24, male, 1AA]

[23] "The government does not officially acknowledge Laz [...] In fact, the name of our elective Laz course is *Living languages and dialects*. It's also sad that there is no advantages of Laz. Other than social, cultural, and political factors, that fact that Laz does not provide any economical advantages discourages people from learning Laz [...] There is Georgian right next to us. If you knew Georgian, for instance, you would benefit from it economically just for knowing Georgian. Georgian and Laz are very similar, someone who knows either language can learn the other." [MhK, 32, male, 1RR]

The other major factor interrupting the acquisition of Laz in younger generations is migration to non-Laz regions. There are only restricted employment opportunities in agriculture and industry in Laz regions (northeastern Turkey) partly due to the mountainous geographical conditions. For this reason, Laz individuals from the northeast relocate to bigger cities like Istanbul or Ankara for employment. This results in restricted interaction with Laz-speaking family and relatives for those who settle in non-Laz regions and their children. Children who are raised in non-Laz areas apart from their Laz-speaking grandparents have limited access to Laz input and fewer chances to acquire Laz:

[24] "The youth can't stay in the geography of our hometown as they grow older. There aren't enough lands or agriculture, employment is tough. There weren't any universities close to our hometown in the past. Now there are some universities but the quality of education is questionable. So young people go to Trabzon, closest, or cities like Ankara and Istanbul. Families don't pressure their children to learn Laz because they know their children will most likely maintain their lives away from their hometown. I also believe families don't pressure their children to speak Laz because speaking Turkish with an accent in big cities is an object of ridicule." [EU, 59, male, 2AN]

Consequences: Assimilation and gradual language loss through generations

Familial and institutional factors such as the ones mentioned above result in assimilation towards the dominating Turkish culture, which in turn leads to gradual language loss and generational gap. Even though the interviewees in this study mostly fall into two age categories (i.e., young adults between 21-34 years old and middle aged individuals between 51-59 years old), the young adults in this study have experienced various interaction patterns with their grandparents or the elderly members of the Laz community (see Table 2.1 in Section 2.2.2). Interaction with grandparents seems to impact attitudes and dedication of younger Laz individuals to speaking Laz and/or LT. For instance, RA reports that the reason he could learn Laz is his paternal grandmother.

[25] "My (paternal) grandmother knew Turkish. She completed primary school education, but she could express her feelings better in Laz. So (my parents) spoke Laz to her at home. Because I was exposed to Laz at home and because I had a good relationship with my grandmother, I could learn Laz at that level." [RA, 24, male, 1AA]

The participants of this study described a positive correlation between the age of a Laz individual and how well they speak Laz. Elder members of the Laz community speak the "best" Laz, referring to fluency and extensive knowledge of vocabulary and idioms. As MhK indicates, today's older generation are the ones who learned Laz at home and Turkish at school. IA made a

similar observation while pointing out the generational difference as follows.

[26] "People above 60 are mostly the ones who encountered Turkish at school. We can even say above 50 in remote villages." [MhK, 32, male, 1RR]

[27] "My generation, the ones who were born between 1970 and 1975, or even the ones who were born before 1980 learned Laz at home and Turkish at school. Suddenly people switched to Turkish after 1980. When I was younger, I observed that the parents of those who are around 35 years old now spoke Turkish to their children at home. However, these native Turkish children also spoke Laz. They grew up with Turkish but, at around 15-20 years old, or when they started socializing in the society, they started switching to Laz because the Laz speaking population was high. This does not happen anymore. We were recently looking for a Laz-speaking child actor for a movie, but we couldn't find one. Now children speak Turkish at home and school." [IA, 51, male, 1RN]

Nevertheless, interviewees also acknowledged that, in some (isolated) Laz villages, it is possible to find native Laz-speaking children. For instance, MS reported her observations from a recent visit to her grandparents' village in Artvin, where children continue to learn Laz. Another example is the youngest interviewee EY, who is a 21 years old Laz native speaker born and raised in a Laz village. Although he self-identifies with higher proficiency for Laz compared to Turkish, he indicates that elderly Laz speakers have better knowledge of Laz compared to young speakers, especially when it comes to vocabulary.

[28] "Children who migrate (to non-Laz areas) don't learn Laz [...] The ones who live in (Laz) villages continue to learn and the elderly continue to teach [...] I was raised somewhere close to the city. Children who live in Laz villages speak better Laz than I do, even today." [MS, 33, female, 2ON]

[29] "I think the best and most experienced Laz speaker in our family is my paternal grandmother. For example, she knows some Laz words that I do not. She knows many Laz words and uses them constantly, whereas I have to use Turkish at school [...] I don't know the Laz words for days of the week. There are also Laz words for the months of the year and seasons but my grandmother knows them. I only know some." [EY, 21, male, 1RR]

Although age and environment are strong indicators of someone's Laz proficiency, there seems to be other reasons as well for the generational gap in Laz proficiency. The best evidence for this comes from siblings who received similar Laz input while growing up but developed different levels of Laz proficiency. Some interviewees attribute this difference to gender. RA indicates that males in the Laz community have higher Laz proficiency as they have more opportunities to socialize with other Laz speakers outside the house. Some indicate that differences between siblings result from personal aptitude and/or interest. For instance, HY points out that the difference between her daughters MY and BY is due to personal interest. Some others cannot find a reasonable explanation for different behaviors among siblings, as in the case of MS.

[30] "I have a sister older than me. She understands Laz but doesn't use it due to personal preference. She can't speak Laz as good as I do [...] She is 28 years old now [...] Male children play a certain role in the Laz culture so I was more involved in the Laz culture. My sister began to work quickly and was missing on the cultural side. I, on the other hand, had difficulty culturally when I moved to a different city for college [...] Laz culture has been modernized, but in the past, men were responsible for physical tasks requiring manpower [...] They had more social roles outside their house [...] Women were responsible for tasks at home. [...] That's why we have the word [oxordʒa], which means "head of household" [...] Men were given importance because they represented the power of the family outside." [RA, 24, male, 1AA]

[31] "MY became interested in Laz on her own. It was her own will [...] My other children like Laz too but MY is different. She begs me to speak Laz with her." [HY, 54, female, 1RN]

[32] "We are three sisters. I am the oldest and have a sister 1-1.5 years younger than me [...] We both grew up in the same family with the same parents and grandparents around. Our parents did not pay any special effort to teach me Laz but I learned it at home. She doesn't know Laz, I know it, and how this can happen keeps my mind very busy. Can someone close their mind to language? She can't even pronounce Laz words. We grew up in the same family side by side, we were together wherever we went [...] Everything was the same and our age difference is little. Our youngest sibling also doesn't know Laz but I understand that; she was born later. But the fact that my younger sister cannot speak and even pronounce Laz is ridiculous to me." [MS, 33, female, 2ON]

As a consequence of the small number of young Laz speakers and the lack of presence of Laz in educational settings, Laz vocabulary cannot keep up with the pace of modern life. Technical terms (e.g., math terms, technological terms) are learned in Turkish at school and there is often no corresponding Laz vocabulary. Recalling even non-technical Laz vocabulary might be a challenge for Laz speakers. For instance, for most fluent Laz speakers, naming days of the week, months or seasons in Laz is a difficult task. Counting beyond number 10 is equally difficult and beyond 20 is almost impossible. This is a sign that Laz is undergoing language endangerment. The loss of numeral systems is typical for minority languages surrounded by a dominating language whose number system replaces the numeral system of the minority language especially starting with larger numbers (Comrie, 2005). Current Laz language maintenance projects and resources focus on preserving Laz rather than increasing the richness of Laz vocabulary. EY and MhK express their opinions on this issue below. EY's own opinion indicates expectation from institutions as he finds coining new Laz words unrealistic as long as there is no institution to take control. On the other hand, MhK draws attention on the role of speakers in coining and maintaining new Laz words.

[33] "Today newly coined words don't have counterparts in Laz. For instance Turkish Language Association adds new words like *uçangöz* 'flying eye' for *drone*. We don't have any institutions like such so no new words are created for Laz." [EY, 21, male, 1RR]

[34] "Throughout its history, the words Laz has gained are mostly Persian and then Arabic because of religion. These borrowed words has entered Laz through Turkish. Now we use English or French loanwords in Turkish as they are used in Turkish. We don't create any Laz words in such cases. Even if we create new words, there is no gain. I mean if feels like as if you created a new word and it is only you who is using that word." [MhK, 32, male, 1RR]

The Laz community is cognizant of these circumstances. As many interviewees indicated in the interviews, almost all Laz individuals, even the elderly, are aware that the younger generation is not acquiring Laz and that the language is endangered. However, most members of the Laz community seem to accept this fact and don't take any action to preserve the language. MS and BA summarize this as follows.

[35] "Elderly people are very sympathetic [...] (Mimicking others) 'Ours (our kid) didn't happen to learn Laz. It's so nice that MS speaks (Laz) well, I wish Emel spoke (Laz) too'. They are not reproachful but romantic sympathetic. They don't support me. In fact, they think my efforts are in vain. (Mimicking others) 'Why do you care?' I try to collect recordings and do whatever I can. (Mimicking others) 'Meh'." [MS, 33, female, 2ON]

[36] "Laz people have big words, they tell their opinions openly [...] But when it comes to taking action, I don't think we show enough sensitivity and attention. Do we teach this language to our kids? Or, what do we do when they don't learn this language? I believe we have shortcomings in this respect. This indicates that these languages will probably be forgotten gradually [...] I believe this is not the right attitude." [BA, 34, female, 2RN]

To summarize, this section was based on Laz individuals' self-observations that came up during sociolinguistic interviews. The most common factors leading to positive attitudes towards Laz as well as main reasons of discontinuance of Laz through generations were reported. In

the Laz community, every individuals' linguistic experience and therefore language attitudes are different. However, Laz individuals typically have positive attitudes towards their heritage language. Despite this, Laz is confronted with a breakdown in intergenerational transmission due to familial and institutional factors. This results in language shift towards Turkish in young generations of the Laz community. However, individuals who have had close interactions with their grandparents starting from a young age are more likely to speak fluent Laz or even LT today.

2.3.2 Attitudes towards Laz identity

Fishman (1991) states that "the destruction of a language is the destruction of a rooted identity". Likewise, the destruction of somebody's rooted identity results in an inevitable loss of that person's heritage language given the context of minority groups. This section aims to provide a sense of how Laz people are viewing their ethnic Laz identity, and how this attitude might be affecting whether they speak Laz or what kind of variety of Turkish they speak.

First of all, there are positive attitudes towards Laz identity in the Laz community. In fact, none of the interviewees indicated negative feelings about being Laz. As reported in Table 2.3, all interviewees used adjectives and phrases with positive connotations to describe how they feel about being Laz.

Table 2.3: Phrases used by interviewees to describe their feelings about being Laz

Turkish	English	Total count
özel/şanslı/üstün değil ama ayrıcalıklı/beni farklı kılıyor	special/lucky/privileged/different	4
seviyorum/hoşuma gidiyor	I like it	3
mutlu/mutluyum	(I'm) happy	3
eğlenceli/komik	fun	2
pozitif/olumsuz düşünmüyorum	positive/I don't think negatively	2
güzel/hoş bir şey	nice	2
kucaklıyorum	I embrace it	1
objektif bakabilmeyi öğretti	taught me to be objective	1
sempatiyle karşılıyorum	sympathetic	1
beni heyecanlandırıyor	makes me excited	1
benim varoluşum	my existence	1
değerli	precious	1

Nevertheless, some Laz individuals develop an awareness of their Laz ethnicity and identity later in life. Such awareness generally corresponds to high school or college years when Laz individuals have more chances to interact with peers outside of the Laz community and start thinking critically and developing their own personal opinions regardless of what has been presented to them. In other words, there seems to be a correlation with age and awareness or acceptance of identity. BA and MhK share their individual experiences as follows.

[37] "Today, there is social media. We see and read things, witness different lives. As we grow older, [...] we become aware of such things and try to value them [...] When there are always Laz people around you, nobody questions anything. You talk about the same things and have the same opinion, etc. When you meet people from different cultures or people who don't know your culture, their questions and astonishment about your culture makes you start thinking." [BA, 34, female, 2RN]

[38] "I used to identify myself as Turk until my third or fourth year in college. But I started to identify as Laz after an incident with one of my professors [...] We were always speaking Laz but we would identify as Turks. I had never researched my language (Laz). I didn't know anything except for a few things I heard. One day I was looking at the map of Turkic languages in my professor's office. When I couldn't find Laz, I wondered why because we called ourselves Turks. The professor was a linguist. Instead of explaining why, he looked down on me and told me "Your language copied words from here and there. That's how you created the language. Do you think we would include you here?" I disliked this attitude and after that day I started researching and learning Laz. That day was a milestone for me both regarding language and identity." [MhK, 32, male, 1RR]

There are at least three potential reasons why awareness of ethnicity develops late in Laz individuals. One reason is dependence on other community members in creating awareness of ethnic identity. Most Laz people who have knowledge about the Laz language, culture or history, gain their knowledge through experiencing or hearing stories from their ancestors. When there is nobody to transfer information (e.g., in the case of Laz individuals living outside the Laz settlements away from elderly members of the Laz community), there aren't many chances to gain awareness of ethnic identity. Another reason is the lack of written sources and the difficulty of accessing the existing written sources. There is a limited number of publications (books, magazines, dictionaries) about the Laz language and culture (written in Laz[24] or Turkish). As MhK and NY describe below, these are mostly accessible in big cities or in used bookstores, or online if you get lucky. Moreover, based on SK's experience, finding a source does not always mean you can access it. An environment in which Laz individuals do not have access to written sources to learn from is not ideal to build awareness of ethnic identity, especially if these Laz individuals are also not in close contact with the other members of the Laz community.

[24] A Laz alphabet of Latin origin was first used by Iskender Tzitaşi in 1929 in the Union of Soviet Socialist Republic (Kavakli, 2015). The Laz alphabet started to be used in Turkey after Tzitaşi's alphabet was developed by Lazoğlu and Feurstein in 1984 (Haznedar, 2018; Kavakli, 2015). However, Laz publications did not survive due to logistical reasons (e.g., lack of qualified staff to create Laz content) as discussed earlier in Section 2.1.3 and other factors such as the monolingual policy of the Turkish government (i.e., no tradition of education in Laz) and no use of Laz in religious contexts. Therefore, Laz historically remained as an oral language.

[39] "It is not easy to access printed sources. There are no places selling (Laz) sources here. There is a big book festival in Istanbul every year. It takes place in November if I remember correctly. It's not easy to go there at that time of year if you are working full-time. Some books are sold online, but they sell out quickly or they don't have editions." [MhK, 32, male, 1RR]

[40] "One of my biggest challenges is Laz vocabulary. There are printed dictionaries but they are either out of print or sold at very high prices in used bookstores. There is one online dictionary, by the Laz Institute. I try to use it, [...] but it was difficult to find the words I was searching." [NY, 31, female, 2OO]

[41] "There is a book about the history of my village [...] It is old and kept in the archives of the village and not very accessible to people. Maybe researchers are allowed to have a look at it [...] I am interested in reading its content [...] Some value things too much and they don't want anyone to touch valuables other than important people. To be honest that's why people don't go after information." [SK, 30, male, 2OO]

The third reason for late awareness could be the confusion about the meaning of 'Laz'. As discussed in Section 2.1.3, 'Laz' may be interpreted as people of the (eastern) Black Sea Region in general, or the Laz ethnic group who speak the Laz language. As ML reports, some Laz individuals like to clarify their origins during social interactions due to multiple interpretations of Laz. Even within the Laz community, certain qualities are assigned to people when defining how much they know about the Laz language and culture. Various expressions such as *tam Laz* 'true Laz', *katı Laz* 'strictly Laz', *yarım Laz* 'half Laz', or *daha Laz* 'more Laz' are common when describing someone. For some of the interviewees, such as RA, the primary criteria for being a true Laz is knowing the language (also see Serdar (2015) for a discussion of the place of Laz in construction of ethnicity). Some interviewees like EU believe that knowing cultural elements is also necessary to be true Laz. While the knowledge of language and culture were described to be the two common criteria of being Laz, some interviewees like BA and IA maintained that

one's self definition of identity depends on how they feel about themselves. In summary, multiple interpretations of 'Laz' may be causing the younger generation of Laz individuals to discover their own ethnicity and identity later than expected.

[42] "When we were in Diyarbakır, my mother told some of her friends that we were true Laz and that true Laz people live to the east of Rize, etc. Maybe Laz individuals feel the need to specify this because people think that the whole Black Sea Region is Laz." [ML, 32, female, 2AA]

[43] "For me, if someone knows the culture and doesn't intend to speak Laz, they are half Laz. If they also try to learn Laz, I can say they are true Laz." [RA, 24, male, 1AA]

[44] "True Laz are those who can clearly express themselves speaking Laz while not mixing Turkish words [...] Due to the conditions of the area, they also practice the falconry tradition, become involved in the nature, know the soil, etc. I personally believe individuals to be true Laz when I encounter someone who knows trees, agriculture, tea, etc." [EU, 59, male, 2AN]

[45] "How you define yourself depends on how you feel and how much it satisfies you or how much you care about it." [BA, 34, female, 2RN]

[46] "The criteria of being Laz depends on how you define yourself, if we are talking about identity rather than genetics." [IA, 51, male, 1RN]

Conversations with interviewees revealed another observation in the Laz community. There is a common belief that people outside the Laz community have negative attitudes about Laz people and that they lack awareness about the Laz ethnic group and language. The negative attitudes outside the community generally take the form of bad humor as BY exemplifies below. This may lead some Laz individuals to conceal their identity, as in NY's case.

[47] "Some people consider Laz people narrow-minded. There are words like *Laz kafası* 'Laz headed', or humiliating expressions like 'Laz people's brains stop working after 12'. I experienced such jokes, but I disregarded them." [BY, 28, female, 2RN]

[48] "I was going to a boarding high school and our friends were from various places [...] When I revealed I was Laz, they would laugh and make jokes and try to mimic the Laz accent. In fact, at some point, I stopped saying 'I am Laz.' and instead said 'I am from the Black Sea.' I felt as if this filtered out the amusement aspect." [NY, 31, female, 2OO]

Thus far, this section has shown that the Laz community's attitudes about their identity and ethnicity are typically positive. However, there seems to be a common opinion within the Laz community that people outside the Laz community have negative attitudes towards Laz people. These negative attitudes are generally in the form of ridicule about Laz characteristics as they are projected in the media. Outside the Laz community, there is a lack of awareness about the Laz ethnic group and their language. For this reason, Laz children may find Laz and/or LT undesirable as they may reveal ethnic Laz identity. Nevertheless, awareness of ethnicity may develop late for some Laz individuals especially in high school or college years. Therefore attitudes towards the Laz language and identity may change around these times. In the light of the interviews conducted for this study, this change is towards a more positive direction. Language attitude change with age was also attested in previous research. For instance, Baker (1992) indicates that teenage years remain important in change of language attitudes, but positive attitudes towards heritage language decline with age. Baker interprets that the underlying cause for such an attitude change is the socialization process in adolescence (e.g., mass media influences, influence of peers, etc.). Tse (2001) investigates the experiences of bilinguals of English and a heritage language (i.e., Spanish, Japanese, Cantonese) in the USA. The study reports that bilinguals have negative or neutral feelings toward their heritage language in elementary school years. However, they develop positive feelings about their heritage language and bilingualism after junior high or high school. Tse suggests that attitude change at this point in life is a stage of

social identity development. In an overview of language attitude studies, Dragojevic et al. (2021) point out that language attitudes are socially mediated and prone to change across the lifespan. They report that young children have a preference for ingroup members and native (or native-accented) speakers rather than foreign (or foreign-accented) speakers. Starting from elementary school years, children develop the same linguistic stereotypes as adults, so a preference for the standard/prestige language/variety. However, negative attitudes towards the native/heritage language could be reversed through various interventions such as dialect awareness training, explicit instruction to reduce biases, perspective-taking practices, etc. In summary, the findings of this section are in line with previous research concerning the change in language attitudes across lifespan. In the case of the current study, positive attitudes towards Laz increase during highschool or college years, when Laz individuals socialize with non-Laz individuals and start developing awareness of their Laz identity.

2.3.3 Attitudes towards Laz Turkish

As discussed earlier in this chapter, most of today's young Laz individuals are acquiring the standard variety of Turkish rather than LT. As there has been a language shift from Laz to Turkish, there is also a shift from LT to ST. This section will examine attitudes towards LT and describe the conditions under which LT is surviving today.

To begin with, there is an awareness among most interviewees that LT is distinct variety of Turkish showing Laz characteristics. While NY relates that elderly Laz native speakers have a distinct Turkish because they speak another language, MdK points out that children are more exposed to Laz in villages and therefore they pick up LT. Moreover, IA explains how Laz and Laz Turkish are influenced by each other.

[49] "Because my maternal grandmother speaks a completely different language (Laz), her Turkish words are more 'rotten'." [NY, 31, female, 2OO]

[50] "Even when I was a child, I could notice that my classmates whose family didn't speak Laz had better Turkish. It makes a big difference to have grandparents at home because they generally speak Laz [...] Our friends who resided in villages had a more different Turkish compared to us, most likely because Laz was heard and spoken in villages more." [MdK, 32, female, 1RR]

[51] "Grammatical characteristics are influenced from each other. I've encountered the following example. In Ardeşen Laz, there is no dative suffix -s. They normally say *Art'aşeni vore* 'I am in Ardeşen', there is no suffix attached to *Art'aşeni*. Because they are bilinguals, they notice something is missing so they add the Turkish dative suffix *-de* and say *Art'aşenide vore*." [IA, 51, male, 1RN]

Most interviewees in this study could identify vowel differences between Laz and Turkish. They could also describe the general characteristics of vowels in LT (i.e., substitution of [ɯ, y, œ] with [i, u, o]). When EY was asked about his observations on LT vowels, he described a correspondence pattern between ST [ɯ, y, œ] and LT [i, u, o] as well as ST [ɯ] and LT [u]. He provided two examples; one from his mother's LT pronunciation and writing and another from his classmate's writing. The latter example shows that even EY's peer had the same vowel correspondence pattern as EY's mother. However, some interviewees like BA noted that such vowel substitutions do not always take place. This can either indicate language shift from LT to ST or the existence of another pattern in LT.

[52] "*ı* [ɯ] becomes *i* [i], *ö* [œ] becomes *o* [o], *ü* [y] becomes *u* [u]. My mom asks me which one was with the dots and which one was without. My mom's (Turkish) writing has some errors [...] but she doesn't say *ö* [œ] instead of *o* [o] when she speaks. Generally, *ı* [ɯ] becomes *i* [i] and sometimes *u* [u] [...] One day the vice principal brought paper to classroom and asked everyone to write where they were from. Someone wrote *buraliyim* 'I am from here' (instead of *buralıyım*). " [EY, 21, male, 1RR]

[53] "First of all, we have a punctuation issue in vowels, but it's not like we make all *ı* [ɯ] vowels *i* [i] [...] There is backness harmony in Turkish, but this is not very important in Laz Turkish [...] Vowels in *gideyrum* 'I am going' (cf. Turkish *gidiyorum*) are mixed." [BA, 34, female, 2RN]

In addition to vowel differences, interviewees identified other Laz characteristics in LT. Laz consonants that are absent in Turkish, especially ejectives, are described to be observed in LT. As BA and SK explain, Laz characteristics in LT are more observable when someone is experiencing intense emotions or in elderly people's speech. Nevertheless, there has been no scholarly work dedicated to investigation of ejectives in LT. The data used in this dissertation contains variation regarding ejectives in LT. As discussed in Öztürk & Pöchtrager (2011), Turkish loanwords in Laz also show variation.[25]

[54] "It's as if the *p'* sound such as the one in *p'ip'eri* 'pepper' bursts. When my father speaks, he might say Turkish words with *p'*, or *k'* likewise [...] I notice this in my speech too but rarely. I don't have much of an accent [...] But my speech immediately changes when I am in a Laz environment or when I get angry." [BA, 34, female, 2RN]

[55] "You can clearly identify some Laz sounds like *p'* [p'], *k'* [k'], *ç'* [ʧ'] (in Laz Turkish) but we notice these when we learn reading/writing Laz. People use these sounds too in speech as if they were in Laz. I should also point out that you can observe this in older people." [SK, 30, male, 2OO]

It appears that LT is seen as a distinct variety by the Laz community, and it can be identified based on vowel and consonant characteristics. Table 2.4 reports the descriptions that came up when interviewees were asked their personal opinions on LT.

[25] Öztürk & Pöchtrager (2011) indicate that voiceless or voiced stops/affricates may be borrowed into Laz as ejectives, but not always. For instance, Turkish ***d**ola**p*** 'cupboard' borrowed into Laz as ***d**ola**p'**i*, but Turkish ***d**ok**t**or* 'doctor' borrowed into Laz as ***t'**ox**t'**ori*, or Turkish *y**t**y* 'iron' borrowed as *u**t**i*.

Table 2.4: Descriptions of LT based on interviewees' own opinions

Turkish	English	Total count
güzel/hoş/hoşuma gidiyor	nice/I like it	7
sıcak/samimi/içten/bizden biri hissi	warm/sincere	6
bozuk	rotten	3
sevimli	cute	2
komik	amusing	2
doğal/kendim gibi hissetmek	natural/feeling my true self	2
uyduruk/eğreti	made up/makeshift	2
yanlış yansıtılmış	portrayed incorrect	1
farklı	different	1
sempatik	sympathetic	1
normal	normal	1
yoğun duygularla alakalı	associated with intense emotions	1
keyiflendirici	joyful	1
duyunca gülümsüyorum	makes me smile when I hear	1
iyi hissettiriyor	makes me feel good	1
çocukluk anılarım aklıma geliyor	reminds me of my childhood memories	1
olumsuz	negative	1
itici	unattractive	1
hoşlanmıyorum	I don't like it	1

Participants of this study have at least two different approaches to LT. First, for most interviewees, LT is associated with positive feelings as FK's and MhK's words show below. At least for few interviewees like MhK, LT signifies Laz identity. The second approach is a more negative although less common attitude towards LT. In fact, there were only two interviewees; MS and IA, who held such opinions. Note that IA holds this opinion although he is an LT speaker who grew up in a Laz town (Pazar, Rize).

[56] "I really like it (Laz Turkish). When I hear it, it really feels like I have butterflies in my stomach. I like it and smile [...] I smile because this is the story of my fifteen years (until high school)." [FK, 30, male, 2AN]

[57] "If Laz dies, which we do not wish, at least there will be a variety of Turkish spoken by Laz people. If that dies too, there is nothing else to do." [MhK, 32, male, 1RR]

[58] "I wish there weren't something like Laz Turkish and everyone spoke Laz and Turkish and German and English. Mixing things with each other sounds meaningless to me. It's better if Laz Turkish doesn't exist." [MS, 33, female, 2ON]

[59] "Laz Turkish is very irritating to me. I don't like it at all. If we are going to speak Turkish, let's speak Turkish. If we are going to speak Laz, let's speak Laz." [IA, 51, male, 1RN]

Note that individuals' attitudes towards LT may change over time. For instance, MhK became more welcoming about LT as he grew older. Some interviewees also reported that gender and environment play a role in whether or not individuals adopt LT. For instance, EY reported that females are more careful with their Turkish, while ML indicated that her younger brother speaks LT due to environmental influence.

[60] "When I am involved in a heated discussion, I revert to my natural (LT) speech [...] I speak Turkish and everyone will understand me after all [...] I used to feel shy about speaking LT, but I don't have such concerns now [...] Past experiences, stories, what was wanted from us played a role in this. When you grow up, you believe everything taught to you is correct. We grew up with false things that were taught to be correct." [MhK, 32, male, 1RR]

[61] "The new generation pays attention on not using Laz Turkish. Some don't care, but especially girls are careful and try to speak proper Turkish [...] I don't know why." [EY, 21, male, 1RR]

[62] "In my family, I am the one who speaks Turkish most properly. My mom and brother especially speak LT [...] My brother and I work at the same school and people find it very odd that we have different Turkish. He grew up more extrovert and spent time in the village [...] I think he was mostly influenced by his friends." [ML, 32, female, 2AA]

In the Laz community, children's attitudes towards LT are different from adults, as reported by interviewees. The younger Laz generation is more exposed to ST through school or media, which makes ST more desirable for them. Laz children who speak LT or have more positive feelings about LT are reported to be typically the ones who grow up in an environment where LT was present. Such an environment most often corresponds to the Laz communities in the northeast (Rize or Artvin). HY's and EY's comments below reflect these observations.

[63] "Children have some accent inevitably because they live in my hometown [...] They don't enjoy it much and aspire to speak Istanbul Turkish. I believe the new generation likes it better when the diction is correct and hair and clothes are neat." [HY, 54, female, 1RN]

[64] "If they (Laz children) grow up here (in Ardeşen), they may find LT normal. But if they were born and raised somewhere else, or if they were born here and raised somewhere else, they may find LT strange like outsiders do." [EY, 21, male, 1RR]

It was also reported by many interviewees that parents desire their children to adopt ST for future concerns, but they don't pressure their children to speak ST as BA notes. See below how MhK and ML describe such parental concerns.

[65] "Parents are more biased towards Istanbul Turkish [...] but they don't put any pressure by saying don't speak like this or that [...] They only guide their children towards Istanbul Turkish as the correct Turkish." [BA, 34, female, 2RN]

[66] "Families want their children to speak Istanbul Turkish. Unfortunately, the conditions in our country are all about socioeconomic wealth. Everybody's expectations about their children's future are good things and parents have high concerns about this [...] Parents believe speaking Istanbul Turkish will be beneficial for their children in their future professions. In fact, that's the truth. Employers all around the country prefer hiring people who speak Istanbul Turkish. They judge candidates who speak with any dialect by saying that they don't even know how to speak Turkish." [MhK, 32, male, 1RR]

[67] "Most want their children to speak Turkish properly and that's actually why they don't teach their children Laz. Environment is a huge problem for them because everyone speaks a dialect (here in Hopa). Many people want their children to speak Turkish right because they believe their children will have difficulty in other environments. Parents might be thinking their children could encounter problems (outside of Hopa) due to accented speech and feel uncomfortable because of this." [ML, 32, female, 2AA]

The interviewees in this study also expressed their opinions about how LT is seen outside the community. The common belief was that LT was regarded as an impolite, wrong, and especially amusing form of Turkish. Except for a few interviewees such as HY, most Laz individuals in this study view this attitude as patronizing and mocking. For instance, RA and NY feel uncomfortable that LT is made an object of ridicule. NY also explains that people outside the Laz community believe Laz to be the same thing as LT. The influence of outsiders' opinions on LT may even extend to discrimination within the Laz community. For instance, IA reports that Laz employers in Laz regions prefer ST speaking employees.

[68] "They like my speech because it is different. They don't make fun of me [...] They are curious (about my speech)." [HY, 54, female, 1RN]

[69] "I had a Turkish literature teacher in high school. One day there was a crow flying by the building. S/he specifically asked me what was flying. And I said *k'arga* (cf. ST *karga*) with my childhood mind. S/he had the whole class laugh at me. I never forget about this." [RA, 24, male, 1AA]

[70] "I think non-Laz people find Laz Turkish unpleasant [...] and amusing [...] condescendingly amusing. I can say impolite and amusing [...] People confuse Laz Turkish with Laz [...] Only Laz people know the Laz language is not that. I believe that's why Laz people are not pleased." [NY, 31, female, 2OO]

[71] "Two girls in my hometown told me they were looking for jobs. They told me employers hired people without an accent. Employers in Pazar; employers who can't even speak Turkish properly, hire ST speakers especially for roles requiring communication with customers." [IA, 51, male, 1RN]

Negative opinions outside the community, examples of discrimination against the Laz language or people, or expectations from certain occupations (e.g., teachers or government workers) might lead LT speakers to 'correct' their speech. Below, ML describes the situations in which LT speakers may use careful speech. As a teacher, MhK explains how he feels pressured to speak ST in the classroom. Nevertheless, 'corrected' speech may not always be appropriate. For instance, MY explains that when Laz individuals force themselves to speak ST next to other members of the community, this is may be found ridiculous by the community.

[72] "LT speakers generally don't feel the need to correct their speech when they are in an environment with familiar people. The places where they feel such a need are places like government institutions, hospitals, maybe schools, more formal environments, or when there are guests they don't know well." [ML, 32, female, 2AA]

[73] "I use Istanbul Turkish when I am teaching Turkish in class. In breaks, at lunch time, or when students approach me, I sometimes use Laz if I know those students also know Laz. Sometimes I use my natural Turkish speech (LT). However, as a Turkish teacher, the curriculum provided to me is based on students' understanding good understanding and speaking of Istanbul Turkish. So I have to provide this to students. Diverging from this sounds like violation of the curriculum. I am responsible for teaching what is expected from me in class. It is not important what I do after class or in the breaks." [MhK, 32, male, 1RR]

[74] "(Laz people) are more careful (about their Turkish) when they are with non-Laz people. When they are with other Laz people, they are already ridiculed if they are trying to speak polite Turkish. There are people like this, who come from Istanbul and make themselves ridiculous when they are trying to fix their Turkish." [MY, 30, female, 2RN]

Under the circumstances in which LT is treated as undesirable by Laz parents and children along with negative connotations outside the Laz community, there is no doubt that a generational as well as a geographical gap are observed for LT. This is also a predicted outcome if LT is a second language variety. The older someone is, the higher the chances are for this person to be a (native) Laz speaker with a heavy, easily distinguished Laz accent when speaking Turkish. MhK explains this concept in his own words below. Moreover, SK points out that a heavy Laz accent is considered acceptable for elder Laz individuals but not the young ones. In other words, it appears that the Laz community internalized the relationship between age and LT.

[75] "Older people's Turkish is more broken [...] The middle aged and the generation before them spoke more broken Turkish. I think our generation diverged from that broken Turkish to some extent...Maybe I shouldn't call it broken but 'different'. I think our generation stripped itself from that difference and our speech is more similar to modern, Istanbul Turkish. If we have to name this variety, we can maybe say second generation Laz Turkish." [MhK, 32, male, 1RR]

[76] "Because they learn pure Turkish at school, children find Laz Turkish strange [...] When I speak Laz-accented Turkish, they find it strange. But there was no problem when my grandfather spoke in the same way." [SK, 30, male, 2OO]

In summary, members of the Laz community are aware that LT (as spoken by older speakers) is distinct from ST. While most interviewees personally have positive feelings towards LT, they describe LT as a 'rotten' variety of Turkish. The most likely reason for the discrepancy between their feelings and descriptions is as follows. Laz individuals believe people outside the community typically find LT as something to make fun of, which makes most Laz individuals feel uncomfortable. Moreover, parents in the Laz community desire their children to speak ST for future employment and advancement. Laz children, except for the ones who were raised in small Laz settlements, are more prone to speak ST due to schooling, media and parental influence. For

this reason, a generational gap is observed for LT as there is a shift from LT to ST in the younger generation.

2.4 Conclusion

This chapter aimed to provide a description of the conditions in which the Laz language and LT have been surviving. Through sociolinguistic interviews, interviewees were directly asked their opinions about the Laz language, the Laz identity, and LT. The main findings were as follows.

Laz individuals generally have positive attitudes towards the Laz language; however, Laz is not successfully passed to the younger generation. One of the main reasons for this generational gap is familial factors such as mixed marriages, linguistic preferences of parents, misunderstanding of bilingualism, and traumatic influence of past nationalistic movements. The other main reason is the lack of formal presence of Laz in institutional settings such as schools and government institutions, and employment in industry which brings together migration to non-Laz regions.

All interviewees associated their Laz identity and ethnicity with positive feelings. However, many Laz individuals develop an awareness and acceptance of Laz identity after teenage years, when they have increased interactions with people outside the Laz community. In addition, interviewees commonly expressed that people outside the Laz community had negative stereotypes about Laz people, typically expressed in the form of mockery. It was also reported that people outside the community lacked awareness as they typically don't recognize the Laz language and ethnicity but assume all Black Sea people have the same characteristics and speak the same language. Such ideology of people outside the Laz community may cause some Laz individuals to hide their ethnicity.

As for LT, the most common opinion among the interviewees was positive. Despite these

positive views about LT, interviewees still described LT's structural characteristics with negative terms including 'rotten' Turkish. Interviewees also noted that people outside the Laz community typically see LT as an amusing form of Turkish. From the point of view of outsiders (non-Laz people), LT may be an amusing variety of Turkish as portrayed in the media (e.g., soap operas, comedy movies) but not necessarily associated with negative feelings. However, this attitude of outsiders is viewed by most Laz individuals as patronizing and mocking. Furthermore, due to educational and institutional factors, LT is not a desirable variety among young Laz individuals, and parents wish their children to adopt ST for future employment. This leads to a generational gap in which older Laz individuals are more likely to speak LT whereas younger individuals are more likely to adopt ST. The language shift from Laz to Turkish also plays a role in this generational gap. LT is more likely to be spoken by older Laz people who are also Laz speakers whereas the younger Laz individuals, excluding the ones who are raised in Laz villages, are less likely to speak Laz and LT.

In this study, opinions of the interviewees are used to gain an understanding of the language ideology in the Laz community. Laz individuals interviewed for this study generally have positive personal feelings about their heritage language Laz, their Laz identity, as well as LT. Contradicting these positive views, there is language shift in the community, from Laz to Turkish and from LT to ST. In other words, there seems to be conscious or unconscious decision-making in the Laz community in terms of not speaking Laz or LT. This is mainly driven by the pressures of the society to speak ST. As Laz is not recognized in educational and governmental settings, LT is also not preferred. Instead, ST is seen as the prestige and 'correct' variety even by Laz individuals who think positively about the Laz language and embrace LT as a distinct variety of Turkish indexing Laz identity.

Chapter 3

Laz Turkish: General vowel distribution in the corpus

3.1 Introduction

Laz Turkish (LT) is a second language variety of Turkish that developed into its own distinct dialect in a language contact situation between Turkish and the Laz language. LT is spoken as a second language (L2) by native Laz speakers, or as a native language (L1) by Laz descendants who have little or no knowledge of Laz. Like Laz, which is shifting to Turkish, LT is shifting to Standard Turkish (ST) as there is strong pressure for minority identities to become Turkified and the younger members of the Laz community to learn to speak ST, especially at school (if they don't already speak ST).

LT has features of ST, but it also has characteristics that appear to have been inherited from Laz (Brendemoen, 1989). One such characteristic is observed in vowel harmony (VH). ST has a symmetrical vowel system with eight phonemes showing VH with respect to their backness and rounding features (four front: /i, e, y, œ/, four back: /ɯ, a, u, o/, four round /y, œ, u, o/, four

unround: /i, e, ɯ, a/).[26] Laz, on the other hand, has a smaller vowel inventory with five phonemes; /i, e, a, u, o/ (Lacroix, 2019; Öztürk & Pöchtrager, 2011), and there is no VH. Because Laz lacks the Turkic vowels /ɯ, y, œ[27]/ and does not have VH, this has impacted how VH functions in LT.

Like ST, LT has progressive backness harmony (applies to all vowels) and rounding harmony (applies to high vowels only). However, VH in LT is only partially productive. For instance, the past tense vowel can match the root vowel in both backness and rounding (23a), but it can mismatch the root vowel in backness (23b) or rounding (23c), or both (23d). As can be seen in (23a-23b)), the PST vowel can trigger further harmony in the following vowel segment. Disharmonic forms such as (23b), (23c) and (23d) involve allomorphic realizations of the same suffix (PST) that are not conditioned by vowel harmony. This is unlike ST, where disharmony between stem and affix involves affix vowels that are fixed and do not alternate (see Section 3.2.4).

(23) a. de-**di**-ler — *harmonic* — (cf. ST de-di-ler)
say-PST-3PL
'they said'
[082119-S3-M]

b. aʃ-**ti**-ler — *mismatch in backness* — (cf. ST atʃ-t**ɯ**-lar)
open-PST-3PL
'they opened'
[081919-S2-M]

c. kalk-**tu**-m — *mismatch in rounding* — (cf. ST kalk-t**ɯ**-m)
get.up-PST-1SG
'I got up'
[090319-S8-M]

d. gel-**du**-n — *mismatch in backness and rounding* — (cf. ST gel-d**i**-n)
come-PST-2SG
'you came'
[082119-S7-M]

[26] See Clements & Sezer (1982) and Arik (2015) for disharmony in ST.

[27] The non-high front rounded vowel is represented with [œ] rather than [ø], following Zimmer & Orgun (1992) but there is no phonemic difference between these two and they are interchangeable for the purposes of this research.

Based on a corpus of fieldwork data collected in Rize, Turkey, this study investigates the extent and productivity of vowel harmony in LT and shows how language contact had led to language change and the emergence of a new dialect.

This chapter provides the general distribution of vowels in the LT corpus and initial observations with respect to LT vowel harmony. Predictions regarding the distribution of vowels in LT are as follows:

i) Age differences:

   If LT is undergoing language shift to ST, data from older LT speakers will often contain characteristics distinct from ST whereas younger LT speakers' speech will resemble ST more.

ii) Fewer [ɯ, y, œ]:

   Due to the difference between the vowel systems of Laz and Turkish, LT speakers may use fewer [ɯ, y, œ] vowels in general.

iii) 1st root vowel substitutions:

   If LT speakers are using fewer [ɯ, y, œ] vowels, they may have developed substitution patterns, where [ɯ, y, œ] in ST cognates may be corresponding to LT [i, u, o] respectively. Such substitution of vowels were discussed in previous work for Turkish loanwords in Laz (Kutscher, 2008; Lacroix, 2019; Öztürk & Pöchtrager, 2011). If there is a substitution pattern in LT, like in Turkish loanwords in Laz, this would be determined by examining the 1st root vowel of LT words compared to the 1st root vowel of ST cognates because the initial vowel does not undergo vowel harmony but triggers it. In non-initial positions, the substitution pattern may again be observed, but this time vowels may also be undergoing backness and/or rounding harmony.

iv) Non-initial high vowel substitutions:

   Among [ɯ, y, œ] in Turkish (including LT), the non-high round vowel [œ] is typically

only found in the 1st root position but the remaining vowels [ɯ, y] can occur throughout the word. If [ɯ, y] are substituted with [i, u] in LT, then there will be only two kinds of high vowels that can occur in LT suffixes; [i] or [u]. This could result in backness and/or rounding harmony violations in suffixes.

v) Distance effects:

If LT has progressive vowel harmony where the trigger of vowel harmony is the 1st root vowel, there may be more vowel harmony violations in LT towards word end, as the distance between trigger and target increases (McCollum, 2019; McPherson & Hayes, 2016; Zymet, 2014). Or, if there are only two suffix vowels [i, u] in LT, the preceding root vowel could be any of the [a,e,i,o,u,(ɯ),(œ),(y)] and therefore the first suffix vowel may show the most vowel harmony violations while the rest of the suffix vowels may harmonize with the first suffix vowel. In other words, there may be fewer vowel harmony violations across suffixes in LT, towards word end.

The rest of the sections in this chapter will introduce vowel harmony in ST (Section 3.2), describe the methods used in the current research (Section 3.3), discuss five broad research questions (Section 3.4), and conclude (Section 3.5).

3.2 Vowel Harmony in Standard Turkish

Before discussing vowel harmony in LT, it is necessary to understand how vowel harmony functions in Standard Turkish because this will facilitate comparisons with Laz Turkish since LT is assumed to have developed through contact between Laz and ST (especially today younger LT speakers are exposed to ST through education). Standard Turkish has vowel harmony in native roots (known as internal or root harmony) and in suffixes (i.e, external or suffix harmony). There are two types of root-controlled[28], rightward vowel harmony; backness (aka, palatal) and

[28]The trigger of vowel harmony is the initial vowel of the root.

rounding (aka, labial).[29]

The following subsections describe these two types in Standard Turkish as well as the conditions when harmony does not apply. Allophonic variations of vowels in Standard Turkish will also be explained. The information in this section of the paper is adapted from Kornfilt (2013), Göksel & Kerslake (2005), and Kabak (2011) unless otherwise indicated.

3.2.1 Vowels

Turkish consists of eight phonemically distinctive vowels, which are illustrated in Table 3.1.

Table 3.1: Vowels in Standard Turkish

	front		back	
	unround	round	unround	round
high	i	y	ɯ	u
non-high	e	œ [30]	a	o

Some of the vowels represented in Table 3.1 have allophonic variants in Standard Turkish. For example, /a, u, o/ are realized as their fronted allophones [a̟, u̟, o̟][31] in loanwords in the context of palatalized consonants like [lʲ], [kʲ], and [gʲ][32] as in (24). (Nevertheless, some native

[29] As suggested by Clements & Sezer (1982), there is one case where regressive backness and rounding harmonies are observed in Standard Turkish. In colloquial speech, loanwords with a root-initial onset cluster undergo a vowel insertion process, e.g, /prens/→/p**i**rens/ 'prince', and /prova/→/p**u**rova/ 'rehearsal'. The inserted vowel is one of the high vowels /i, ɯ, y, u/ and undergoes backness and rounding assimilation harmonizing with the following vowel.

[30] In the literature, there is inconsistency about which IPA symbol the ortographic *ö* corresponds to. Most resources on Turkish linguistics use the orthographic conventions and transcribe this vowel as /ö/ (Clements & Sezer, 1982; Göksel & Kerslake, 2005; Karaağaç, 2012; Lewis, 1970), some transcribe this sound as /œ/ (Brendemoen, 2002; Van der Hulst & Van De Weijer, 1991; Johanson & Csató, 1998; Zimmer & Orgun, 1992) and some use /ø/ (Kabak, 2011; Kornfilt, 2013). Both /œ/ and /ø/ are front, non-high, rounded vowels, so in terms of vowel harmony in ST (or TD), using either of these IPA symbols in transcriptions does not make a difference. In this paper, /œ/ will be used to stay consistent with Brendemoen (2002)'s transcriptions of Trabzon Turkish, another dialect in the northeastern Black Sea.

[31] Göksel & Kerslake (2005) state that /a/, /o/, and /u/ are "palatalized" adjacent to palatal consonants, and they use an underdot ([ạ], [ọ], [ụ]) to represent such vowels. However, my interpretation of such vowels is the following. Due to coarticulation, [a], [o], and [u] are "fronted" (or "advanced") adjacent to palatal consonants, so I use the sub-plus diacritic (̟) instead of an overdot.

[32] Göksel & Kerslake (2005) transcribe these palatal(ized) consonants as [l], [c], and [ɟ]. In my transcriptions in this paper, I follow Kornfilt (2013) and use the diacritic for palatalization (ʲ).

Turkish speakers do not palatalize these consonants and therefore do not front /a, u, o/, e.g., [alfabɛ] instead of [a̟lʲfabɛ], etc.)

(24) a. a̟lʲfabɛ ‘alphabet’
b. gʲa̟vur ‘infidel’
c. kʲu̟fi ‘Cufic’
d. lʲo̟kum ‘Turkish delight’

/e, i, u, y/ are realized as their slightly lowered counterparts [ɛ, ɪ, ʊ, ʏ] word-finally, as exemplified in (25).

(25) a. kypɛ ‘earring’
b. ilgɪ ‘interest’
c. ordʊ ‘army’
d. yzyntʏ ‘sadness’

/e/ can also appear as [æ] preceding /l/, /m/, /n/, /r/ in coda position (26). However, this is an idiolectal difference; for example, some people consistently pronounce (26a) as [elli] instead of [ælli]. Similarly, (26b) could be pronounced as [hem] by some individuals.

(26) a. ælli ‘fifty’
b. hæm ‘also’ (as in the conjunction *hem ... hem de*)

To summarize, non-high /e/ and all the high vowels except /ɯ/ are pronounced lower in word-final position. All the back vowels except /ɯ/ may be fronted adjacent to palatal consonants. For convenience in this paper, the rest of the phonetic transcriptions of Standard Turkish refer to the eight phonemes indicated in Table 1, regardless of various realizations of vowels.

3.2.2 Backness harmony

In Standard Turkish, front vowels /y, i, œ, e/ do not combine with the vowels from the set of back vowels /u, ɯ, o, a/ and vice versa within a word. This means that there is backness

harmony. Backness in the root extends to suffixes. For instance, front [e] in the root 'ev' in (27) has to be followed by front vowels, and back vowel [u] in 'ʧoʤuk' in (28) has to be followed by suffixes containing back vowels.

(27) a. ev-ler-imiz-den 'from our houses'

b. *ev-lar-ɯmɯz-dan

(28) a. ʧoʤuk-lar-ɯmɯz-dan 'from our children'

b. *ʧoʤuk-ler-imiz-den

Backness harmony also applies root-internally. Words as in (29a) are widely attested, but those as in (29b) and (29c) violate the combination restriction, although words of this kind may be found in loanwords, see Section 3.2.4.

(29) a. deniz 'sea'

b. *daniz

c. *denɯz

As for compound constructions, they contain more than a single vowel harmony domain, which explains the co-occurrence of front and back vowels in examples such as (30a) and (30b), where the dash indicates the boundary between the two constituents of the compound. Note that within each half of the compound, harmony does apply.

(30) a. ak-ʤijer 'lung'

b. jyz-baʃɯ '(army) captain'

For further information about which vowel sequences are legal in terms of backness harmony, please refer to Appendix 6.3.

3.2.3 Rounding harmony

All eight vowels can appear in the initial syllable of a word in Turkish. In addition to backness harmony, a high vowel must harmonize with the previous vowel in terms of its rounding

feature. Examples in (31a-b) indicate internal harmony, and (31c-d) also display external harmony.

(31) a. kuru ‘dry’
b. kœty ‘bad’
c. jol-un ‘of a/the road’
d. sœz-yn ‘of a/the word’

When a suffix contains a vowel from the lower set (e.g., the plural morpheme -lAr), the vowel in the suffix surfaces with an unrounded vowel even if it follows a rounded vowel. When a suffix contains a high vowel (e.g, the past tense suffix -DI) and follows a rounded vowel, the suffix surfaces with a high rounded vowel such as [u] and [y] based on the backness of the preceding vowel. This means that while any round vowel can trigger harmony, rounding harmony only applies to high vowels, not to non-high vowels. (32) exemplifies an inflectional suffix (i.e., the plural -lAr) that has a two-way alternation for backness. Based on the front, rounded root vowel [œ], the suffix must be realized with a front vowel as indicated in (32a). Since the plural morpheme contains an underlying non-high vowel, rounding does not apply to the suffix, as seen in (32b). (33) is an example for the past tense suffix -DI. This morpheme contains an underlying high vowel, so following the front, rounded vowel [œ] of the root, the vowel in the suffix has to be realized as front, rounded [y] (33a).

(32) a. gœz-ler ‘eye-PL’
b. *gœz-lœr

(33) a. gœr-dy ‘see-PST’
b. *gœr-du
c. *gœr-di
d. *gœr-dɯ

Rounded non-high vowels [œ] and [o] do not occur in non-initial syllables in words of Turkic origin as they cannot be the product of round vowel harmony. However, they are found in

non-initial syllables in some loanwords (34) (and in the progressive suffix -(I)jor as explained in Section 3.2.4. These non-initial round vowels still trigger harmony on following suffixes (e.g., [balon-u] but *[balon-ɯ] 'balloon-ACC'). Note that examples in (34b) and (34c) also lack internal backness harmony.

(34) a. balon 'balloon'
b. byrokrasi 'bureaucracy'
c. kuafœr 'hairdresser'

Similar to backness harmony, rounding harmony does not extend to all components in compounds (35). Assuming that rounding spreads rightward, if vowel harmony extended to all components of compounds, one would expect rounded vowels in the second word in (35a) and unrounded vowels in (35b).

(35) a. on iki 'twelve (ten-two)'
b. altɯn jyzyk 'golden ring'

For further information about which vowel sequences are legal in terms of rounding harmony, please refer to Appendix 6.3.

3.2.4 Disharmony

Most of the disharmonic roots in Turkish are loanwords. Even with disharmonic words of foreign origin, the suffix undergoes backness and rounding harmony by harmonizing with the final vowel of the stem, which is further evidence for the productivity of vowel harmony (36).

(36) a. kitab-ɯn 'book-GEN.3'
b. siroz-un 'cirrhosis-GEN.3'
c. ʃofœr-yn 'driver-GEN.3'

However, when (loan)words end in a palatal consonant (37a-b) or a consonant cluster whose first member is a palatal consonant(37c-d), the following suffix vowel is always front since they block

harmony from the previous vowels and instantiate a new harmonic domain. Clements & Sezer (1982) describe such palatal consonants as opaque.

(37) a. hilal^{j}-i ‘crescent-ACC’

b. petrol^{j}-y ‘petroleum-ACC’

c. kal^{j}b-i ‘heart-ACC’

d. gol^{j}f-y ‘golf-ACC’

Apart from disharmonic roots and the cases where palatal consonants play a role, some affixes in Turkish do not alternate due to harmony[33]. For example, the first vowel of the progressive suffix -(I)jor undergoes both types of vowel harmony while the second vowel remains as [o] at all times (38). As explained earlier in Section 3.2.3, a non-high rounded vowel such as [o] does not typically occur in non-initial syllables of Turkish words, so suffixes like -(I)jor are unusual in terms of their structure with respect to how harmony functions in ST. Other disharmonic suffixes where the first vowel alternates but not the second are the possibility marker -(j)Abil and inflectional suffixes that refer to actions with a continuous nature (i.e., non-premeditative suffixes) such as -(j)Iver, -(j)Adur, and -(j)Akal.[34] There is a four-way alternation in suffixes with high alternating vowels as in (38) and a two-way alternation with non-high alternating vowels as in (39).[35] If there is any following suffix, it harmonizes with the preceding vowel (e.g., gel-ij**o**r-**u**m ‘come-PROG-1SG’, gid-ed**u**r-d**u** ‘(s/he) kept on going’).

(38) a. gel-ijor ‘come-PROG’

b. yaz-ɯjor ‘write-PROG’

c. gœr-yjor ‘see-PROG’

d. dur-ujor ‘stand-PROG’

[33] See (Arik, 2015) for a list of disharmonic affixes in Turkish.

[34] From these examples, it is seen that the fixed vowel in such disharmonic suffixes could be one of the set [o, i, e, u, a]. I am not aware of any other disyllabic suffix where the first vowel undergoes harmony but the second vowel is [ɯ], [y], or [œ].

[35] Note that not all bisyllabic suffixes are like this, since both vowels in some bisyllabic suffixes undergo backness and rounding harmony. The possessive suffix (when it refers to the 1st/2nd/3rd plural person) is an example for such a bisyllabic morpheme, e.g., [kalem-imiz] ‘pencil-POSS.1PL’ vs. [dost-umuz] ‘friend-POSS.1PL’.

(39) a. gid-edur ‘keep on going’

b. ʧœz-edur ‘keep on solving (a problem or an issue)’

c. jaz-adur ‘keep on writing’

d. bul-adur ‘keep on finding (something)’

Some derivational suffixes have only one variant, which results in disharmony if it attaches to a root with vowels from a different harmonic set. For instance, -gen (attaches to numbers to derive names of geometric shapes with corners), -(i)stan (attaches to nouns referring to ethnicity to derive country names), -gil (attaches to kinship terms or proper names to refer to the extended family) all have fixed vowels. Some examples are given in (40-41).

(40) a. yʧ-gen ‘triangle’ (yʧ: ‘three’)

b. altɯ-gen ‘hexagon’ (altɯ: ‘six’)

(41) a. hind-istan ‘India’ (hint: ‘Indian’)

b. moːl-istan ‘Mongolia’ (moːl: ‘Mongolian’)

Turkish also has a few disharmonic prefixes borrowed from other languages. In such cases, there is no leftward root-controlled harmony or no rightward affix(prefix)-controlled harmony which leads to vowel alternation in the root. However, these prefixes are generally borrowed from other languages along with the roots they are attached to. So, these prefixes are not productive in the sense that they are generally not used when new words are coined.[36] Examples are provided in (42).[37]

[36]But there are some examples; for instance, *anti-* can be used in political contexts as in [anti-taj:ipʧi] meaning ‘not a Tayyip supporter’.

[37]These examples are adapted from Göksel & Kerslake (2005) as well as online resources including Türk Dil Kurumu (Turkish Language Institution), Oxford Dictionaries Online, and Online Etymology Dictionary.

(42)

a.	anti-	‘against’	anti-bakterijel	‘antibacterial’
b.	na-	‘not’	naː-mert	‘craven’
c.	a-	‘not; without’	a-normal	‘abnormal’
d.	bi-	‘not’	bi-ʧaːre	‘helpless’
e.	post-	‘after’	post-modern	‘postmodern’
f.	gajri-	‘other’	gajri-myslim	‘non-Muslim’

In general, ST vowel harmony is productive and follows consistent patterns. Disharmony in ST is of two main kinds: loanword roots that do not harmonize internally to conform to Turkish phonotactics, and certain fixed affixes that show no alternations.

3.3 Current study

3.3.1 Speakers

Data were collected from thirteen LT speakers through oral interviews. Data from three participants who spoke Turkish close to standard were excluded from the LT corpus because this data would not be informative in comparing how LT differs from ST. Two of these speakers (52 and 53 year old) lived in non-Laz areas of Turkey for a long time so their Turkish speech was ST-like and not representative of LT as it is spoken in the Rize area. The other speaker whose data were excluded from the LT corpus was the youngest among all participants (25 year old) as his Turkish speech was very ST-like with respect to vowels. Therefore, a balanced sample of five female and five male speakers representing a range of age groups (O: old, M: mid, Y: young) were included in the LT corpus (Table 3.2). Each of these speakers will be profiled in the rest of this section, as this gives a sense of the linguistic profile of the community members.

Information about how each speaker learned Turkish and Laz was obtained during interviews. Speaker 1 acquired Laz as her native language and learned Turkish when she was a teenager; now she speaks Turkish in her daily life rather than Laz. Speaker 2 learned both Laz

Table 3.2: Information about the speakers whose data is used in this corpus study

Speaker	Gender	Age	Age Group	Hometown in Rize	Language
1	female	79	O	Fındıklı	Laz, LT
2	male	59	M	Pazar	Laz, LT
3	female	65	M	Ardeşen	Laz, LT
4	male	78	O	Ardeşen	Laz, LT
5	male	53	M	Ardeşen	Laz, LT
6	female	58	M	Ardeşen	Laz, LT
7	female	49	M	Ardeşen	Laz, LT
8	male	65	M	Pazar	Laz, LT
9	male	38	Y	Çayeli	LT
10	female	70	O	Çayeli	LT

and Turkish at home, but he describes his dominant language as Turkish. Speakers 3, 4, 5, 6 and 8 were born to Laz-speaking families and they all learned Turkish in primary school. Speaker 6 reported that she was encouraged by her parents to use Turkish after starting school. So she was Turkish dominant after schooling but she became a balanced bilingual after getting married to another Laz person. Speaker 7 was born to a Laz and LT speaking family, but she didn't clearly describe when she learned each language.

Speaker 9 and 10 represent a mother and her son. They have been residing in Pazar, Rize for a long time but they are originally from the neighboring Rize district named Çayeli (Appendix 6.1), which does not have a dense Laz population. Speaker 9 and 10 do not identify as Laz, nor do they speak the Laz language; however, the forms they produced were very similar to the ones elicited from Speakers 1-8 regarding vowel harmony. In addition, when interviewed, Speaker 9 and 10 did not report a difference between their own variety of Turkish and LT spoken in the area. This shows that LT is a local dialect, and the speakers of LT do not necessarily need to identify as Laz or be bilingual speakers of Laz and Turkish. Therefore, data from Speaker 9 and 10 were included in the corpus and examined along with the rest of the corpus.

3.3.2 Data Collection

Data was collected in the Pazar and Ardeşen towns of Rize, Turkey (Appendix 6.1) in the summer of 2019.[38] Interviews with speakers were done in Turkish. The interviews were a natural dialog between the researcher and the speaker, and speakers were not limited in terms of the content of their speech. Natural conversation was used as the fieldwork method to elicit a variety of affixes and to allow more LT forms to naturally emerge. Interviewees were not asked to produce any specific LT forms during conversations.

The researcher, who is a native ST speaker, and the language consultant were present in a typical interview. The presence of an ST speaker in the interview environment is possibly a drawback, which may have led the consultants to speak a variety closer to ST. To avoid the participants from accommodating to the researcher's ST speech, participants were informed that the general purpose of the interview was to examine how Laz individuals speak Turkish naturally. Note that it was not possible to have a completely naturalistic environment in a data collection (voice recording) situation. In addition, telling the participants the point of the study may have made them more self-conscious of their speech. Another issue to note is that in some interviews it was not possible to be alone with the consultant and there were other people present at the interview room. These were either ST or LT speakers (see Table 3.3). The presence of other Laz members in interviews can be considered as an advantage for this study, because consultants might have felt more comfortable during interviews.

[38]This research was funded by a UCSD Friends of International Center fellowship.

Table 3.3: Presence of people at the interview room other than the language consultant and the researcher

Speaker	Presence of other people at the interview room
7, 8, 9, 10	none
1, 6	at least one ST speaker
2, 5	at least one LT speaker
3, 4	at least one ST and one LT speaker

A Zoom H1n Digital Handy Portable Recorder was used with a lavalier microphone to record the interviews. The interviews were recorded in a quiet space based on the researcher's and speaker's availability (e.g., at homes or work places of the speakers). The duration of the interviews were typically between thirty minutes and one hour. Recordings were annotated through ELAN 5.7, and data sets were created for all inflected Laz Turkish words (see exceptions in 3.3.3).

3.3.3 Data

Consultants' Turkish speech from the recordings were extracted to create a corpus of suffixed words. The overall corpus consists of 8212 tokens, containing three data sets. One of these data sets is a list of words with a single suffix (henceforth 1-suffixed words) and contains 4,989 tokens. Another data set contains only 2-suffixed words and includes 2,677 tokens. The third data set is for 3-suffixed words and contains 546 tokens. Tokens in the corpora contain roots ranging from one to four. Tokens with various root and suffix lengths will allow an analysis of vowel harmony across the word. Note that there were a few instances of words with 4 (or more) suffixes in the spoken data. These were not included in the LT corpus due to small sample size. Furthermore, tokens which contain at least one suffix with two vowels were not included in the corpus. The reason for this is that one of the most common suffixes with two vowels in the data was the progressive suffix -Ijor (e.g., [gel-ijor-lar] 'come-PROG-3PL'). In ST, vowel

harmony applies to the first but not to the second vowel in the progressive suffix (see Section 3.2.4). Including such suffixes in the LT corpus would skew the results of this study. Since the goal is to assess how much harmony and disharmony LT has compared to ST, including multiple tokens of disharmonic suffixes that are in both dialects will obscure the comparison.

For every token in the LT corpus, an ST cognate was listed. Root and suffix vowel features were specified (i.e., height, backness, rounding). Whether these vowels harmonize with the preceding vowel with respect to backness and/or rounding was also indicated. For each vowel, surrounding consonants were identified. Each suffix vowel was identified as being located in a 'closed' or 'open' syllable.

In addition, each of the 8,212 tokens was labeled as 'ST-identical' or 'LT-unique' with respect to the vowels the token contains. If an LT word is identical to its ST cognate, this LT word is marked as 'ST-identical'. As the focus of this study is how vowels and vowel harmony in LT differ from ST, LT words that differ from the ST cognate only in consonants are also marked as 'ST-identical' (43a). If an LT word contains at least one vowel that is different from what that token would be in ST, then this token is marked as 'LT-unique' indicating that the token contains LT characteristics with respect to vowels (43b).

(43) a. **ʤ**it-ti (cf. ST **g**it-ti) → ST-identical
go-PST
'he/she/it went'
[081919-S2-M]

b. el-**u**m-den (cf. ST el-**i**m-den) → LT-unique
hand-POSS.1SG-ABL
'from my hand'
[080619-S1-O]

The discussion of LT in Section 3.4.1 and 3.4.2 will refer to both ST-identical and LT-unique forms in the corpus. However, the main focus of this study will be on the LT-unique tokens. This has at least two benefits. One, it focuses on what distinguishes these forms from the standard variety. Two, it prevents eliminating the harmonic but LT-unique words such as

[misir-ler] 'corn-PL' (cf. [mɯsɯr-lar] in ST).

Data analysis and illustrations were done via Python. All tokens from the ten speakers were analyzed together.

3.4 Research Questions and Discussion

The goal of this chapter is to report the general distribution of vowels in the LT corpus. Therefore, the following sections will look into five basic questions below. The rest of the issues will be addressed in the following chapter.

1. Who uses the most LT-unique tokens?
2. What are the vowels that occur in LT-unique words?
3. How do the LT vowels differ from ST vowels?
4. How much harmony is there in LT-unique tokens in general?
5. Do backness and rounding harmonies peter out across the word in LT-unique tokens?

3.4.1 Distribution of LT-unique vs. ST-identical tokens

As described in Section 3.3.3, the total number of LT word tokens in the corpus is 8212 and these are labeled as either ST-identical or LT-unique. The goal of this section is to get an overall picture of i) how much of the corpus resembles ST and how much of it is LT-unique with respect to vowel distribution and ii) the distribution of LT unique words by age/speaker.

The distribution of ST-identical and LT-unique tokens in the corpus as well as their suffix length are summarized in Table 3.4. 69% of the tokens in the LT corpus resemble ST cognates with respect to vowels. ST-identical LT tokens have the same vowel sequences in ST cognates, so these ST-identical tokens satisfy backness and rounding harmonies wherever applicable as

in ST as discussed in Section 3.2 of this chapter. In other words, ST-identical tokens are not informative with respect to how LT vowels differ from ST. Vowels in the remaining 31% of LT tokens show differences from ST cognates. LT-unique tokens contain many disharmonic forms as will be discussed in the rest of this chapter. To identify how LT vowels (and therefore LT vowel harmony) differ from ST, one must examine the LT-unique tokens within the corpus. This will be discussed in the following sections.

Table 3.4: Distribution of ST-identical and LT-unique tokens in the corpus

Token length	ST-identical	LT-unique	Total
1-suffixed	3838 (77%)	1151 (23%)	4989
2-suffixed	1572 (59%)	1105 (41%)	2677
3-suffixed	288 (53%)	258 (47%)	546
Total	5698 (69%)	2514 (31%)	8212

Each speaker contributed different numbers of tokens in the corpus since data were extracted from natural conversations. The number of tokens were not solely dependent on how long the conversation was, but it also depended on how many inflected words (with one, two or three suffixes) were produced during the conversation. The number of tokens from each speaker is illustrated in Figure 3.1, where speakers are indicated by their age ('65a' = Speaker 8, '65b' = Speaker 3). The two speakers (Speaker 9 and 10) from Çayeli are indicated with '*'.

The number of ST-identical and LT-unique tokens contributed by each speaker was also analyzed and illustrated in Figure 3.2. The distribution of ST-identical and LT-unique tokens for each speaker is different. The number of LT-unique tokens produced by speakers older than 70 years old are close to the number of ST-identical tokens they produced. On the other hand, younger speakers have a larger gap between the number of ST-identical and LT-unique tokens they produced.

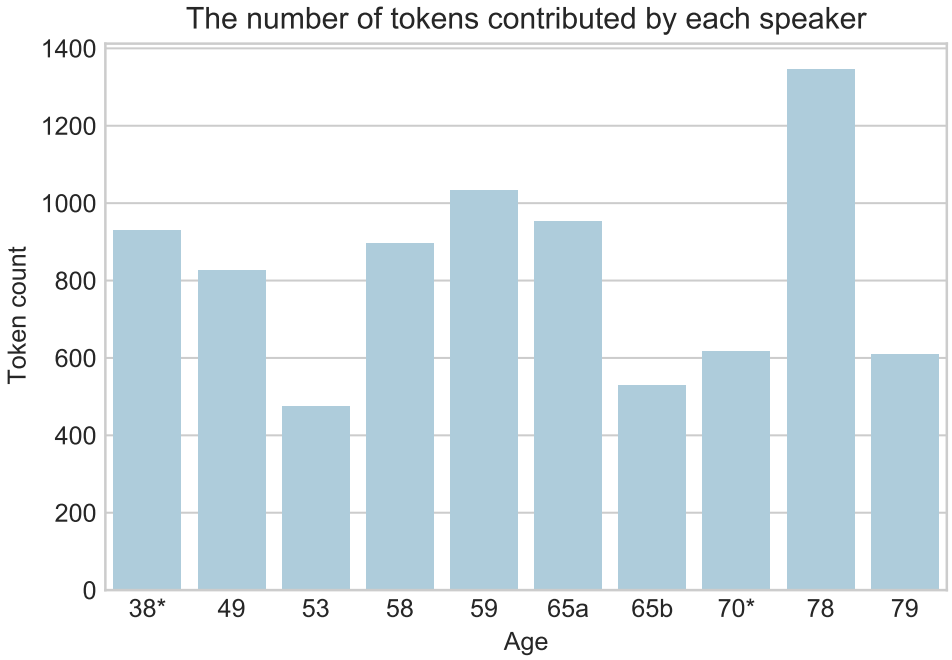


Figure 3.1: The number of tokens from each speaker in the corpus

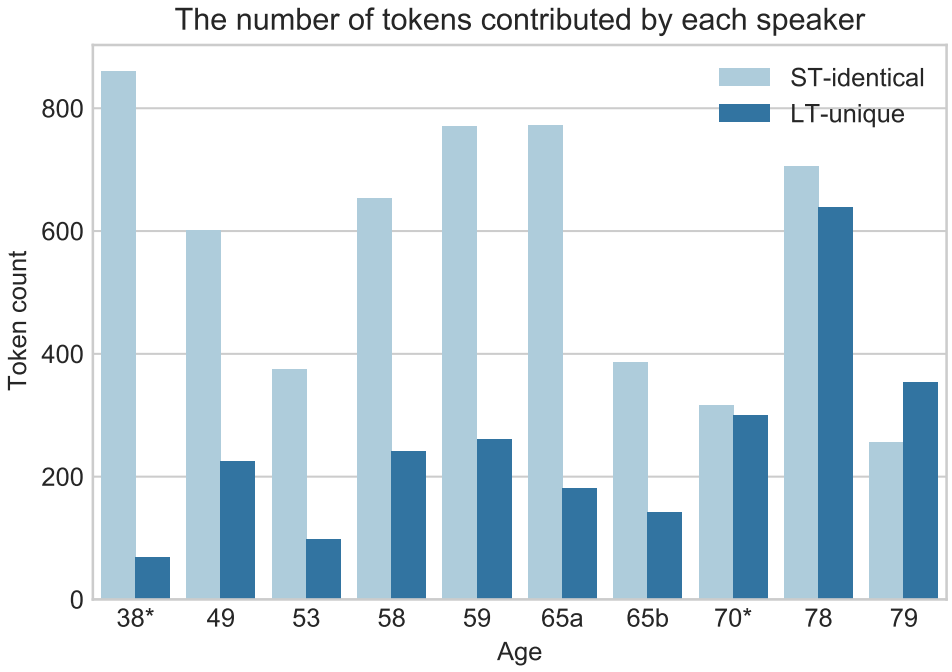


Figure 3.2: The number of ST-identical and LT-unique tokens from each speaker

To give a better sense of the distribution of LT-unique tokens by age and speaker, Figure 3.3 provides the percentage of LT-unique tokens for each speaker. The data fall into three groups: $\geq$70, 49-65 and $\leq$38, suggesting a generational gap with respect to the use of LT-unique tokens.[39]

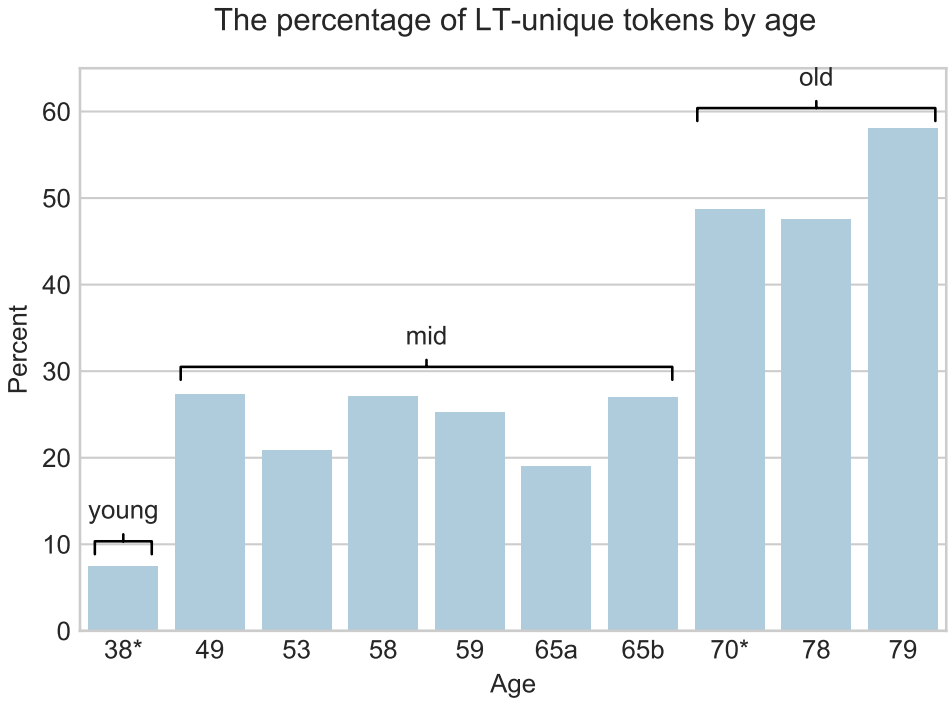


Figure 3.3: The percentage of LT-unique tokens produced by speakers

In summary, throughout the whole LT-corpus, 69% of LT tokens are ST-identical and the remaining 31% contains LT-unique tokens. The majority of the LT-unique tokens in the corpus are produced by elderly speakers followed by middle aged speakers. The lowest number of LT-unique tokens is produced by the young speaker. I hypothesize that this is due to contact with ST and a gradual convergence towards ST represented in the younger speakers. LT features will be discussed in the rest of this chapter as well as the next chapter.

[39]The 25 year old speaker, who was excluded from the corpus as described in Section 3.3.1, produced only 3 (%0.003) LT-unique tokens out of 973 suffixed words, possibly creating another age gap.

3.4.2 Distribution of vowels in LT

This section is concerned with the LT vowel segments that occurred in the LT corpus and their comparison with the vowel segments in ST cognates. This section also aims to investigate the vowels occurring in LT-unique tokens and their distribution by age.

All vowel segments observed in LT are illustrated in Figure 3.4. The vowels represented in this figure are my transcriptions of LT.

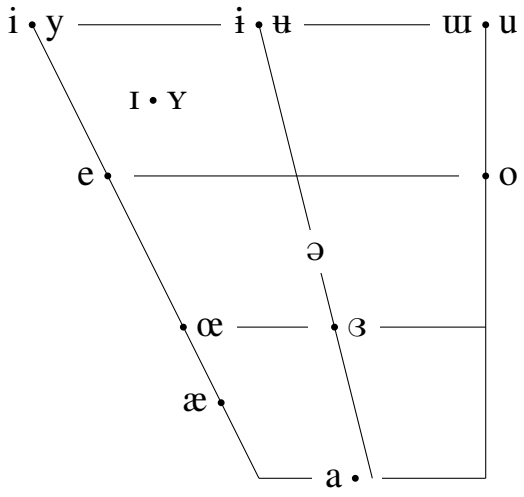


Figure 3.4: Vowel segments of LT

The number of occurrences for each root vowel in the whole LT corpus (including ST-identical and LT-unique tokens) in comparison with the number of vowel segments in ST cognates is provided in Figure 3.5. This figure shows that the number of occurrences for non-high root vowels [e, a] was equal to that of ST cognates. [y, ɯ, œ] are relatively rare in both LT and ST, but occurred slightly fewer times in the roots of LT tokens compared to their ST cognates. In contrast, the number of occurrences for [u, i, o] is slightly higher within roots. This distribution can be compared with the distribution of root vowels only in LT-unique tokens in Figure 3.6. As seen in Figure 3.6, non-high root vowels [a, e] in LT-unique tokens are comparable to that of ST cognates. However, taking the number of vowel occurrences in ST cognates as the reference point, there is a decrease in [y, ɯ, œ] but an increase in [u, i, o] within the root vowels of LT-unique tokens.

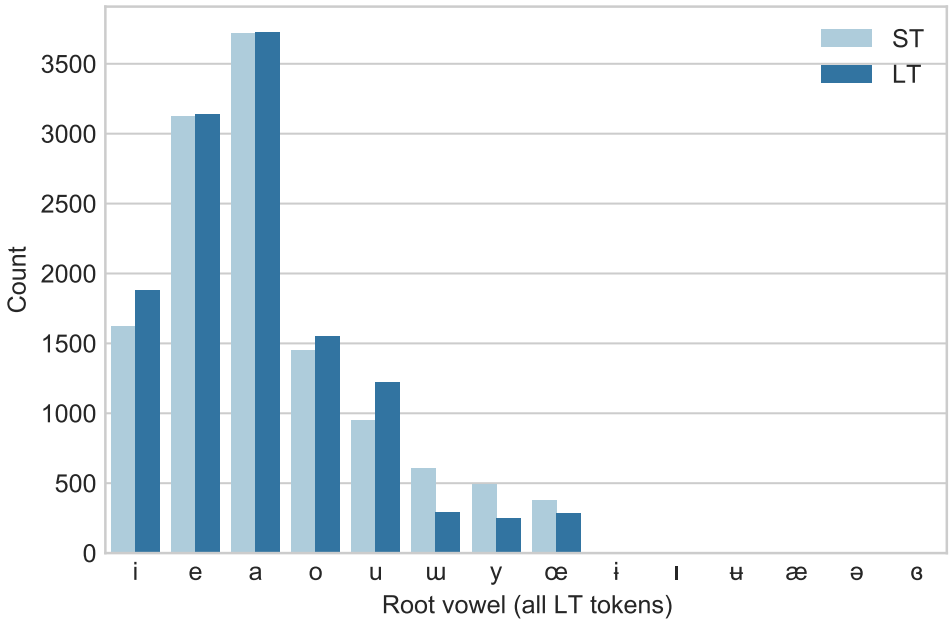


Figure 3.5: The number of root vowels in all LT tokens in comparison with their ST cognates

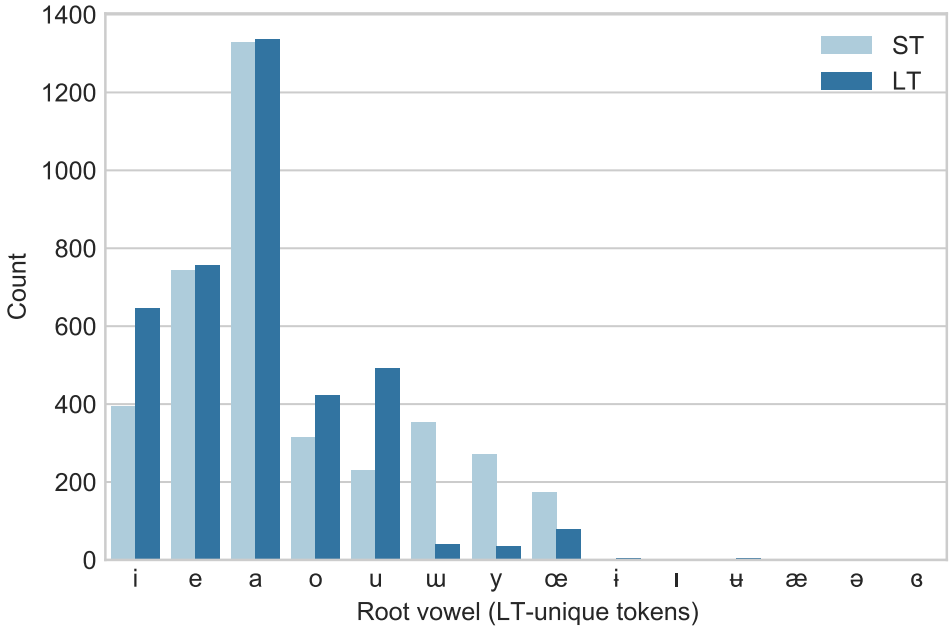


Figure 3.6: The number of root vowels in LT-unique tokens in comparison with their ST cognates

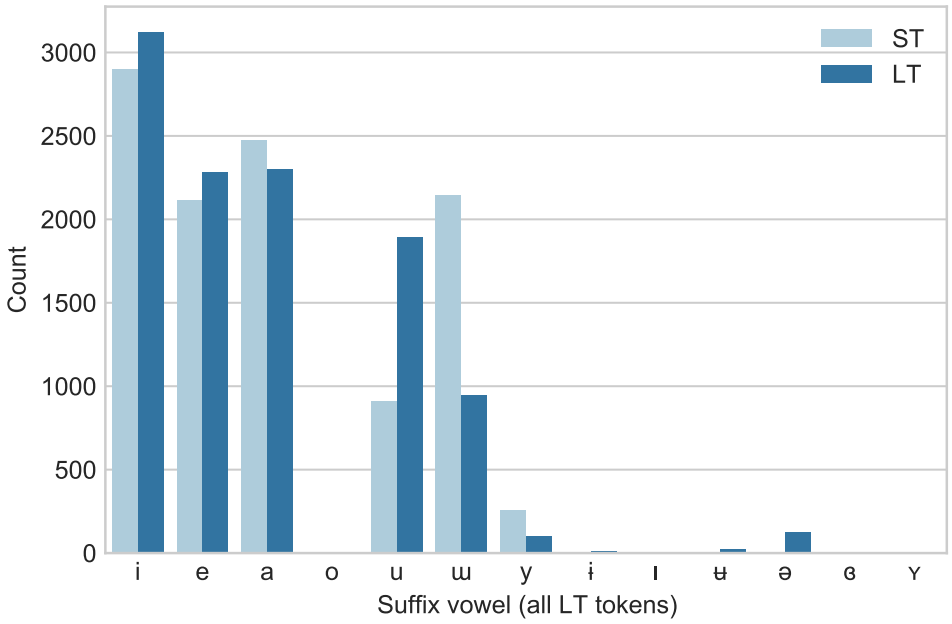


Figure 3.7: The number of suffix vowels in all LT tokens in comparison with their ST cognates

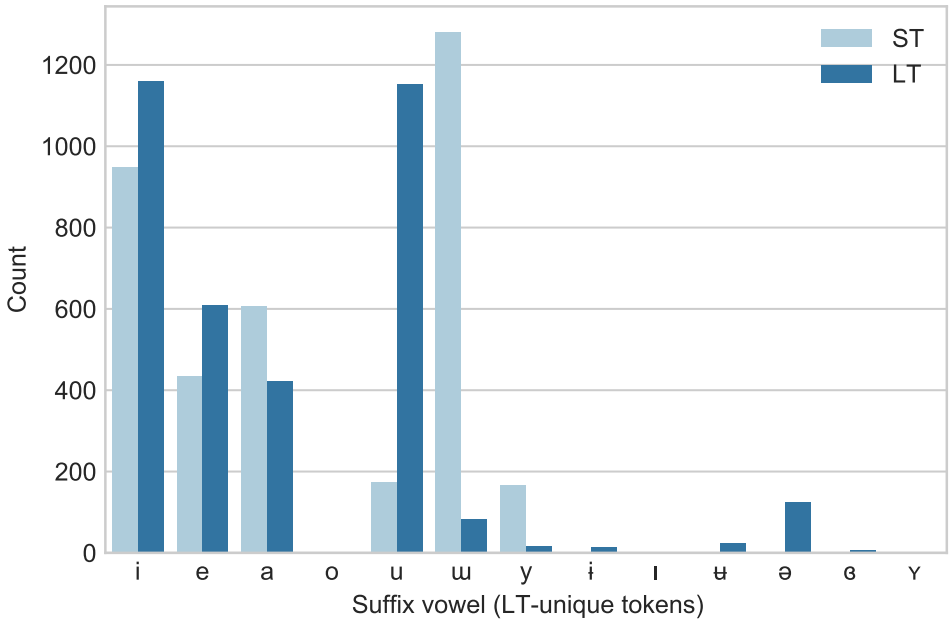


Figure 3.8: The number of suffix vowels in LT-unique tokens in comparison with their ST cognates

Figure 3.7 and 3.8 present the same comparison as Figure 3.5 and 3.6, but this time based on suffix vowels. Figure 3.7 indicates a more obvious mismatch among the number of suffix

vowels of LT in comparison with the suffix vowels in ST cognates. There are far fewer numbers of [ɯ, y] within suffixes of LT tokens, the occurrence of [u] nearly doubled compared to the suffix vowels of ST cognates. Both Figure 3.5 and 3.7 show that other vowels [ɔ, ʉ, i̇, ɪ, æ, ɞ, ʏ] occured in the LT corpus but rarely. When it comes to suffix vowels in LT-unique tokens only, as demonstrated in Figure 3.8, there is a sharp decrease in [ɯ, y] and a sharp increase in occurrences of [u] along with a slightly higher number of [i].

To summarize, in comparison with the vowel occurrences in ST cognates, LT unique tokens presented a different pattern. The use of Turkish vowels [y, ɯ, œ] were reduced while the use of [u, i, o], which are found in the vowel system of both Turkish and Laz, increased. Such a pattern was observed most obviously within suffix vowels of LT-unique tokens. These observations raise the question of which age group or how much of each age group contributes to this pattern? Therefore, the rest of this section examines the distribution of vowels in LT-unique tokens by age, and age groups are represented as young ($\leq$38), middle (49-65) and old ($\geq$70).

In LT-unique tokens, the distribution of root vowels by age are illustrated in Figure 3.9, where 'other' vowels refer to [i̇, ɪ, ʉ, æ, ɞ]. In general, older speakers use fewer [ɯ, y, œ] compared to middle aged speakers, which indicates a generational gap. Highest number of LT [i, o] are produced by the old age group followed by the mid age group, whether or not these correspond to [i, o] in ST respectively. The number of LT [u] produced by old and mid age groups are almost equal. However, these correspond to ST [u] less often in the mid age group, indicating that the mid age group might have a stronger preference for LT [u] in roots whether the corresponding ST vowel is [u] or not. There is no clear generational difference regarding non-high vowels [a, e]. There is little data from the young speaker because only less than 10% of his words were LT-unique (cf. Figure 3.3).

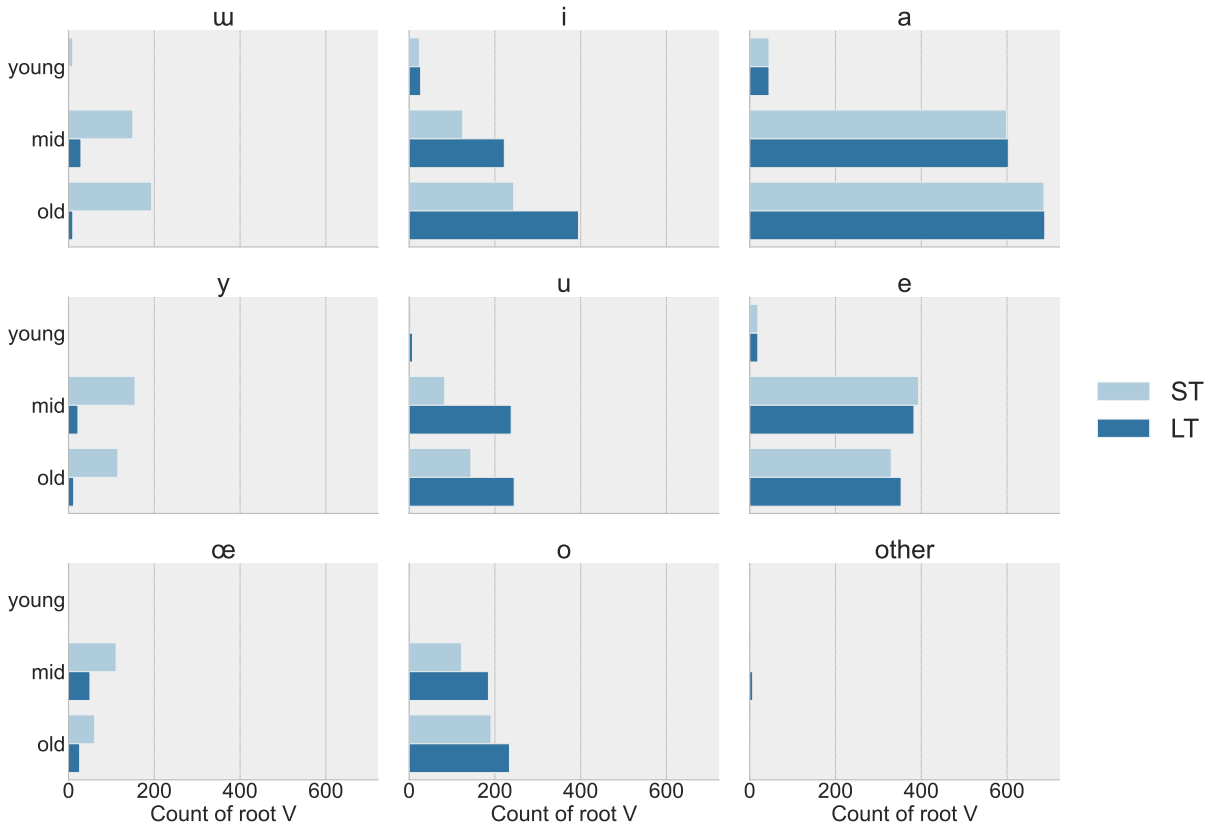


Figure 3.9: Root vowels in LT-unique tokens in comparison with root vowels in ST-cognates

Figure 3.10, where 'other' category contains [i̟, ɪ, ʉ̟, ə, ɞ, ʏ], illustrates the distribution of suffix vowels by age in LT-unique tokens. In general, [ɯ, y] are rarely used in suffixes across all age groups. However, the mid age group produces [ɯ] more often compared to the old age group. The mid age group also uses the most vowels from the set of 'other' vowels, which may be indicating a transitioning stage (e.g. for an LT vowel corresponding to ST [ɯ], transitioning from [i] to [i̟] and then to [ɯ]). The most common high vowels in the suffixes of LT-unique tokens are [i] and [u]. The mid age group uses [i] more often compared to the old age group whereas the old age group uses [u] more often compared to the middle agers. There is no clear generational difference regarding non-high vowels [a, e]. There is little data from young speakers.

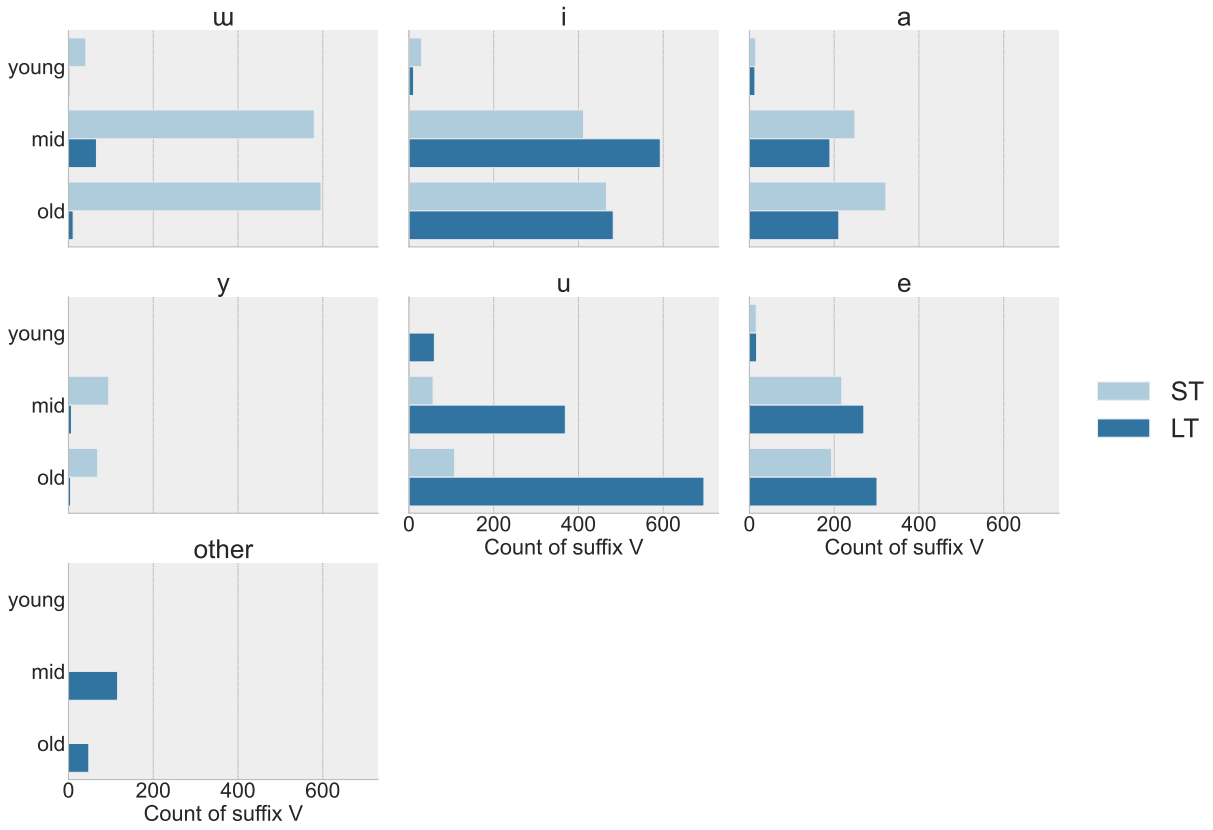


Figure 3.10: Suffix vowels in LT-unique tokens in comparison with suffix vowels in ST-cognates

Previous sections indicated that LT is heavily influenced by the Laz language, which lacks the three Turkish phonemes /ɯ, y, œ/. The results provided in this section have demonstrated that the characteristics of the Laz vowel system is reflected in LT, where the occurrence rates of [ɯ, y, œ] in LT-unique roots/suffixes are low. For this reason, the observations made in this section may be suggestive of a vowel correspondence pattern in LT-unique tokens, where the three Turkish vowels [y, ɯ, œ] are substituted with their front/back counterparts [u, i, o]. To probe whether this is indeed the case, a vowel-to-vowel comparison is provided in the following section.

3.4.3 Vowel-to-vowel Correspondence

The preceding section indicated that LT, a second language variety of Turkish, may have a vowel substitution pattern due to the differences between vowel systems of Turkish and Laz. Such

strategies are attested in L2 acquisition of vowel systems as discussed in Chapter 1, Section 1.4. LT learners who are native Laz speakers may have initiated similar strategies. The Laz language has /i, u, o, a, e/ but not /ɯ, y, œ/. Therefore, LT speakers may substitute /ɯ, y, œ/ with other vowels. Given the higher numbers of [i, u, o] in the LT-unique corpus, these are the most likely vowels that are substituted, where the rounding and height of the ST vowels are maintained, but this must be determined.

To investigate vowel correspondence, each vowel in each LT-unique token in the LT corpus was compared with the corresponding vowel in the ST cognate. For instance, the 1st root vowel in the LT-unique token [**i**ʃikli-de] 'Işıklı-LOC' is [i]. The corresponding root vowel in the ST cognate of this word is [ɯ]; [**ɯ**ʃɯklɯ-da]. In other words, there is a mismatch between the corresponding first root vowels. This type of a mismatch can be characterized as vowel substitution. Because the first root vowel is the vowel harmony trigger in Turkish, vowel harmony does not apply to the first root vowel. Therefore, the best vowel position to examine whether there is a vowel substitution strategy is the first root vowel. Table 3.5 summarizes all vowel correspondences in the first root vowel position of LT-unique tokens.

According to Table 3.5, [a, e, i, o, u] mainly show a match between ST and LT in the 1st root position. Other vowels [ɯ, œ, y] can be observed in the root-initial position in LT-unique tokens, matching the root-initial vowel in the corresponding ST cognates. Nevertheless, there are also a set of cases where there is a mismatch, and they are overwhelmingly observed between [i, o, u] and their front/back counterparts [ɯ, œ, y].

Table 3.5: Comparison of the 1st root vowel in LT-unique tokens vs. ST cognates

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
1st Root Vowel	match	a	839	-	-	-	-	-	-	-	-	839
		e	-	493	-	-	-	-	-	-	-	493
		i	-	-	248	-	-	-	-	-	-	248
		o	-	-	-	303	-	-	-	-	-	303
		u	-	-	-	-	102	-	-	-	-	102
		y	-	-	-	-	-	18	-	-	-	18
		œ	-	-	-	-	-	-	77	-	-	77
		ɯ	-	-	-	-	-	-	-	22	-	22
		Total	839	493	248	303	102	18	77	22	-	2102
	mismatch	a	-	1	-	-	1	-	-	-	1	3
		e	3	-	-	-	-	-	-	-	1	4
		i	-	10	-	-	2	-	-	-	-	12
		o	1	-	-	-	1	-	1	-	-	3
		u	-	1	-	2	-	1	-	-	-	4
		y	-	-	1	-	161	-	-	-	3	165
		œ	-	1	-	94	-	-	-	-	-	95
		ɯ	-	-	118	1	6	-	-	-	1	126
		Total	4	13	119	97	171	1	1	-	6	412

As can be seen in Table 3.5, in ST cognates, there are a total of 183 occurrences of [y], 172 occurrences of [œ], and 148 occurrences of [ɯ] in match and mismatch cases combined. There is a match between the initial root vowels of LT-unique token and the ST cognate in 18 (9.8%) instances of [y], 77 (44.8%) instances of [œ], and 22 (14.9%) instances of [ɯ]. Whenever there is mismatch, ST cognate [y] primarily corresponds to [u] (161 instances, 88% of all occurrences of [y]), [œ] corresponds to [o] in the majority of forms (94 instances, 54.7% of all occurrences of [œ]), and [ɯ] primarily corresponds to [i] (118 instances, 79.7% of all occurrences of [ɯ]) in root-initial positions of LT-unique tokens. This pattern is illustrated in Figure 3.11.

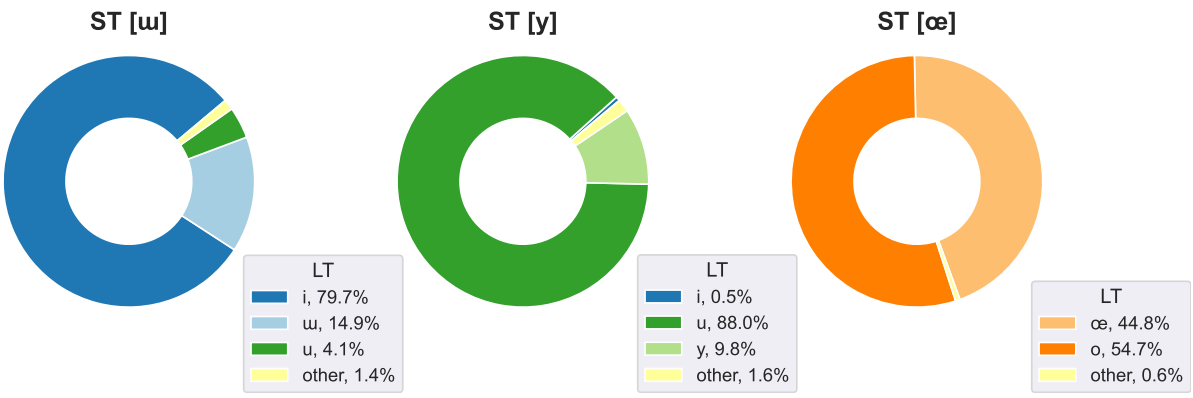


Figure 3.11: [ɯ, œ, y] in the 1st root vowel of LT-unique tokens in comparison with their ST cognates

The distribution illustrated in Figure 3.11 raises the questions of whether it is the elderly LT speakers who substitute [ɯ, y, œ]. A breakdown of vowel correspondences for [ɯ, y, œ] by age is provided in Table 3.6. In the 1st root vowel position, ST [ɯ] to LT [i] substitution is especially done by the old age group (n=87, 59% of all occurrences of ST [ɯ]) whereas ST [y] to LT [u] substitution is especially done by the mid age group (n=98, 53.5% of all occurrences of ST [y]). The mid age group also contributes most to the ST [œ] to LT [o] substitution in the corpus (n=59, 34.3% of all occurrences of ST [œ]). Both [o] and [œ] are used by the mid age group (50 [œ] vs. 59 [o]) and the old age group (25 [œ] vs. 35 [o]). Sample size from the young age group is too small to make further comparisons.

Table 3.6: Vowel correspondences for [ɯ, y, œ] in the 1st root position of LT-unique tokens divided by age

Age	ST cognate	LT vowels							Total
		ɯ	y	œ	i	u	o	other	
young	ɯ	1	-	-	2	-	1	-	4
	y	-	-	-	-	-	-	-	-
	œ	-	-	2	-	-	-	-	2
	Total	1	-	2	2	-	1	-	6
mid	ɯ	14	-	-	29	5	1	-	49
	y	-	12	-	-	98	-	3	113
	œ	-	-	50	-	-	59	-	109
	Total	14	12	50	29	103	60	3	271
old	ɯ	7	-	-	87	1	-	-	95
	y	-	6	-	1	63	-	-	70
	œ	-	-	25	-	-	35	1	61
	Total	7	6	25	88	64	35	1	226

The patterns observed in Table 3.6 are visualized in Figure 3.12. LT speakers from the mid age group proportionally uses more LT [ɯ] corresponding to ST [ɯ] (28.6%) compared to the speakers from the old age group (7.4%). The old age group substitutes ST [ɯ] with LT [i] most often (91.6%). The mid aged speakers also tend to use LT [y] matching ST [y] slightly more often (10.6%) compared to the speakers from the old age group (8.6%). Similarly, the mid age group uses LT [œ] matching ST [œ] slightly more often (45.9%) compared to the old speakers 41%). Percentages for the young age group may be ambiguous due to small sample size. In summary, it is possible to make a generalization that the mid aged speakers produce more [ɯ, y, œ] compared to the old aged speakers. The speakers from the old age group tend to substitute [ɯ, y, œ] with [i, u, o] most often.

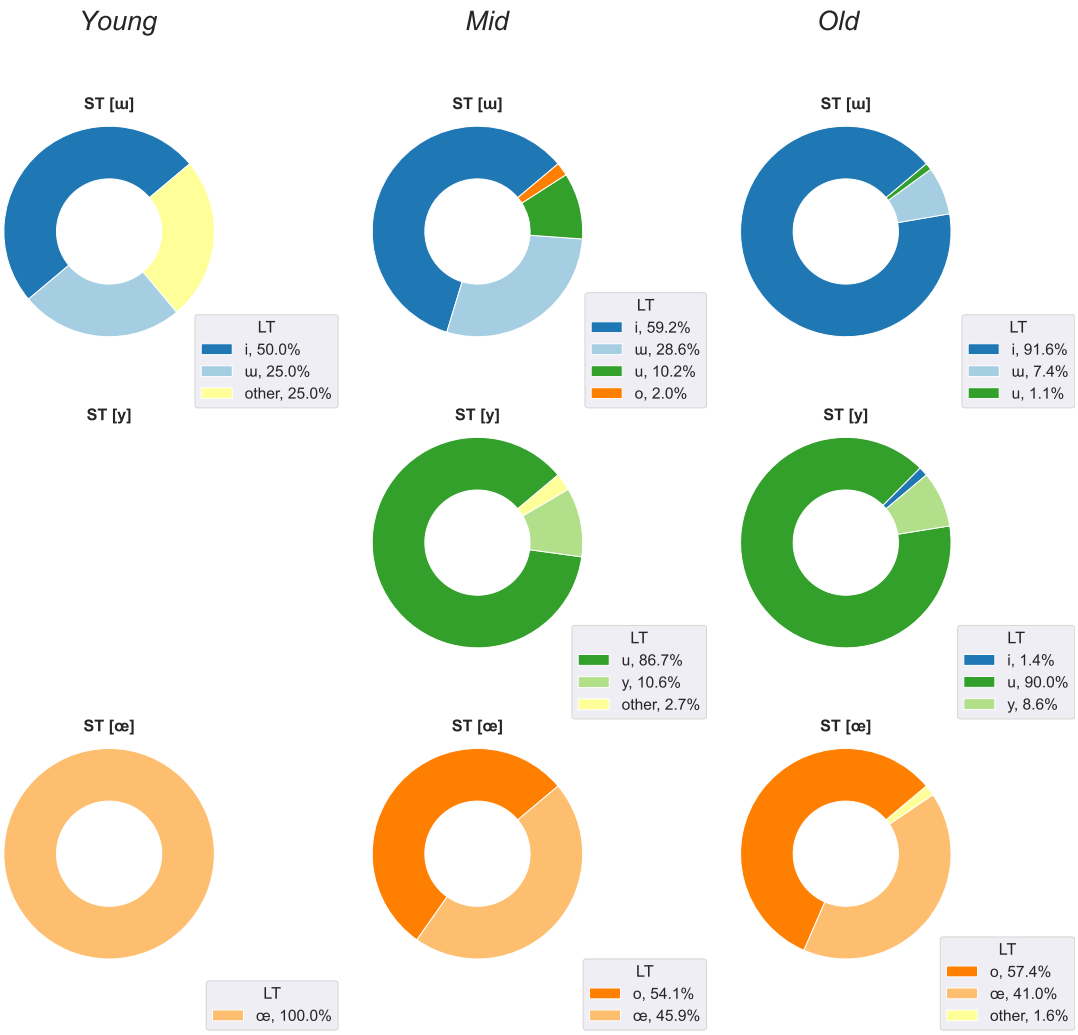


Figure 3.12: Vowel correspondences for [ɯ, y, œ] in the 1st root position of LT-unique tokens divided by age

Next, Table 3.7 illustrates the distribution of vowels in the second root position of ST cognates in comparison with the LT vowels in the same position. The information in this table is visualized in Figure 3.13.

First of all, there is no occurrence of [œ] and only 6 occurrences of [o] in the 2nd root vowel position. This is because non-high round [o, œ] typically only occur in root-initial positions in Turkish (ST as well as LT), except for loanwords. The rest of the non-high vowels [a, e] mainly match between ST and LT in the 2nd position, similar to the 1st root position.

In the 2nd root position of ST cognates, there are a total of 192 occurrences of [ɯ] in match and mismatch cases combined. ST [ɯ] corresponds to the matching LT [ɯ] only 16 times (8.3% of all occurrences of ST [ɯ]) whereas 146 (76%) of ST [ɯ] correspond to LT [i] and 29 (15.1%) to LT [u]. There are also 85 occurrences of ST [y] in total in match and mismatch conditions. ST [y] corresponds to the matching LT [y] only 12 times (14.1% of all occurrences of ST [y]). The rest of ST [y] corresponds to LT [u] (n=64, 75.3%) and LT [i] (n=9, 10.6%). In other words, in the 2nd root position, ST [ɯ, y] most often correspond to LT [i, u] respectively. This is similar to what was observed in the 1st root position. However, the fact that ST [ɯ] also corresponds to LT [u] and ST [y] also corresponds to LT [i] in the 2nd root position is a new observation, distinct from the pattern in the 1st root vowels where almost all mismatch cases were correspondences between [y]-[u], [ɯ]-[i], and [œ]-[o].

Table 3.7 also highlights that ST [i, u] may both correspond to LT [i] and [u]. In the 2nd root position, there are 118 instances of ST [i] in the match and mismatch cases in total. ST [i] corresponds to the matching LT [i] in 69 cases (58.5%). But it also corresponds to the mismatching LT [u] 26 times (22%) and LT [ɯ] 3 times (2.5%). There are also a total of 114 instances of ST [u] in the match and mismatch conditions. ST [u] matches LT [u] 93 times (81.6%). However, it mismatches with LT [i] 17 times (14.9%) and LT [y] 2 times (1.8%)

Clearly, there are additional factors in non-initial syllables leading to a correspondence of [y]-[i, u] and [ɯ]-[i, u] as well as [i]-[u] and [u]-[i]. The mismatch patterns represented in

Table 3.7 are ambiguous because in non-initial syllables, it is not clear if the vowel mismatch is due to i) vowel substitution, or ii) vowel harmony with the preceding vowel. This issue will be addressed in the next chapter.

Table 3.7: Comparison of the 2nd root vowel in LT-unique tokens vs. ST cognates

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
2nd Root Vowel	match	a	431	-	-	-	-	-	-	-	-	431
		e	-	189	-	-	-	-	-	-	-	189
		i	-	-	69	-	-	-	-	-	-	69
		o	-	-	-	6	-	-	-	-	-	6
		u	-	-	-	-	93	-	-	-	-	93
		y	-	-	-	-	-	12	-	-	-	12
		œ	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	-	-	-	16	-	16
		Total	431	189	69	6	93	12	-	16	-	816
	mismatch	a	-	1	-	-	-	-	-	-	-	1
		e	5	-	1	-	-	-	-	-	-	6
		i	-	18	-	-	26	-	-	3	2	49
		o	-	-	-	-	-	-	-	-	-	-
		u	-	-	17	2	-	2	-	-	-	21
		y	-	-	9	-	64	-	-	-	-	73
		œ	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	146	-	29	-	-	-	1	176
		Total	5	19	173	2	119	2	-	3	3	326

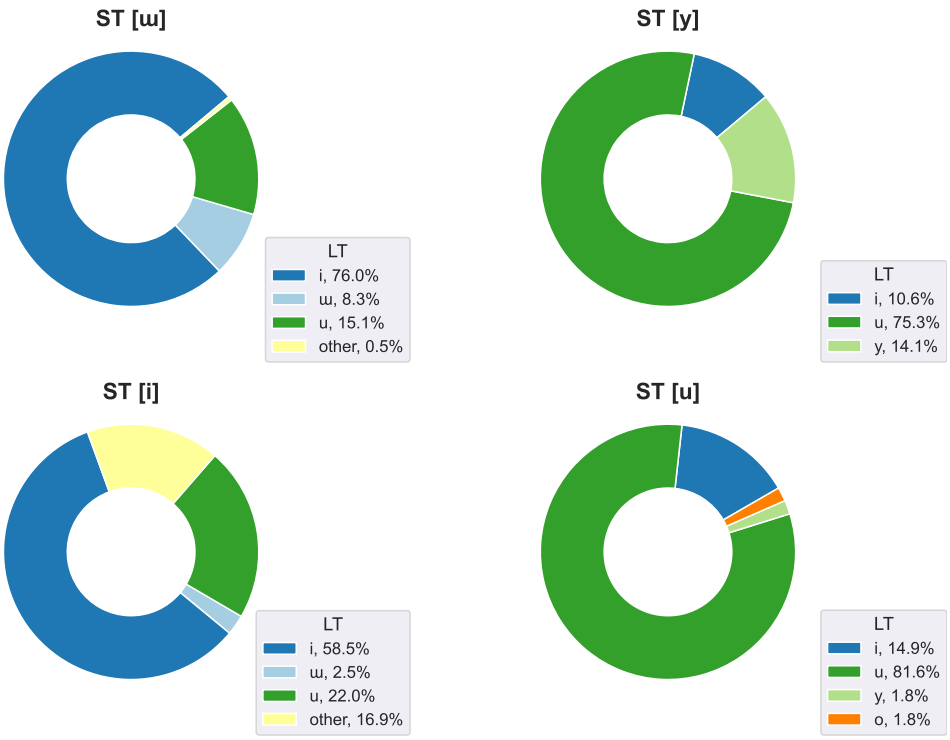


Figure 3.13: 2nd root vowels of LT-unique tokens

Distribution of the 2nd root vowels are also examined by age and the results are reported in Table 3.8 and visualized in Figure 3.14. The sample size for the young speaker is small so the mid and old age groups will be compared. Overall, the mid aged group produces more [ɯ] (13.5% matching ST [ɯ] and 5.3% corresponding to ST [i]) and more [y] (19.5% matching ST [y]) in LT-unique tokens compared to the old aged group (2.2% [ɯ] matching ST, 1.4% [ɯ] corresponding to ST [i], 7% [y] matching ST). One of the predicted substitution patterns, ST [ɯ] to LT [i] correspondence, is proportionally higher for old speakers (83.3%) compared to the mid age group (71.9%). The other predicted substitution pattern, ST [y] to LT [u], is slightly higher proportionally for the mid aged speakers (78%) compared to old speakers (74.4%). One of the unpredicted substitution patterns, ST [u] to LT [i], is only done by the old age group (21.2%). The other unpredicted correspondence, ST [i] to LT [u], is observed for both mid and old age groups but it is slightly higher for the mid age group (23.7%) compared to the old age group (21.6%).

Table 3.8: Vowel correspondences for [ɯ, y, i, u] in the 2nd root position of LT-unique tokens divided by age

Age	ST cognate	LT vowels							Total
		ɯ	y	i	u	œ	o	other	
young	ɯ	1	-	2	3	-	-	-	6
	y	-	1	-	-	-	-	-	1
	i	-	-	5	1	-	-	-	6
	u	-	-	-	1	-	-	-	1
	Total	1	1	7	5	-	-	-	14
mid	ɯ	13	-	69	13	-	-	1	96
	y	-	8	1	32	-	-	-	41
	i	2	-	24	9	-	-	3	38
	u	-	-	-	33	-	-	-	33
	Total	15	8	94	87	-	-	4	208
old	ɯ	2	-	75	13	-	-	-	90
	y	-	3	8	32	-	-	-	43
	i	1	-	40	16	-	-	17	74
	u	-	2	17	59	-	2	-	80
	Total	3	5	140	120	-	2	17	287

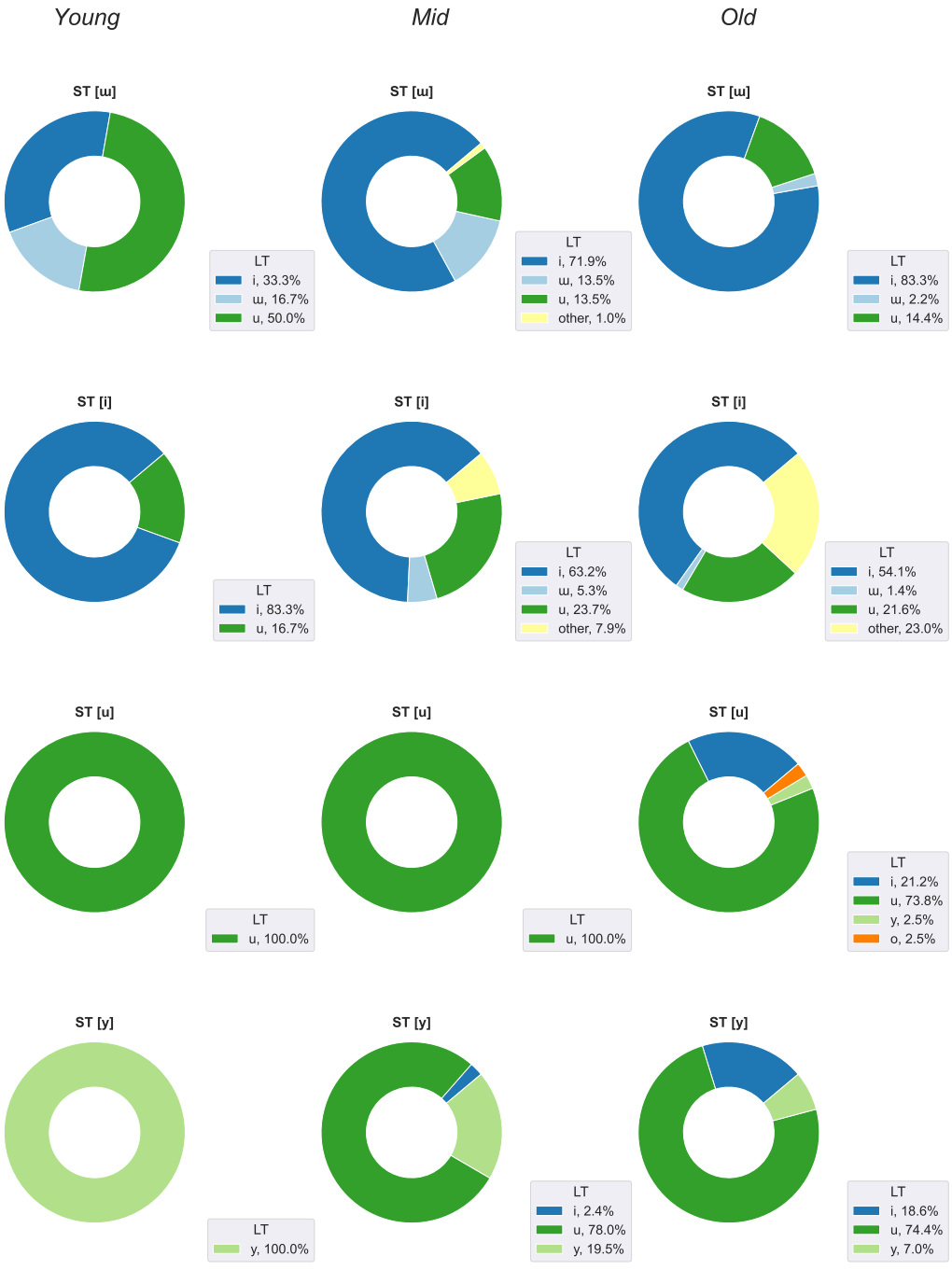


Figure 3.14: 2nd root vowels of LT-unique tokens divided by age

Table 3.9: Comparison of the 3rd and 4th root vowels in LT-unique tokens vs. ST cognates

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
3rd Root Vowel	match	a	53	-	-	-	-	-	-	-	-	53
		e	-	31	-	-	-	-	-	-	-	31
		i	-	-	12	-	-	-	-	-	-	12
		o	-	-	-	2	-	-	-	-	-	2
		u	-	-	-	-	2	-	-	-	-	2
		y	-	-	-	-	-	1	-	-	-	1
		œ	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	-	-	-	-	-	-
		Total	53	31	12	2	2	1	-	-	-	101
	mismatch	a	-	-	1	-	-	-	-	-	-	1
		e	2	-	8	-	-	-	-	-	-	10
		i	-	-	-	-	1	-	-	-	-	1
		o	-	-	-	-	-	-	-	-	-	-
		u	-	-	-	7	-	-	-	-	-	7
		y	-	-	-	1	-	-	-	-	-	1
		œ	-	-	-	2	-	-	-	-	-	2
		ɯ	-	-	12	-	-	-	-	-	-	12
		Total	2	-	21	10	1	-	-	-	-	34
4th Root Vowel	match	a	1	-	-	-	-	-	-	-	-	1
		e	-	9	-	-	-	-	-	-	-	9
		i	-	-	2	-	-	-	-	-	-	2
		o	-	-	-	1	-	-	-	-	-	1
		u	-	-	-	-	-	-	-	-	-	-
		y	-	-	-	-	-	-	-	-	-	-
		œ	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	-	-	-	-	-	-
		Total	1	9	2	1	-	-	-	-	-	13
	mismatch	a	-	-	-	-	-	-	-	-	-	-
		e	-	-	-	-	-	-	-	-	-	-
		i	-	-	-	-	-	-	-	-	-	-
		o	-	-	-	-	-	-	-	-	-	-
		u	-	-	-	-	-	-	-	-	-	-
		y	-	-	-	-	-	-	-	-	-	-
		œ	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	1	-	-	-	1	2
		Total	-	-	-	-	1	-	-	-	1	2

Table 3.9 demonstrates the 3rd and 4th root vowel comparisons for completeness. Due to small sample size, no further interpretations will be made.

In root vowels, the position of the vowel matches the order of syllables (e.g., the 2nd root vowel is in the 2nd syllable of the word). However, suffix vowels do not reflect the syllable order because roots may have up to 4 vowels. For instance, the 1st suffix vowel may be the second syllable of the word if the root is monosyllabic (e.g., *ki.z**u**m* 'my daughter', where 'kiz' is the root), or it could be the third syllable if the root contains two vowels (e.g., *ri.ze.n**u**n* 'Rize's', where 'rize' is the root). So, there are two possibilities to analyze the position of suffix vowels within words: i) analyzing suffix vowels by suffix order (i.e., 1st suffix vowel, 2nd suffix vowel, 3rd suffix vowel); ii) analyzing suffix vowels by the position within words (i.e., 2nd to 7th vowel of the word). Note that there are no occurrences of [o] and [œ] in suffixes of ST cognates in the corpus, so these vowels will be omitted from the rest of the tables in this section.

To begin with, a vowel comparison chart is provided for 1st suffix vowels in Table 3.10. Based on this table, the majority of vowels that present a match between ST cognates and corresponding LT vowels are [a] and [e]. However, there is also a substantial amount of ST [a] corresponding to LT [e] (n=98) and vice versa (n=39) in the mismatch condition. The correspondence between [a] and [e] is not expected based on substitution since these vowels exist in both Laz and Turkish. However, the correspondence between [a] and [e] may be due to harmony with the preceding vowel (See Chapter 4 for further discussion.).

The rest of the vowels [ɯ, y, i, u] primarily show mismatches in the 1st suffix position (also demonstrated in Figure 3.15). First, there are a total of 790 ST [ɯ] in the match and mismatch conditions. Only 31 (3.9%) of these match an LT [ɯ]. The majority of ST [ɯ] correspond to LT [i] (n=512, 64.8%) and LT [u] (n=236, 29.9%). Second, the total count of ST [y] in the 1st suffix position is 131. Only 5 (3.8%) of these ST [y] match LT [y]. Most of the rest of ST [y] correspond to LT [u] (n=97, 74%) and sometimes LT [i] (n=22, 16.8%). Third, there are 606 ST [i] in total match and mismatch cases combined. 78 (12.9%) among these match LT [i]. Surprisingly, 420

(69.3%) of ST [i] correspond to LT [u] and some even correspond to LT [ɯ] (n=20,3.3%). Finally, there are a total of 138 ST [u] in the 1st suffix position. 19 (13.8%) of these match LT [u]. Almost all of the rest ST [u] correspond to LT [i] (n=118, 85.5%). The correspondence between [i] and [u] is not expected based on substitution since both of these vowels exist in Laz and Turkish.

Table 3.10: Comparison of the 1st suffix vowel in LT-unique tokens vs. ST cognates

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
1st Suffix Vowel	match	a	308	-	-	-	-	-	-	-	-	308
		e	-	266	-	-	-	-	-	-	-	266
		i	-	-	78	-	-	-	-	-	-	78
		u	-	-	-	-	19	-	-	-	-	19
		y	-	-	-	-	-	5	-	-	-	5
		ɯ	-	-	-	-	-	-	-	31	-	31
		Total	308	266	78	-	19	5	-	31	-	707
	mismatch	a	-	98	3	1	1	-	-	-	-	103
		e	39	-	2	-	1	-	-	-	4	46
		i	-	-	-	-	420	1	-	20	87	528
		u	-	-	118	-	-	-	-	-	1	119
		y	-	-	22	-	97	-	-	-	7	126
		ɯ	-	-	512	-	236	1	-	-	10	759
		Total	39	98	657	1	755	2	-	20	109	1681

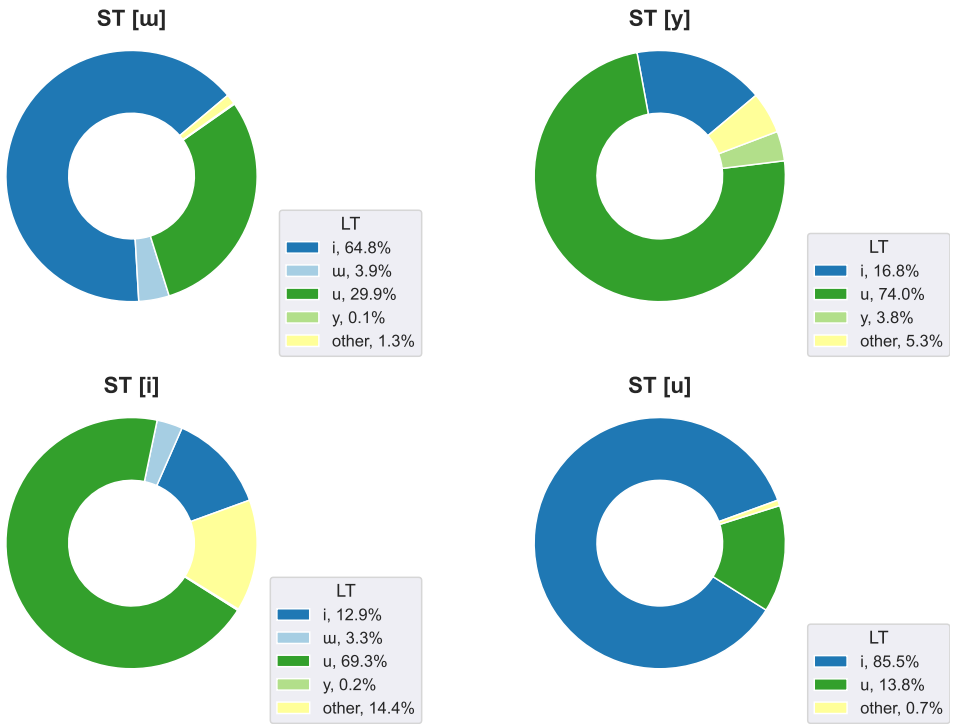


Figure 3.15: 1st suffix vowel of LT-unique tokens in comparison with 1st suffix vowel in ST cognates

To summarize the pattern in the 1st suffix position, there is a prevalence of [i] (n=657) and [u] (n=755) in LT suffixes in the mismatch condition. ST [ɯ] to LT [i] correspondence as well as ST [y] to LT [u] correspondence were observed. These were expected based on the general vowel substitution pattern. Two other correspondences were observed and these were unexpected based on the vowel substitution pattern; i) ST [ɯ, y] corresponding to LT [u, i] respectively, where backness but not rounding feature of vowels are preserved, ii) ST [i, u] to LT [u, i] respectively, where neither backness nor rounding features of vowels are preserved. For this reason, it is useful to consider the age factor in the 1st suffix position to see if the unexpected vowel correspondences were contributed by a specific age group.

The distribution of 1st suffix vowels in LT-unique tokens and their ST cognates is demonstrated in Table 3.11 and visualized in Figure 3.16. First of all, although the sample size is small from the young speaker, there is a general tendency to use [u] in the 1st suffix of LT-unique tokens.

In general, the mid aged LT speakers proportionally use more ST [ɯ] corresponding to LT [i] (80.2%) compared to the old speakers (53.2%). The mid age group also uses proportionally more ST [y] corresponding to LT [u] (78.9%) compared to the old group (66.7%). This shows that the mid age group uses the general vowel substitution pattern (ST [ɯ, y] to LT [i, u] respectively) in suffixes more often when compared with older speakers. On the other hand, older speakers use the unexpected correspondence patterns more often than the mid age group. To clarify, ST [ɯ] corresponds to LT [u] at 43.3% in old speakers but at 12.4% in mid speakers. ST [y] corresponds to LT [i] at 31.5% in old speakers but at 6.6% in mid speakers. In addition, ST [i] corresponds to LT [u] at 81.9% for old speakers but at 53.7% for mid age group. ST [u] corresponds to LT [i] at 88.2% in the old age group but at 82.7% for the mid age group.

Table 3.11: Vowel correspondences for [ɯ, y, i, u] in the 1st suffix position of LT-unique tokens divided by age

Age	ST cognate	LT vowels							Total
		ɯ	y	i	u	œ	o	other	
young	ɯ	1	-	7	17	-	-	-	25
	y	-	-	-	1	-	-	-	1
	i	-	-	-	19	-	-	-	19
	u	-	-	-	1	-	-	-	1
	Total	1	-	7	38	-	-	-	46
mid	ɯ	24	-	291	45	-	-	3	363
	y	-	4	5	60	-	-	7	76
	i	19	-	47	152	-	-	65	283
	u	-	-	43	8	-	-	1	52
	Total	43	4	386	265	-	-	76	774
old	ɯ	6	1	214	174	-	-	7	402
	y	-	1	17	36	-	-	-	54
	i	1	1	31	249	-	-	22	304
	u	-	-	75	10	-	-	-	85
	Total	7	3	337	469	-	-	29	845

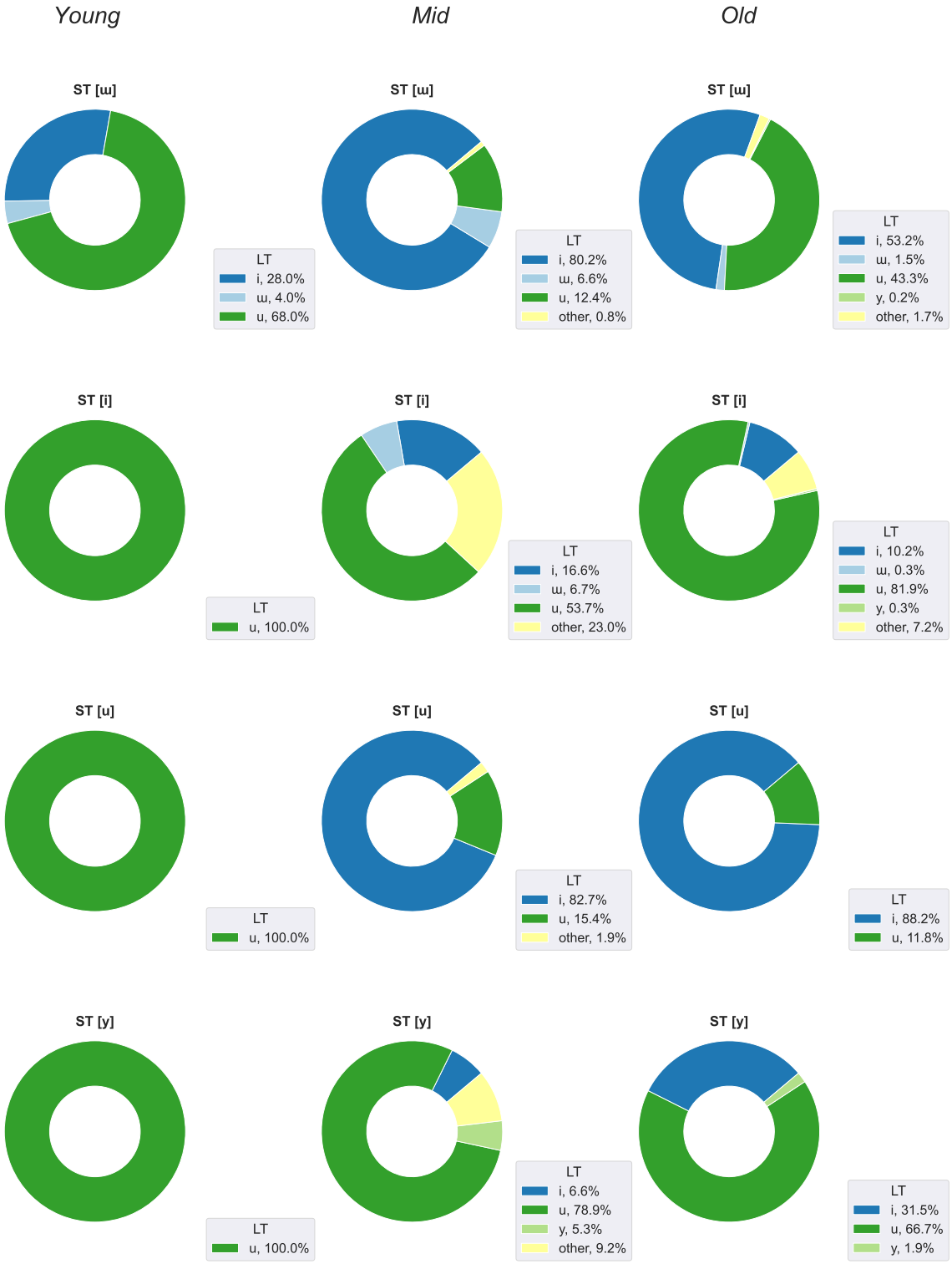


Figure 3.16: 1st suffix vowel of LT-unique tokens divided by age

Next is the distribution of 2nd suffix vowels, presented in Table 3.12. The patterns observed for the 2nd suffix vowels are similar to the distribution of vowels in the 1st suffix position. Overall, two high vowels are common in suffixes of LT-unique tokens; [i] and [u]. In the mismatch condition, the majority of ST [i] corresponds to LT [u] (n=180, 59.6% of all ST [i]). The majority of ST [u] corresponds to LT [i] (n=20, 69% of all ST [u]). ST [y] corresponds to either LT [u] (n=29, 85.3% of all ST [y]) or [i] (n=4, 11.8% of all ST [y]). ST [ɯ] corresponds to either LT [i] (n=262, 61.5% of all ST [ɯ]) or [u] (n=133, 31.2% of all ST [ɯ]). Again, there is notable presence of non-high unround vowels in the mismatch condition. 120 instances of ST [a] correspond to LT [e], and 14 instances of ST [e] correspond to LT [a]. These are highly likely due to vowel harmony with the preceding vowel (See Chapter 4, Section 4.3.4).

Table 3.12: Comparison of the 2nd suffix vowel in LT-unique tokens vs. ST cognates

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
2nd Suffix Vowel	match	a	52	-	-	-	-	-	-	-	-	52
		e	-	101	-	-	-	-	-	-	-	101
		i	-	-	62	-	-	-	-	-	-	62
		u	-	-	-	-	9	-	-	-	-	9
		y	-	-	-	-	-	1	-	-	-	1
		ɯ	-	-	-	-	-	-	-	14	-	14
		Total	52	101	62	-	9	1	-	14	-	239
	mismatch	a	-	120	-	-	-	-	-	-	-	120
		e	14	-	-	-	-	-	-	-	1	15
		i	1	2	-	-	180	4	-	14	39	240
		u	-	-	20	-	-	-	-	-	-	20
		y	-	-	4	-	29	-	-	-	-	33
		ɯ	-	1	262	-	133	-	-	-	16	412
		Total	15	123	286	-	342	4	-	14	56	840

Finally, Table 3.13 illustrates vowels in the 3rd suffix position of LT words and their ST cognates. The number of vowels in the 3rd suffix position is fewer compared to the 1st and 2nd

suffix vowels for two reasons. First, the number of the 3-suffixed tokens in the corpus is smaller. Second, there are suffixes without vowels in this position such as the 1SG *-m*, 2SG *-n*, and 1PL *-k*. Although the sample size is not large, the correspondence pattern stays consistent in the 3rd suffix vowels as well. In the mismatch condition, 11 instances of ST [i] correspond to LT [u] (27.5% of all ST [i]), and all 7 instances of ST [u] correspond to LT [i]. 47 of ST [ɯ] correspond to LT [i] (73.4% of all ST [ɯ]) and 14 to LT [u] (21.9% of all ST [ɯ]). Moreover, when there is a mismatch, ST [a] corresponds to LT [e] (n=15, 65.2% of all ST [a]).

Table 3.13: Comparison of the 3rd suffix vowel in LT-unique tokens vs. ST cognates

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
3rd Suffix Vowel	match	a	8	-	-	-	-	-	-	-	-	8
		e	-	5	-	-	-	-	-	-	-	5
		i	-	-	23	-	-	-	-	-	-	23
		u	-	-	-	-	-	-	-	-	-	-
		y	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	-	-	-	2	-	2
		Total	8	5	23	-	-	-	-	2	-	38
	mismatch	a	-	15	-	-	-	-	-	-	-	15
		e	-	-	-	-	-	-	-	-	1	1
		i	-	-	-	-	11	2	-	1	3	17
		u	-	-	7	-	-	-	-	-	-	7
		y	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	47	-	14	1	-	-	-	62
		Total	-	15	54	-	25	3	-	1	4	102

To summarize the findings so far, in the 1st root position where vowel harmony does not apply, [a, e, i, o, u] mainly show a match between ST and LT but ST [ɯ, y, œ] are substituted with LT [i, u, o]. Among all age groups, it is the older LT speakers who contributes most to this substitution pattern. In the 2nd root position, other patterns start emerging in addition to the general ST [ɯ, y, œ] to LT [i, u, o] substitution. This time, ST [ɯ, y, i, u] may all correspond to

LT [i] or [u]. This pattern becomes more clear in suffixes. As predicted by the general substitution pattern, ST [ɯ, y] may correspond to LT [i, u] respectively, and rounding feature of vowels are preserved. This type of correspondence is contributed to the corpus mostly by the mid age group. There are two other correspondence patterns in suffixes. First, ST [ɯ, y] may correspond to LT [u, i] respectively, and backness of vowels are preserved. Second, ST [i, u] may correspond to LT [u, i] respectively, and neither backness nor rounding of vowels are preserved. These two correspondence patterns are most often contributed to the corpus by the old age group. To clarify the difference between root vowels and suffix vowels, the following comparison between the 1st root vowels and the 1st suffix vowels are provided in Figure 3.17.

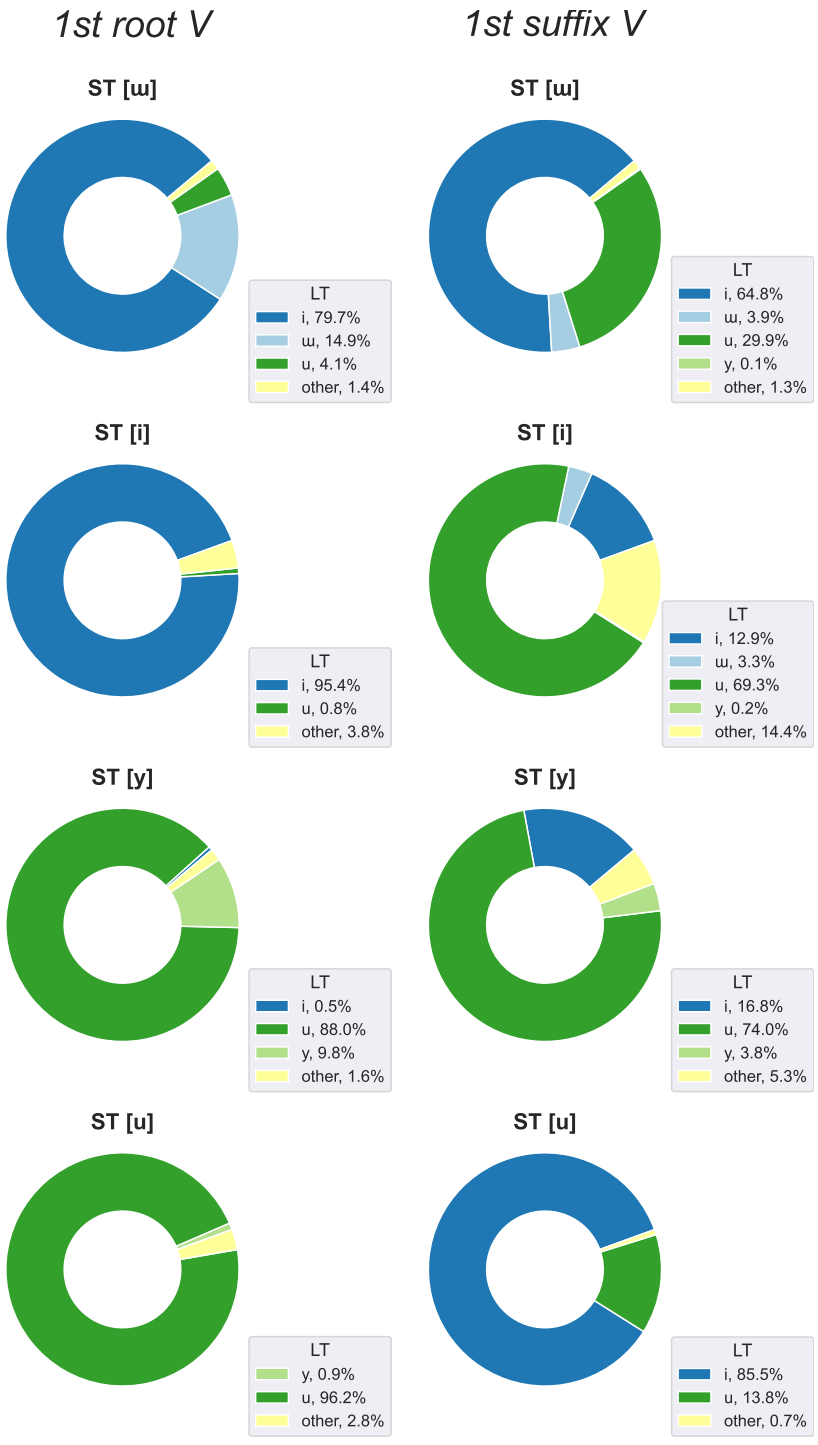


Figure 3.17: 1st root vowels vs. 1st suffix vowels in LT-unique tokens in comparison with ST-cognates

Thus far, the distribution of the suffix vowels were analyzed based on suffix order in LT-unique tokens in the LT corpus. Next, suffix vowels will be analyzed by the position within words. A suffix vowel can be the 2nd to 7th vowel within a word in the LT corpus as the corpus contains words with up to 4 root vowels and 3 suffixes. The following tables will demonstrate this order.

Table 3.14 illustrates the distribution of suffix vowels that are the 2nd vowel within a word. The majority of high vowels indicates a mismatch: 290 instances of ST [i] (77.7% of all ST [i]) correspond to LT [u] and 93 ST [u] (88.6% of all ST [u]) correspond to LT [i]. Moreover, 17 instances of ST [y] (21.5% of all ST [y]) correspond to LT [i] and 51 (64.5% of all ST [y]) correspond to LT [u]. ST [ɯ] corresponds to LT [i] 229 times (63.3% of all ST [ɯ]) or [u] 110 times (30.4% of all ST [ɯ]). Most non-high vowels present a match but whenever they do not, 13 instances of ST [a] (6.7% of all ST [a]) correspond to LT [e], and 27 ST [e] (12.6% of all ST [e]) correspond to LT [a]. These comparison patterns are consistent with the analysis of suffix vowels by suffix order.

Table 3.14: Comparison of suffix vowels in LT-unique tokens vs. ST cognates (2nd vowel of word)

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
2nd vowel of the word	match	a	180	-	-	-	-	-	-	-	-	180
		e	-	181	-	-	-	-	-	-	-	181
		i	-	-	15	-	-	-	-	-	-	15
		u	-	-	-	-	11	-	-	-	-	11
		y	-	-	-	-	-	5	-	-	-	5
		ɯ	-	-	-	-	-	-	-	17	-	17
		Total	180	181	15	-	11	5	-	17	-	409
	mismatch	a	-	13	1	-	1	-	-	-	-	15
		e	27	-	2	-	1	-	-	-	4	34
		i	-	-	-	-	290	-	-	6	62	358
		u	-	-	93	-	-	-	-	-	1	94
		y	-	-	17	-	51	-	-	-	6	74
		ɯ	-	-	229	-	110	-	-	-	6	345
		Total	27	13	342	-	453	-	-	6	79	920

Suffix vowels that are the 3rd and 4th vowels within words, as demonstrated in Table 3.15, also show a similar correspondence pattern. In the mismatch condition, ST [i] corresponds to LT [u] and vice versa. ST [y] and [ɯ] can both correspond to LT [i, u]. There is also a substantial amount of ST [a] corresponding to LT [e] (n=137 in the 3rd vowel position and n=66 in the 4th vowel position).

Table 3.16 illustrates the distribution of suffix vowels that are the 5th and 6th vowels within words. Although the sample size is much smaller in these positions, the typical pattern found in the mismatch condition does not change.

Suffix vowels that are the 7th vowel within word are not reported here since there was only one instance of this, which occurred in an ST-identical token (i.e., [kɯrtasije-dʒi-liɣ-e] ‘to stationary business’).

Table 3.15: Comparison of suffix vowels in LT-unique tokens vs. ST cognates (3rd and 4th vowels of word)

Position	Condition	ST cognate	LT vowels a	e	i	o	u	y	œ	ɯ	other	Total
3rd vowel of the word	match	a	145	-	-	-	-	-	-	-	-	145
		e	-	134	-	-	-	-	-	-	-	134
		i	-	-	84	-	-	-	-	-	-	84
		u	-	-	-	-	9	-	-	-	-	9
		y	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	-	-	-	15	-	15
		Total	145	134	84	-	9	-	-	15	-	387
	mismatch	a	-	137	2	1	-	-	-	-	-	140
		e	17	-	-	-	-	-	-	-	1	18
		i	1	2	-	-	256	4	-	24	58	345
		u	-	-	31	-	-	-	-	-	-	31
		y	-	-	9	-	61	-	-	-	1	71
		ɯ	-	1	389	-	175	1	-	-	14	580
		Total	18	140	431	1	492	5	-	24	74	1185
4th vowel of the word	match	a	35	-	-	-	-	-	-	-	-	35
		e	-	47	-	-	-	-	-	-	-	47
		i	-	-	44	-	-	-	-	-	-	44
		u	-	-	-	-	8	-	-	-	-	8
		y	-	-	-	-	-	1	-	-	-	1
		ɯ	-	-	-	-	-	-	-	13	-	13
		Total	35	47	44	-	8	1	-	13	-	148
	mismatch	a	-	66	-	-	-	-	-	-	-	66
		e	9	-	-	-	-	-	-	-	1	10
		i	-	-	-	-	53	3	-	4	7	67
		u	-	-	14	-	-	-	-	-	-	14
		y	-	-	-	-	14	-	-	-	-	14
		ɯ	-	-	175	-	86	1	-	-	6	268
		Total	9	66	189	-	153	4	-	4	14	439

Table 3.16: Comparison of suffix vowels in LT-unique tokens vs. ST cognates (5th and 6th vowels of word)

Position	Condition	ST cognate	LT vowels									Total
			a	e	i	o	u	y	œ	ɯ	other	
5th vowel of the word	match	a	8	-	-	-	-	-	-	-	-	8
		e	-	9	-	-	-	-	-	-	-	9
		i	-	-	20	-	-	-	-	-	-	20
		u	-	-	-	-	-	-	-	-	-	-
		y	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	-	-	-	2	-	2
		Total	8	9	20	-	-	-	-	2	-	39
	mismatch	a	-	16	-	-	-	-	-	-	-	16
		e	-	-	-	-	-	-	-	-	-	-
		i	-	-	-	-	11	-	-	1	2	14
		u	-	-	7	-	-	-	-	-	-	7
		y	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	25	-	12	-	-	-	-	37
		Total	-	16	32	-	23	-	-	1	2	74
6th vowel of the word	match	a	-	-	-	-	-	-	-	-	-	-
		e	-	1	-	-	-	-	-	-	-	1
		i	-	-	-	-	-	-	-	-	-	-
		u	-	-	-	-	-	-	-	-	-	-
		y	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	-	-	-	-	-	-	-	-
		Total	-	1	-	-	-	-	-	-	-	1
	mismatch	a	-	1	-	-	-	-	-	-	-	1
		e	-	-	-	-	-	-	-	-	-	-
		i	-	-	-	-	1	-	-	-	-	1
		u	-	-	-	-	-	-	-	-	-	-
		y	-	-	-	-	-	-	-	-	-	-
		ɯ	-	-	3	-	-	-	-	-	-	3
		Total	-	1	3	-	1	-	-	-	-	5

In summary, initial root vowels of LT-unique tokens indicate that LT has a vowel substitution strategy where ST [ɯ, y, œ] correspond to LT [i, u, o] respectively. Almost all non-high unround vowels [a, e] and non-high round back [o] occur in the match condition. Similarly, almost all high vowels [i, u] remain in the match condition. These observations are independent of vowel harmony as the first root vowel does not undergo vowel harmony. In non-initial positions, ST [i] may correspond to LT [u], and vice versa. ST [ɯ] and [y] both may correspond to LT [i, u]. In addition, non-high unround ST [a] may correspond to LT [e], and vice versa. This pattern remains consistent whether suffix vowels were investigated by suffix order (e.g., 1st suffix vowel) or by position of suffix vowels within word (e.g., a suffix vowel which is the 2nd vowel within a word). Vowel harmony and other factors may be involved in these distributions in non-initial syllables. This issue will be revisited in the following chapter.

3.4.4 Backness and Rounding harmony

This section aims to broadly describe how much backness and rounding harmony there is in LT as well as how much harmony LT speakers from different age groups have. In investigating harmony, ST-identical tokens (where all vowels within a word match the vowels in its ST cognate) and LT-unique tokens (where at least one vowel within a word is different from its ST cognate) will be grouped separately. Separating out the LT-unique tokens will help better identify if vowel harmony is operating in LT, and if not, what accounts for vowel distribution and affix alternations. (Hereafter, B = backness harmony, R = rounding harmony.)

In describing vowel harmony in LT, harmony within the roots or suffixes can be examined. In this section, 'root harmony' refers to vowel harmony in all root vowels in an LT token. When all root vowels in a word satisfy backness and/or rounding harmony, these roots satisfy harmony (44a). If there is at least one vowel that violates backness and/or rounding harmony, then root harmony is violated (44b-44d). When a root is monosyllabic, root harmony is not applicable ('NA') as in (44e).

(44) a. **nufus**-ta *root harmony* (cf. ST **nyfus**-ta)
population-LOC
'in the population'
[082019-S6-M]

b. **aʤi**-r-ler *B violation* (cf. ST **aʤɯ**-r-lar)
pity-AOR-3PL
'they pity'
[082019-S6-M]

c. **karu**-m-dur *R violation* (cf. ST **karɯ**-m-dɯr)
wife-POSS.1SG-COP
'(she is) my wife'
[082119-S4-O]

d. **komʃi**-ler-e *B and R violations* (cf. ST **komʃu**-lar-a)
neighbor-PL-DAT
'to the neighbors'
[081919-S10-O]

e. **don**-du-m *not applicable* (cf. ST **dœn**-dy-m)
return-PST-1SG
'I returned'
[080619-S1-O]

'Suffix harmony' in this section refers to the harmony in all suffix vowels. If 'suffix harmony' is satisfied, all suffix vowels obey backness and/or rounding harmony (45a). If there is at least one suffix vowel that violates backness and/or rounding harmony, then 'suffix harmony' in this token is 'violated' (45b-45d). Suffix harmony is not applicable ('NA') in 1-suffixed tokens containing a suffix without a vowel (45e) or in tokens containing at least one suffix containing a central vowel (e.g., [ɨ, ʉ, ə]) because it is not clear if these central vowels obey or disobey backness harmony (45f).

(45) a. javri-**sin-e** *suffix harmony* (cf. ST javru-**sun-a**)
offspring-POSS.3SG-DAT
'to his/her/its offspring'
[082119-S4-O]

b. jap-**il-en** *B violation* (cf. ST jap-**ɯl-an**)
do-PASS-NMLZ
'the ones that are done'
[082119-S3-M]

c. evlad-**um** *R violation* (cf. ST evlad-**ɯm**)
child-POSS.1SG
'my child'
[082119-S4-O]

d. gel-**ur-ler** *B and R violations* (cf. ST gel-**ir-ler**)
come-AOR-3PL
'they come'
[081919-S2-M]

e. daju-**m** *not applicable* (cf. ST dajɯ-**m**)
uncle-POSS.1SG
'my uncle'
[082119-S4-O]

f. sev-**er-əm** *not applicable* (cf. ST sev-**er-im**)
love-AOR-1SG
'I love'
[082019-S6-M]

Table 3.17 reports vowel harmony in roots and suffixes in ST-identical tokens and LT-unique tokens.

Table 3.17: Root and suffix harmony in ST-identical/LT-unique tokens of LT

	Total	root harmony			suffix harmony		
		satisfied	violated	NA	satisfied	violated	NA
ST-identical	5698	2029	456	3213	5521	90	87
LT-unique	2514	625	521	1368	408	1974	132
Total	8212	2654	977	4581	5929	2064	219

As can be seen in Table 3.17, there are also vowel harmony violations in ST-identical tokens occurring in LT. Disharmonic roots (n=456) are typically as a result of loanwords such as

[kuvvet-e] ‘force-DAT’, [fabrika-da] ‘factory-LOC’, and [ateʃ-i] ‘fire-ACC’. Violations of harmony in suffixes (n=90) are either due to suffixes with a fixed vowel such as the converbial *-ken* (e.g., konuʃ-ur-ken ‘speak-AOR-CVB’) and adjectival *-ki* (e.g., erzurum-da-ki ‘Erzurum-LOC-ADJ’), where fixed vowels do not alternate. Or, they are due to palatalized consonants which cause fronting of vowels in the same syllable, overriding vowel harmony. Some examples from the LT corpus are [kalʲb-i] ‘heart-POSS.3SG’, [saatʲ-e] ‘hour-DAT’, and [hakikatʲ-le] ‘Hakikat-COM’, where the front vowel appears in the suffix after the palatalized consonant despite a back vowel /a/ occurring in the root preceding the suffix.

Thus far, backness and/or rounding harmony in each token were presented as ‘root harmony’ or ‘suffix harmony’, grouping together individual vowels in roots or suffixes. As shown in Table 3.17, the source of most harmony violations are LT-unique tokens, especially suffixes. Backness and rounding harmony for each suffix vowel in LT-unique tokens are examined in Table 3.18 (“Rate of h.” = rate of harmony, representing the percentage of tokens satisfying vowel harmony). Note that suffixes without vowels (n=524), such as 1SG *-m*, are not reported in Table 3.18. Suffix vowels are separated into two categories, high suffix vowels and non-high suffix vowels, because high vowels are targets of rounding harmony, but non-high vowels are not. The results indicate that non-high suffix vowels have higher rates of backness harmony (68.2%) compared to high vowels (36.3%). In suffixes with high vowels, rounding harmony rates (53.7%) are higher in comparison with backness harmony rates (36.3%). Overall, harmony rates are quite low for high vowels. Less than half of the high root vowels (49.9%) and only around 1/3 of high suffix vowels (36.3%) satisfy backness harmony. According to these results, one cannot say backness harmony is operating productively in high vowels of LT-unique tokens.

Table 3.18: Backness and rounding harmony in LT-unique tokens

Vowel	Height	Total	Backness harmony				Rounding harmony			
			satisfied	violated	NA	**Rate of h.**	satisfied	violated	NA	**Rate of h.**
Root	High	534	264	265	5	**49.9%**	432	102	-	**80.9%**
	Non-high	764	512	251	1	**67.1%**	-	-	764	-
	Total	1298	776	516	6	**60.1%**	432	102	764	**80.9%**
Suffix	High	2448	874	1532	42	**36.3%**	1315	1133	-	**53.7%**
	Non-high	1163	700	326	137	**68.2%**	-	-	1163	-
	Total	3611	1574	1858	179	**45.9%**	1315	1133	1163	**53.7%**

Next, Figure 3.18 illustrates the distribution of vowel harmony in LT-unique tokens across young, mid, and old age groups. The percentages indicate the rate of vowels which satisfy backness and/or rounding harmony. Based on Figure 3.18, for high vowels, backness harmony rates decrease as age increases, especially in roots. However, there is no consistent decrease or increase in rounding harmony across age groups in roots or suffixes. Rounding harmony is satisfied most often by the mid age group. As for non-high vowels, there is a slight increase in backness harmony in roots as age increases. However, there is no consistent increase or decrease in backness harmony of suffix vowels across age groups. Backness harmony is violated most often by the mid age group. In summary, there is no single pattern across age groups where vowel harmony is satisfied more often with decrease in age.

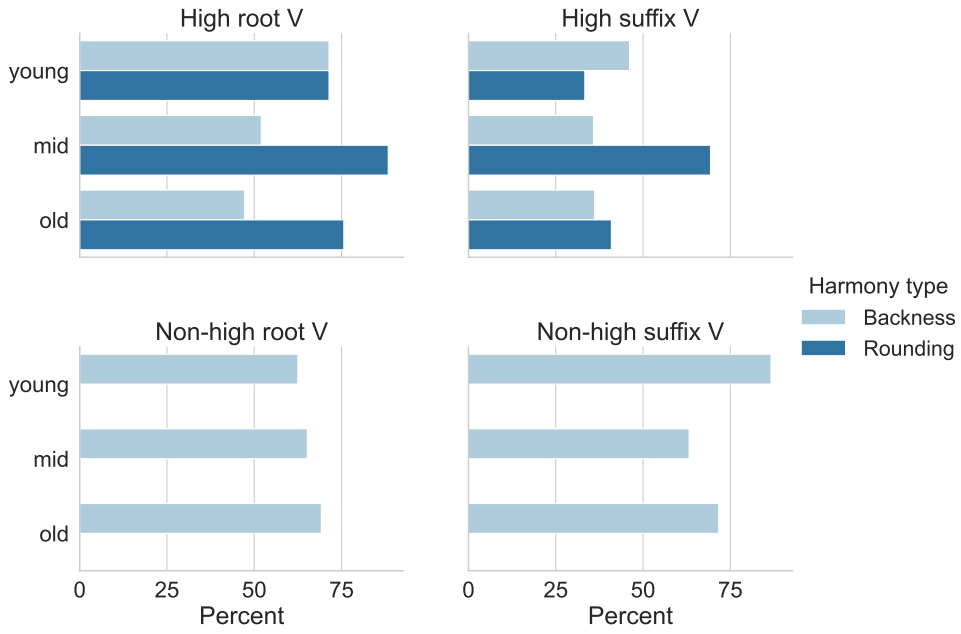


Figure 3.18: Backness and rounding harmony rates of high/non-high root and suffix vowels in LT-unique tokens

In summary, this section demonstrated that the LT corpus contains ST-identical tokens, where vowel harmony operates as in ST, as well as LT-unique tokens, where vowel harmony shows some patterns that ST words do not show. In other words, LT vowel harmony is a mixed system where a portion of the tokens resembles ST harmony but another portion patterns differently. Some of the vowel harmony rates are very low, suggesting that LT in its current form only shows weak evidence for vowel harmony, particularly with suffixes. The main focus in the following chapter will be on LT-unique tokens to investigate what determines the vowel distribution patterns.

3.4.5 Harmony across the word

Previous studies on vowel harmony suggested a locality effect in which the target vowel is less likely to undergo vowel harmony as the distance between the trigger and target increases (McCollum, 2019; McPherson & Hayes, 2016; Zymet, 2014). This was discussed in Chapter 1 of this dissertation. Locality may be playing a role in LT vowel harmony too, and vowel harmony

may be decreasing towards word end in LT. On the other hand, the previous sections showed that LT suffixes typically have two high vowels [i, u]. Because the preceding root vowel could be any of the [a, e, i, o, u, (ɯ), (œ), (y)], the first suffix vowel may show the most vowel harmony violations in LT while the rest of the suffix vowels may harmonize with the first suffix vowel. In other words, there may be fewer vowel harmony violations across suffixes in LT, towards word end.

The aim of this section is to examine LT vowel harmony with respect to harmony rates across the word (from left to right, since there is progressive vowel harmony in LT). Since suffixes in ST-unique tokens within the corpus are predicted to be fully harmonic whenever applicable, the main focus of this section will be on LT-unique tokens. Harmony in root vowels will not be analyzed here for two reasons: First, monosyllabic roots where vowel harmony is not applicable comprise 54% (n=1368) of all LT-unique tokens. In other words, it is not possible to include more than half of the relevant data in the analysis. Second, of all roots containing more than one vowel (n=1146), 382 roots are loanwords which may contain vowel harmony violations. In the rest of this section, harmony across suffix vowels will be examined, first by suffix order (e.g., 1st suffix vowel) and then by order within word (e.g., 2nd vowel of the word).

First, results are reported for the backness and rounding harmonies in LT-unique tokens based on suffix order in Table 3.19. The results indicate that rounding harmony is satisfied at higher rates compared to backness harmony rates in LT-unique forms. This is likely due to the hypothesized vowel substitution strategy (i.e. [ɯ]∼[i] and [y]∼[u]) especially in high vowels where the rounding features of vowels are preserved at the expense of backness. Note that suffixes without vowels (n=524) such as 1SG -m and 1PL -k are not reported in Table 3.19. 'NA' cases for backness harmony indicate suffixes with a central vowel (e.g., ə, ʉ, ɨ, etc.) marked 'NA' for backness harmony. For rounding harmony, 'NA' cases indicate suffixes with non-high vowels where rounding harmony is not applicable. (The distribution of the suffixes without vowels and central vowels will be clearly illustated in Table 3.20).

Moreover, Table 3.19 also demonstrates that backness and rounding harmony rates systematically increase towards the end of the word (i.e., the 3rd suffix).

Table 3.19: Backness and rounding harmony rates by suffix order in LT-unique tokens

Suffix order	Backness harmony				Rounding harmony			
	satisfied	violated	NA	**Rate of h.**	satisfied	violated	NA	**Rate of h.**
1st	976	1303	110	**42.8%**	795	794	800	**50%**
2nd	511	509	62	**50.1%**	433	317	332	**57.7%**
3rd	87	46	7	**65.4%**	87	22	31	**79.8%**
Total	1574	1858	179	**45.9%**	1315	1133	1163	**53.7%**

Similar to ST, backness harmony in LT applies to all vowels whereas rounding harmony only applies to high vowels. For this reason, Table 3.20 measures the vowel harmony rates across the word separately for high and non-high suffix vowels as well as the not applicable cases.

Table 3.20: Backness and rounding harmony rates by suffix order for high/non-high vowels in LT-unique tokens

Suffix vowel	Suffix order	Backness harmony				Rounding harmony			
		satisfied	violated	NA	**Rate of h.**	satisfied	violated	NA	**Rate of h.**
High	1st	471	1098	20	**30%**	795	794	-	**50%**
	2nd	336	395	19	**46%**	433	317	-	**57.7%**
	3rd	67	39	3	**63.2%**	87	22	-	**79.8%**
Non-high	1st	505	205	90	**71.1%**	-	-	800	-
	2nd	175	114	43	**60.5%**	-	-	332	-
	3rd	20	7	4	**74.1%**	-	-	31	-
NA	1st	-	-	125	-	-	-	125	-
	2nd	-	-	281	-	-	-	281	-
	3rd	-	-	118	-	-	-	118	-
Total		1574	1858	703	**45.9%**	1315	1133	1687	**53.7%**

As demonstrated in Table 3.20, high vs. non-high suffix vowels behave differently regarding backness harmony rates. There is a large increase across suffixes from 30% to 63% for high vowels. Backness harmony rates for non-high vowels range from 70% to 75%, with a dip on the 2nd suffix vowel only down to 60%.

Harmony of vowels by suffix order is also analyzed by age. High suffix vowels are illustrated in Figure 3.19 and non-high suffix vowels in Figure 3.20. For high suffix vowels, both backness and rounding harmony rates consistently increase towards word end in all three age groups. For non-high suffix vowels, backness harmony rates increase towards word end for the young age. There is a dip in backness harmony in the 2nd suffix vowel for the mid and age old groups.

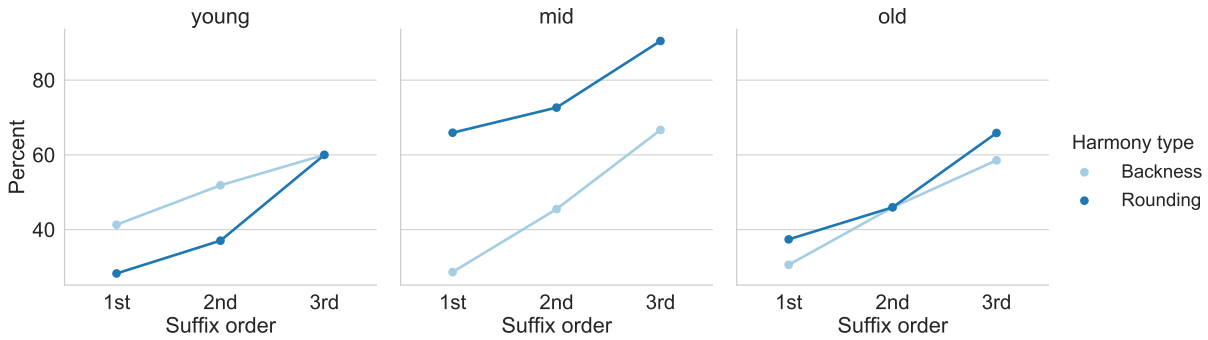


Figure 3.19: Backness and rounding harmony rates in high LT-unique suffixes based on suffix order

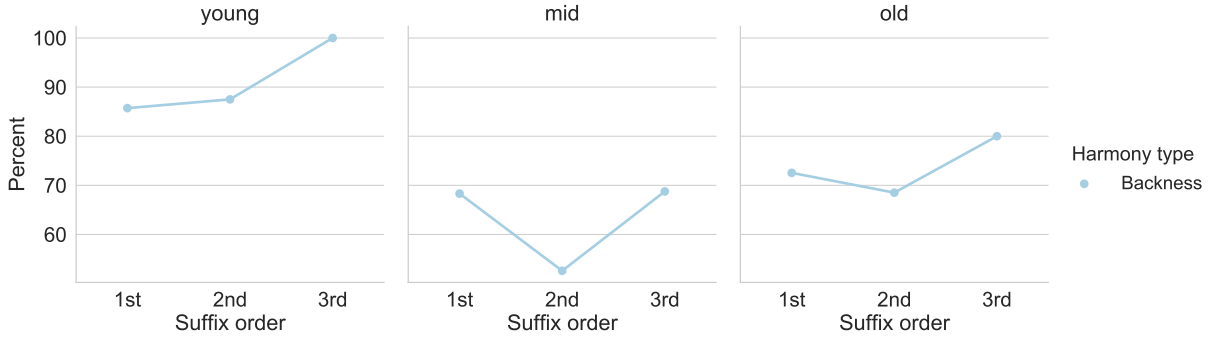


Figure 3.20: Backness and rounding harmony rates in non-high LT-unique suffixes based on suffix order

Next, suffix vowels in LT-unique tokens are examined by their order within the word. Results are reported in Table 3.21. The pattern that emerged when suffix vowels are examined by order within word is similar to previous observations. Rounding harmony rates are higher compared to backness harmony rates, and rates of both types of harmonies increase towards the

end of the word. Nevertheless, the sample size for suffix vowels that are the 6th vowel within an LT-unique word is too small (n=6) so harmony rates for the 6th vowel can be ignored.

Table 3.21: Backness and rounding harmony rates of suffix vowels in LT-unique tokens by order within word

Order	Backness harmony				Rounding harmony			
	satisfied	violated	NA	**Rate of h.**	satisfied	violated	NA	**Rate of h.**
2nd	452	798	79	**36.2%**	346	519	464	**40%**
3rd	701	795	79	**46.8%**	622	459	494	**57.5%**
4th	343	229	16	**60%**	284	136	168	**67.6%**
5th	73	35	5	**67.6%**	59	19	35	**75.6%**
6th	5	1	1	**83.3%**	4	-	2	**100%**
Total	1574	1858	179	**45.9%**	1315	1113	1687	**53.7%**

Table 3.22 also reports suffix vowels by order within word, this time grouping together vowels by their height. In general, harmony rates increase from the 2nd to 6th vowel. Backness harmony rates of high vowels are lower compared to backness harmony rates of non-high vowels. Similarly, backness harmony rates of high vowels are lower compared to that of rounding harmony.

Table 3.22: Backness and rounding harmony rates for high/non-high vowels in LT-unique tokens, by order within word

Suffix vowel	Order	Backness harmony				Rounding harmony			
		satisfied	violated	NA	**Rate of h.**	satisfied	violated	NA	**Rate of h.**
High	2nd	177	673	15	**20.8%**	346	519	-	**40%**
	3rd	417	643	21	**39.3%**	622	459	-	**57.5%**
	4th	231	184	5	**55.6%**	284	136	-	**67.6%**
	5th	45	32	1	**58.4%**	59	19	-	**75.6%**
	6th	4	-	-	**100%**	4	-	-	**100%**
Non-high	2nd	275	125	64	**68.7%**	-	-	464	-
	3rd	284	152	58	**65.1%**	-	-	494	-
	4th	112	45	11	**71.3%**	-	-	168	-
	5th	28	3	4	**90.3%**	-	-	35	-
	6th	1	1	-	**50%**	-	-	2	-
NA	2nd	-	-	38	-	-	-	38	-
	3rd	-	-	287	-	-	-	287	-
	4th	-	-	159	-	-	-	159	-
	5th	-	-	40	-	-	-	40	-
	6th	-	-	-	-	-	-	-	-
Total		1574	1858	703	**45.9%**	1315	1133	1163	**53.7%**

Harmony of suffix vowels by order within word is also analyzed by age. High suffix vowels are illustrated in Figure 3.21 and non-high suffix vowels in Figure 3.22. For high suffix vowels, backness and rounding harmony rates increase towards word end for all age groups. For non-high suffix vowels, there is a decrease in the 3rd vowel within word, where backness harmony rates for the following vowels continue increasing towards word end.

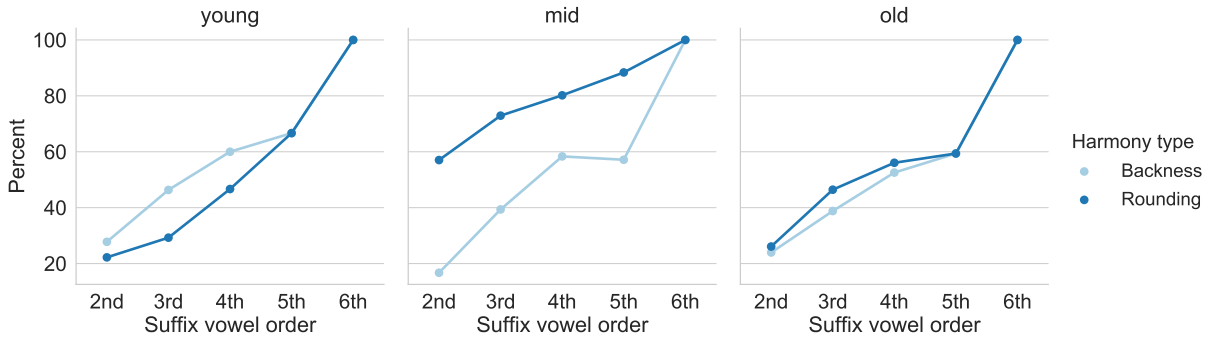


Figure 3.21: Backness and rounding harmony rates of high suffix vowels of LT-unique tokens by position within word

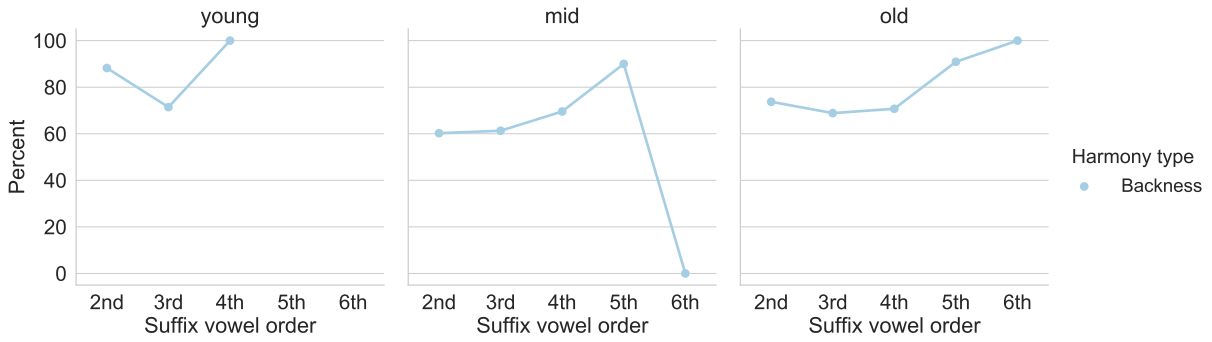


Figure 3.22: Backness and rounding harmony rates of non-high suffix vowels of LT-unique tokens by position within word

In summary, in LT-unique tokens, high vowels satisfy rounding harmony more often compared to backness harmony. Backness harmony, on the other hand, applies to all vowels and is satisfied more often by non-high vowels compared to high vowels. Moreover, vowel harmony in LT-unique words do not peter out across the word. In fact, backness and rounding harmony rates gradually increase towards the word end and this pattern is consistent across all age groups. These results seem to support the second prediction made in this section. The first suffix vowel is showing the lowest rates of harmony and harmony rates increase for the rest of the suffix vowels. This could be indicating a tendency for suffix vowels to harmonize with each other but not necessarily with the root.

3.5 Conclusion

The purpose of this chapter was to examine the vowel harmony patterns in LT. In this study, five research questions were discussed.

Question 1 was concerned with who uses the most LT-unique tokens. To answer this question, Section 3.4.1 investigated the distribution of LT-unique and ST-identical forms in the corpus. The results reported that 69% of the corpus is comprised of ST-identical forms, which are mostly harmonic, and the remaining 31% of the corpus is made up of LT-unique tokens, which are

the main source of disharmony in LT. An analysis of the age of consultants in this study revealed that there is a generational gap since elder speakers (above age 70) produce more LT-unique forms compared to speakers from the middle or young age groups.

Question 2 was an investigation of vowels that occur in LT-unique words. The distribution of vowels in LT roots and suffixes were examined Section 3.4.2. Vowel occurrences in all LT tokens were compared with the vowel occurrences in ST cognates of the LT words. This was also analyzed in a smaller group; vowel occurrences in LT-unique tokens in comparison with their ST cognates. The results indicated that the Laz vowel system, which lacks the three Turkic phonemes /ɯ, œ, y/, is reflected in LT since [ɯ, œ, y] rarely occur in LT-unique roots and suffixes. Instead, their front/back counterparts [i, o, u] occur more frequently in LT-unique tokens. Vowel distribution in LT-unique tokens were also analyzed by age. Overall, LT speakers from the old age group produced fewer [ɯ, œ, y] vowels compared to the mid age group. (The sample size from the young speaker was not big enough to make further comparisons.)

Question 3 investigated how LT vowels differed from ST vowels. Section 3.4.3 studied the distribution of LT vowels by focusing on vowel-to-vowel comparison between LT-unique tokens and their ST cognates. The results showed that [ɯ, y, œ] can be pronounced by LT speakers despite being rarely used. For the vowels in the initial syllable of a word, which is the trigger of vowel harmony, the general tendency was the correspondence of ST [ɯ, y, œ] with LT [i, u, o], respectively, where the rounding feature of vowels is preserved rather than backness. For the non-initial vowels in LT-unique tokens, ST [ɯ] - LT [i] and ST [y] - LT [u] correspondences emerge again ([œ] occurs in the initial position in ST/LT tokens). However, in non-initial positions, ST [ɯ] may correspond to both LT [i, u]. ST [i] may also correspond to LT [u], and vice versa. The discussion of in which contexts the LT vowel occurs as [i] or [u] and whether there is any predictability regarding this distribution are left for the next chapter.

Question 4 was an investigation of how much harmony there is in LT-unique tokens in general. Section 3.4.4 broadly examined the backness and rounding harmony rates in the corpus.

While the ST-identical forms in the corpus satisfy vowel harmony as in ST, the main source of partial disharmony remains the LT-unique tokens in the corpus (especially harmony in high suffix vowels). The results also showed that, in general, rounding harmony shows a stronger satisfaction rate compared to backness harmony because [ɯ, y] to [i, u] substitution preserves the rounding feature of vowels at the expense of preservation of the backness feature. Vowel harmony in LT-unique tokens were also examined by age. Overall, there was no single pattern across the young, mid, old age groups where vowel harmony was always satisfied most often by the young age group followed by the mid and then the old.

Question 5 investigated whether backness and rounding harmonies peter out across the word in LT-unique tokens. This was discussed in Section 3.4.5. The results indicated that backness and/or rounding harmony did not decrease towards the right edge of LT-unique tokens. In fact, harmony rates systematically increased in suffixes with high vowels. These results were consistent across all age groups.

To summarize, LT vowel harmony seems to display a mixed system which has both ST features and Laz features. There are many ST-identical tokens in the corpus, and the vowels obey harmony just like they do in ST. However, many disharmonic forms are also found in LT (LT-unique tokens). In general, ST vowels [ɯ] and [y] typically correspond to LT [i] and [u]. This is likely to be due to an L1 (Laz) effect on L2 (LT). However, [i] and [u] may also correspond to each other in suffixes of LT-unique tokens. This indicates that there must be some other factor(s) than an L1 effect determining the distribution of [i, u] in suffixes. The vowel correspondence pattern in suffixes of LT-unique tokens raises the following questions; i) what determines whether a suffix vowel will be realized as [i] or [u]? ii) do certain suffixes always occur with [i] while others always occur with [u]? iii) do certain suffixes have an [i]∼[u] alternation? The following chapter is dedicated to answer these questions and explain the distribution of vowels in LT-unique tokens.

Chapter 4

Laz Turkish: Explaining the vowel distribution in suffixes

4.1 Introduction

The previous chapter explored how vowel distribution from the LT corpus differs from ST. LT tokens were examined under two groups 1) ST-identical tokens where all vowels within words match that of ST cognates and 2) LT-unique tokens where vowel sequence of words diverge from that of ST cognates. While ST-identical words satisfy backness and rounding harmonies as they would in ST, LT-unique tokens often present vowel harmony violations.

It was found in the previous chapter that one significant factor leading to vowel harmony violations in LT-unique tokens is L1 (Laz) influence in LT. Three vowels, [ɯ, y, œ], are absent in the Laz vowel system. These vowels typically correspond to [i, u, o] in LT-unique tokens. Some of these vowel correspondences are due to substitutions, while others could potentially be a result of vowel harmony or other factors. In addition, the previous chapter concluded that high suffix vowels in LT are typically [i] or [u]. This raised the question of whether certain suffixes in LT always occurred with [i] or [u], or have alternation between [i] and [u].

The main goal of this chapter is to provide an explanation of the distribution of vowels in LT. Under the assumption that affixes are attached productively to roots (rather than words being learned holistically), this chapter aims to determine what is responsible for the choice of vowels in non-initial positions of LT words, especially in suffixes. To address this issue, the following four research questions will be discussed.

1. Do surrounding consonants influence LT vowels?
2. Do some suffixes have fixed vowels?
3. What conditions the choice of vowels in particular suffixes?
4. What conditions the choice of vowel in non-initial syllables in general? Is it vowel harmony or other factors?

The rest of this chapter is structured as follows. Methods are described in Section 4.2. The four research questions are discussed in Section 4.3. A general discussion of syllable structure is provided in Section 4.4. This is followed by a general discussion about whether LT has vowel harmony (Section 4.5). The findings of the chapter are summarized in Section 4.6.

4.2 Methods

This chapter is an extended analysis of the same data used in the previous chapter. In addition to the methods used in the previous chapter, statsmodels module of Python was used for logistic regression calculations. Logistic regression was used to evaluate the relationship between categorical variables of vowel mismatch, syllable type, backness harmony, rounding harmony, and suffix vowels.

4.3 Discussion of Research Questions

4.3.1 Do surrounding consonants influence LT vowels?

As discussed in Chapter 1, consonants adjacent to vowels may impact how vowels are realized. Previous research have suggested that labials condition rounding, velars backing, and coronals fronting (Clements & Hume, 1995; Clements & Sezer, 1982; Hume, 1992). Rounding in the environment of labials (Erdal, 1998; Lees, 1966) and fronting in the environment of palatal(ized) consonants (Clements & Sezer, 1982; Özçelik & Sprouse, 2017) have been discussed in the case of ST. In another variety of Turkish spoken in the northeastern Black Sea, Trabzon Turkish, it was observed that suffixes ending in velar stops occurred with round vowels [u, ʉ] (and rarely [y]), suggesting vowel rounding in the environment of velars (Brendemoen, 2002). This section will test whether the back and round features of vowels in LT-unique tokens are predictable by adjacent consonants.

Consonants preceding/following LT vowels are examined under four groups: Labials, velars, palatals and coronals. Both root vowels and suffix vowels of LT-unique tokens are tested. The distribution of vowel harmony and vowel feature for root and suffix vowels are provided in Appendix 6.7. Since most back or round features that are unpredicted by vowel harmony come from suffix vowels, only suffix vowels are reported in this section.

Figure 4.1 illustrates the round feature of LT-unique suffix vowels preceding consonants. Figure 4.2 illustrates the same thing, except that the vowel follows consonants. If vowel rounding is conditioned by specific consonants (labials and velars), then the expectation is to find round vowels which cannot be explained by vowel harmony in the environment of labials and velars but not in the environment of palatals or coronals. According to Figure 4.1, there is unpredicted rounding of vowels preceding labials and velars. However, there is also unpredicted rounding both preceding and following coronals (note that unround vowels in the context of coronals mostly satisfy rounding harmony). This suggests that the rounding effect in the environment of labials and velars but also coronals may be conditioned by some other factor.

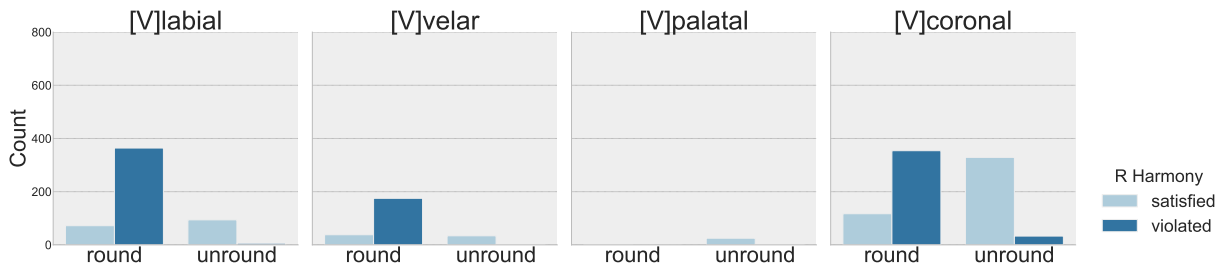


Figure 4.1: Rounding harmony and round feature in LT-unique suffix vowels preceding consonants

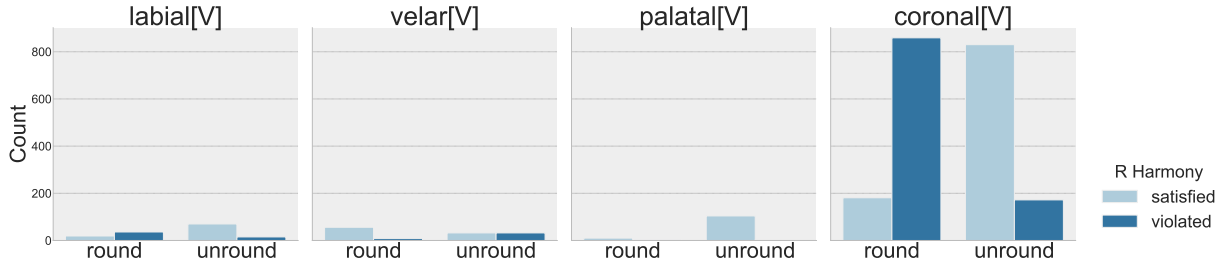


Figure 4.2: Rounding harmony and round feature in LT-unique suffix vowels following consonants

The back feature of LT-unique suffix vowels preceding consonants and following consonants are illustrated in Figure 4.3 and Figure 4.4, respectively. If certain consonants (especially palatals and coronals) condition vowel fronting, the expectation is to find front vowels that cannot be attributed to vowel harmony. There is some unpredicted fronting preceding palatals (Figure 4.3) and following palatals Figure 4.4. In fact, this much unpredicted fronting is also observed for labials and velars, in both preceding and following conditions. Nevertheless, there are unpredicted back vowels in general, preceding labials and velars. This observation is not surprising given Figures 4.1 and 4.2, where round vowels are common preceding labials and velars. As LT typically contains two high vowels [i,u], the only round vowel is back [u], which seems to violate backness harmony too (Figure 4.3). As for coronals, there is unpredicted fronting preceding coronals and especially following coronals; however, disharmonic back vowels are also very common preceding or following coronals. In summary, front vowels unpredicted by vowel harmony do not appear to be conditioned by palatals or coronals only. Unpredicted front vowels

are observed across all four consonant categories, especially following consonants (as seen in Figure 4.4).

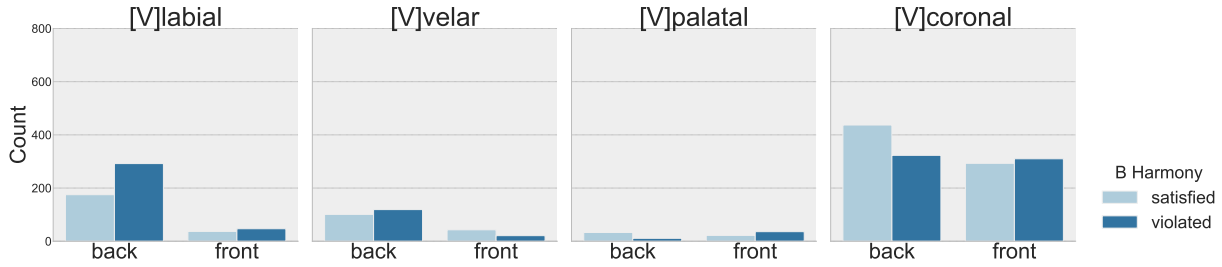


Figure 4.3: Backness harmony and back feature in LT-unique suffix vowels preceding consonants

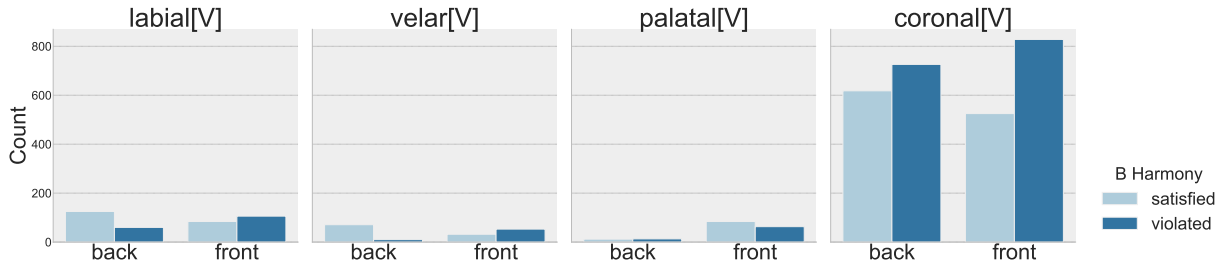


Figure 4.4: Backness harmony and back feature in LT-unique suffix vowels following consonants

These observations made in this section are similar across all age groups, except that elderly speakers show unpredicted rounding more often than anyone else (Appendix 6.8).

To sum up, this section examined the relationship between backness/rounding of suffix vowels in LT-unique tokens and adjacent consonants. Round vowels that cannot be explained by vowel harmony are observed adjacent to not only labials and velars but also coronals. Front vowels that cannot be explained by vowel harmony are observed across all consonant categories. The observations made in this section indicate that place features of consonants do not seem to be responsible for the realization of the vowels, and therefore there should be another factor or other factors determining vowel distribution in LT suffixes.

4.3.2 Do some affixes have fixed vowels?

Overview of suffixes in the corpus

This section will address the influence of suffix type on the vowel harmony patterns observed in LT, where 'type' refers to meaning and usage. The most frequently occurring suffixes (more than 50 instances) in LT-unique tokens will be examined. These are listed in Table 4.1, ordered based on the frequency of occurrence in LT-unique tokens. Note that the suffixes in Table 4.1 are among the most frequent affixes in Turkish (Pierce, 1961); see Appendix 6.9.

Table 4.1: The number of suffixes in LT-unique vs. ST-identical tokens

Vowel	Suffix		LT-unique	ST-identical	Total
high	PST	-DI	624	831	1455
	ACC	-(j)I[40]	337	523	860
	POSS.3SG	-(s)I(n)[41]	276	398	674
	POSS.1SG	-Im[42]	184	257	441
	COP	-DIr	138	91	229
	GEN.3	-(n)In	101	226	327
	1SG	-(j)Im[43]	101	137	238
	COMPM	-(s)I(n)[44]	85	170	255
	AOR	-Ir[45]	75	109	184
	1PL	-(j)Iz/-lIm	74	37	111
	NMLZ	-DIK	70	106	176
	NMLZ	-lI	64	99	163
	GEN.1	-Im	63	104	167
	NMLZ	-lIK	52	72	124
non-high	DAT	-(j)A	169	687	856
	PL	-lAr	156	484	640
	LOC	-DA	130	798	928
	NEG	-mA	91	141	232
	AOR	-Ar[46]	85	107	192
	NMLZ	-ʤA	84	100	184

[40]The optional [j, s, n] preceding suffix vowels are epenthetic, occurring after a stem ending in a vowel.

[41]-(s)I word-finally, -(s)In when followed by a case suffix or the nominalizing -ʤA (Göksel & Kerslake, 2005); for instance, *ust-**i*** 'its top' (cf. ST yst-y) vs. *ust-**in**-e* 'to its top'(cf. ST yst-yn-e).

In Turkish (including LT), the order of suffixes are as follows. In nominal morphology, derivational suffixes precede inflectional suffixes (46a), which can be followed by clitics (46b) (Göksel & Kerslake, 2005).

(46) a. giʃ-luk-ta-ki
winter-NMLZ-LOC-ADJ
noun-DER-INFL-INFL
'the one in the winter house'
[080619-S1-O]

b. gelin-um=le
daughter.in.law-POSS.1SG=COM
noun-INFL=CLITIC
'with my daughter in law'
[080619-S1-O]

In verbal morphology, the order of suffixes depends on whether the verb form is finite or non-finite. In finite forms, the root is followed by voice, negation, tense/aspect/modality markers (e.g., PST, AOR), copula (conditional/evidential/past), person, and then the copula (-DIr) which functions as a generalizing marker (47a-47b). In non-finite forms, the root is followed by voice, negation, subordinator (e.g., nominalizer -DIK, infinitival -mAK), and nominal inflectional markers (e.g., plural, case, possessive). See examples in (47c-47d).

(47) *Finite: Root-Voice-Negation-TAM-Copula-Person-Copula (-DIr):*

a. koniʃ-me-du-m
speak-NEG-PST-1SG
'I didn't speak.'
[080619-S1-O]

[42]This suffix occurs without a vowel following a stem ending with a vowel. As the main interest in this dissertation is how vowels are realized in suffixes, Table 4.1 excludes the suffix occurrences when the vowel is omitted. For instance, the occurrences of the POSS.1SG without a vowel as in *uti-**m*** 'my iron' (cf. ST yty-m) are excluded from the POSS.1SG frequency count).

[43]See footnote 42

[44]See footnote 41

[45]See footnote 42

[46]See footnote 42

b. tanɯ-n-miʃ-tur
recognize-PASS-EVCOP-COP
'It is recognized.'
[081919-S9-Y]

Non-finite: Root-Voice-Negation-Subordinator-Nominal inflectional markers:

c. sojle-duɣ-i (zaman)
say-NMLZ-3SG (time)
'when he/she says'
[082119-S4-O]

d. jap-ma-duk-tan (sonra)
do-NEG-NMLZ-ABL (after)
'after not doing'
[081919-S9-Y]

Regarding suffix types, there are at least two potential reasons for the disharmony in LT. One, partial vowel harmony might be a result of certain suffixes that fail to harmonize. Two, certain suffixes which allow alternating vowels may show different patterns than the four-way alternation (i.e., [i]∼[ɯ]∼[u]∼[y]) found in ST. The rest of this section will address these two issues.

Suffixes with [i]

This section focuses on whether disharmony in LT may be due to affixes that fail to harmonize. In ST, some suffixes provide exceptions to vowel harmony. For instance, the vowel in converbial -ken stays unchanged no matter what the preceding vowel is. Some suffixes with two vowels, such as the progressive -(I)jor, may undergo vowel harmony in the first vowel but the second vowel [o] remains the same at all times and therefore may present vowel harmony violations (see Chapter 3, Section 3.2.4). In LT, too, there may be suffixes occurring with a fixed vowel, where a fixed vowel fails to alternate.

The behavior of suffix vowels is investigated in LT-unique tokens only, because ST-identical tokens present the same patterns in ST. In LT-unique tokens, suffixes like ACC -(j)I,

POSS.3SG -(s)I(n), COMPM -(s)I(n) and the nominalizer -lI were found to occur typically with an [i]. Other suffixes such as POSS.1SG -Im, COP -DIr (the copula 'to be'), GEN.3 -(n)In, AOR -Ir, 1PL -(j)Iz/-lIm, GEN.1 -Im and the nominalizing suffixes -DIK and -lIK were found to occur with [u] most often. All of these suffixes have a four-way alternation in ST, but they behave differently in LT. The rest of this section examines each of these suffixes individually by demonstrating which vowels occur in these suffixes as well as whether they harmonize with the preceding vowel.

To start with, there are 860 ACC suffix vowels in the corpus. 523 (61%) of these ACC suffixes appear in ST-identical tokens and alternate as in ST, so they satisfy harmony. However, the rest of the 337 (39%) ACC suffixes are in LT-unique tokens, and the behavior of these ACC suffixes is different from ST. According to Table 4.2, the ACC vowel in LT-unique tokens shows two patterns. One, the ACC vowel alternates according to both types of harmonies as can be seen in 127 instances of the ACC suffix satisfying both backness and rounding harmonies. These harmonic instances of the ACC suffix are within LT-unique tokens because root vowels differ from the vowels in ST cognates. Second, 92% (n=309) of the ACC occurrences have [i] even when backness and/or rounding harmony is violated, suggesting a fixed [i] for this suffix. Of the 8% (n=28) that do not show [i], all but 2 show harmonic behavior. Examples of the ACC are provided in (48). Note that 101 out of these 127 ACC suffixes are realized with [i] and could be accidentally satisfying vowel harmony.

Table 4.2: The number of ACC -(j)I suffix vowels in LT-unique tokens

Harmony	ACC suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	101	6	19	1	-	127
B satisfied, R violated	3	-	-	-	-	3
B violated, R satisfied	111	-	-	1	-	112
B violated, R violated	94	-	1	-	-	95
B and/or R is *NA*	-	-	-	-	-	-
Total	309	6	20	2	-	**337**

(48) a. kapi-j**i** *harmonic* (kapɯ-j**ɯɪ** in ST)
door-ACC
'the door'
[090319-S8-M]

b. baba-m-**i** *B violation* (baba-m-**ɯɪ** in ST)
father-POSS.1SG-ACC
'my father'
[082119-S4-O]

c. gyn-**i** *R violation* (gyn-**y** in ST)
day-ACC
'the day'
[082119-S4-O]

d. tohum-**i** *B and R violations* (tohum-**u** in ST)
seed-ACC
'the seed'
[080619-S1-O]

Similar to the case of the ACC, there are 674 POSS.3SG suffixes (-(s)I(n)) in the corpus. 398 (59%) occur in ST-identical forms and 276 (41%) are found in LT-unique forms. Table 4.3 demonstrates that the POSS.3SG suffix is typically realized with [i] in LT-unique tokens (87% of occurrences) no matter whether the [i] harmonizes with the preceding vowel or not. One exception to this is POSS.3SG suffixes realized with [u] (n=29), 21 of which are due to vowel harmony. 'Other' category contains [ɪ, ɨ, ʉ][47]. Examples are provided in (49).

[47] Although it is possible to categorize central vowels as [-back], they are treated as 'NA' for vowel harmony in the LT corpus. Central vowels are left out from the analysis due to their low frequency in the data (see Chapter 3, Section 3.4.2). The front vowel [ɪ] is categorized as front and unround in the corpus. However, it is marked as 'NA' for backness harmony in Table 4.3 as it follows a central vowel.

Table 4.3: The number of POSS.3SG -(s)I(n) suffix vowels in LT-unique tokens

Harmony	POSS.3SG suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	36	2	21	2	-	61
B satisfied, R violated	2	-	3	-	-	5
B violated, R satisfied	176	-	1	-	-	177
B violated, R violated	26	-	4	-	-	30
B and/or R is *NA*	-	-	-	-	3	3
Total	240	2	29	2	3	**276**

(49) a. kari-s**i**n-e — *harmonic* — (karɯ-s**ɯɯ**n-a in ST)
wife-POSS.3SG-DAT
'to his wife'
[082119-S4-O]

b. laz-ʤa-s**i** — *B violation* — (laz-ʤa-s**ɯɯ** in ST)
Laz-NMLZ-POSS.3SG
'it's Laz (translation)'
[082019-S6-M]

c. (ardaʃen) kœj-**i** — *R violation* — (kœj-**y** in ST)
(Ardeşen) village-POSS.3SG
'Ardeşen's village'
[082119-S4-O]

d. (topraɣɯn) toz-**i** — *B and R violations* — (toz-**u** in ST)
(soil) dust-POSS.3SG
'(the soil's) dust'
[082119-S7-M]

The compound marker (COMPM) -(s)I(n) is another suffix which is typically used with [i] in LT-unique tokens. Of 255 COMPM suffixes, 170 (67%) occur in ST-identical forms and the rest 85 (33%) occur in LT-unique forms. 87% (n=74) of the LT-unique COMPM suffixes have [i] (Table 4.4). 'Other' category contains one [ɨ]. See examples in (50).

Table 4.4: The number of COMPM -(s)I(n) suffix vowels in LT-unique tokens

Harmony	COMPM suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	12	1	6	-	-	19
B satisfied, R violated	-	-	1	-	-	1
B violated, R satisfied	53	-	1	-	-	54
B violated, R violated	9	-	1	-	-	10
B and/or R is *NA*	-	-	-	-	1	1
Total	74	1	9	-	1	**85**

(50) a. (sabah) ka:valti-**sin**-de — *harmonic* — (ka:valtɯ-**sɯn**-da in ST)
(morning) breakfast-COMPM-LOC
'in the breakfast'
[090319-S8-M]

b. (siɣir) ʧoban-**i**-dur — *B violation* — (ʧoban-**ɯ**-dɯr in ST)
(cattle) shepherd-COMPM-COP
'(he is) a cattle shepherd'
[082119-S4-O]

c. (misir) un-**in**-den — *B and R violations* — (un-**un**-dan in ST)
(corn) flour-COMPM-ABL
'from corn flour'
[081919-S10-O]

Finally, the nominalizer -lI appears to have a fixed [i] in LT-unique tokens. This suffix functions to derive nouns and adjectives so the derived form possesses the characteristics described. Out of 163 -lI suffixes in the corpus, 99 (61%) are found in ST-identical tokens and harmonize with the preceding vowel while the remaining 64 (39%) occur in LT-unique tokens (Table 4.5). 92% (n=59) of the -lI in LT-unique tokens have [i]. Examples are given in (51).

Table 4.5: The number of NMLZ -lI suffix vowels in LT-unique tokens

Harmony	NMLZ suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	20	3	2	-	-	25
B satisfied, R violated	-	-	-	-	-	-
B violated, R satisfied	34	-	-	-	-	34
B violated, R violated	5	-	-	-	-	5
B and/or R is *NA*	-	-	-	-	-	-
Total	59	3	2	-	-	**64**

(51) a. akil-**li**-jim *harmonic* (akɯl-**lɯ**-jɯm in ST)
wisdom-NMLZ-1SG
'I am wise'
[082119-S4-O]

b. fajda-**li**-dur *B violation* (fajda-**lɯ**-dɯr in ST)
benefit-NMLZ-COP
'(it is) beneficial'
[082119-S7-M]

c. tohum-**li**-dur *B and R violations* (tohum-**lu**-dur in ST)
seed-NMLZ-COP
'(it is) with seed'
[082119-S7-M]

To summarize, there are at least four suffixes in LT-unique tokens that occur with a fixed [i] (Table 4.6). 'Fixed' does not indicate that there are no alternations in the suffix vowel but it indicates a high percentage of tokens with the vowel [i]. The fixed [i] forms following other vowels means that there are violations of harmony, especially for backness. In Table 4.6, it might be the case that the allomorphs with [n] have different rates of [i]. However, the slightly lower [i] occurrence percentages (i.e., 87%) are irrelevant to the presence of [n] in POSS.3SG and COMPM. In other words, the occurrence of vowels other than [i] does not correspond to whether the allomorph is -(s)In or -(s)I. Because there are not equal sample sizes for each suffix from each age group, it is difficult to arrive at a conclusion regarding generational differences with respect

to suffixes occurring with fixed [i] (see Appendix 6.10, Table 6.6).

Table 4.6: Summary of suffixes with fixed [i] in LT-unique tokens

Suffix		Total count	Fixed [i] [i] occurrence		satisfies B	satisfies R
ACC	-(j)I	337	309	(92%)	34%	69%
POSS.3SG	-(s)I(n)	276	240	(87%)	16%	88%
COMPM	-(s)I(n)	85	74	(87%)	16%	88%
NMLZ	-lI	64	59	(92%)	34%	92%

Suffixes with [u]

While suffixes like the POSS.3SG, ACC, COMPM and the nominalizer -lI seem to occur with a fixed [i] in LT-unique tokens, other suffixes contain a fixed [u]. These suffixes are the POSS.1SG -Im, COP -DIr, GEN.3 -(n)In, AOR -Ir, 1PL -(j)Iz/-lIm, GEN.1 -Im, and the nominalizing suffixes -DIK and -lIK.

First, the corpus contains 441 instances of POSS.1SG, 257 (58%) of which occur in ST-identical words, and 184 (42%) in LT-unique words. In LT-unique tokens, 78% of the POSS.1SG contain a fixed [u] (n=143). This is demonstrated in Table 4.7, and examples are provided in (52). 'Other' category contains five [ə] and one [ʉ].

Table 4.7: The number of POSS.1SG -Im suffix vowels in LT-unique tokens

Harmony	POSS.1SG suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	3	12	19	3	-	37
B satisfied, R violated	-	1	32	-	-	33
B violated, R satisfied	9	5	7	-	-	21
B violated, R violated	2	-	85	-	-	87
B and/or R is *NA*	-	-	-	-	6	6
Total	14	18	143	3	6	**184**

(52) a. guʤ-**um** *harmonic* (gyʤ-**ym** in ST)
strength-POSS.1SG
'my strength'
[082119-S4-O]

b. ʧœj-**um** *B violation* (kœj-**ym** in ST)
village-POSS.1SG
'my village'
[081919-S2-M]

c. bakal-**um** *R violation* (bakkal-**ɯm** in ST)
convenience.store-POSS.1SG
'my convenience store'
[082119-S4-O]

d. kiz-**um** *B and R violations* (kɯz-**ɯm** in ST)
daughter-POSS.1SG
'my daughter'
[081919-S10-O]

Second, COP -DIr occurs in the data 229 times, and 91 (40%) are in ST-identical words and 138 (60%) are in LT-unique words. As indicated in Table 4.8, 86% (n=118) of this suffix in LT-unique tokens are [u]. 'Other' category contains six [ə]. Examples are given in (53).

Table 4.8: The number of COP -DIr suffix vowels in LT-unique tokens

Harmony	COP suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	6	-	6	-	-	12
B satisfied, R violated	-	-	31	-	-	31
B violated, R satisfied	-	8	1	-	-	9
B violated, R violated	-	-	80	-	-	80
B and/or R is *NA*	-	-	-	-	6	6
Total	6	8	118	-	6	**138**

(53) a. sufur-**dur** *harmonic* (sɯfuɾ-**dɯr** in ST)
zero-COP
'(it is) zero'
[080619-S1-O]

b. teʃekkyr-**dur** *B violation* (teʃekkyr-**dyr** in ST)
thank-COP
'(it is) thank(s)'
[080619-S1-O]

c. baba-**dur** *R violation* (baba-**dɯr** in ST)
father-COP
'(he is a) father'
[082019-S6-M]

d. de-mek-**tur** *B and R violations* (de-mek-**tir** in ST)
say-INF-COP
'it means'
[082019-S5-M]

Next, the GEN.3 occurs in the corpus 327 times, 226 (69%) in ST-identical words and 101 (31%) in LT-unique words. Although some of GEN.3 in LT-unique tokens occur with [i] (n=23), this suffix generally occurs with [u] (71%, n=72). This is illustrated in Table 4.9 ('other' vowels are two [ɔ] and one [ɨ]). Examples are provided in (54).

Table 4.9: The number of GEN.3 (-(n)In) suffix vowels in LT-unique tokens

Harmony	GEN.3 suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	5	3	14	-	-	22
B satisfied, R violated	-	-	17	-	-	17
B violated, R satisfied	15	-	3	-	-	18
B violated, R violated	3	-	38	-	-	41
B and/or R is *NA*	-	-	-	-	3	3
Total	23	3	72	-	3	**101**

(54) a. okuz-**un** *harmonic* (œkyz-**yn** in ST)
ox-GEN.3
'ox's'
[090319-S8-M]

b. kœj-ym-**un** *B violation* (kœj-ym-**yn** in ST)
village-POSS.1SG-GEN.3
'my village's'
[081919-S2-M]

c. bura-**nun** *R violation* (bura-**nɯn** in ST)
here-GEN.3
'of here'
[081919-S9-Y]

d. kelime-**nun** *B and R violations* (kelime-**nin** in ST)
word-GEN.3
'word's'
[082119-S3-M]

The number of the AOR suffixes with a high vowel is 184 in the corpus. 109 (59%) are in ST-identical forms, and 75 (41%) are in LT-unique tokens. Table 4.10 provides the breakdown of the AOR suffixes in LT-unique tokens. According to this table, the AOR appears to occur with [u] frequently (84%, n=63). 'Other' category contains three [ə] and one [ɨ]. Some examples are given in (55). Note that the AOR suffix is phonologically irregular in ST (and LT) as it has variation between six vowels: High [i, ɯ, y, u] (-Ir) and non-high [a, e] (-Ar). Göksel & Kerslake

(2005) describe this variation as follows. The variants with a high vowel (AOR -Ir) occur after polysyllabic stems or monosyllabic verbs ending in [l] or [r]. The variants with a non-high vowel (AOR -Ar) occur after verbs ending in consonants other than [l, r]. The AOR suffix reported in this section represents the allomorph with a high vowel AOR -Ir.

Table 4.10: The number of AOR -Ir suffix vowels in LT-unique tokens

Harmony	AOR suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	3	1	21	-	-	25
B satisfied, R violated	-	-	6	-	-	6
B violated, R satisfied	-	2	-	-	-	2
B violated, R violated	2	-	36	-	-	38
B and/or R is *NA*	-	-	-	-	4	4
Total	5	3	63	-	4	**75**

(55) a. karuʃ-**ur** — *harmonic* — (karɯʃ-**ɯr** in ST)
mix-AOR
'(it) mixes'
[082019-S5-M]

b. al-**ur**-um — *R violation* — (al-**ɯr**-ɯm in ST)
buy-AOR-1SG
'I buy'
[080619-S1-O]

c. bil-**ur**-se-n — *B and R violations* — (bil-**ir**-se-n in ST)
know-AOR-COND-2SG
'if you know'
[082119-S4-O]

The 1PL, was found in the corpus in 111 instances. Of 111 1PL, 37 (33%) occurred in ST-identical words while 74 (67%) occurred in LT-unique ones (Table 4.11). Note that 1PL agreement suffix has three forms in ST (and LT) and the choice among variants (paradigms) depend on tense. Kornfilt (2013) describes that one variant is -(j)Iz, which occurs after aorist

(-(I/A)r), present progressive (-Ijor), reported past (-mIʃ), or future (-AɕɜAk) markers. Another variant is -k, found after definite past tense (-DI) or conditional (-sA) markers. The last variant is -lIm, found after an optative marker (-(j)A). The 1PL numbers reported in this section exclude the cases where the 1PL is -k since it lacks a vowel (e.g., [de-du-k] 'say-PST-1PL'). As shown in Table 4.11, 1PL occurs with [u] in 64% of cases (n=24 for -(j)Iz, n=23 for -lIm). However, 'other' vowels are also preferred: For -(j)Iz, eleven [ə], five [ʉ], two [ɨ], and for -lIm two [ə]. Examples are provided in (56) for -Iz and in (57) for -lIm.

Table 4.11: The number of 1PL -(j)Iz/-lIm suffix vowels in LT-unique tokens

Harmony	1PL suffix vowel -Iz					1PL suffix vowel -lIm					Total
	i	ɯ	u	y	other	i	ɯ	u	y	other	
B satisfied, R satisfied	2	-	2	-	-	-	-	-	-	-	4
B satisfied, R violated	-	-	2	-	-	-	-	4	-	-	6
B violated, R satisfied	3	2	-	-	-	-	-	-	-	-	5
B violated, R violated	-	-	20	-	-	-	-	19	-	-	39
B and/or R is *NA*	-	-	-	-	18	-	-	-	-	2	20
Total	5	2	24	-	18	-	-	23	-	2	**74**

(56) a. ver-ur-**uz** — *harmonic* — (ver-ir-**iz** in ST)
give-AOR-1PL
'we give'
[080619-S1-O]

b. jap-ar-**uz** — *R violation* — (jap-ar-**ɯz** in ST)
do-AOR-1PL
'we do'
[081919-S2-M]

c. gid-er-**uz** — *B and R violations* — (gid-er-**iz** in ST)
go-AOR-1PL
'we go'
[080619-S1-O]

d. de-r-**əz** *B and R not applicable* (de-r-**iz** in ST)
say-AOR-1PL
'we say'
[082119-S7-M]

(57) a. bak-a-**lum** *R violation* (bak-a-**lɯm** in ST)
look-OPT-1PL
'let's look'
[081919-S9-Y]

b. itʃ-e-**lum** *B and R violations* (itʃ-e-**lim** in ST)
drink-OPT-1PL
'let's drink'
[082119-S4-O]

c. ed-e-**ləm** *B and R not applicable* (ed-e-**lim** in ST)
do-OPT-1PL
'let's do'
[082019-S5-M]

Another suffix with a fixed [u] in LT-unique tokens is -DIK, which attaches to verbs to form a verbal noun, participle, or converb. -DIK is found in the corpus 176 times; 106 (60%) in ST-identical forms and 70 (40%) in LT-unique forms. The vowel is [u] in 89% (n=62) of -DIK in LT-unique tokens. The distribution of vowels for -DIK is shown in Table 4.12 where 'other' category contains one [ʉ]. Examples are provided in (58).

Table 4.12: The number of NMLZ -DIK suffix vowels in LT-unique tokens

Harmony	NMLZ suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	-	-	12	-	-	12
B satisfied, R violated	-	-	21	3	-	24
B violated, R satisfied	2	3	2	-	-	7
B violated, R violated	-	-	27	-	-	27
B and/or R is *NA*	-	-	-	-	-	-
Total	2	3	62	3	-	**70**

(58) a. supur-**duɣ**-un — *harmonic* — (sypyr-**dy:**-n in ST)
sweep-NMLZ-2SG
'the one you sweep'
[082119-S7-M]

b. gœr-**duɣ**-um — *B violation* — (gœr-**dy:**-m in ST)
see-NMLZ-1SG
'the one I see'
[082119-S7-M]

c. jaʃa-**duɣ**-un — *R violation* — (jaʃa-**dɯ:**-n in ST)
live-NMLZ-2SG
'the one you live'
[081919-S2-M]

d. sev-**duɣ**-um — *B and R violations* — (sev-**di:**-m in ST)
love-NMLZ-1SG
'the one I love'
[080619-S1-O]

GEN.1 (-Im) is found in the corpus 167 times; 104 (62%) in ST-identical tokens and 63 (38%) in LT-unique tokens. Similar to 1PL, GEN.1 is typically pronounced with [u] in LT-unique tokens (57%, n=36) (Table 4.13) but there are also 26 cases with 'other' vowels: twenty-five [ə] and one [ɪ]. See examples in (59).

Table 4.13: The number of GEN.1 -Im suffix vowels in LT-unique tokens

Harmony	GEN.1 suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	-	-	-	-	1	1
B satisfied, R violated	-	-	5	-	-	5
B violated, R satisfied	1	-	-	-	-	1
B violated, R violated	-	-	31	-	-	31
B and/or R is *NA*	-	-	-	-	25	25
Total	1	-	36	-	26	**63**

(59) a. akl-**um** *B violation* (akl-**ɯm** in ST)
wisdom-GEN.1
'my wisdom'
[082119-S4-O]

b. ben-**um** *B and R violations* (ben-**im** in ST)
I-GEN.1
'my'
[081919-S2-M]

c. biz-**əm** *B and R not applicable* (biz-**im** in ST)
we-GEN.1
'our'
[082119-S3-M]

Finally, -lIK is used with a fixed [u] in LT-unique tokens. It functions to derive nouns from nouns/adjectives/adverbs or to derive adjectives from nouns. It is found in the corpus 124 times; 72 (58%) in ST-identical forms and 52 (42%) in LT-unique forms. In LT-unique tokens, this suffix occurs with [u] 65% of cases (n=34). The distribution of vowels for -lIK is shown in Table 4.14 and examples are provided in (60). The category 'other' contains one [ʉ].

Table 4.14: The number of NMLZ -lIK suffix vowels in LT-unique tokens

Harmony	NMLZ suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	12	1	3	-	-	16
B satisfied, R violated	-	-	8	-	-	8
B violated, R satisfied	3	1	4	-	-	8
B violated, R violated	-	-	19	-	-	19
B and/or R is *NA*	-	-	-	-	1	1
Total	15	2	34	-	1	**52**

(60) a. baluk-tʃu-**luk** *harmonic* (balɯk-tʃɯ-**lɯk** in ST)
fish-NMLZ-NMLZ
'fishery'
[081919-S9-Y]

b. namaz-**luk**-lar *B violation* (namaz-**lɯk**-lar in ST)
prayer-NMLZ-PL
'praying equipments'
[080619-S1-O]

c. kœty-**luk** *R violation* (kœty-**lyk** in ST)
bad-NMLZ
'malignancy'
[090319-S8-M]

d. esnaf-tʃi-**luk** *B and R violations* (esnaf-tʃɯ-**lɯk** in ST)
craft-NMLZ-NMLZ
'craftsmanship'
[081919-S2-M]

Suffixes occurring with a fixed [u] are summarized in Table 4.15. The low percentages of backness and rounding harmonies are suggestive of a lack of vowel harmony in these suffixes. Adherence to vowel harmony may be accidental in these suffixes. Because there are not equal sample sizes for each suffix from each age group, it is difficult to arrive at a conclusion regarding generational differences with respect to suffixes occurring with fixed [u] (see Appendix 6.10, Table 6.6).

Table 4.15: Summary of suffixes with fixed [u] in LT-unique tokens

Suffix		Total count	Fixed [u]			
			[u] occurrence		satisfies B	satisfies R
POSS.1SG	-Im	184	143	(78%)	36%	18%
COP	-DIr	138	118	(86%)	31%	6%
GEN.3	-(n)In	101	72	(71%)	43%	24%
AOR	-Ir	75	63	(84%)	43%	33%
1PL	-(j)Iz/-lIm	74	47	(64%)	17%	4%
NMLZ	-DIK	70	62	(89%)	53%	23%
GEN.1	-Im	63	36	(57%)	14%	0%
NMLZ	-lIK	52	34	(65%)	32%	21%

Overall, there are many LT words where affixes alternate as in ST (i.e., suffixes in ST-identical tokens). Nevertheless, an investigation of LT-unique tokens reveals that certain suffixes

occur with either of the two typical high LT vowels [i] or [u], which may result in disharmonic forms. A striking generalization is also revealed when [i]-suffixes are compared with [u]-suffixes: The suffixes with a fixed [i] are the ones that lack a coda consonant (Table 4.6) while the suffixes with a fixed [u] contain a coda consonant (Table 4.15). This suggests that syllable structure plays a role in determining the suffix vowel. The issue of syllable structure will be addressed in Section 4.3.4 and 4.3.3.

Suffixes showing variation

So far, it has been shown that although there is some variation, certain suffixes occur with a fixed vowel [i] or [u] in LT-unique tokens. The corpus also revealed that there are at least two suffixes that show an alternation between [i] and [u] that is not due to vowel harmony: PST and 1SG). The rest of this section will focus on the distribution of vowels in PST and 1SG as well as suffixes with non-high vowels, which show alternation between [a] and [e].

First, the PST suffix (-DI) is the most common suffix in the corpus occurring 1455 times. 831 (57%) of these are found in ST-identical tokens and 624 (43%) are found in LT-unique words. An examination of LT-unique tokens indicates that the PST can occur with [i] (37%, n=228) or [u] (51%, n=319). This distribution cannot be explained by vowel harmony as most occurrences do not obey vowel harmony (Table 4.16, where 'other' vowels are fifty-four [ə], six [ʉ], and two [ɨ]). However, syllable structure may be playing a role in the choice of vowel in LT as will be discussed below. Examples of PST with [i] are provided in (61).

Table 4.16: The number of PST (-DI) suffix vowels in LT-unique tokens

Harmony	PST suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	46	6	46	-	-	98
B satisfied, R violated	-	-	79	2	-	81
B violated, R satisfied	119	6	5	1	-	131
B violated, R violated	61	-	189	-	-	250
B and/or R is *NA*	2	-	-	-	62	64
Total	228	12	319	3	62	**624**

(61) a. de-**di**-ler *harmonic*
say-PST-3PL
'they said'
[082119-S3-M]

b. anla-**di** *B violation* (anla-**dɯ** in ST)
understand-PST
'(he/she/it) understood'
[082119-S4-O]

c. uʃu-**di** *B and R violations* (yʃy-**dy** in ST)
be.cold-PST
'(he/she/it) got cold'
[082119-S4-O]

Below are examples for PST when the vowel is [u] (62). As these examples show, the consonant following the PST can be different, i.e., velar [k] in (62a), labial [m] in (62b, 62c), or coronal [n] (62d). In the following examples, the consonants following PST suffix vowel [u] constitute a coda in the syllable.

(62) a. buju-**du**-k *harmonic* (byjy-**dy**-k in ST)
grow-PST-1PL
'we grew up'
[081919-S2-M]

b. gœr-**du**-m *B violation* (gœr-**dy**-m in ST)
see-PST-1SG
'I saw'
[081919-S2-M]

c. sat-**tu**-m *R violation* (sat-**tɯ**-m in ST)
sell-PST-1SG
'I sold'
[080619-S1-O]

d. de-**du**-n *B and R violations* (de-**di**-n in ST)
say-PST-2SG
'you said'
[082019-S5-M]

In conclusion, the distribution from examples (61) and (62) suggests that syllable structure may be determining the realization of the vowel as [i] or [u] for the PST, as this is a suffix that can be followed by other suffixes, including those that are consonant only. This raises the question of how suffixes with 'fixed' [i] or [u] discussed in the previous sections behave when they are followed by another suffix, which may put the fixed vowel in an open or closed syllable. This issue will be addressed in Section 4.3.3.

Second, the corpus contains 238 instances of the 1SG suffix, excluding the cases in which the suffix lacks a vowel (e.g., (62c)). Out of 238, 137 (58%) of the 1SG suffix are found in ST-identical forms and 101 (42%) are found in LT-unique forms (Table 4.17, where 'other' vowels are six [ə] and four [ʉ]). Examples are provided in (63) for cases where the suffix is realized with [i] and in (64) for cases where the suffix is produced with [u]. Note that all 1SG instances in the LT-unique corpus are found word-finally. The vowel alternations of the 1SG as observed in these examples cannot be due to syllable structure as the form of the suffix is -(j)Im, which should condition [(j)um] if syllable structure is responsible for the form. Yet, there are examples which contain [i] that violate back harmony such as (63b).

Table 4.17: The number of 1SG (-(j)Im) suffix vowels in LT-unique tokens

Harmony	1SG suffix vowel					Total
	i	ɯ	u	y	other	
B satisfied, R satisfied	21	2	15	-	-	38
B satisfied, R violated	-	1	8	-	-	9
B violated, R satisfied	23	-	-	-	-	23
B violated, R violated	-	-	21	-	-	21
B and/or R is *NA*	-	-	-	-	10	10
Total	44	3	44	-	10	**101**

(63) a. bura-li-**jim** *harmonic* (bura-lɯ-**jɯm** in ST)
here-NMLZ-1SG
'I am from here'
[082019-S6-M]

b. musliman-**im** *B violation* (myslyman-**ɯm** in ST)
muslim-1SG
'I am Muslim'
[082119-S4-O]

(64) a. al-ur-**um** *harmonic* (al-ɯr-**ɯm** in ST)
take-AOR-1SG
'I take'
[080619-S1-O]

b. bak-ar-**um** *R violation* (bak-ar-**ɯm** in ST)
look-AOR-1SG
'I look'
[081919-S10-O]

c. gez-er-**um** *B and R violations* (gez-er-**im** in ST)
travel-AOR-1SG
'I travel'
[080619-S1-O]

Aside from the PAST and 1SG suffixes with high vowels that alternate between [i] and [u], non-high suffixes always show alternation between [a] and [e] in LT-unique tokens. As will be

demonstrated in the rest of this section, the choice between [a] and [e] mostly depends on vowel harmony.

The most frequent non-high suffix in the LT corpus is DAT -(j)A (n=856). 687 (80%) of these occur in ST-identical tokens and the rest 169 (20%) in LT-unique tokens. The DAT occurs with either [a] or [e] in the LT-unique corpus, but there is a stronger tendency for [e] (76%, n=128). This tendency cannot be explained by syllable type as all DAT suffixes occurred word-finally (in open syllables). Likewise, the presence of palatal [j], which might be expected to condition a front vowel, in the -jA form of the DAT does not explain the tendency for front [e].[48] Examples are provided in (65).

Table 4.18: The number of DAT -(j)A suffix vowels in LT-unique tokens

Harmony	DAT suffix vowel			Total
	a	e	other	
B satisfied	25	70	-	95
B violated	15	57	-	72
B is *NA*	1	1	-	2
Total	41	128	-	**169**

(65) a. kira-ɕi-ler-**e** *harmonic* (kira-ɕɯı-lar-**a** in ST)
rent-NMLZ-PL-DAT
'to the renters'
[080619-S1-O]

b. bel-un-**e** *B violation* (bel-in-**e** in ST)
waist-POSS.2SG-DAT
'to your waist'
[082119-S3-M]

[48] In general, the -jA form occurred 32 times and the -A form 137 times. Only five [-ja] and three [-je] occurred in the corpus when vowel harmony was violated.

c. ajakabɨ-**ja** *B not applicable* (ajakkabɯ-**ja** in ST)
shoe-DAT
'to the shoe'
[082119-S3-M]

As for the PL -lAr, it occurred in the corpus 640 times, 484 (76%) of which being in ST-identical tokens and 156 (24%) in LT-unique tokens. As illustrated in Table 4.19, whether the PL vowel is [a] or [e] in LT-unique tokens, the choice mainly depends on vowel harmony as 79% (n=123) of the suffixes satisfy harmony. 'Other' vowel category contains two instances of the mid round central vowel [ɞ]. See examples in (66).

Table 4.19: The number of PL -lAr suffix vowels in LT-unique tokens

Harmony	PL suffix vowel			Total
	a	e	other	
B satisfied	56	67	-	123
B violated	14	16	-	30
B is *NA*	1	-	2	3
Total	71	83	2	**156**

(66) a. konuʃ-me-**ler** *harmonic* (konuʃ-**ma-lar** in ST)
speak-NMLZ-PL
'the speeches'
[082119-S4-O]

b. uzum-**ler** *B violation* (yzym-**ler** in ST)
grape-PL
'grapes'
[082119-S7-M]

c. kɨʃ-**lar** *B not applicable* (kɯʃ-**lar** in ST)
winter-PL
'winters'
[081919-S9-Y]

There are 928 LOC -DA suffixes in the LT corpus. 798 (86%) among these are found in ST-identical tokens while the rest 130 (14%) are in LT-unique tokens. The majority (68%,

n=88) of the LOC vowels in LT-unique tokens satisfy vowel harmony (Table 4.20). 'Other' vowel category contains one instance of the mid round central vowel [ɐ]. See examples of the LOC in (67).

Table 4.20: The number of LOC -DA suffix vowels in LT-unique tokens

Harmony	LOC suffix vowel			Total
	a	e	other	
B satisfied	27	61	-	88
B violated	18	20	-	38
B is *NA*	-	3	1	4
Total	45	84	1	**130**

(67) a. duzʤe-**de** — *harmonic* — (dyzʤe-**de** in ST)
Düzce-LOC
'in Düzce'
[082119-S3-M]

b. misir-**da** — *B violation* — (mɯsɯr-**da** in ST)
corn-LOC
'in the corn'
[082119-S4-O]

c. ~~ʉ~~st-~~ʉ~~n-**de** — *B not applicable* — (yst-yn-**de** in ST)
top-POSS.3SG-LOC
'on its top'
[082019-S5-M]

Next, the NEG -mA occured in the LT corpus 232 times, 141 (61%) in ST-identical tokens and 91 (39%) in LT-unique tokens. As can be seen in Table 4.21, the NEG often occurs with [a] (73%, n=66). Whether it occurs with [a] or [e], it often satisfies backness harmony (73%, n=66). The 'other' vowel category contains two instances of [i]. Examples for the NEG are illustrated in (68).

Table 4.21: The number of NEG -mA suffix vowels in LT-unique tokens

Harmony	NEG suffix vowel			Total
	a	e	other	
B satisfied	50	16	-	66
B violated	16	5	2	23
B is *NA*	-	2	-	2
Total	66	23	2	**91**

(68) a. birak-**ma** *harmonic* (bɯrak-**ma** in ST)
leave-NEG
'don't leave'
[082119-S4-O]

b. gez-**ma** *B violation* (gez-**me** in ST)
travel-NEG
'don't travel'
[082119-S7-M]

c. dɯʃ-~~ɯr~~-**me**-s~~i~~n *B not applicable* (dyʃ-yr-**me**-sin in ST)
fall-CAUS-NEG-OPT.3SG
'let (it) not make him/her fall'
[082019-S6-M]

The allopmorph of the AOR with a non-high vowel (-Ar) occurred in the corpus 192 times, 107 (56%) in ST-identical tokens and 85 (44%) in LT-unique tokens. Unlike the AOR -Ir (allomorph with a high vowel), the AOR -Ar satisfies vowel harmony in LT-unique tokens except for only several instances (Table 4.22). Examples are provided in (69).

Table 4.22: The number of AOR -Ar suffix vowels in LT-unique tokens

Harmony	AOR suffix vowel			Total
	a	e	other	
B satisfied	32	49	-	81
B violated	4	-	-	4
B is *NA*	-	-	-	-
Total	36	49	-	**85**

(69) a. in-**er**-um *harmonic* (in-**er**-im in ST)
go.down-AOR-1SG
'I go down'
[081919-S10-O]

b. kir-**ar**-di *B violation* (kɯr-**ar**-dɯ in ST)
break-AOR-P.COP
'he/she used to break'
[082119-S4-O]

Finally, there are 184 instances of the NMLZ -ʤA in the corpus, 100 (54%) in ST-identical tokens and 84 (46%) in LT-unique ones. This suffix shows alternation between [a] and [e] in LT-unique tokens as indicated in Table 4.23. All of the 30 disharmonic -ʤe forms result from the stem [t**u**rk-tʃe] 'Turkish', which is suggestive of a lexicalized form. This stem also reflects the [y] to [u] substitution pattern observed in LT. The root vowel is produced backed, but the suffix vowel retains the fronted form. This is exemplified in (70b).

Table 4.23: The number of NMLZ -ʤA suffix vowels in LT-unique tokens

Harmony	NMLZ suffix vowel			Total
	a	e	other	
B satisfied	51	1	-	52
B violated	2	30	-	32
B is *NA*	-	-	-	-
Total	53	31	-	**84**

(70) a. arap-**ʧa**-dur *harmonic* (arap-**ʧa**-dɯr in ST)
Arab-NMLZ-COP
'it is Arabic'
[082019-S5-M]

b. turk-**ʧe**-de *B violation* (tyrk-**ʧe**-de in ST)
Turk-NMLZ-LOC
'in Turkish'
[082019-S6-M]

In summary, some suffixes with high vowels in nonstandard LT tokens occur with a fixed [i] (e.g., ACC) and some occur with a fixed [u] (e.g., AOR, POSS.1SG, COP). Some others show alternations between [i] and [u] (e.g., PST). This alternation may be predictable from syllable structure. The summary of high suffix vowels showing [i]-[u] variation is provided in Table 4.24. Suffixes with non-high vowels show alternation between [a] and [e], and do not show fixed vowels. Nevertheless, some of these suffixes show a preference for one vowel over the other, and some show greater adherence to vowel harmony than others. The summary of non-high suffixes with [a]-[e] alternation is provided in Table 4.25. Age differences are also examined, but no further interpretations will be made because there are varying sample sizes for each suffix from each age group (Appendix 6.10, Table 6.7 and Table 6.8). The next section is dedicated to a detailed analysis of syllables and distribution of vowels in LT to explore what factors may be determining variation.

Table 4.24: Summary of high suffix vowels with [i]-[u] variation in LT-unique tokens

Suffix	Total count	Vowel	Occurrence	Satisfies B	Satisfies R
PST -DI	624	i	228 (37%)	20%	72%
		u	319 (51%)	39%	16%
1SG -(j)Im	101	i	44 (44%)	48%	100%
		u	44 (44%)	52%	34%

Table 4.25: Summary of non-high suffix vowels with [a]-[e] variation in LT-unique tokens

Suffix		Total count	Vowel	Occurrence	Satisfies B
DAT	-(j)A	169	a	41 (24%)	61%
			e	128 (76%)	55%
PL	-lAr	156	a	71 (46%)	79%
			e	83 (53%)	81%
LOC	-DA	130	a	45 (35%)	60%
			e	84 (65%)	73%
NEG	-mA	91	a	66 (73%)	76%
			e	23 (26%)	70%
AOR	-Ar	85	a	36 (42%)	89%
			e	49 (58%)	100%
NMLZ	-ʤA	84	a	53 (63%)	96%
			e	31 (37%)	3%

4.3.3 What conditions the choice of vowels in particular suffixes?

The previous section has shown that suffixes with non-high vowels often alternate, mostly obeying vowel harmony. However, suffixes with high vowels may be fixed with [i] or [u], or show alternation between [i] and [u]. This pattern in high vowels is not predictable by vowel harmony. It seems syllable structure may be determining the realization of LT vowels as [i] or [u]. For this

reason, this section focuses on high suffix vowels and discusses whether vowel choice in high vowels can be determined by syllable type.

Table 4.26 illustrates the suffixes with high vowels as they occur in LT-unique tokens. In this table, 'fixed syllabification' means that no other suffixes follow, or the type of following suffix does not alter the syllabification. 'Resyllabifiable' indicates that a following suffix may change the syllabification of a suffix. For instance, a VC suffix occurs in a closed syllable word-finally. However, it may be resyllabified when followed by a vowel initial suffix, putting the consonant of the VC suffix into the onset position of the following suffix. An example is provided in (71), where the POSS.1SG -um is followed by the GEN.1 -un. (71a) shows the affixes of the word and (71b) the syllabification of (71a). The syllabification without the GEN.1 is provided in (71c). This raises the following question. If syllabification plays an active role in selection of vowels in LT-unique tokens, do resyllabifiable suffixes show [i]-[u] variation depending on syllable type?

(71) a. komʃu-lar-um-un (komʃu-lar-ɯm-ɯn in ST)
neighbor-PL-POSS.1SG-GEN.1
'of my neighbors'
[081919-S2-M]

b. komʃu.la.**ru**.mun → POSS.1SG vowel in an open syllable

c. komʃu.la.**rum** → POSS.1SG vowel in a closed syllable

[49] COP -DIr always occurs in a closed syllable in ST as well as LT. There was one exception in the LT corpus where the coda consonant was dropped: [ne-du] 'What is (it)?' (cf. ST [ne-dir]).

Table 4.26: Individual suffixes and syllable type in LT-unique forms

		Open		Closed		Total		
		i	u	i	u	i	u	
Fixed Syllabification								
ACC	-(j)I	309	20	0	0	309	20	fixed [i]
COP	-DIr	0	1[49]	6	117	6	118	fixed [u]
1PL	-(j)Iz/-lIm	0	0	5	47	5	47	
GEN.1	-Im	0	0	1	36	1	36	
GEN.3	-(n)In	0	0	23	72	23	72	
1SG	-(j)Im	0	0	44	44	44	44	alternating
Resyllabifiable								
POSS.3SG	-(s)I(n)	194	22	46	7	240	29	fixed [i]
COMPM	-(s)I(n)	59	9	15	0	74	9	
NMLZ	-lI	58	2	1	0	59	2	
POSS.1SG	-Im	7	41	7	102	14	143	fixed [u]
AOR	-Ir	0	10	5	53	5	63	
NMLZ	-DIK	1	56	1	6	2	62	
NMLZ	-lIK	4	13	11	21	15	34	
PST	-DI	216	22	12	297	228	319	alternating

According to Table 4.26, there is a striking pattern for most of the suffixes whereby the presence of a coda consonant dictates the choice of vowel: [i] in open syllables and [u] in closed syllables. The exception to this is 1SG -(j)Im, which consistently occurs in closed syllables and has equal numbers of [i] and [u]. Note that this suffix behaves differently compared to GEN.1 and POSS.3SG, both of which have a similar -Im shape but consistently favor [u]. With respect to whether resyllabification has any impact on the realization of LT vowels, most suffixes show no effect of resyllabification (i.e., resyllabifiable suffixes with fixed [i] or [u]). Only the resyllabifiable PST -DI shows alternating vowels. These vowels are distributed based on syllable structure. 95% (n=216) of PST [i] occur in open syllables and 93% (n=297) of PST [u] occur in closed syllables.

The suffixes showing variation, 1SG and PST, raise the following questions. First, the 1SG does not resyllabify. Under this condition, does vowel harmony explain the variation in the 1SG -(j)Im, or, does this variation reflect a split behavior of speakers from different age groups? How does the presence or absence of [j] in the 1SG impact the 1SG vowel? Second, why is the PST variable when it resyllabifies, but the other resyllabifiable suffixes are not? Is there something about the nature of the PST usage that could be responsible?

To answer the first question, the distribution of [i] and [u] in 1SG is provided in Table 4.27 along with speaker age and vowel harmony information. Although there is variation in the data, it is notable that the -jIm allomorph always occurs with [i] in both age groups even when backness harmony is violated. The occurrence of [i] in -jIm could be explained by the presence of palatal [j], which seems to be conditioning the choice of front [i] rather than back [u]. Table 4.27 also demonstrates generational differences. In mid aged speakers, 1SG obeys rounding harmony in 96% of the 1SG (n=26) while backness harmony is satisfied in 52% of the 1SG instances (n=14). Overall, mid aged speakers produced the -jIm allomorph, which favors [i], more often (n=19) than old aged speakers. In old aged speakers,1SG obeys rounding harmony in 54% of the 1SG (n=33) while backness harmony is satisfied in 49% of the 1SG instances (n=30). Old aged speakers produced the -Im allomorph, which favors [u], more often (n=45) compared to the mid aged group. In summary, the presence of the palatal [j] in 1SG seems to be correlated with [i] forms, and this effect is more pronounced in middle-aged speakers. However, this effect does not explain why other similarly shaped suffixes (e.g., ACC -(j)I, 1PL -(j)Iz) do not show variation of this nature (see Appendix 6.11).

Table 4.27: Distribution of [i, u] in the allomorphs of the 1SG -jIm vs. -Im in LT-unique tokens

Age	Harmony	-jIm		-Im		Total
		i	u	i	u	
Mid	B satisfied, R satisfied	8	-	2	4	14
	B satisfied, R violated	-	-	-	-	-
	B violated, R satisfied	11	-	1	-	12
	B violated, R violated	-	-	-	1	1
	B and/or R is *NA*	-	-	-	-	-
	Total	19	-	3	5	**27**
Old	B satisfied, R satisfied	10	-	1	11	22
	B satisfied, R violated	-	-	-	8	8
	B violated, R satisfied	6	-	5	-	11
	B violated, R violated	-	-	-	20	20
	B and/or R is *NA*	-	-	-	-	-
	Total	16	-	6	39	**61**

The second question will be examined from three aspects: i) generational difference, ii) archaic use of the PST, and iii) L1 (Laz) influence.

First, whether there is influence of age in the distribution of PST vowels is tested. Age and vowel harmony factors are examined in Table 4.28 regarding the vowel distribution in PST. No generational difference has been observed according to this table since all age groups consistently favor [i] in open syllables and [u] in closed syllables. In other words, it is not the case that a certain age group consistently uses [i] or [u] resulting in the variation in PST. The distribution of PST vowels cannot be explained by vowel harmony either because only a small portion of the vowels (92 out of 547) satisfy both types of harmonies. For this reason, there may be another factor explaining this variable behavior of the PST suffix in LT.

Table 4.28: PST -DI and age distribution

Age	Harmony	PST vowel (Open)			PST vowel (Closed)		
		i	u	Total	i	u	Total
Young	B satisfied, R satisfied	-	-	-	-	1	1
	B satisfied, R violated	-	-	-	-	3	3
	B violated, R satisfied	1	-	1	-	1	1
	B violated, R violated	-	-	-	-	4	4
	B and/or R is *NA*	-	-	-	-	-	-
	Total	1	-	**1**	-	9	**9**
Mid	B satisfied, R satisfied	24	12	36	5	14	19
	B satisfied, R violated	-	-	-	-	9	9
	B violated, R satisfied	72	-	72	4	3	7
	B violated, R violated	14	3	17	-	68	68
	B and/or R is *NA*	2	-	2	-	-	-
	Total	112	15	**127**	9	94	**103**
Old	B satisfied, R satisfied	16	-	16	1	19	20
	B satisfied, R violated	-	-	-	-	67	67
	B violated, R satisfied	42	1	43	-	-	-
	B violated, R violated	45	5	50	2	109	111
	B and/or R is *NA*	-	-	-	-	-	-
	Total	103	6	**109**	3	195	**198**

Second, whether the distribution of the PST in the LT corpus shows an archaic pattern is tested. The archaism argument for variation in the PST has been suggested by Bayramin (2014), as discussed earlier in Chapter 1, Section 1.3. In Old Anatolian Turkish (OAT; 13th-15th centuries, aka Old Ottoman (Kerslake, 1998)), the PST vowel is round [u, y] when it is followed by 1st/2nd persons (i.e., 1SG -DU-m, 1PL -DU-k, 2SG -DU-n, 2PL -DU-nUz), whereas in the 3rd persons, the PST vowel is unround [i, ɯ] (i.e., 3SG -DI-Ø, 3PL -DI-lAr) (Özdarendeli, 2005; Timurtaş, 1976). This distribution overlaps with syllable structure. The 1st/2nd person forms 1SG, 1PL, and 2SG are in closed syllables. Only the 2PL PST form occurs in an open syllable, but it might have compositionally developed from the 2SG (i.e., dU-n-Uz). The 3SG and 3PL forms are in

open syllables. The occurrence of the PST in LT-unique forms is similar to the use of the PST in OAT (Figure 4.5). [u] is primarily found in closed syllables with the 1st/2nd persons. In contrast, [i] is found in open syllables with the 3rd person. This distribution cannot be explained by vowel harmony as the majority of the PST [i] and [u] disobey backness and/or rounding harmony. Nevertheless, this distribution is meaningful if syllable structure determines the LT vowel.

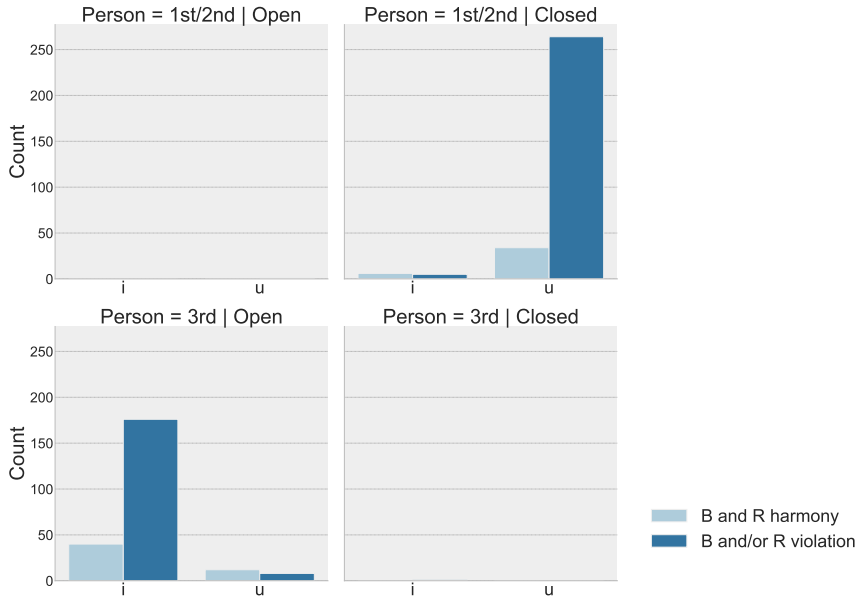


Figure 4.5: The PST in LT-unique forms: person, syllable type, and vowel harmony

In the LT-unique corpus, person markers following the PST always occurred word-finally. Following the PST -DI, person suffixes are 1SG -m, 1PL -k, 2SG -n, 2PL -nIz and 3PL -lAr. The former three suffixes without a vowel (-m, -k, -n) put the PST vowel in a closed syllable (72a-72c). The 2PL -nIz causes the PST vowel to be in an open syllable but there are only two instances of the 2PL following the PST in the corpus. One example is given in (72d), where the PST vowel is [u] despite being in an open syllable and being followed by a 2nd person (the other example contains a PST [ɯ] which is fully harmonic: kal.dɯɯ.nɨz 'you stayed'). On the other hand, the 3SG is -Ø, meaning that the PST occurs word-finally in an open syllable (72e). Followed by the 3PL -lAr, the PST vowel remains in an open syllable (72f). All PST suffixes in the LT-unique corpus are inflected with person (including 3SG -Ø), and the most common person markers are 1SG, 1PL

and 3SG.

(72)	a.	1SG	gœ.tur.d**u**m	'I took'	[081919-S10-O]
	b.	1PL	git.me.d**u**k	'we didn't go'	[080619-S1-O]
	c.	2SG	jap.t**u**n	'you did'	[090319-S8-M]
	d.	2PL	de.sej.d**u**.nuz	'if you said'	[081919-S2-M]
	e.	3SG	bi.tur.d**i**	'he/she finished'	[090319-S8-M]
	f.	3PL	baʃ.la.d**i**.ler	'they started'	[080619-S1-O]

If LT is representative of OAT features, archaism explains why the PST shows variation as well as why the PST occurs with [u] in the 1st/2nd persons (or closed syllables) but [i] in the 3rd persons (or open syllables). However, it could also be the case that this archaism reflects the syllable structure distribution that is more widespread in LT. There are at least two reasons that archaism may not be the sole explanation for the behavior of the PST suffix. First, not all the suffixes examined in this section reflect archaisms, and yet they show a strong syllable structure correlation (Table 4.29). There is especially a good match between LT and OAT for suffixes with [u], but less strong match with the other suffixes. Among the eight OAT suffixes with a round vowel, seven (COP, 1PL, GEN.1, GEN.3, POSS.1SG, AOR, NMLZ -DIK) are fixed with a round [u] in LT, and only one (NMLZ -lI) does not show correlation with LT as this suffix is fixed with [i] in LT. Out of four OAT suffixes with an unround vowel, two (ACC, POSS.3SG) matches the LT [i] form, one (1SG) shows [i]-[u] alternation in LT, and another (NMLZ -lIK) is fixed with [u] in LT. Two OAT suffixes (PST, COMPM) are fully alternating. In LT, PST also alternates based on syllable structure but COMPM is fixed with [i]. Note that the COMPM and POSS.3SG have the identical shape -(s)I(n) and both occur with [i] in LT, but only the POSS.3SG matches the OAT use. To summarize, there is a partial correlation between vowels in LT suffixes and OAT forms.

Table 4.29: Individual suffixes in OAT vs. LT-unique forms (Özdarendeli, 2005; Timurtaş, 1976)

		OAT	LT (prediction)	LT (corpus)	Notes
Fixed Syllabification					
ACC	-(j)I	i/ɯ	i	i	
NMLZ	-lI	**u/y**	**u**	**i**	
COP	-DIr	u/y	u	u	
1PL	-(j)Iz/-lIm	u/y	u	u	
GEN.1	-Im	u/y	u	u	
GEN.3	-(n)In	u/y	u	u	
1SG	-(j)Im	**a/e/i/ɯ**	**i?**	**i/u**	-(v)Am in OAT (rarely: -vAn, or -in/-ɯn)
Resyllabifiable					
POSS.3SG	-(s)I(n)	i/ɯ	i	i	
COMPM	-(s)I(n)	**i/ɯ/u/y**	**i/u**	**i**	
POSS.1SG	-Im	u/y	u	u	
AOR	-Ir	u/y	u	u	
NMLZ	-DIK	u/y	u	u	
NMLZ	-lIK	**i/ɯ**	**i**	**u**	
PST	-DI	i/ɯ/u/y	i/u	i/u	u/y with 1st/2nd person, i/ɯ with 3rd person

The second reason that archaism may not be the only explanation for the variation in PST is as follows. If LT preserved archaic features, this would be suggestive of LT developing much earlier since modern Turkish does not show such archaisms. However, there is mixed evidence for the argument that LT developed centuries ago. Laz people have been living in the northeastern Black Sea area for centuries, and the Turkification of this area started after the 11th century (Bayramin, 2014; Meeker, 1971). The contact between Laz people and Turks in the northeastern Black Sea area especially increased after the Ottoman conquest of Trabzon in 1461[50] (Akkuş

[50]One could argue that LT emerged after the Ottoman conquest (rather than emerging earlier during the OAT/Old Ottoman period). This would roughly correspond to the period of Middle Ottoman (16th to 18th centuries) or New Ottoman (19th century to 1928) (Kerslake, 1998). Backness harmony was fully developed by Middle Ottoman but rounding harmony was still developing, therefore causing variation in suffixes with respect to rounding harmony (See examples in Gökçe (2009)). By the New Ottoman period, rounding harmony was fully developed. In other words, if LT suffixes with fixed vowels or LT PST showing [i]-[u] variation are actually representing archaisms due to language contact with earlier stages of Turkish, this would specifically mean contact with Turkish before the 17th century, when rounding harmony had not been fully developed. Also see footnote 15 in Chapter 1.

& Akkuş, 2020; Brendemoen, 2002). If LT was in contact with earlier stages of Turkish, the general vowel distribution in the LT-unique corpus may be explained as a result of this earlier contact. In general, non-high vowels often satisfied backness harmony in LT (rounding harmony does not apply to non-high vowels), and it was the high vowels that caused more violations of backness and/or rounding harmonies. Some scholars suggest that the northeastern Black Sea dialects of Turkish represent older stages of Turkish and therefore exhibit partial vowel harmony (Brendemoen, 2002; Johanson, 2006). In Turkic languages, the common belief is that backness harmony developed earlier than rounding harmony (Erdal, 1998, 2004; Johanson, 1998). Rounding harmony is suggested to have gradually developed between the 14^{th}-17^{th} centuries, and it is generally accepted that rounding harmony took its standard Turkish form after the 17^{th} century (Erdem, 2006; Johanson, 1978). If this is true, it explains why certain suffixes in OAT, as discussed in Table 4.29, has fixed unround vowels [i, ɯ] or fixed round vowels [y, u] showing an alternation based on backness harmony but lacking rounding harmony. While this account may be true for most northeastern Black Sea dialects, it may not be valid in the case of isolated Laz villages, where individuals natively and primarily spoke Laz. Based on the information collected from the members of the Laz community as discussed in Chapter 2, Laz individuals who were born before 1980 learned Laz as L1 at home and Turkish as a second language once they started schooling, not as a result of other forms of contact. The necessity to learn Turkish in school was especially stronger after the foundation of the Turkish Republic in 1923. This suggests that the LT variety examined in this corpus is a relatively new variety.

Finally, L1 influence is tested to explain the variation in the PST. In Laz, tense/aspect markers may show variation based on person. In fact, the past and the aorist markers in Laz are -i for the 1st/2nd persons (1SG, 1PL, 2SG, 2PL), -u for the 3SG, and -es for the 3PL (Lacroix, 2009; Öztürk, 2019). In other words, Laz speakers have the knowledge that 1st and 2nd persons pattern together, differently from the 3rd persons. If LT is influenced by Laz as an L2 variety, this would explain why the PST is showing variation between [i]-[u]. There are at least two caveats regarding

this, however. First, two tense aspect markers occurred frequently in the LT-unique corpus: the PST and the the AOR; the former shows [i]-[u] variation but the latter does not (Table 4.26). If the variation in the PST is due to L1 influence, one would expect the AOR to show the same variation, since both the PST and the AOR in Laz have the same forms. Nevertheless, the AOR primarily occurs with [u] and in closed syllables. Second, the use of PST in L1 does not explain why LT PST has [i] in the 1st/2nd persons but [u] in the 3rd persons, because the pattern is the opposite in Laz ([u] in 1st/2nd persons and [i] in 3SG).

L1 influence may also be examined by looking at other, more general, characteristics of Laz. In Laz, most nominal suffixes containing high vowels are of the shape -(V)Ci, such as the genitive -ʃi, adjectival -uri, and adjectival -oni (Lacroix, 2009). Furthermore, nominal borrowings from Turkish that end in a consonant receive a final [i]. In other words, [i] is associated with nominals and open syllable nominal suffixes. This may have extended to LT. In LT-unique tokens, suffixes occurring with [i] are nominal suffixes (i.e., ACC -(j)I, POSS.3SG or COMPM -(s)I(n), NMLZ -lI). These are typically in the shape of -(C)i since [i] mostly occurs without a coda (Table 4.26). This fixed [i] pattern may occur in nominals in LT, but does not extend to verbal suffixes, where there is more variety of vowels in Laz verbal suffixes. So, this pattern, which originated as a nominal suffix preference for [i] in open syllables, might have been interpreted as [i] in open syllables and extended to other open syllable suffixes, therefore causing variation in the verbal PST suffix based on syllable type. In contrast, [u] was used in closed syllables including other nominal suffixes (e.g., GEN.1, GEN.3, POSS.1SG) or verbal (e.g., AOR) suffixes. The use of [u] in closed syllables might have appeared as the opposite counterpart to the tendency for [i] in open syllables. Nevertheless, this pattern might have also appeared due to influence from OAT, where most of the suffixes with a round vowel match the LT suffixes occurring with [u] (cf. Table 4.29).

In summary, this section has shown that there is a strong tendency for suffixes to show vowels based on open/closed syllable status; [i] is favored in open syllables whereas [u] is found in closed syllables. This pattern is consistent across suffixes with fixed syllabification or

resyllabifiable suffixes. There are two exceptional suffixes with [i]-[u] variation. The variation in 1SG -(j)Im can be explained by the presence of [j], conditioning the occurrence of front [i]. The variation in PST -DI can be explained by syllable type, which seems to have extended from L1 influence.

4.3.4 What conditions vowels in suffixes: Harmony or syllable type?

The preceding section has shown a strong relationship between LT-unique vowels and syllable type: Open syllables typically occur with [i] and closed syllables [u]. The distribution of high vowels [i, u] in suffixes showing variation (i.e., 1SG, PST) is not predictable by vowel harmony. While syllable type is a strong factor to explain the distribution of high vowels across the LT-unique corpus, this may coincide with vowel harmony, that is, [i] in open syllables and [u] in closed syllables may accidentally satisfy vowel harmony. For this reason, this section aims to compare the two factors in question, vowel harmony and syllable type, and investigates to what extent backness harmony, rounding harmony, and syllable type explain the distribution of LT [i, u] better. If syllable type is primarily responsible, it would suggest that LT-unique forms have low levels of vowel harmony. In such case, LT may not actually be considered a variety with vowel harmony, but a variety representing a mix of LT-unique forms which may accidentally satisfy vowel harmony and ST-identical forms which satisfy vowel harmony as in ST.

First, overall distribution of LT-unique vowels is provided in Figure 4.6, categorized by vowel harmony (backness and rounding harmonies) and syllable type (open/closed surface syllables). Non-high round vowels [o, œ] are not shown in Figure 4.6 as these do not occur in suffixes. Central vowels are also excluded due to low frequency (see Figure 3.8 in Chapter 3).

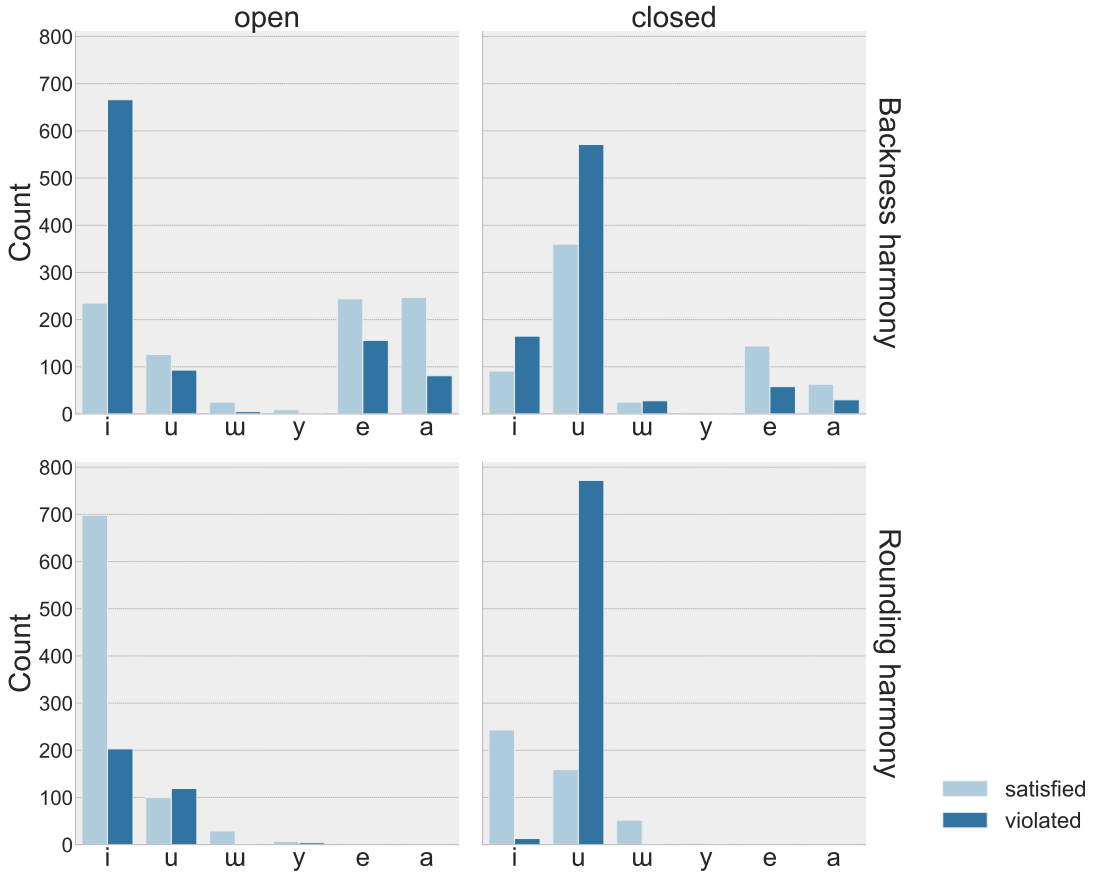


Figure 4.6: The distribution of suffix vowels in LT-unique tokens classified by syllable type and vowel harmony

Figure 4.6 is illustrative of at least three patterns. One, [a, e] tend to obey harmony regardless of syllable type. Two, [ɯ] and [y] are rare in LT-unique tokens. When the former occurs, it typically satisfies vowel harmony. Three, the two most frequent vowels in LT-unique tokens are [i] and [u], the former typically occurring in open syllables and the latter in closed syllables. Both of these vowels tend to disobey vowel harmony. [i] often violates backness harmony but mostly satisfies rounding. On the other hand, [u] often violates both types of harmonies. Nevertheless, Figure 4.6 does not demonstrate vowel correspondence patterns, which may be informative in the discussion of why LT [i, u] disobey vowel harmony. To zero in on this aspect, suffixes occurring with [i] or [u] in LT-unique tokens are provided along with their ST cognates in Table 4.30. (Also see Appendix 6.12 for a statistical analysis.)

Table 4.30: The distribution of [i, u] in LT-unique suffixes and the corresponding ST cognates

LT vowel	Corresponding ST vowel	Total	B Harmony		R Harmony		Syllable	
			satisfied	violated	satisfied	violated	open	closed
i	**i**	**161**	**121**	**40**	**129**	**32**	**124**	**37**
	u	145	5	140	7	138	137	8
	y	26	8	18	4	22	24	2
	ɯ	820	189	631	797	23	611	209
	Total	1152	323	829	937	215	896	256
u	**u**	**28**	**26**	**2**	**25**	**3**	**8**	**20**
	i	610	68	542	58	552	90	520
	y	126	92	34	121	5	52	74
	ɯ	383	298	85	54	329	67	316
	Total	1147	484	663	258	889	217	930

The following observations can be made according to Table 4.30 (See Appendix 6.13 for examples). First, [y] is not common in ST either (n=26 corresponding to LT [i], n=126 corresponding to LT [u]).

Second, it is infrequent that [i] and [u] match an ST cognate (n=161, n=28). Note that 124 out of 161 LT [i] matching ST [i] occur in open syllables whereas 20 out of 28 LT [u] matching to ST cognate occur in closed syllables. Some of these may be accidentally satisfying vowel harmony.

Third, when there is a mismatch between LT and ST vowels, LT [i] corresponds to ST [u] (n=145) or ST [ɯ] (n=820). LT [u] corresponds to ST [i] (n=610) or ST [ɯ] (n=383). These correspondence patterns, especially the fact that most LT [u] do not correspond to ST [u] but to ST [i,ɯ], show that suffix vowels are not determined by straight substitution, but are conditioned by another factor.

Next, when LT [i] corresponds to [ɯ], backness is sacrificed (n=631) but not rounding (n=797) as expected. Most (n=611) of these instances occur in open syllables. When LT [u] corresponds to [ɯ], rounding is sacrificed (n=329) but not backness (n=298). Most (n=316) of these occur in closed syllables. The correspondence of ST [ɯ] with LT [i,u] is predicted

considering that the Laz vowel system has five vowels only two of which are high: /i, u/. Note that the patterns examined here also correspond to the general pattern of [i] in open and [u] in closed syllables.

Finally, it appears that the correspondence between [i] and [u] is not conditioned by vowel harmony. When LT [i] corresponds to ST [u], both backness and rounding harmonies are violated but the syllable type is open (n=137). When LT [u] corresponds to ST [i], both types of harmonies are violated but the syllable type is closed (n=520).

Considering the total [i] and [u] instances, the following pattern emerges: [i] is observed in open syllables (n=896), where backness is violated (n=829) and rounding is satisfied (937). [u], on the other hand, is observed in closed syllables (n=930), where both backness and rounding harmonies are violated (n=663, n=889). In other words, as [i] is associated with open syllables, it is also associated with rounding being satisfied. Similarly, [u] is associated with closed syllables and rounding being violated.

One final concern regarding this pattern is whether generational differences are responsible for the behavior of [i, u] in suffixes of LT-unique tokens. To test this, the data in Table 4.30 had been further examined divided by age groups. The results are illustrated in Figure 4.7 and 4.8. (The results from the young speaker are reported in Appendix 6.14 due to the small sample size.)

Overall, the vowel correspondences categorized by mid and old age groups show similar patterns. However, differences are also observed between the two groups. Within the old age group, there are similar rates of finding i) LT [i] corresponding to ST [ɯ], ii) LT [u] corresponding to ST [ɯ], and iii) LT [u] corresponding to ST [i]. However, the mid age group seems to have slightly different tendencies when it comes to vowel correspondences. Mid speakers favor LT [i] rather than LT [u] corresponding to ST [ɯ]. In fact, the use of LT [u] corresponding to ST [ɯ] in mid speakers is less than half compared to that of old speakers. In addition, there are fewer LT [u] corresponding to ST [i] in mid speakers compared to old speakers. These observations may be indicating a generational shift: Mid aged speakers seem to have shifted away from LT [u] - ST

[ɯ] and LT [u] - ST [i] correspondences, instead showing higher tendency for the LT [i] - ST [ɯ] correspondence. Nevertheless, the pattern of [i] in open and [u] in closed syllables is primarily preserved in both age groups.

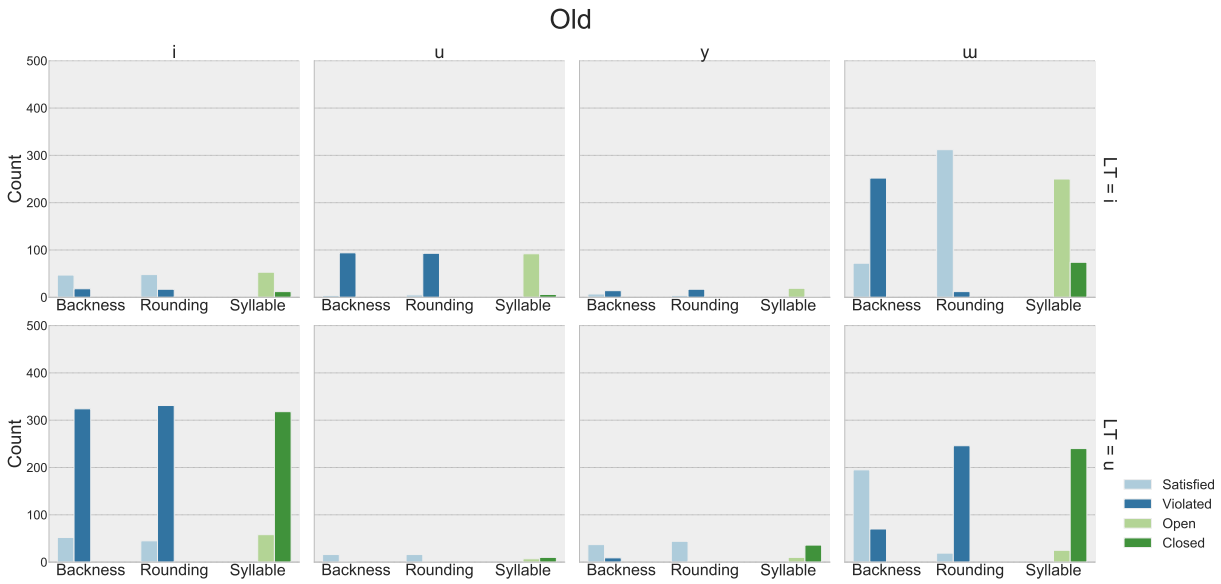


Figure 4.7: Old age group: LT [i] and LT [u] correspondence with ST cognates

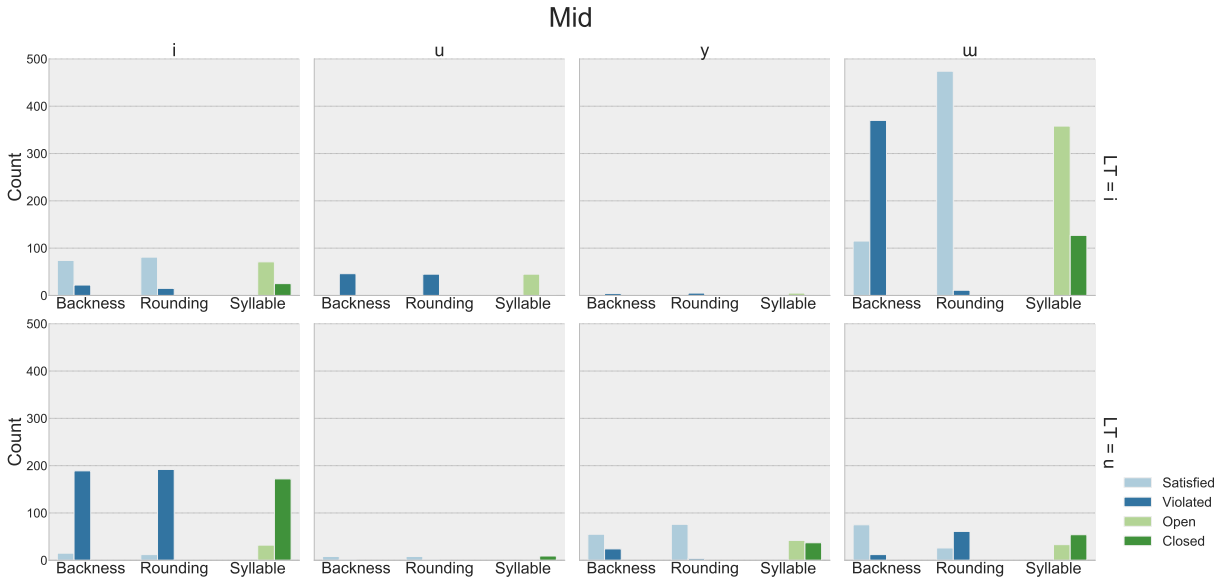


Figure 4.8: Mid age group: LT [i] and LT [u] correspondence with ST cognates

In conclusion, there is a general trend in the corpus such that LT [i] - ST [u,ɯ] and LT [u]

- ST [i,ɯ] correspondences are observed. These do not merely indicate vowel substitutions arising from the difference between the Laz and Turkish vowel systems. Additionally, the age factor on its own does not account for the distribution of high vowels in LT-unique tokens. Instead, syllable type is a strong factor due to the tendency of [i] in open syllables and [u] in closed syllables. This pattern also corresponds to [i] typically satisfying rounding harmony but [u] violating it. Note that a statistical analysis is also provided in Appendix 6.12, which confirms that backness harmony on its own cannot explain the variation in [i, u] in LT-unique tokens. However, rounding harmony and syllable type on their own perform equally good in explaining the variation in the data.

4.4 General discussion of syllable structure

So far this dissertation has shown a correlation between open syllables and [i] as well as closed syllables and [u]. This section aims to discuss whether the correspondence between vowel quality and syllable type is a viable phonological pattern.

One common pattern across languages with respect to vowel quality and syllable structure is the distribution of tense/lax vowels. Lax vowels typically correlate with closed syllables and tense vowels with open syllables. For instance, lax vowels occur in closed syllables and tense vowels occur in open syllables in French, Spanish, and Dutch (Corbin, 2006; Féry, 2003; Jiménez & Lloret, 2019; Polgárdi, 2008; Storme, 2017). Similarly, in English and German, lax vowels are restricted to closed syllables whereas tense vowels can occur in open or closed syllables (Hoole et al., 1994; Ladefoged & Johnson, 2014; Mailhammer et al., 2015). Vowels are typically shorter in closed syllables but longer in open syllables (Ladefoged & Johnson, 2014; Maddieson, 1985). A lax vowel is shorter, lower and more centralized than a corresponding tense vowel (Ladefoged & Johnson, 2014). Therefore, the correspondence of lax vowels with closed syllables and tense vowels with open syllables seems to be related to vowel duration (e.g., see Botma & Van Oostendorp (2012) and Féry (2003)). However, recent studies indicate that syllable structure

may impact vowel quality independently of vowel duration (Storme, 2017).

Although lax/tense vowels are often associated with syllable structure, other correlations between vowel quality and syllable type seem to be unattested. The distribution of front/unround vowels in open syllables and back/round vowels in closed syllables appears to be quite unusual. Furthermore, there seems to be no natural phonological explanation conditioning vowel frontness/unrounding in open syllables or vowel backing/rounding in closed syllables.

In summary, from a phonological point of view, the [i]-[u] alternation based on syllable type as observed in LT-unique tokens seems to be unusual, and more likely to be an accidental phonological correlation that arose due to vowels becoming fixed in suffixes, perhaps due to influence from the distribution of vowels in suffixes in Laz.

4.5 Putting it altogether: Does LT have vowel harmony?

The LT corpus in this dissertation was examined by focusing on LT-unique forms (31%), but there were also many ST-idential forms (69%) which show vowel harmony as they do in ST. Focusing on LT-unique forms facilitates capturing what makes LT a unique variety.

As discussed in Chapter 3 (Section 3.4.4), non-high suffix vowels satisfy backness harmony 68% of the time in LT-unique forms. However, high suffix vowels obey backness harmony less often (36%) and obey rounding harmony in 54% of occurrences in LT-unique forms. Putting aside comparisons with ST, if the LT-unique corpus is examined on its own merits, are these percentages enough to argue for the presence of vowel harmony in LT-unique forms? The answer to this may be no. In previous research, another language, Uzbek, has been categorized as 'not harmonic at all' due to a 54% backness harmony rate (Harrison et al., 2002). Based on this criterion, especially high vowels in LT-unique forms are not showing vowel harmony. Furthermore, there is the issue of what harmonic forms in LT-unique forms actually represent.

The following three sections expand on i) how vowel harmony functions in LT-unique

tokens in general, ii) what harmonic forms in LT-unique tokens represent, and iii) how LT may have developed.

4.5.1 How does partial vowel harmony function in LT?

Based on the current data, partially productive vowel harmony in LT works as follows. ST-identical forms satisfy backness and/or rounding harmonies as they do in ST. LT-unique forms, on the other hand, show more vowel harmony violations (cf. Chapter 3, Table 3.17).

With respect to in LT-unique tokens, first of all, there is an underrepresentation of [ɯ,œ, y] vowels. This is because LT initially emerged as a second language variety where L1 (Laz) has a smaller vowel inventory compared to L2 (Turkish). Turkish contains eight phonemes /a, e, ɯ, i, o, œ, u, y/ and these show vowel harmony with respect to their backness and rounding features. However, Laz contains five phonemes /a, e, i, o, u/ and is not a vowel harmony language. Because Laz lacks three of the Turkish phonemes /ɯ,œ, y/, vowel harmony in today's Laz Turkish is disrupted partially due to this difference in the vowel systems. Second, LT seems to have (or have developed) backness harmony. Non-high vowels that participate in backness harmony are [a, e] in Turkish (the other non-high vowels [o, œ] are found in the first syllable of roots). Both [a] and [e] are also present in Laz and LT, and they typically satisfy backness harmony in LT. When [a, e] violates backness harmony in LT-unique suffixes, it is often due to a preceding vowel undergoing vowel substitution. This suggests some LT words may have been learned as a whole word (e.g., [turk-ʧe-de], cf. example 70b). Next, rounding harmony is partially productive in LT-unique data because there are typically two high vowels; [i] and [u]. When ST [ɯ] corresponds to LT [u], backness is preserved and only the rounding feature changes which results in rounding harmony violations in LT-unique suffixes. This pattern is commonly observed in elderly speakers. When ST [ɯ] corresponds to LT [i], only the backness of the vowel changes and this often leads to backness harmony violations. This pattern is very common in younger (mid aged) speakers but also observed in elderly speakers. The former correspondence pattern (LT [i] - ST [ɯ]) is common

in the data. Whenever there is correspondence between [i] and [u], both backness and rounding features change, suggesting a lack of adherence to one of the two kinds of vowel harmony. In addition, few suffixes with high vowels in the LT-unique corpus show robust [i]-[u] alternation as most suffixes with high vowels have a tendency towards fixed [i] or [u]. This suggests that LT speakers may have developed a system with fixed vowels where vowel harmony was accidentally satisfied in some forms, but this is gradually giving way to vowel harmony induced alternation as LT speakers are more exposed to ST. Finally, variation is expected in a developing system like LT vowel harmony. The variation in the current corpus cannot always be explained by vowel harmony or syllable type. Sometimes it can be explained by the etymology of particular words, which may indicate contact with Turkish at earlier stages; e.g, Old Turkish [kapu] 'door', cf. ST [kapɯ] 'door' and LT-unique tokens such as [kapu-m-e] 'to my door'. Sometimes variation has no apparent explanatory factor.

4.5.2 What do harmonic forms represent?

The harmonic suffixes in LT-unique tokens, may simply indicate compliance with the requirements of vowel harmony, but these may also include accidentally harmonic forms. For instance, a fully harmonic suffix vowel [i] may be matching the front and unround features of a preceding front unround vowel simply due to vowel harmony requirements (73a-73d). However, if this [i] is also in an open syllable, the vowel may be accidentally harmonizing since a high vowel in open syllables is [i] in LT-unique tokens (73a, 73c). Or, if a harmonic [i] matches the ST cognate, the resemblance to the ST form may indicate some form of memorization of an ST form due to language contact (73a, 73b). On the other hand, if [i] is in an open syllable mismatching the ST cognate, this could indicate accidental vowel harmony due to syllable structure (73c) or vowel substitution in cases where LT [i] corresponds to ST [ɯ]. If [i] is in a closed syllable mismatching the ST cognate, this could indicate vowel substitution resulting in accidental harmony or it could merely indicate vowel harmony (73d). Note that in Chapter 3, vowel substitution was observed as

a strong L2 strategy in the 1st root vowel position; however, this may not be true of non-initial positions. For this reason, in fully harmonic suffix vowels where the only alternative explanation to vowel harmony is vowel substitution (e.g. 73d), it is likely that vowel harmony is a stronger possibility.

(73)

a.	oɣret-men-ler-**i** teach-NMLZ-ACC 'teachers' [082119-S7-M]	*match, open*	(œːret-men-ler-**i** in ST)
b.	getur-me-d**i**-n bring-NEG-PST-2SG 'you didn't bring' [090319-S8-M]	*match, closed*	(getir-me-d**i**-n in ST)
c.	majdanoz-im-**i** parsley-POSS.1SG-ACC 'my parsley' [080619-S1-O]	*mismatch, open*	(majdanoz-um-**u** in ST)
d.	kullan-me-miʃ-**i**z use-NEG-EVCOP-1PL 'we didn't use' [081919-S2-M]	*mismatch, closed*	(kullan-ma-muʃ-**ɯ**z in ST)

Among high suffix vowels that are fully harmonic, 19% of [i] and 35% of [u] may be attributed to vowel harmony only (Table 4.31). For non-high vowels, 43% of [e] and 7% of [a] that satisfy backness harmony may solely be attributed to the presence of vowel harmony (Table 4.32). Given these findings, most of the fully harmonic suffix vowels in LT-unique forms may be accidentally satisfying vowel harmony.

Table 4.31: High suffix vowels which satisfy backness and rounding harmonies following a front unround vowel or back round vowel

When both backness and rounding harmonies are satisfied:					
Preceding V	Condition	Syllable	i	u	Explanation other than harmony
front, unround	match	open	89	-	→ ST match/syllable type (28%)
		closed	30	-	→ ST match (10%)
	mismatch	open	136	-	→ syllable type/(substitution) (43%)
		closed	60	-	→ (substitution) (19%)
	Total		**315**	-	
back, round	match	open	-	7	→ ST match (3%)
		closed	-	18	→ ST match/syllable type (8%)
	mismatch	open	-	78	→ (substitution) (35%)
		closed	-	122	→ syllable type/(substitution) (54%)
	Total		-	**225**	

Table 4.32: Non-high suffix vowels which satisfy backness harmony following a front or back vowel

When backness harmony is satisfied:					
Preceding V	Condition	Syllable	a	e	Explanation other than harmony
front	match	open	-	132	→ ST match (57%)
		closed	-	86	
	mismatch	open	-	111	→ ? (43%)
		closed	-	54	
	Total		-	**383**	
back	match	open	229	-	→ ST match (93%)
		closed	57	-	
	mismatch	open	17	-	→ ? (7%)
		closed	6	-	
	Total		**309**	-	

4.5.3 How did LT develop?

It is possible to suggest two hypotheses regarding LT vowel harmony. One, LT initially did not have vowel harmony but gradually developed it with more exposure to ST. If this hypothesis is correct, we would expect that the data contains variation which cannot be explained by vowel harmony. We would also expect that LT speakers substitute [ɯ, y, œ] in Turkish words with [i, u, o] as the former list of vowels are not in their L1 vowel system. Two, LT had some form of vowel harmony when LT emerged but not as systematic as in ST due to the lack of [ɯ, y, œ] vowels. If this is correct, there should be some consistency in the data with respect to vowel harmony. For example, even if LT speakers may use vowel substitution strategies, non-initial vowels should obey backness and/or rounding harmonies. In the LT-unique corpus examined in this dissertation, there is some evidence for backness harmony in non-high vowels and rounding harmony in high vowels, however, the overall percentages for vowels satisfying vowel harmony are low (cf. Chapter 3, Section 3.4.4 and 3.4.5). Both of these hypotheses are consistent with the assumption that LT began as a second language variety. They differ only on whether vowel harmony was originally present or gradually developed. The current data confirms that LT is developing vowel harmony and becoming more like ST based on the generational differences with respect to the amount of ST forms in the younger speakers.

Due to lack of data from earlier stages of LT, it is not possible to test which of the two hypotheses holds true. However, the variation in the current data seems to be supportive of the first hypothesis. LT tokens in the current data display various patterns including 1) vowel sequences that cannot be explained by vowel harmony or vowel substitution or syllable structure, 2) vowel substitution throughout the word regardless of vowel harmony, 3) vowel substitution in the root followed by harmonic suffixes, 4) occurrence of [i] in open syllables and [u] in closed syllables, and finally 5) vowel sequences with no vowel harmony violations (i.e., ST-identical tokens which satisfy vowel harmony wherever applicable). Examples for the first four groups are illustrated in Table 4.33.

Table 4.33: Patterns in LT-unique tokens

	LT token	ST cognate	Gloss	Label
Unpredictable	kum-d**e**n	kum-d**a**n	sand-ABL	[082119-S4-O]
	et-m**a**	et-m**e**	do-NEG	[082119-S4-O]
	ver-d**u**	ver-d**i**	give-PST	[082019-S5-M]
	o-n**i**n	o-n**u**n	it-GEN.3	[082119-S7-M]
Vowel substitution	saj**i**-lar-**i**	saj**ɯ**-lar-**ɯ**	number-PL-ACC	[082019-S5-M]
	uz**u**m-ler	**y**z**y**m-ler	grape-PL	[082119-S7-M]
	ornek-ler-i	**œ**rnek-ler-i	model-PL-ACC	[082119-S3-M]
	m**u**sl**i**man-**i**m	m**y**sl**y**man-**ɯ**m	Muslim-1SG	[082119-S4-O]
Root: Vowel substitution, Suffix: harmony	m**i**s**i**r-l**e**r	m**ɯ**s**ɯ**r-l**a**r	corn-PL	[082119-S3-M]
	ʧarʃ**i**-d**e**n	ʧarʃ**ɯ**-d**a**n	downtown-ABL	[081919-S10-O]
	nas**i**l-s**i**n	nas**ɯ**l-s**ɯ**n	how-2SG	[081919-S2-M]
	d**o**n-**u**p	d**œ**n-**y**p	return-CONJ	[082119-S4-O]
Syllable effect	ge.t**u**r.d**u**k	ge.t**i**r.d**i**k	bring.PST.1PL	[081919-S9-Y]
	ge.t**u**r.d**i**.ler	ge.t**i**r.d**i**.ler	bring.PST.1PL	[082119-S3-M]
	ka.r**u**m.d**u**r	ka.r**ɯ**m.d**ɯ**r	wife.POSS1SG.COP	[082119-S4-O]
	ka.r**i**.s**i**.ne	ka.r**ɯ**.s**ɯ**.na	wife.POSS3SG.DAT	[082119-S4-O]

It is possible that vowel harmony was not produced in the early stages of LT. Under these circumstances, at least two potential scenarios can be considered:

i) Lacking the vowels [ɯ, y, œ] in their vowel system, Laz learners of L2 Turkish might have produced [i] instead of [ɯ] and [u] instead of [y] in suffixes, preserving the rounding feature of vowels. The fact that [i] and [u] were the two possible vowels in high suffixes might have been reinterpreted under the influence of L1 (Laz), where [i] in open syllables is associated with nominals and nominal suffixes, leaving the other high vowel [u] for other forms. This distributional pattern could have come to correlate with open/closed syllables later (see the discussion of PST in Section 4.3.3).

ii) If LT emerged centuries ago, certain suffixes with high vowels would be used with an unround [i, ɯ] or round [u, y]. Because the vowels [ɯ, y] are absent in the Laz vowel system, fixed vowels for Laz learners of L2 Turkish would be unround [i] or round [u]. As noted in Table 4.29, in OAT, most suffixes with a round vowel were of the shape -(C)VC

and most suffixes with an unround vowel were in the shape of -(C)V. This could have combined with the influence of L1 (Laz), where [i] is associated with nominals and nominal suffixes in the shape of -(V)CV. This could have resulted in [i] in open vs. [u] in closed syllables pattern in LT-unique forms.

In either scenario, the syllable pattern started to weaken as vowel harmony started to be learned by LT users. One piece of evidence for this in this dissertation was the generational difference with the 1PL -(j)Im. In general, as younger speakers in the Laz community become more ST dominant, most LT words become ST-like with respect to vowel harmony (i.e., ST-identical LT words). In fact, the presence of ST-identical tokens (69%) in the current corpus is evidence for that. The age gap between elderly speakers who produce more LT-unique tokens and younger speakers who use more ST-identical tokens also support this argument.

In conclusion, it is likely that LT emerged as an L2 variety without vowel harmony and that it gradually developed, replacing fixed vowels in suffixes with vowel harmony induced alternants. No matter whether LT emerged with or without vowel harmony, the current LT-unique corpus suggests that there is some evidence for backness harmony among non-high vowels and rounding harmony among high vowels, but the rates of vowel harmony adherence are overall low in suffixes. Especially considering that some suffixes may be accidentally satisfying vowel harmony, there is only weak evidence for productive vowel harmony in LT-unique tokens. However, LT-unique forms were only a subset (31%) of the whole LT data. All speakers exhibited a mix of LT-unique and ST-identical forms, with middle and young aged speakers showing more ST-identical forms. As younger members of the Laz community are acquiring (Standard) Turkish as their first language, they master vowel harmony rules of Turkish as well as the three Turkic vowels [ɯ, y, œ]. So, even when their Turkish speech may occasionally carry Laz elements (e.g., ejective consonants), they still produce Turkish forms that satisfy vowel harmony.

4.6 Conclusion

The main goal of this chapter was to explain the distribution of vowels in LT. Four main research questions were discussed.

Question 1 researched whether there is a relationship between back and/or round features of vowels and the place of articulation of adjacent consonants. Based on previous literature, coronals may be associated with vowel fronting whereas labials are associated with rounding and velars with backness (Brendemoen, 2002; Clements & Sezer, 1982; Erdal, 1998; Hume, 1992; Lees, 1966; Özçelik & Sprouse, 2017). The pattern in the LT-unique data indicated rounding in the environment of labials that could not be explained by vowel harmony, but also the same was true of velars and coronals. Unpredicted vowel fronting was observed in the environment of all four consonant categories. These patterns were similar across all age groups. Overall, this section demonstrated that the distribution of LT vowels must be determined by factors other than surrounding consonants.

Question 2 investigated the nature of particular suffixes. In LT-unique tokens, certain suffixes occur with a fixed vowel [i] or [u], causing disharmonic forms. Suffixes fixed with [i] lack a coda consonant but the ones fixed with [u] have a coda consonant. Furthermore, at least two suffixes (i.e., 1SG, PST) show an alternation between [i] and [u]. The 1SG alternation does not correlate with syllable structure, but the PST alternation does. This variation cannot be explained by vowel harmony. As for suffixes with non-high vowels, there is always variation between [a, e], with most of it predictable by vowel harmony. In cases where vowel harmony is violated, there may be a preference for [e] or [a] (e.g., the preference of [e] over [a] in DAT -(j)A).

Question 3 was further investigation of particular suffixes with high vowels, this time attempting to explain the choice of vowels focusing on syllable type. [i] is found in open syllables and [u] in closed syllables whether particular suffixes have fixed syllabification or are resyllabifiable. Suffixes showing alternation between [i, u] can be explained by i) the presence of

a palatal [j], conditioning the front vowel [i] (i.e., 1SG being realized with [i] in the -jIm form but as [u] in the -Im form) or ii) syllable type, which seems to have extended from L1 influence (i.e., PST [i] in open and [u] in closed syllables).

Question 4 researched what conditions the choice of vowel in general and focused on all LT-unique suffixes. The impact of vowel harmony and syllable type on the choice of LT vowel was compared. The results showed that the two most common vowels in LT-unique tokens are [i] and [u]. In general, LT [i] corresponds to ST [u,ɯ] and LT [u] corresponds to ST [i,ɯ]. While elderly speakers show all these correspondence patterns, younger (mid aged) speakers show the LT [u] - ST [i,ɯ] pattern less often. Instead, they tend to show more LT [i] - ST [ɯ] correspondence in general. Nevertheless, generational difference does not explain the distribution in LT-unique vowels. Backness harmony on its own also does not account for the LT [i, u] distribution. Instead, syllable type and rounding harmony are equally good in explaining the variation in the data. The LT vowel is [i] in open syllables when rounding harmony is satisfied. The LT vowel is [u] in closed syllables when rounding harmony is violated.

Considering all the findings, it is not possible to prove whether LT emerged with or without vowel harmony. Nor is it possible to test this due to lack of LT data through its developmental stages. Regardless of whether LT emerged with or without vowel harmony, LT shows partially productive vowel harmony today, and it is becoming more like ST with increased exposure of LT speakers to ST. The LT-unique forms, do, however, show unique patterns where vowels are distributed based on syllable type, and may only accidentally conform to vowel harmony.

Chapter 5

Conclusion

The aim of this dissertation was to investigate the partially productive vowel harmony patterns in Laz Turkish (LT). LT is a nonstandard dialect of Turkish mainly spoken by the Laz minority in the northeast of the Black Sea Region in Turkey. LT has been shifting towards the standard variety (ST) under the influence of the dominating Turkish culture. This dissertation also aimed to investigate the root causes of this language shift by researching the attitudes within the Laz community about the Laz language, LT, and the Laz identity.

The main findings of this dissertation were as follows. First of all, the vowel systems of Turkish and Laz differ. While Laz contains five phonemes /a, e, i, u, o/, Turkish contains three more phonemes /ɯ, y, œ/. In LT, the three Turkish vowels [ɯ, y, œ] are uncommon due to the differences between the L1 (Laz) and L2 (Laz) vowel systems. This affects how vowel harmony is manifested in LT. LT speakers use a vowel substitution pattern, where [ɯ, y, œ] vowels of ST cognates correspond to [i, y, o], respectively. In this correspondence pattern, the rounding features of these vowels are preserved but backness features are not. This substitution pattern is especially observed in word-initial positions (1st root vowel of a word), which is the trigger of vowel harmony. In non-initial positions, however, there are additional correspondence patterns with respect to high vowels. [ɯ] in ST cognates may correspond to LT [i] preserving the rounding

but not backness feature, or it may correspond to LT [u] preserving the backness feature but not rounding. Moreover, [i] and [u] in ST cognates may correspond to LT [u] and [i], respectively, at the expense of both backness and rounding features. In other words, there are mainly two high vowels alternating with each other in LT suffixes: [i] and [u]. The distribution of these vowels in LT cannot be explained by vowel harmony or surrounding consonants. Instead, it is primarily predictable by syllable type, where [i] occurs in open syllables and [u] occurs in closed syllables typically. Moreover, when particular affixes were examined, it was found that certain suffixes occur with a fixed [i] or [u]. Whether these suffixes can resyllabify or not, suffixes with fixed [i] correspond to open syllables and the ones with fixed [u] correspond to closed syllables. There are also two suffixes with variation between [i] and [u]; 1SG -(j)Im and PST -DI. The variation in the 1SG can be explained by the presence of the palatal [j], which conditions the front [i], whereas the variation in the past tense marker can be explained by syllable type, which seems to have extended from L1 influence. Overall, the data and distribution of vowels show only weak evidence for vowel harmony in LT-unique forms, especially considering that some suffix vowels may be accidentally satisfying vowel harmony (e.g., [i] following a front unround vowel in an open syllable, [u] following a back round vowel in a closed syllable).

In summary, LT is a mix of ST-identical forms that satisfy vowel harmony as in ST, and LT-unique forms mostly showing vowel disharmony. Vowel harmony in LT-unique forms are influenced by various factors such as L1 influence, syllable structure, and vowel height. Due to lack of historical LT data, certain questions with respect to how LT emerged remain open ended in this thesis: Was there an LT variety that developed and was passed on to other generations? Did each generation in the Laz community acquire, as an L2, the Turkish they were exposed to? Or, is the LT being used now between speakers (instead of Laz) something that is new? To understand how vowel harmony evolved in LT, it is important that future research must elaborate on the interaction patterns of the Laz community with Turkish speakers. Neverthesless, LT has been developing vowel harmony, becoming more similar to the ST vowel harmony system. This

can be deduced from the generational gap observed with respect to LT characteristics.

Overall, between-speaker and within-speaker variation was found across the data, and LT-specific forms occurred along with ST forms. However, LT characteristics (causing vowel harmony violations) occur more consistently in the Turkish speech of elderly members of the Laz community compared to the Turkish speech of the younger Laz individuals. This is indicative of a shift from LT to ST. Other than the higher number of words distinct from ST (i.e., LT-unique tokens) in elderly people's speech, one clear generational difference was as follows. Elderly people often used both LT [i] and [u] corresponding to ST [ɯ]. They also often showed LT [i] - ST [u], and LT [u] - ST [i] correspondence. However, younger (mid aged) speakers showed LT [i] - ST [ɯ] correspondence more than any other pattern. This indicates a generational shift in vowel correspondence patterns.

This dissertation concluded that the generational shift was due to increased exposure to the prestige variety, ST. ST is especially preferred in the context of educational and governmental institutions, whereas Laz people and the Turkish spoken by 'Laz' people (sometimes incorrectly generalized to refer to all locals of northeastern Black Sea) are characterized in the media or other social domains as an object of ridicule. In general, members of the Laz community have positive attitudes towards their heritage language Laz, Laz Turkish, and Laz identity. However, they also notice the negative stereotypes outside the community. While younger Laz individuals seem to be influenced to a great extent by the stereotypes of the majority culture, they seem to gain awareness of their identity and language(s) starting from high school years, when they develop more acceptance of their identity. Attitude research in the Laz community - especially attitudes regarding LT - may benefit from follow-up studies where Laz children are included as participants and age differences among Laz individuals are more controlled.

This research demonstrates that examining nonstandard varieties such as Laz Turkish is important in understanding how vowel harmony may be manifested in contexts of language contact and second language acquisition. This research remains distinct from the previous

research in the field due to its results but also due to its methodology since the analysis was based on a corpus of LT words drawn from conversational speech. This study also differs from previous attitude studies in the Laz community, most of which only focus on the Laz language.

Chapter 6

Supplementary Materials

6.1 Location of Fieldwork: Rize

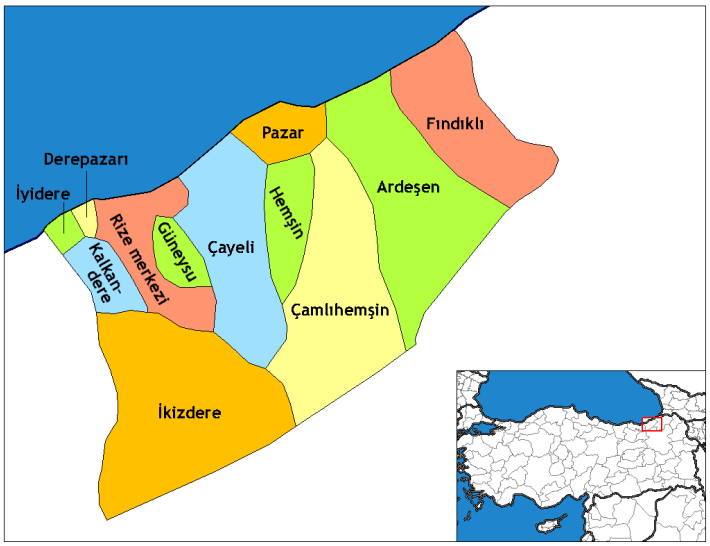


Figure 6.1: The location of Rize in northeastern Turkey and its districts

6.2 Laz consonants

6.2.1 Pazar Laz consonants

Table 6.1: Pazar Laz consonant inventory as reported in Öztürk & Pöchtrager (2011)

	(bi)labial	**alveolar**	**postalveolar**	**velar**	**labio-velar**	**glottal**
Voiceless/aspirated stops	pʰ	tʰ		kʰ	kʰw	
Voiced stops	b	d		g	gw	
Ejective stops	p’	t’		k’	k’w	
Voiceless/aspirated affricates		tsʰ	ʧʰ			
Voiced affricates		ʣ	ʤ			
Ejective affricates		ts’	ʧ’			
Voiceless fricatives	f	s	ʃ	x	xw	
Voiced fricatives		z	ʒ	ɣ	ɣw	
Nasals	m	n				
Liquids		l, r				
Approximants			j		w	h

6.2.2 Arhavi Laz consonants

Table 6.2: Arhavi Laz consonant inventory as reported in Lacroix (2019)

		labial	**dental or alveolar**	**postalveolar or palatal**	**velar or uvular**	**glottal**
Occlusive	Voiceless non-glottalized	p	t		k	
	Voiceless glottalized	p’	t’		k’	
	Voiced	b	d		g	
Affricate	Voiceless non-glottalized		ts	ʧ		
	Voiceless glottalized		ts’	ʧ’		
	Voiced		ʣ	ʤ		
Fricative	Voiceless	(f)[51]	s	ʃ	x	h
	Voiced	v	z	ʒ	ɣ	
Nasal		m	n			
Lateral			l			
Approximant			ɹ	j		

[51] In loanwords from Turkish, e.g. Laz [tufeɣi] ‘gun’, from Turkish [tyfek].

6.3 Turkish Vowel Sequences

The table below is taken from Hayes (n.d.). Out of 64 possible two-vowel sequences, 16 of them are legal in native Turkish words (shown with no shading). The rest of the sequences are illegal due to disharmony in vowels (shaded areas in the table). Note that non-high round vowels /o, œ/ are only found in initial syllables in words of Turkic origin; therefore, vowel sequences such as /o o/ or /u o/ are unpredicted in Turkish.

i i	i e	i y	i ø	i ɯ	i a	i o	i u
e i	e e	e y	e ø	e ɯ	e a	e o	e u
y i	y e	y y	y ø	y ɯ	y a	y o	y u
ø i	ø e	ø y	ø ø	ø ɯ	ø a	ø o	ø u
a i	a e	a y	a ø	a ɯ	a a	a o	a u
ɯ i	ɯ e	ɯ y	ɯ ø	ɯ ɯ	ɯ a	ɯ o	ɯ u
o i	o e	o y	o ø	o ɯ	o a	o o	o u
u i	u e	u y	u ø	u ɯ	u a	u o	u u

6.4 Interview Questions

Questions about the interviewee's background

1. How old are you?
2. Where are you from?
    - Where did you grow up?
    - Is this area dense in Laz population?
    - Did you live in other areas in Turkey or outside Turkey? (for college, etc.?)
3. How do you identify - Laz, Turk, or both?
4. How did you learn Laz and Turkish?
    - When did you start learning them?
    - How well do you speak Laz and Turkish?
5. Are both of your parents Laz?
   If parents are alive:
    - How old are your parents?
    - Do your parents speak Laz?
    - How/when/where did they learn it?
    - Do your parents speak Turkish? How/when did they learn it?
    - How did they speak Turkish? Can you describe it?
6. Are you married?
   If yes:
    - Does your spouse speak Laz (or LT)?
    - (If has kids) Do your children speak Laz? / Do you teach them Laz?
    - (If has kids) How do your children speak Turkish?

Questions about the Laz language

1. In which of these contexts do you use Laz (and in which contexts do you use Turkish)?:
    - school
    - shops
    - restaurants

- workplace (if applicable)
- religious worship
- daily life (family/friends)
- other?

2. What is the value of the Laz language to you?

3. Do all children in the Laz community learn Laz? Why or why not?

4. What do you think about Laz language education in family settings?

   - Did your family want you to learn Laz?
   - Did your family do anything additional to teach you Laz - other than speaking the language within family context?
   - Did you learn Laz because you wanted to learn it?

5. Who in your family speaks Laz the best or most fluently?

   - The wider community: Who else in the neighborhood or town speaks Laz well?
   - (If older speakers are better) Why could Laz not be passed down to younger people successfully?

6. How much do you know about Laz language education in Turkey, at institutional level (e.g., in schools)?

   - Have you ever taken a class in Laz at school (or other means of education, e.g., 'kurs')?
   - If you had a chance to take a class in Laz language, would you be interested in doing that?
   - What about other languages?

7. When you don't know a word in Laz, what do you do?

   - Do you use the Turkish equivalence of that word?
   - What other strategies do you use?

8. Do you know how to write Laz? Based on your experience, do you think Laz speakers around you learn reading/writing Laz? Why?

9. Are there any Laz publications (newspapers, printed or online articles, books, etc.)?

   - How much do you know about them?
   - Do you follow any updates on these? How often and why?

Questions about Laz Turkish

1. If you wanted to give a label to the Turkish you speak, how would you call it?
2. Is the type of Turkish you speak different from how people of Rize, Hemsin, Cayeli, etc. speak?
    - How do you distinguish your speech vs. how other people speak in Rize/Blackse area? Can you give any examples?
    - How do you distinguish LT from ST? If you find differences, what kinds of things distinguish LT from ST for you?
3. At school, did your classmates and teachers use a non-standard Turkish or ST?
    - How did this influence you?
    - Did you experience discrimination at school because the kind of Turkish you speak is different from ST?
4. In general, how do you feel about speaking LT (and ST, if the consultant can speak both varieties)? Which one feels more natural to you?
5. When speaking with ST speakers, have you ever fixed your speech to sound more like an ST speaker? Why?
6. When speaking with LT speakers, do you feel more comfortable using LT?
7. In your opinion, what do LT speakers think of LT as a variety of Turkish? Can you provide some adjectives (e.g., sincere, comfortable, natural, unnatural...)?
8. In your opinion, what do ST speakers think of LT as a variety of Turkish? Can you provide some adjectives (e.g., negative, positive, funny...)?
9. What do children in the Laz community think of LT? Do they speak LT?
    - What is the benefit to speaking Laz? For teenagers? For young people?
10. In general, do Laz families push their children to use ST?
    - What about your own experience (as a parent or child)?
11. As we know, some Laz people live in bigger cities like Istanbul, Ankara etc. These are far from the Laz regions in the North East of Turkey. How do you think the place someone lives in affect the way they speak Turkish? For example, what happens when a Laz person lives in big cities?
12. Do you think somebody's way of speech can change throughout life?
    If yes:
    - Do you have any examples from the people around you?
    - Examples from your own life?

Questions about Laz identity

1. Who are Laz people?
    - Do you consider someone a Laz person if they have Laz ancestry but speaks no Laz?
    - Is there any degree to being Laz? How?
2. Did you experience discrimination as a Laz person in school (before university)? Would you mind sharing this experience?
3. Did you go to university? If yes, how was your experience as a Laz person there?
4. How do outsiders (ST speaker) people generally react when they hear you speak with a non-standard dialect?
    - How do they react when they learn that you are ethnically Laz?
5. How do you feel about being Laz?
6. Do you research your past, history, culture, etc.? If yes, what kinds of things do you do?
7. Do you think there has been any change in people's attention on the Laz culture?
    - Do you think Laz people are becoming more like any other person in Turkey (who are not associated with any minority groups)?
    - Or, do they embrace the Laz culture and values more tightly?
8. Do people realize that the Laz language is in danger of not being spoken anymore?
    - Are people are doing anything about it?
    - What is your own reaction to it?

6.5 Further information on the interviewees

IA is a 51 year old male from Pazar, Rize. He is a well-known Laz language activist and author. He is the president of the Laz Institute and a Laz language lecturer at the Bosphorus University as well as Bilgi University in Istanbul. He was born in a Laz village in Pazar and lived there until 12 years old. He relocated to the center of Pazar to attend middle school and high school and then to Istanbul for college. Since then, he has been residing in Istanbul but he still has close connections in his hometown. IA's native and dominant language is Laz. He started learning Turkish at school, and he is an LT speaker.

HY is a 54 year old female who was born and raised in Pazar, Rize. HY's grandparents barely knew Turkish so they constantly spoke Laz. HY's parents were bilinguals of Laz and LT and they talked to each other in Laz in the family. However, in an effort to teach their children Turkish before school age, HY's parents spoke Turkish to their children at home. Nevertheless, HY would respond to her parents in Laz and also speak Laz with her siblings at home. HY spoke Turkish with her friends at school. She describes herself being more dominant in Laz than Turkish (LT). HY is a housewife and has four children, two of whom are MY and BY.

EY, at 21 years old, is the youngest participant in this study. He was born in a Laz village in Çamlıhemşin, Rize, where he lived and attended kindergarten. He grew up in Ardeşen, Rize, and he is currently a college student in Trabzon. EY indicates his dominant language to be Laz, as he always speaks Laz with both of his parents. Although EY's older and younger siblings can speak Laz, they prefer using Turkish. When EY speaks Laz to his siblings, they answer in Turkish. EY uses LT to communicate with other members of the Laz community who are Turkish monolinguals, but he can also speak ST in careful speech in the presence of non-Laz people.

RA is a 24 year old male from Arhavi, Artvin. He lived in Artvin all his life except for college years spent in Samsun, which is another city in the Black Sea Region. He identifies as a balanced bilingual of Laz and Turkish (LT) except for educational contexts in which he is Turkish dominant.

MhK and MdK are a couple living in Ardeşen, Rize. MhK is a 32 year old male from Ardeşen. He works as a Turkish language teacher at a public school. Although he is Turkish (LT) dominant, he has spoken Laz since childhood. He developed interest in the preservation of Laz starting in his college years. To contribute to language maintenance projects, he offers an elective Laz course to his 6th grader students at school. MhK's wife MdK is 32 years old and from the Fındıklı district of Rize. She was born in a Laz village and lived with her Laz-speaking grandparents. As a child, she spent most of her time with her grandparents since her mother was working full-time. So MdK was Laz-dominant as a child but she became Turkish dominant after school age (after she moved to the center of Fındıklı). MdK studied econometrics and is currently a housewife.

MY is a 30 year old female who works at a government institution. She is the second daughter of HY and older sister of BY. MY is an ST speaker and was raised in Istanbul. However, she lives in an apartment building where their neighbors are extended family from the Laz community. Although MY's dominant language is Turkish, she is extremely interested in developing her Laz skills. She also actively contributes to the language maintenance projects at

the Laz Institute.

FK is a 30 year old postdoctoral researcher. He was born and raised in Hopa, Artvin, where he lived until high school years. He moved to Istanbul to attend high school and college and then to Belgium for post graduate studies. His mother is not a Laz speaker altough her ancestors are from Georgia. FK's father grew up in a household where both parents spoke Laz with each other. However, FK's father can only understand Laz but not speak it fluently. FK is familiar with Laz because of his interactions with paternal grandparents and aunt especially during his time in Istanbul. He can't speak Laz fluently but he is taking Laz classes to learn it better.

SK is a 30 year old male from Yalova. He was born in Istanbul and moved to Yalova at 10 years old. He went back to Istanbul for college and worked for three years in Istanbul upon graduating. Since 2015, he has been residing in his hometown, Yalova, and working as an industrial engineer. SK's mother is Laz and originally from Batumi, Georgia. Although not fluent, she can speak Laz. SK's father is originally from Pazar, Rize, and he is not fluent in Laz either. Since neither parents were fluent Laz speakers and spoke different Laz dialects, the family language when SK was growing up was Turkish. SK speaks ST and he indicates that he learned most of his Laz knowledge from his grandfather. SK can identify and understand words in Laz speech; however, he has difficulty with Laz sentence structures.

NY is a 32 year old female from Kocaeli. She works in the private sector and married a non-Laz. Although both of NY's parents identify as Laz, only her mother speaks Laz. NY's mother is an ST speaker since she purposefully educated herself to speak ST rather than LT. NY's father doesn't speak Laz at all and he is an LT speaker. Because Turkish was the family language when growing up, NY is Turkish (ST) dominant and not fluent in Laz.

ML is a 32 year old female from Hopa, Artvin. She is a Turkish language teacher and spent all her life in Artvin except for college years in Izmir and several years of teaching service in Diyarbakır. She moved back to her hometown Hopa 6 years ago. Both of ML's parents are Laz but only her mother can speak fluent Laz. Although her paternal grandparents are Laz speakers, ML's father cannot speak Laz because he was born in Diyarbakır and lived there until his 30s. ML can understand Laz; however, she cannot fluently speak Laz. She is an ST speaker.

MS is a 33 year old female primary school teacher from Düzce. She has been residing in Istanbul since attending college in Istanbul. Both of MS's parents identify as Laz and speak Laz although her father is Turkish dominant. MS is a Laz-Turkish bilingual but she identifies as being Turkish (ST) dominant. She still has close ties with the Laz community in the eastern Black Sea region since her maternal grandparents live in a Laz village in Borçka, Artvin. MS is interested in language activism and voluntarily teaches Laz courses through the channels of the Laz Institute. She is married to another Laz who doesn't speak Laz. They have a 7 year-old-son whose native language is Turkish.

BA is a 34 years old female. She lived in Ardeşen, Rize, all her life until college where she attended in Trabzon. After college, she started working as a Turkish language teacher in Istanbul, where she has been residing for the last 10 years. Both of BA's parents speak Laz so she was exposed to both Turkish and Laz since birth. BA speaks relatively fluent Laz, but she is Turkish (ST) dominant.

EU is 59 years old and the oldest male participant in this study. He is an architect and has been residing in Istanbul since attending college there. His hometown and extended family are in

Hopa, Artvin. However, EU lived in various cities in the Black Sea before college years (Samsun, Sinop, Amasya). He is an ST speaker and understands Laz but lacks fluency speaking Laz.

BY is a 28 years old dentist in Istanbul. She is HY's daughter and MY's younger sister (the third oldest among siblings). Unlike her sister MY, BY can only understand basic conversational Laz. She does not have conversational Laz skills except for a few Laz words and phrases. BY lives with her family in an apartment building where their neighbors are extended family from the Laz community.

6.6 Quotations in Turkish

[1] "(Lazca) aidiyet duygumu besliyor diyebilirim." [MS, 33, female, 2ON]

[2] "Lazca konuşmanın değeri kendime verdiğim değerle eşit yani kendime nasıl değer veriyorsam Lazca'ya eşitim yani [...] Ben Lazcay'ım Lazca benim." [MhK, 32, male, 1RR]

[3] "Benden önceki yaşayan, bana gen aktarımı yapmış olan atalarım, annelerimin annesi, onun annesi, hepsi Lazca konuşuyordu. Dolayısıyla benim için kültürel bir miras ve onu seviyorum ve korumak istiyorum." [MY, 30, female, 2RN]

[4] "Çok eskiden beri ufaklığımdan beri aşina olduğum için, biliyosunuz ufak yaşlar hep böyle bir hoş zamanların geçtiği anlardır. Dolayısıyla ben o dili duyduğumda veya Lazca'yı duyduğumda ne bileyim böyle eski güzel günler, güzel anılar gelir aklıma [...] Bize çok misafir geliyordu özellikle memleketten gelenler, yaşlı teyzeler işte filan. Onlar konuşurken böyle işte Erdoğaniçkimi filan hani böyle o tatlı ifade var ya bizim Türkçe'de çok kullanmadığımız [...] Ordan bana cok sıcak gelir oranın insanlarının konuşması böyle daha kucaklayan gibi gelir." [EU, 59, male, 2AN]

[5] "Benim için büyük bir utanç bunu konuşamamak [...] Sanki böyle ee büyüklerimiz eskiye karşı bir hainlik yapıyormuşum gibi hissediyorum kendimi [...] Sanki babaannem bir yerden bana kızacak gibi hissediyorum işte niye hani bizi terk ettin [...] Lazca konuşmak işte eskiyle bağlantılı olmak gibi hissediyorum ben kendimi, işte eski yaşanan şeyleri unutmamak, işte büyüklerimizi unutmamak, babaanne, dedem, onlara biraz saygı [...] Yani eskiden kopmamak diyebilirim biraz, ee kim olduğumuzu unutmamak." [FK, 30, male, 2AN]

[6] "Telefonla ailemle konuşurken kullanıyorum mesela toplu taşımada (Lazca) kullanmayı seviyorum. Etraftaki insanlar anlamasın diye değil. Sebebi sadece görünürlük hoşuma gidiyor, yani Lazca'nın görünürlüğünü arttırmak." [MY, 30, female, 2RN]

[7] “Daha çok ortak duyguların yaşandığı zamanlarda diyim [...] Düğün öncesi eğlencelerde, mevlütlerde, köyde çoğu yerde, işte sokakta karşılaşıldığı zaman, sevindirici bir durum olduğunda, ya da tam tersi üzücü bir durum olduğunda Lazca’ya başvurulur [...] Lazca ağıtlar falan yakılır o ölüm olduğu zaman, ya da işte bir erkek evleniyordur yani iki insan bir araya geliyordur evlilik yaşayacaklardır evlilik birlikteliği. O zamanlarda işte türküler, daha eski zamanlarda kış hazırlıkları yapıldığı zaman işte o şarkılar türküler söylenilen yerlerde daha etkin olarak kullanılıyor.” [RA, 24, male, 1AA]

[8] “Benim ilk Lazca konuşmam işte annem arkadaşlarımın yanında bir şey söylediği için, o arkadaşlarım anlamadığı için, işte ben de anneannem babaannem gibi işte, “Anne hani tamam artık, ayıp, yeter bu kadar” gibi bir cümle kurdum. Ve bu cümleyi kurduğumda da işte üniversite bitmişti öğretmen olmuştum. Ilkim öyle gerçekten bir yerde Lazca konuşmam bu oldu bilmeme rağmen.” [ML, 32, female, 2AA]

[9] “Köye gidiyorum ya orda benim yaştakiler hiç Turkçe konuşmaz. Başliyoz hemen Lasça’ya yani. Ama daha yeni nesil biraz daha az konuşuyo yani. Pazar’a felan gidiyolar ya merkeze okumaya, pek genelde Türkçe konuşmayi seviyorlar. Benim yeğenim var bir tane hala diyo bana diyo şey Lasça konuşma ben sevmiyom Lasça konuşmayi yapiyo [...] Kendini giya şehirliyim göstermek istiyo anliyo musun, yani Lasça konuşmak kibarlik değilmiş.” [HY, 54, female, 1RN]

[10] “Arkadaşlarımda yine taşımalı eğitim vardı çünkü köyden gelenler vesaire. O şey çok bariz ortadaydı yani fark çok fazla ortadaydı. Orta okulda sınıfta falan Lazca konuşurlardı. Yani biz o kadar konuşmazdık. Acaba şey diyorum böyle biz hani sahil kesimi şeyine mi girmişiz hani. Öyle de bi algı olur ya sanki o da aslında bir yerde devlet politikası da olabilir hani biraz daha böyle hani kullanmamaya [...] Sanki Lazca konuşmak biraz daha köylü işi ya da ne bileyim böyle daha kaliteyi, bir tırnak içerisinde söylüyorum hani, düşüren bir şeymis gibi algılayan insanlar da vardı. Çünkü bunu çok net hatırlıyorum, ee hatta işte annesinin Istanbul’da büyümesiyle övünen arkadaşlarımız falan filan da vardı.” [BA, 34, female, 2RN]

[11] “Hopa’da Lazlar dışında başka halklar da olduğu için [...] onlarla iletişim süresince Türkçe daha yoğun kullanılmış, dolayısıyla Lazca biraz daha geri planda kalmış [...] Rize’de’ Ardeşen’de’ Pazar’da aslında daha yoğun kullanılan yerler. Aslında burada (Hopa) da böyle şey hani aile aile bile değişiyor yani bir köyde hala işte Lazca konuşmaya devam ederken diğer köyde aslında çok daha önceden Lazca konuşma bırakılmış gibi durumlar da var.” [ML, 32, female, 2AA]

[12] “Genel olarak Türkçe konuşuyoruz ama Lazca’yı genelde yaşlılarla bir araya geldiğimizde ister istemez daha Lazca konuşuluyor daha ağırlıklı. Ee köye gittiğimizde mesela eşimin halaları genelde Lazca konuşur. Ardeşen Lazcası’yla Fındıklı da çok farklı olduğu için ben ilk zamanlar anlamıyordum, şimdi yavaş yavaş çözdüm olayı mesela.” [MdK, 32, female, 1RR]

[13] “Benim babam da Laz annem de Laz. Babam Rize Pazar’lı [...] Annem Batum’ludur. Bu şey olayı var ya diyalekt, onların arasında bu var. Şimdi ikisi de onların Lazca’sı farklı bunlarıin Lazca’sı farklı modunda ve ikisi de net şekilde bilmiyor. [...] Ama noldu bana kelimelerle geçti.” [SK, 30, male, 2OO]

[14] “Lazca öğretilmesi icin herhangi bir şaba kesin yoktu. Biz sadece aralarında konuşurken ona kulak misafiri olduk yani. Onlar da ilerıde konuşulmayacağını, bizim ihtiyacimiz olmadığını düşündükleri işin böyle bi çabaya girmediler.” [BY, 28, female, 2RN]

[15] “O Lazca bilmiyor. Ben bir hata yaptım [...] Ben Lazca konuşmaya çok hakim olmadığımı düşündüğüm için [...] yani sistemi biliyorum fiil çekimlerini biliyorum [...] ama akıcı konuşamadığım icin ben çocuğuma ögretemeyeceğimi düşünerek yapmadım bu işi. [...] Ben o konunun üstünde duramadım. Çünkü anneanne yok, babaanne yok. Hani ben kendim büyüttüm oğlumu.” [MS, 33, female, 2ON]

[16] “Ben doğduğum andan itibaren Lazca’nın içinde doğmuş oldum. Annem mesela sonradan öğrenmiş. Anne babası eskiden öyle bir şey varmış işte (Türkçe’yi) konuşamazsın, okuyamazsın, Lazca’yı öğrenme gibi bir algı varmış. Mesela annem o yüzden mesela dedem cok evde konuşturmazmış. Annemden ben daha iyi Lazca biliyordum çocukken. Çünkü ben doğduğumdan itibaren sürekli hatta babaannemle oturup sohbet edermişim.” [MdK, 32, female, 1RR]

[17] “Çocuk mahkemeleri kurup okullarda öğrencilerden hakim savcı ve bekçi gibi kategori seçip çocukları seçip mahkeme oluşturup evinde Lazca konuşan çocukları yargıladılar. ” [IA, 51, male, 1RN]

[18] “Bu bir dil ve bu konuşulmalı gibi olmamış o dönem. Bizimkiler de bu şeyle büyüdüler galiba. Lazca konuşmayın ayıp, konuşanları da birbirinize ispiyonlayın diyen öğretmenlerle büyümüşler. Annem de babam da böyle büyümüş, Lazca konuşmanın ayıp olduğunu düşüne düşüne.” [SK, 30, male, 2OO]

[19] “Diğer sınıflarda girdiklerimde bazen soru sorduğumda falan şu oldu hani bize ilkokul öğretmenimiz konuşturmazdı kesinlikle. Biz de öyle büyüdük. Bizde de konuşturmazlardı Türkçeniz bozuluyo falan diye. Şimdiki 6. sınıfların dersine giriyorum ben. Orda da hani öğrencilerden duyduğum bizim öğretmenimiz konuşturmazdı çok kızardı Lazca felan diye. Hala daha bu devam ediyor ve bunu söyleyen öğretmenlerin çoğu da gene Laz. Ee işin acı veren noktası burası oluyo malesef.” [MhK, 32, male, 1RR]

[20] “(Annem ve babam) Şiddet görüyolarmış, yani fiziksel şiddet olmasa da okullarında psikolojik şiddet görüyolarmış öğretmenleri tarafından. Türkçe konuşun, Türkçe konuşun diye baskı görüyorlarmış. Ben de gördüm hani babamların döneminde değil ben de kendi öğretmenimden gördüm. Bir şeyin hani mesela Lazca’sını yazmışım ilkokula gidiyordum. Öğretmenim beni sert bir şekilde uyardı yani bunun Türkşe’sini yazmalısın diye.” [MS, 33, female, 2ON]

[21] “Onlar (annem babam) evde doğru düzgün Lazca konuşmamışlar kendileri de. Ama ne oldu bana kelimelerle geçti. Ben bunu benim söylediğim kelimeleri insanlar anlamayınca farkettim. Bakkala gittim yani bir kilo minci dedim, minci ne dedi [...] O zaman dedim hani benim kullandığım ne? [...] Yengeç var ya yengecin Lazca’sı *ç’akali*. Ben mesela ç’akali diye biliyorum. Simdi yengeç diyorlar. Yengeç diyorum herhalde denizde olanı. Biz hep derede görüyoruz ya onu, herhalde diyorum denizde böyle büyük olanı var ya onlar herhalde yengeç, benimkiler ç’akali diyorum falan. Hani bunları böyle ufakken pek farketmiyordum. Sonra sonra öğrenmeye başladım. Asıl ne zaman farkettin dersen, bende dank ettiği zaman lisenin sonlarına doğru. Aslına bakarsan çok geç.” [SK, 30, male, 2OO]

[22] “O (Lazca öğrenmek) biraz da kişisel seçim artık yani [...] herkes her şeyi yapmakta özgürdür. Insanlar da açıkçası şöyle söylemek istiyorum hani rızası yok [...] Ingilizce yani yaşamımı idame ettirebilmem için Ingilizce öğrenmem gerekiyor. Bu, sektörden kaynaklı [...] Şu an Lazca’ya gerek var mı? Türkce’nin gerekli olduğu kadar Lazca’ya gerek yok o yüzden insanların seçimine kalmiş. Ancak yani o kültürü yaşatmak isteyen yani benim gibi işte o eskiler gibi, onlar tabi daha etkin kullanıyorlar Lazca’yı.” [RA, 24, male, 1AA]

[23] “Yani devletin resmi tanımlaması yok (Lazca için). [...] Zaten derslerimizi de Yaşayan Dil ve Lehçeler dersi adı altında yaşıyoruz seçiyoruz. Daha doğrusu ee bunun yani bunu bir getirisi yok, o da bi acı bir şey yani. Zaten insanları biraz da uzaklaştıran Lazca’dan uzak hani sosyal kültürel ve de siyasi meselelerin haricinde ee Lazca’nın ekonomik olarak da bir getirisinin olmaması [...] yanı başımızda mesela Gürcüce var, onu bilsen mesela bir getirisi olur Gürcüce biliyorsun diye. Ama yani benzer özellikler, onu öğrenen bunu da öğrenir.” [MhK, 32, male, 1RR]

[24] “Malum bizim oradaki coğrafyadaki gençler orada kalamıyorlar. Toprak zaten yetersiz, tarım yok, iş istihdam... Dolayısıyla hem o zamanlar üniverste de yok şimdi var ama gene de şimdi üniversıtelerin hani ne kadar üniverste olduğu tartışılır. Dolayısıyla en yakın Trabzon var ve işte Ankara İstanbul bir sürü yere geliyorlar. Dolayısıyla aileler çok da Lazca öğrensinler diye onlar bie baskı yapmıyorlar. Çünkü yaşamlarını büyük ihtimalle gurbette geçirecekler. E gurbette de şey Türkçe’nin hani biraz şiveli konusulması veya dilin biraz şey konuşulması büyük şehirlerde dalga konusu oluyor.” [EU, 59, male, 2AN]

[25] “Babaannemse Türkçe biliyordu. İlkokul mezunu babaannem de. Ancak o kendi duygularını Lazca daha iyi ifade edebiliyordu. O yüzden ona Lazca konuşuyolardı evdeyken. Ben de Lazca’ya maruz kaldığım için babaannemle de iletişimim iyi olduğu için Lazca’yı o seviyede öğrenebildim yani.” [RA, 24, male, 1AA]

[26] “60 yaşın üzeri hemen hemen Lazca’yı şey Türkçe’yi okulda tanıyan kesimdir. Burada 60 yaş ve üzeri hemen hemen böyledir, hatta 50 yaş bile diyebiliriz kimi yerlerde. Yüksek köylerde 50 yaş bile diyebiliriz.” [MhK, 32, male, 1RR]

[27] “(Türkçe’yi okulda öğrenen kesim) Benim jenerasyonum, 1970 doğumlular 75 doğumlular, 80 doğumlulara kadar çıkartabilirim ortalama olarak. Ama 80 doğumlulardan sonra yavaş yavaş birden bire işte Türkçe’ye dönmeye başladık. Benim gençlik yıllarımda şeyi görüyordum işte çocuklar, bugün 35 yaşında olan çocuklar, herhalde Türkçe konuşuyordu aileleri, çocukken Türkçe konuşuyolardı. Sonraki yıllarda mesela köye gittiğim zaman, bu anadili Türkçe olan, Türkçe konuşulan çocukların Lazca konuştuklarını öğrendim. Aslında çocuk Türkçe olarak yetiştiriliyor ama çocuk işte 15 yaşına geldi mi, t’oplumun içine girmeye başladi mi ya da 20 ye geldi mi Lazca konuşmaya başlıyor, Lazca’ya dönüyor. Yani t’oplumsal sebeplerden dolayı. Çünkü Lazca konuşan nüfus fazla. Böyle bir şey vardı. Şimdi ama bu yok artık geçen bir film çekecektik, çocuk lazım oldu. Ufak işte Lazca konuşabilen çocuk bulamadık. Yani yok artık öyle bir şey. Artık Türkçe konuşuyor çocuklar evde ve okulda.” [IA, 51, male, 1RN]

[28] “Göçenler (Lazca) öğrenmiyor [...] Köydeki çocuklar öğrenmeye devam ediyorlar ve öğretmeye devam ediyor büyükler [...] Ben kasabada yani şehre daha yakın bir yerde büyüdüm. Benden daha iyi konuşuyorlar köydeki çocuklar şu anda bile.” [MS, 33, female, 2ON]

[29] “Yani en iyi bence, en tecrübeli olan kişi bence babaannemdir, bence odur yani. Bazı kelimeleri mesela ben bilmiyorum o biliyor. Hem de sürekli onu kullandığı için. Ben mesela burada mecburen Türkçe kullanmak zorunda kalıyorum okulda falan [...] Ben günlerin Lazca’sını bilmiyorum mesela [...] Onlar (mevsimlerin, ayların isimleri) var işte. Onları babaannem biliyor, ben tam bilmiyorum.” [EY, 21, male, 1RR]

[30] "Ablam var. O (Lazca) anlıyor ancak yani kişisel tercih meselesi, kullanmıyor. Konuşma benim kadar pek fazla seri konuşamıyor da anlıyor yani [...] O da şu an 28 yaşında [...] Laz kültüründe hani böyle erkek çocuk figüru vardır ya beni o yüzden biraz daha kültürün içine erken adapte ettiler. Ablam pek fazla girmedi yani şey oldu bir an önce hayata atıldı ve biraz daha sekteye uğradı bu konuda. Hani kültürel anlamda adaptasyonum zor oldu diyeyim yani üniversiteye gittiğimde de zor oldu ilçe değiştirdiğimde de zor oldu [...] Bu kültür tabi şimdilerde böyle modernleşti bir anda. Ancak daha çok fiziksel aktiviteyle yapılması gereken işlerde erkekler ön plandaydı atıyorum güce dayalı işler. (Erkekler) Evin dışarısında daha çok bulundukları için daha sosyal rolleri daha fazla olduğu için daha etkin olduklarıı için erkeğin önemi arttı yani erkeğin önemi daha çok oldu kadınlara göre [...] Kadınlar da evde mesela hani aynı etkinliği dışardaki etkinliği evde gösterdiler [...] Mesela [oxordʒa] kelimesi var Lazca'da, evin direği anlamına geliyor [...] Hani erkeğe önem verilmesinin sebebi o yani erkek aslında o hanenin dışardaki gücünü temsil ediyor." [RA, 24, male, 1AA]

[31] "O (MY) kendi haveslendi. Kendi içinden geldi. Zaten o çok farkli [...] Obirleri de (diğer çocuklar) de (Lazcayı) seviyolar ama o (MY) başka. Anne n'olursun biraz öğret diyo, benlen zorla konuşmaya çalişiyo." [HY, 54, female, 1RN]

[32] "Biz üç kız kardeşiz. Ben bir ilk çocuğum. Bir de benden bir, bir buçuk yaş küçük kız kardeşim var. [...] İkimiz aynı evde, aynı anne baba, aynı anneanne babaanne dede hani aynı evin içinde büyüdük. Benim annemle babam da özel bir çaba sarfetmediler bana öğretmek için ben de kendi şey ortamında öğrendim. O bilmiyor ben biliyorum, ve bu benim kafamı çok kurcalıyor nasıl oluyor bu diye. Bir çocuk kendini dile kapatabilir mi? Mesela bir kelimenin telaffuzunu da söyleyemiyor. Aynı evde büyüdük, yan yanaydık, dip dibeydik yani bi yere giderken aynı akış aynı kanal hani o kadar her şey aynı ki yaş aralığımız da az. Mesela üç numara tamam o da Lazca bilmiyor ama üç numarayı şey yapabiliyorum hani o bizden sonra doğdu diye biliyorum ama o iki numaralı kardeşimin bilmemesi ve telaffuz bile edememesi kelimeleri bana çok komik geliyor." [MS, 33, female, 2ON]

[33] "Günümüzde yeni olan kelimelerin karşılığı yok zaten. Şu an zaten mesela Türk Dil Kurumu'nda bazı, drona uçangöz mü mesela o tarz eklemeler yapıyorlar. Bizde öyle bi kurum falan olmadığı için yeni eklemeler olmuyor." [EY, 21, male, 1RR]

[34] “Lazca zaten kendi içerisinde yani kendi tarihi sürecinde aldığı kelimelerin birçoğu ya Farsça’dır, Farsça çok ağırlıktadır ve sonra dinden dolayı işte Arapça kelimeler de girmiştir. Bu da Türkçe vasıtasıyla. E şimdi Türkçe’de yabancı hani İngilizce’den ya da Fransızca’dan aldığı bir kelimeyi biz de Türkçede kullanıldığı şekilde kullanıyoruz zaten. Ekstra buna bir kelime bulmuyoruz. Bulduğumuzda da zaten bir karşılığı yok yani sadece sen bulmuşsun ve sen kullanıyorsun gibi bir şey oluyor.” [MhK, 32, male, 1RR]

[35] “(Yaşlılar) böyle çok sempatik. “Ya bizimki de öğrenemedi işte. Aa MS ne güzel konuşuyor, tüh Emel de konuşsaydı. Hani böyle şeyler çok sitemkar değiller de biraz romantik sempatik [...] çok da beni yüceltmiyorlar, hatta yaptıklarımı da yüceltmiyorlar, biraz boş buluyorlar. Niye uğraşıyorsun? Ben gidiyorum kayıt almaya çalışıyorum, ben gidiyorum bir şey yapmaya çalışıyorum. Meh.” [MS, 33, female, 2ON]

[36] “Lazlar hep şeydir böyle çataçat söylerler fikirlerini işte büyük cümleleri vardır [...] ama uygulamaya geçtiklerinde ben çok da buna gereken hassasiyeti ve özeni gösterdiğimizi düşünmüyorum. Çünkü gerçekten çocuklarımıza bu dili öğretiyor muyuz? Ya da öğrenmediklerinde n’apıyoruz? Bu konuda çok eksik olduğumuzu düşünüyorum. Bu da zaten muhtemelen iste bu dillerin yavaş yavaş kaybolacağını ya da iste ne biliyim birçok şeyin unutulacağını gösteriyor [...] Bizim insanımızda gereken davranış biçimi olmadığını düşünüyorum.” [BA, 34, female, 2RN]

[37] “Şimdi sosyal medya diye bir şey var. Bir şeyler görüyoruz, okuyoruz, farklı hayatlara tanık oluyoruz. Aslında yaşın geçmesinden kastım buydu [...] Şimdi böyle bir şeylerin daha farkında olup biraz daha kıymetli ya da kıymet verir halde yaklaşmaya çaba gösteriyor belki insan [...] Etrafta sürekli Lazlar olunca kimse bir şey sorma gereksinimi hissetmiyor. Zaten hani konuşuyorsun anlaşıyorsun, aynı fikir vesaire. Farklı kültürlerle ya da farklı insanlarla ya da o kültürü bilmeyen insanlarla tanıştığın zaman, onların soruları ve şaşkınlıkları daha farklı olduğu için bu sefer seni de düşünmeye sevk ediyor.” [BA, 34, female, 2RN]

[38] “Üniversitede üçüncü sınıf mi dördüncü sınıfa kadar kendimi genelde Türk olarak tanımlıyordum. Oradaki bir oluşan bir üniversitedeki bir öğretmenimle yaşadığım bir konuşmadan sonra kendimi Laz olarak tanımlamaya başladım [...] O zamana kadar sürekli olarak Lazca konuşuyorduk ama kendimizi Türk olarak adlandırıyorduk. Hiç daha önce kendi dilimi araştırmamıştım bilmiyordum, sadece duyduklarım falan onlar. İşte o gün ee bir öğretmenimizin odasındaki Türk dilleri haritasına baktığımda inceledim böyle kocaman da bir haritaydı orada Lazca’yı görmeyince dedim ki Lazca niye yok. Biz kendimize Türk dediğimiz için niye Lazca yok dedim. Ee o da biraz hani niye olmadığını, kendisi de bir dilbilimciydi, niye olmadığını bana mantıklı açıklamak yerine dalga geçerek “Sizinki, sizin diliniz sağdan soldan toplama bir dil. Kelimeleri sağdan soldan topladınız, bir dil oluşturdunuz. Sizi buraya alır mıyız?” gibi biraz söylemi hoşuma gitmeyince o günden sonra oturdum ben Lazca’yı, belki de o günden sonra öğrenmeye başladım, araştırmaya başladım diyebilirim. Ama o gün benim için hem dil hem kimlik anlamında bir dönüm noktasıydı yani.” [MhK, 32, male, 1RR]

[39] “Basılı, yazılı kaynaklara ulaşmak çok kolay değil. Burada satan yer yok. Ne bileyim işte İstanbul’da büyük kitap fuarı oluyor. Ama Kasım’da felan oluyordu yanlış hatırlamıyorsam. Şimdi bir çalışan için, bizim için kolay değil çalışan zaten gidemiyor o tarihlerde onlara ulaşmak zor. Bazı kitaplar internette satılıyor ama erkenden bitiyor işte basımı yok falan.” [MhK, 32, male, 1RR]

[40] “Aslında bu (Lazca kelime bilgisi) en zorlandığım şeylerden biri, konulardan biri. Çünkü basılı bir hani sözlük olarak bir kaynak çok zor, evet var, zamanında basılmış. Ama hani şu an ya işte şeyi basımı durdurulmuş ya da hani işte şeylerde mmm sahaflarda oldukça yüksek fiyatlara bulunuyor. Dijital sözlük olarak işte bir tek Laz Enstitüsü’nün sözlüğü var, onu kullanmaya çalışıyorum [...] Biraz zor gerçekten aradığım kelimeyi orada bulmak.” [NY, 31, female, 2OO]

[41] “Şimdi benim köyümün tarihini anlatan bir kitap da var [...] bu böyle biraz şey gibi hani köyün arşivlerinde falan duruyor böyle çok da baktırmıyorlar eski falan. Anca böyle hani bilimsel bir şey olsa olabilir [...] Ona bakıp böyle nasıl bir şey anlatıyor onu bir şey yapmak istiyorum yani [...] Kimisi hiç sallamaz, kimisi de çok değer verir. Hiç aman aman kimse ellemesin, yeri geldi mi değerli biri alır bakar şey yapar der. O yüzden hani pek bir kovalayan da yok açıkçası.” [SK, 30, male, 2OO]

[42] "Annem de mesela şey yapar işte Diyarbakır'dayken bunu birkaç arkadaşına söylemiştir. İşte biz gerçek Lazız, gerçek Laz nerede, işte Rize'nin doğusu ve Artvin'in ilçelerinde yaşarlar vesaire. (İnsanlar) Bütün Karadeniz'i Laz zannettikleri için Lazlar belki bunu özellikle belirtme ihtiyacı duyuyordur biz gerçek Lazız diye." [ML, 32, female, 2AA]

[43] "Benim için kültürü biliyor da Lazca konuşmaya yeltenmiyorsa yarı Laz'dır. Kültürü de dili de öğrenmeye çalışıyorsa tam Laz'dır diyebilirim." [RA, 24, male, 1AA]

[44] "Bana göre şey bu Lazca'yı böyle dediğim gibi konuşup dolu dolu kendini ifade edebilen, konuşması sırasında Türkçe fazla katmayanlar [...] Ha bir de şey var, onlar işte yörenin gereği atmaca peşine giderler, biraz doğayla uğraşırlar, hani toprağı bilirler filan yani onlarla bütünleşirse ben işte o zaman hani tam Laz dediğin işte ağacı tanıyan işte tarımı bilen filan birilerine denk geldiğimde hani kendi adıma hmm bu (tam Laz) dediğim oluyor." [EU, 59, male, 2AN]

[45] "O biraz da nasıl hissettiğinizle alakalı, ya da sizi ne kadar tatmin edip etmediğiyle de alakalı, ya da bunu ne kadar umursadığınızla da alakalı." [BA, 34, female, 2RN]

[46] "Laz olmanın ölçütü kendini nasıl tanımladığınla ilgilidir bence. Kimlikten bahsediyorsak şayet yani genlerden bahsetmiyorsak, bir kimlikten bahsediyorsak, bu kişinin kendini tanımlamasıyla ilgili bir meseledir." [IA, 51, male, 1RN]

[47] "Bazı insanların arasında Lazlar biraz daha şey görülebiliyor geri kafalı diyeyim. Eee Laz kafalı kelimesi tarzı bir şeyler var ya mesela şey derler Lazların kafası 12'den sonra duruyormuş falan böyle aynen Lazları biraz aşağılayıcı şeyler var. O espirilerle karşılaştım ama şey yani önemsemedim tabii ki." [BY, 28, female, 2RN]

[48] "Ben işte lisede yatılı okudum ve lisede bir çok yerden gelen arkadaşımız vardı [...] Ben Lazım dediğimde mesela hani en çok eee şakalaşma gülüşme Lazım dediğimde olurdu mesela. Ya da böyle hemen bir işte Laz şivesi yapmak gibi şeyler oluyordu. Hatta ben bir dönem artık Lazım demiyordum ve Karadenizliyim diyordum hani o daha böyle bir şey geliyordu mmm o hani komiklikten biraz sıyırıyormuş seni gibi geliyordu." [NY, 31, female, 2OO]

[49] “Anneannem direk bambaşka bir dil (Lazca) konuştuğu için onda Türkçe kelimeler daha çok bozuluyor.” [NY, 31, female, 2OO]

[50] “Evinde hiç konuşulmayan arkadaşlarımın Türkçesi’nin daha düzgün olduğunu fark edebiliyordum çocukken bile yani belli. Özellikle evde büyük olması çok fark ettiriyor yaşlı oldu mu çünkü yaşlılar genellikle Lazca konuştukları için evde daha çok konuşuluyordu falan [...] Dediğim gibi, evinde özellikle büyük olan köyde oturan arkadaşlarımın şivesi daha değişikti bize göre.” [MdK, 32, female, 1RR]

[51] “Lazca’nın [...] gramer özellikleri de Türkçe’ye taşınıyor. Hatta ben şeyi de gördüm mesela Ardeşen’de bu ergatif datif yok, yani -k -s ekleri yok. Ardeşen’deyim diyemiyor. Normalde Lazca konuşurken *Art’aşeni vore* diyor, ek yok. Ama o Türkçe girdikten sonra, hani iki dilli oldu ya insanlar, şeyin farkında yani Ardeşen’de -de eksik orada diyor. *Art’aşenide vore* diyor Türkçe’deki *-de*’yi katıyor. ” [IA, 51, male, 1RN]

[52] “*ı*’lar *i* oluyor. *o*, *ö* oluyor. *u*, *ü* oluyor. Bazen annem karıştırıyor soruyor noktalı noktasız falan hangisi noktalıydı diyor. Annemin yazı dilinde de biraz hata oluyor [...] Yazı dilinde oluyor, konuşurken *o ö* yapmıyor. *ı*’ları *i* yapıyorlar genelde. Bazen *u* yapıyorlar [...] Bir kere başıma şey gelmişti. Müdür yardımcısı şey getirmişti, kağıt getirdi herkes nereli olduğunu yazacaktı. Bir tane arkadaş mesela *buraliyim* yazmıştı.” [EY, 21, male, 1RR]

[53] “Bir kere bu tabii ki sesli harflerde bir noktalama olayımız var bizim, ama mesela şey böyle her *ı*’yı da *i* yapıyoruz gibi bir durum, yani her noktasızı da noktalı yapıyoruz gibi bir durum yok. [....] Mesela Türkçe’de şey vardır ya hani kalınlık incelik uyumu. Laz Türkçesi’nde o kalınlık ve inceliğin asla bir önemi yok [...] Mesela *gideyrum* hani, orada kalın ince birbirine karışık halde.” [BA, 34, female, 2RN]

[54] “Babam konuşurken bazen çok şey yaparım o işte *p’* sesi var ya mesela *p’iper’i* derken o *p* patlıyor ya böyle. O bazen Türkçe konuştuğu herhangi bir kelimede de o *p* öyle çıkabiliyor. Ya da *k* daha böyle gırtlaktan ya da daha baskın çıkabiliyor [...] Bazen kendimde de bunu görüyor muyum, bazen görüyorum evet, çok nadir de olsa [...] O ortama (Laz ortamına) girdiğimde, anında benim de tonlamalarım ve dilim değişiyor, ya da bir tık sinirlendiğim zaman falan özüme dönüyorum.” [BA, 34, female, 2RN]

[55] “Şey var, ne diyeyim, harfleri net şey yapıyorsun bazılarını tabii *p’, k’ , ç’*. Yani bunları biz öğrenince fark görüyoruz. Ama kendi konuşmalarında da bu harfleri hani Türkçe’deki gibi tam olarak değil ama biraz da bizim Lazca’daymış gibi aktardıklarını görebiliyorsun. Ama şöyle de bir şey var, bu kimlerde var, yaşlılarda var.” [SK, 30, male, 2OO]

[56] “Çok hoşuma gidiyor yani duyunca. Cidden böyle karnımda kelebekler uçuyor diyebilirim yani. Çok hoşuma gidiyor böyle gülümsüyorum [...] Benim 15 yılımı anlatan şeyler olduğu için gülümsüyorum.” [FK, 30, male, 2AN]

[57] “Lazca ölse bile, temennimiz o değil ama, en azından ortaya Lazların konuştuğu bir Türkçe kalacak. O da ölürse artık yapacak bir şey yok.” [MhK, 32, male, 1RR]

[58] “Keşke o Laz Türkçesi diye bir şey olmasa, herkes Lazca da konuşsa, Türkçe de konuşsa, Almanca da konuşsa, İngilizce de konuşsa, birbirine karıştırmasak. Bana biraz anlamsız geliyor. (Laz Türkçesi) olmasın yani olmasa daha iyi benim için.” [MS, 33, female, 2ON]

[59] “(Laz Türkçesi) Bana çok eğreti geliyor, çok irite edici geliyor. Hiç hoşlanmıyorum. Türkçe konuşacaksak Türkçe konuşalım, Lazca konuşacaksak Lazca konuşalım diye düşünüyorum.” [IA, 51, male, 1RN]

[60] “Günlük hayatta ben bazı konuşmalarımda şey yaptığım olmuştur, böyle hararetli konuşma olunca, insanın turkcesi yetmiyor, hararetli konuşunca kusura bakmayın diyorum ben kendi ayarıma dönüyorum [...] Beni hepiniz anlıyorsunuz zaten sonuçta Türkçe konuşuyorum [...] Eskiden çok şey yapardım böyle biraz çekinirdim, utanırdım. Şimdi öyle bir derdim yok [...] yaşanmışlıklar anlatılanlar bizden istenen şey. Ee bir de çocukken yani size söylenilenleri, aslında her şeyin doğru olduğunu biliyorsunuz yani düşünüyorsunuz size söylenilenlerin. Doğru bilinen yanlışlarla büyüdüğümüz için, yetiştiğimiz için, onun şeyini atlatmak kolay olmuyor yani siz onunla yetişiyorsunuz.” [MhK, 32, male, 1RR]

[61] “Yeni nesil çok (Laz Türkçesi) kullanmamaya dikkat ediyor. Bazıları hiç dikkat etmiyor, genelde kızlar dikkat ediyor yani. Kızlar daha çok düzgün konuşmaya çalışıyor. [...] Nedenini bilmiyorum.” [EY, 21, male, 1RR]

[62] “Ben işte ailemde en düzgün (Türkçe) konuşan insan benim. Benim dışımda annem çok, kardeşim de şiveli konuşur vesaire [...] Biz bir de aynı okulda çalışıyoruz. Hala alay konusu siz nasıl kardeşsiniz biriniz boyle, biriniz boyle. O (kardeşim) biraz daha dışa dönük büyüdü işte köyde vesaire [...] O biraz işte arkadaş çevresinden vesaireden daha çok kaldı herhalde.” [ML, 32, female, 2AA]

[63] “Mecbur değişik, (çocuklar) ordalar ya yani memlekette olduklari için ne kadar dizeltseler de var biraz bozukluk [...] (Laz Türkçesi’ni) Pek sevmiyolar. Onlar Türkçe’ye özeniyolar, buranın Türkçesi’ne (İstanbul Türkçesi’ne). Şimdi niye biliyo musun? Daha mesela diksiyonu düzgün, k’iyafetler düzgün, her şey saç baş düzgün, diksiyon ne bileyim düzgün hoşlarına gidiyo heralde yeni nesilin öyle.” [HY, 54, female, 1RN]

[64] “(Laz çocukları) Eğer burada (Ardeşen’de) büyüdüyse normal gelebilir, ama farklı yerde doğdu büyüdüyse, işte burada doğdu farklı yerde büyüdü, sonra gelince garipserler. Normal insan gibi garipseyebilir.” [EY, 21, male, 1RR]

[65] “Hani (anne babalar) böyle bir Türkçe’ye, İstanbul Türkçesi’ne, bir meyil, bir tık daha böyle şey [...] ama çok da şey yapılmıyor, yani böyle konuşmayın da şöyle konuşun gibi bir baskı da yok açıkçası [...] doğru olan bu diye yönlendirmeler yapılır.” [BA, 34, female, 2RN]

[66] “(Aileler) İstanbul Türkçesi istiyorlar tabii. Yani bu ne yazık ki ülkemizdeki durum, şartlar, her şey biraz maddi, ekonomik duruma bakıyor. Herkesin beklentisi çocuğunun geleceği ile ilgili iyi şeyler adınadır ve kaygı düzeyi de bu konuda çok yüksektir bizde [...] İstanbul Türkçesi’yle konuşmak çocuk için iş hayatında ileride bir yerde buna daha faydalı olacağını düşünüyorlar. Ki düşünüyorlar değil zaten böyle yani. Bir işveren ne yazık ki bizde, ee ülkenin herhangi bir yerinde konuşulan Türkçe’yi, Türkçe konuşan kişiyi işe almaktansa, işte konuşmasını bile bilmiyor diyecekler büyük ihtimal İstanbul Türkçesi’yle konuşanı tercih ediyor.” [MhK, 32, male, 1RR]

[67] Çevre zaten onlar için büyük bir problem çünkü işte herkes şiveli konuşuyor. Başka bir yere gidince rahatsız olacağını düşünerek Türkçeyi düzgün konuşmalarını isteyen çoğu insan böyle düşünüyor, işte başka bir okulda vesaire başka bir ortamda belki. (Aileler çocuklarının) bu şiveli konuşmayla ilgili sorun yasayabileceğini ve kişinin kendisinin rahatsız olabileceği düşünüyor olabilirler.” [ML, 32, female, 2AA]

[68] "Hoslarina gidiyo baya yani farklidur diye hoslarina gidiyo yani. Oyle alay eder gibi seyapmiyolar degisik diyolar [...] Merak ediyolar." [HY, 54, female, 1RN]

[69] "Türkçe edebiyat öğretmenimiz vardı. Bir gün işte lisenin yanından karga uçuyordu. Bu dedi ne uçuyor falan bana sordu bilerek. Ben de çocukluk aklımla *k'arga* dedim. İşte bütün sınıfı bana güldürmüştü falan. Onu unutmam." [RA, 24, male, 1AA]

[70] "(Laz olmayanlar Laz Türkçesi'nin) kaba bir dil olduğunu düşünüyorlar bence [...] dinlerken insana rahatsızlık veren [...] komik [...] küçümsemeyle karışık bir komiklik gibi yani. Ee kaba ve komik diyebilirim [...] Aslında Karadeniz şivesi olarak değil de sanki Lazca oymuş gibi de çok karıştırılabiliyor ama aslında Lazcanın bu olmadığını Lazlar biliyor sadece. Hani o yüzden bence (Lazlar) hoşnut değiller." [NY, 31, female, 2OO]

[71] "Pazar'da ben kasabamda dolaşırken ya da bir alışveriş yaparken iki kız bana anlattı. İş arıyorum diyor kız, genç kız ama diyor aksansız Türkçe konuşanları alıyorlar diyor işe. Pazar'da, Pazar'da işverenler yani anadil doğru dürüst Turkçe konuşamayan işverenler eleman alacağı zaman halkla ilişkilerin daha yüz yüze ilişkilerde özellikle aksansız Türkçe k'onuşanlardan seçiyorlar." [IA, 51, male, 1RN]

[72] "Yani genelde çok içe dönük, işte daha birbirlerini tanıyan topluluklarda hissetmiyorlar. Hissettikleri yer de daha çok kamu kuruluşları, hastaneler, belki okullar gibi yerler, daha resmi kuruluşlar yani, ya da yabancı işte tanımadığı misafirler vesaire." [ML, 32, female, 2AA]

[73] "Ben sınıfta Türkçe'yi öğretirken ee bunu (İstanbul Türkçesi'ni) kullanıyorum. Teneffüste, öğle arasında, çocuklar yanıma geldiğinde bazen birilerine Lazcayla söylüyorum Lazca bildiğini bildiğim anlayan kişilere Lazca sesleniyorum bir şeyler diyorum. Bazen işte kendi Türkçe'mizle konuşuyoruz. Ama yani okulda sonuçta eğitim öğretim programı içerisinde Türkçe öğretmeni olarak bana verilen bir programda çocukların işte iyi anlaması iyi konuşabilmesinin hepsi İstanbul Türkçesi'ne dayalı olduğu icin e mecburen bunu sağlıyoruz. Bunun dışında öğretmenlik yapmak da kendi eğitim programımın dışına çıkmak yani tamamen sapmak gibi geliyor bana. Sonuçta siz, sizden isteneni veriyorsunuz, derste onunla yükümlüsünüz. Dersten sonra veya teneffüste ne yaptığım çok da önemli değil." [MhK, 32, male, 1RR]

[74] “Laz olmayanların yanında (Türkçe’ye) daha çok dikkat edilir. Laz olanların yanında dalga geçilir yani kibar konuşmaya çalişiyor falan diye. O tarz tiplemeler var yani İstanbul’dan gelip de Türkşe’sini düzeltmeye çalışırken komik duruma düşenler.” [MY, 30, female, 2RN]

[75] “Eskiler biraz daha Türkçe’leri daha bozukken [...] Yani orta yaş ve sonraki yaş daha bozuk konuşuyorlardı. Biz biraz daha sanki o şeyden sıyrıldık, bizim yaşımız o bozukluktan sıyrıldık. Bozukluk mu denir buna, ben de bozukluk diyorum ama farklılık diyeyim en iyisi. O farklılıktan biraz daha sıyrılıp sanki günümüz Türkçesi’ne, İstanbul ağzına biraz daha yakın konuşuyoruz gibime geliyor. Hani bunun bir isimlendirecek bir şeyi olacaksa hani ikinci nesil Laz Türkçesi diyebiliriz buna.”[MhK, 32, male, 1RR]

[76] “Okulda direk olarak saf Türkçe öğrendikleri için onlara öyle (Laz Türkçesi’yle) konuştuğunuz an seni garipsiyor [...] bunu ben yapınca garipsiyorlar ama dedem onlarla bu şekilde konuşunca sorun yok.” [SK, 30, male, 2OO]

6.7 Adjacent consonants

Table 6.3: Rounding harmony and adjacent consonants in roots and suffixes of LT-unique tokens (Labials, velars, palatals, coronals are represented with [j, n, k, m], respectively.)

	Vowel	Root R harmony		Suffix R harmony		Total	
		satisfied	violated	satisfied	violated	satisfied	violated
Labial adjacent	round[m]	16	13	72	364	88	377
	unround[m]	13	11	94	6	107	17
	[m]round	7	8	19	36	26	44
	[m]unround	22	3	70	15	92	18
Velar adjacent	round[k]	29	14	38	175	67	189
	unround[k]	6	6	34	1	740	7
	[k]round	28	5	56	8	84	13
	[k]unround	32	2	32	32	64	34
Palatal adjacent	round[j]	0	0	1	0	1	0
	unround[j]	2	0	25	2	27	2
	[j]round	-	-	10	4	10	4
	[j]unround	-	-	104	2	104	2
Coronal adjacent	round[n]	121	38	117	354	238	392
	unround[n]	218	16	329	33	547	49
	[n]round	107	51	181	859	288	910
	[n]unround	188	32	830	172	1018	204

Table 6.4: Backness harmony and adjacent consonants in roots and suffixes of LT-unique tokens (Labials, velars, palatals, coronals are represented with [j, n, k, m], respectively.)

	Vowel	Root B harmony		Suffix B harmony		Total	
		satisfied	violated	satisfied	violated	satisfied	violated
Labial adjacent	back[m]	74	23	175	292	249	315
	front[m]	13	30	37	47	50	77
	[m]back	126	33	125	60	251	93
	[m]front	21	40	84	106	105	146
Velar adjacent	back[k]	50	16	101	119	151	135
	front[k]	10	27	43	21	53	48
	[k]back	61	10	71	10	132	20
	[k]front	21	25	32	53	53	78
Palatal adjacent	back[j]	0	0	33	11	33	11
	front[j]	0	2	22	36	22	38
	[j]back	-	-	12	13	12	13
	[j]front	-	-	84	63	84	63
Coronal adjacent	back[n]	429	120	437	323	866	443
	front[n]	164	243	293	310	457	553
	[n]back	343	117	618	726	961	843
	[n]front	144	257	525	828	669	1085

6.8 Adjacent consonants categorized by age

Rounding Harmony

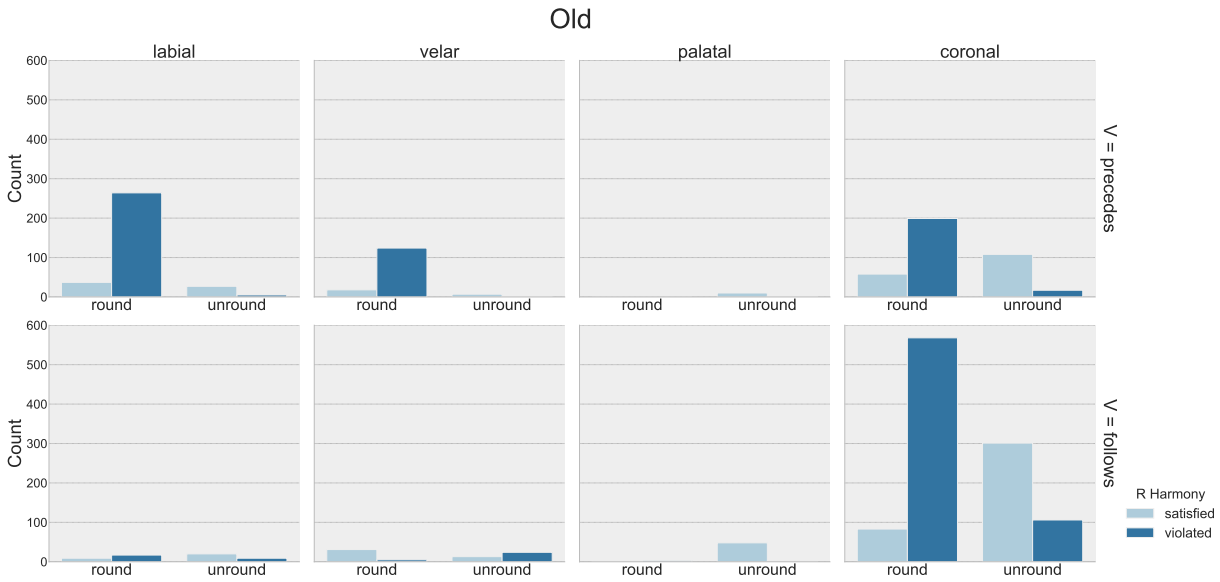


Figure 6.2: Old aged speakers: Rounding harmony and back feature in LT-unique suffix vowels preceding or following consonants

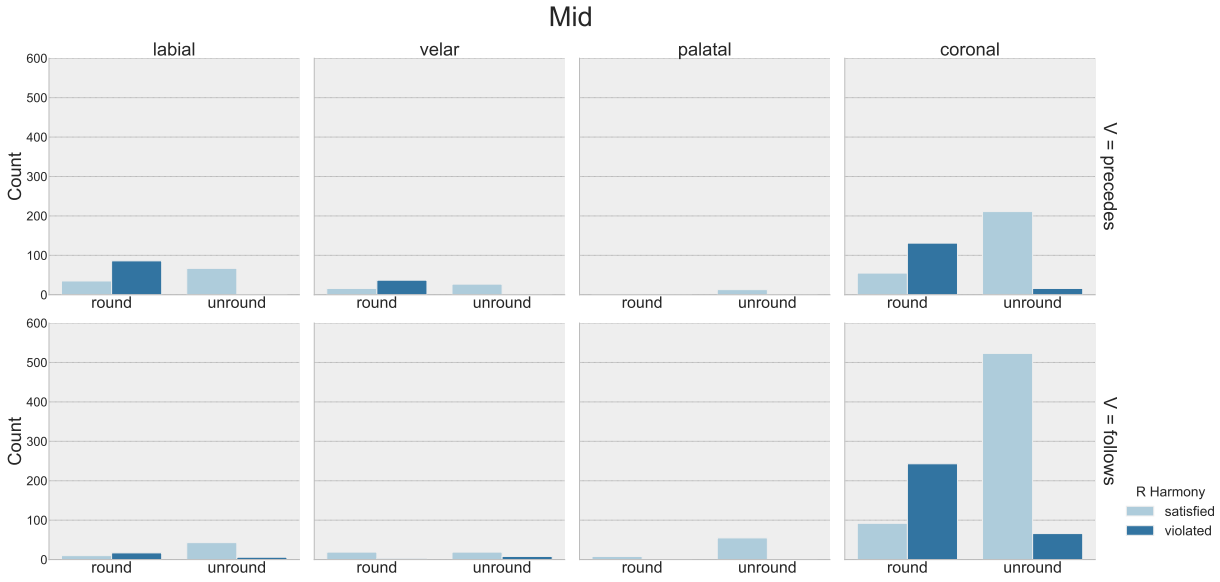


Figure 6.3: Mid aged speakers: Rounding harmony and back feature in LT-unique suffix vowels preceding or following consonants

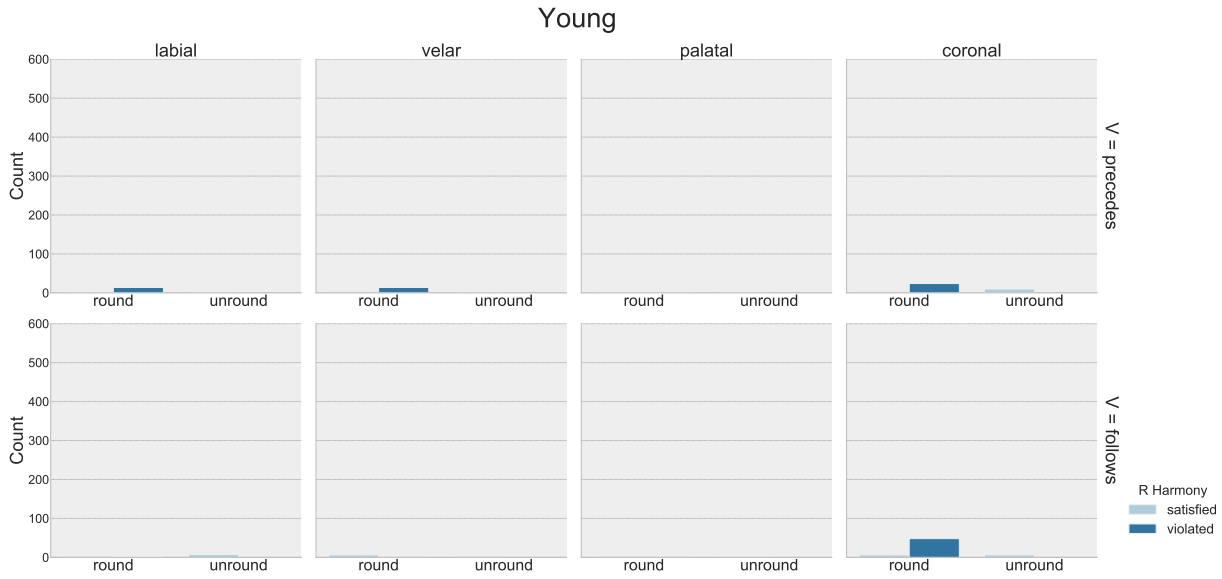


Figure 6.4: Young speaker: Rounding harmony and back feature in LT-unique suffix vowels preceding or following consonants

Backness Harmony

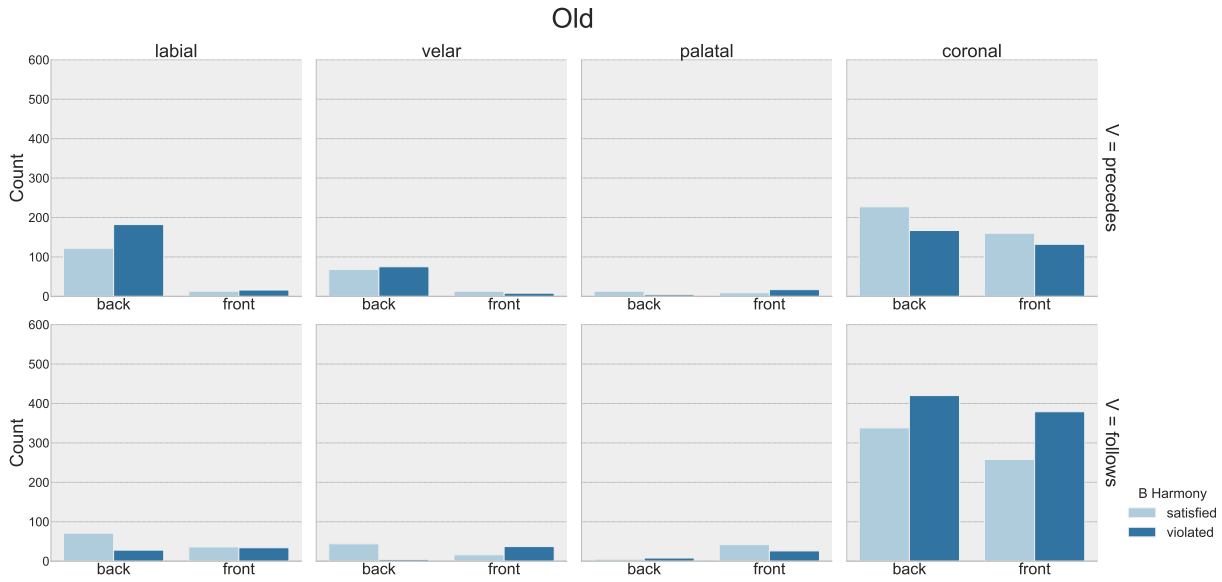


Figure 6.5: Old aged speakers: Backness harmony and back feature in LT-unique suffix vowels preceding or following consonants

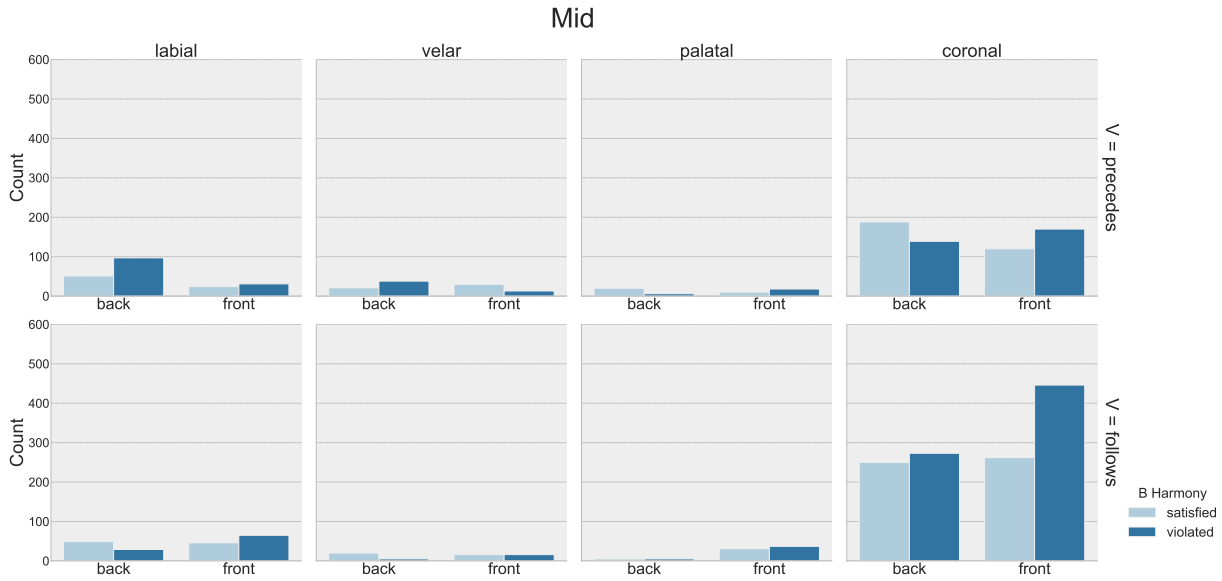


Figure 6.6: Mid aged speakers: Backness harmony and back feature in LT-unique suffix vowels preceding or following consonants

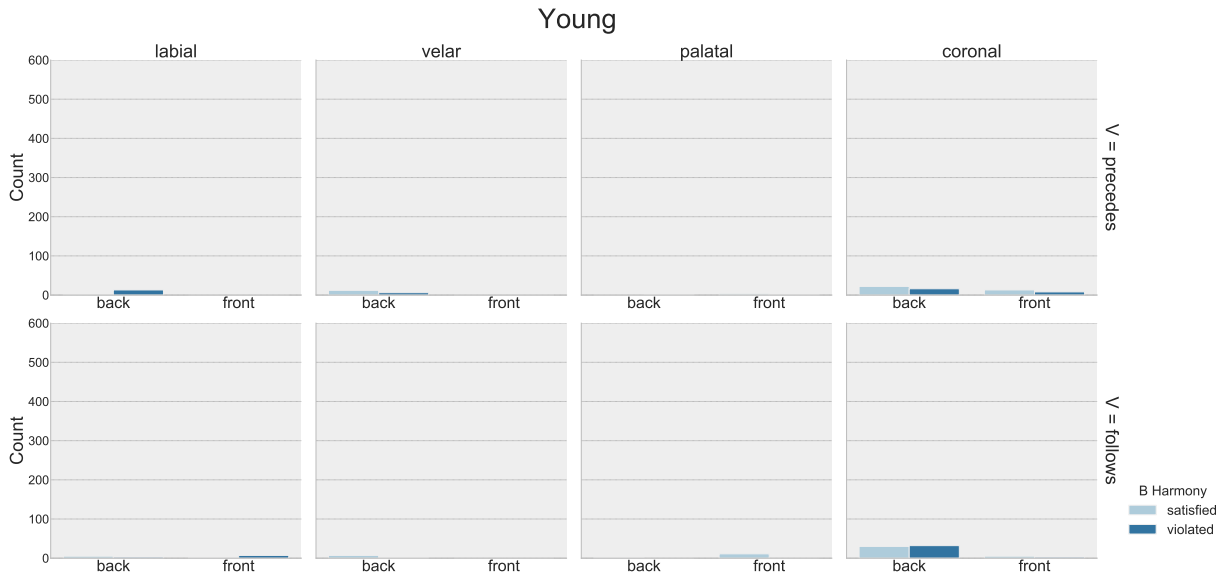


Figure 6.7: Young speaker: Backness harmony and back feature in LT-unique suffix vowels preceding or following consonants

6.9 Frequency of Turkish affixes

Table 6.5: The most frequent twenty affixes in Turkish based on a corpus of 140,000 spoken words (Pierce, 1961)

Suffix		Frequency
PROG	-(I)jor	14,694
PST	-DI	8,803
DAT	-(j)A	8,462
ACC	-(j)I	8,000
PL	-lAr	6,815
COMPM	-(s)I	4,830
1SG	-(j)Im	4,342
EVCOP	-mIʃ	3,789
GEN.3	-(n)In	3,545
LOC	-DA	3,406
ABL	-DAn	3,294
AOR	-Ir/-Ar	2,821
INT	mI	2,781
NEG	-mA	2,500
CONN	DA	2,529
POSS.1SG	-(I)m	2,344
COND	-sA	1,935
IMP.2	-(j)In	1,517
FUT	-(j)AʤAk	1,517
2SG	-sIn	1,341

6.10 Particular suffixes: Age distribution

Table 6.6: Summary of suffixes with fixed vowels in LT-unique tokens, categorized by age

Suffix		Total	Fixed V	Occurrence of fixed V			
				Young	Mid	Old	Total
ACC	-(j)I	337	i	-	152	157	309
POSS.3SG	-(s)I(n)	276	i	3	93	144	240
COMPM	-(s)I(n)	85	i	-	24	50	74
NMLZ	-lI	64	i	-	34	25	59
POSS.1SG	-Im	184	u	-	41	102	143
COP	-DIr	138	u	12	39	67	118
GEN.3	-(n)In	101	u	8	25	39	72
AOR	-Ir	75	u	3	31	29	63
1PL	-(j)Iz/-lIm	74	u	10	13	24	47
NMLZ	-DIK	70	u	7	18	37	62
GEN.1	-Im	63	u	4	10	22	36
NMLZ	-lIK	52	u	1	12	21	34

Table 6.7: Summary of suffixes showing [i, u] variation in LT-unique tokens, categorized by age

Suffix		Total	Vowel	Occurrence of [i] or [u]			
				Young	Mid	Old	Total
PST	-DI	624	i	1	121	106	228
			u	9	109	201	319
1SG	-(j)Im	101	i	-	22	22	44
			u	-	5	39	44

Table 6.8: Summary of suffixes showing [a, e] variation in LT-unique tokens, categorized by age

Suffix		Total	Vowel	Occurrence of [a] or [e]			
				Young	Mid	Old	Total
DAT	-(j)A	169	a	1	16	24	41
			e	-	62	66	128
PL	-lAr	156	a	3	29	39	71
			e	-	38	45	83
LOC	-DA	130	a	-	31	14	45
			e	2	37	45	84
NEG	-mA	91	a	4	34	28	66
			e	2	13	8	23
AOR	-Ar	85	a	-	4	32	36
			e	-	6	43	49
NMLZ	-ʤA	84	a	-	35	18	53
			e	-	17	14	31

6.11 Variation in ACC -(j)I and 1PL -(j)Iz

Table 6.9: Distribution of [i, u] in the allomorphs of the 1PL -jIz vs. -Iz in LT-unique tokens

Harmony	-jIz		-Iz		Total
	i	u	i	u	
B satisfied, R satisfied	1	-	1	2	4
B satisfied, R violated	-	-	-	6	6
B violated, R satisfied	1	-	2	-	3
B violated, R violated	-	-	-	39	39
B and/or R is *NA*	-	-	-	-	-
Total	2	-	3	47	**52**

Table 6.10: Distribution of [i, u] in the allomorphs of the ACC -jI vs. -I in LT-unique tokens

Harmony	-jI		-I		Total
	i	u	i	u	
B satisfied, R satisfied	15	-	86	19	120
B satisfied, R violated	-	-	3	-	3
B violated, R satisfied	25	-	86	-	111
B violated, R violated	1	-	93	1	95
B and/or R is *NA*	-	-	-	-	-
Total	41	-	268	20	**329**

6.12 Modeling the data

This section is a follow-up of Chapter 4, Section 4.3.4. In the current section, syllable type and vowel harmony factors are compared statistically to examine which explains the distribution of LT [i, u] better. The following question is addressed: For all LT-unique vowels [i, u] (matching or mismatching the ST cognate), to what extent do backness harmony, rounding harmony, and syllable type explain the variation in the LT vowel?

To answer this question, logistic regression is used to evaluate the relationship between dependent (i.e., LT vowel) and independent categorical variables (i.e., backness harmony, rounding harmony, syllable type). Logistic regression models were tested on high LT-unique suffix vowels. Pseudo R-squared value is taken as a measure for model comparison, where higher values indicate better models. Statistical tests were run in two ways; first to explain the variation when the dependent variable is LT [i], second when the dependent variable is LT [u]. The results are the same in each case and reported in Table 6.11.

As illustrated in Table 6.11, the best performing model is the one containing backness and rounding harmonies as well as syllable type information (Pseudo R^2=0.53). The models with only one independent variable (only backness harmony or rounding harmony or syllable type) all perform worse than more complicated models. However, there are two best single variables explaining the data: Rounding harmony (Pseudo R^2=0.27) and syllable type (Pseudo R^2=0.27). Backness harmony on its own cannot explain the variation in high vowels in LT-unique tokens(Pseudo R^2=0.02). This finding matches the results reported earlier in Table 4.30.

Table 6.11: Model comparison for LT-unique vowels [i,u], when dependent variable is LT [i]: Pseudo R-squared values

Model	Pseudo R^2	LLR p-value
B harmony + R harmony + Syllable type	0.53	<0.001
R harmony + Syllable type	0.43	<0.001
B harmony + R harmony	0.38	<0.001
B harmony + Syllable type	0.28	<0.001
R harmony	0.27	<0.001
Syllable type	0.27	<0.001
B harmony	0.02	<0.001

To summarize, backness harmony on its own cannot explain the variation in [i, u] vowels in suffixes of LT-unique tokens. However, rounding harmony and syllable type on their own perform equally good in explaining the variation in the data.

6.13 Vowel correspondence: LT [i, u] examples

(74) a. surmene-l**i** *harmonic* (syrmene-l**i** in ST)
Sürmene-NMLZ
'from Sürmene'
[082119-S7-M]

b. turʃu-m-**i** *B and R violation* (turʃu-m-**u** in ST)
pickle-POSS.1SG-ACC
'my pickle'
[080619-S1-O]

c. (kuzina-nun) ust-**i**n-e *B and R violation* (yst-**y**n-e in ST)
(stove-GEN.3) top-POSS.3SG-DAT
'to stove top'
[081919-S10-O]

d. jaʃ-l**i**-lar *B violation* (jaʃ-l**ɯ**-lar in ST)
age-NMLZ-PL
'elderly (people)'
[082119-S3-M]

(75) a. kardeʃ-**u**-nun *B and R violation* (kardeʃ-**i**-nin in ST)
sibling-POSS.3SG-GEN.3
'(his/her) sibling's'
[081919-S10-O]

b. otur-**u**r-ler *harmonic* (otur-**u**r-lar in ST)
sit-AOR-3PL
'they sit'
[080619-S1-O]

c. don-**u**p *harmonic* (dœn-**y**p in ST)
turn-CONJ
'after turning'
[082119-S4-O]

d. evlad-**u**m *R violation* (evlad-**ɯ**m in ST)
child-POSS.1SG
'my child'
[082119-S4-O]

6.14 Vowel correspondence: Young speaker

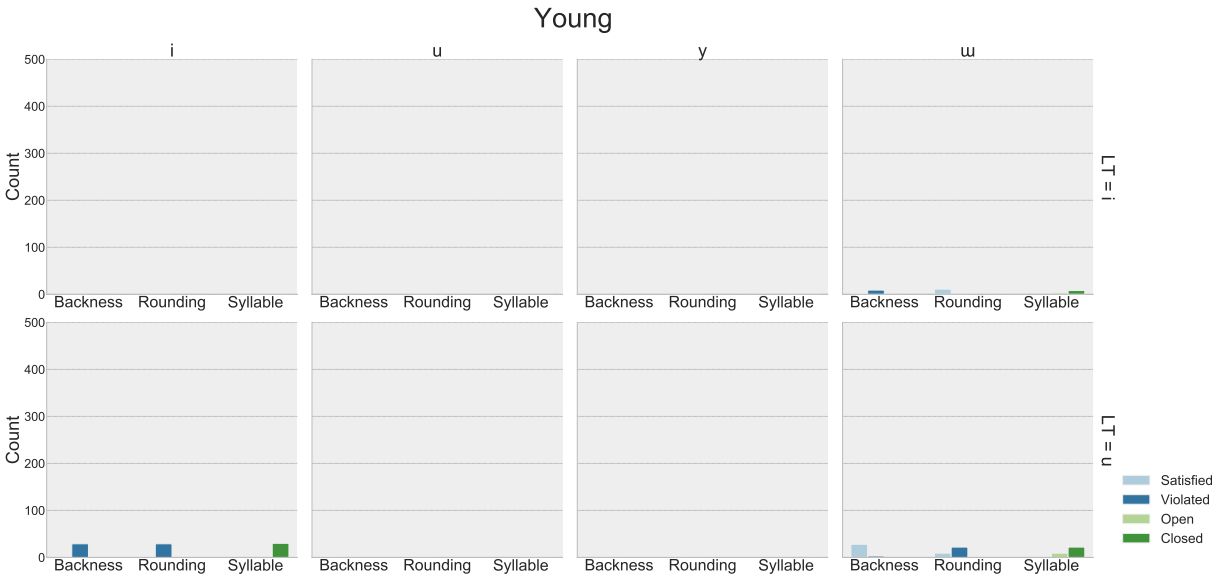


Figure 6.8: Young speaker: LT [i] and LT [u] correspondence with ST cognates

Bibliography

Akay, Sedat. 2021. *Geçmişten Günümüze Siirt Arapçası*, vol. 74. DBY Yayınları.

Akkuş, Faruk. 2020. Anatolian Arabic. *Arabic and contact-induced change* 1. 135.

Akkuş, Mehmet & Batuhan Akkuş. 2020. A multilingual "contact" hub in which Altai faces Caucasia in the north eastern Turkey: Laz encounters Turkish in Artvin. *Artvin Araştırmaları* 2.

Allardt, Erik. 1984. What constitutes a language minority? *Journal of Multilingual & Multicultural Development* 5(3-4). 195–205.

Altan, Aslı. 2012. Türkçe Öğrenen Yabancıların Ünlü Uyumu Konusunda yaptıkları hatalar ve genellemeler. *Türkçe Öğretimi Üzerine Çalışmalar. (3. Uluslararası Türkçenin Eğitimi ve Öğretimi Kurultayı, 9 Eylül Üniversitesi). Doğan Günay, Özden Fidan, Betül Çetin, Funda Yıldız.* (haz.). 35–47.

Andersson, Samuel, Oliver Sayeed & Bert Vaux. 2017. The phonology of language contact.

Andersson, Samuel, Bert Vaux & Zihni Pysipa. 2021. Cwyzhy Abkhaz. *Journal of the International Phonetic Association* 1–21.

Andrews, Peter Alford & Rüdiger Benninghaus. 1989. *Ethnic groups in the Republic of Turkey*, vol. 1. Reichert Wiesbaden.

Applebaum, Ayla Ayda Bozkurt. 2013. *Prosody and grammar in Kabardian*. University of California, Santa Barbara.

Arik, Engin. 2015. An experimental study of Turkish vowel harmony. *Poznan Studies in Contemporary Linguistics* 51(3). 359–374.

Arkadiev, Peter & Yury Lander. 2020. The Northwest Caucasian languages. *The Oxford handbook of the languages of the Caucasus* 369–446.

Aslan, Senem. 2007. "Citizen, speak Turkish!": a nation in the making. *Nationalism and Ethnic Politics* 13(2). 245–272.

Avcı, Ismail. 2002. *Lazlarda sosyo-kültüerel değişim (Socio-cultural change in Laz)*. Istanbul: Istanbul University MA thesis.

Avcı Bucaklişi, Ismail. 2017a. Laz Dergiciliği. *Jineps* https://jinepsgazetesi.com/2017/11/laz-dergiciligi/.

Avcı Bucaklişi, Ismail. 2017b. Lazlar kimdir bilir misiniz? *Jineps* https://jinepsgazetesi.com/2017/01/laz-kimdir-bilir-misiniz/.

Avdan, Nazlı. 2011. *Cultural identity as a discursive product: Multiple voices towards discursive construction of lazi identity*: Linköping University. MA thesis.

Aziza, Rose O. 2008. Neutralization of contrast in the vowel system of Urhobo .

Bakay, Özge. 2020. Yaşayan Diller ve Lehçeler - Seçmeli Lazca Dersi Raporu 2013-2020 .

Baker, Colin. 1992. *Attitudes and language*, vol. 83. Multilingual Matters.

Bali, Rıfat. 2000. Vatandaş Türkçe Konuş! .

Bayir, Derya. 2016. *Minorities and nationalism in Turkish law*. Routledge.

Bayramin, Nazan. 2014. *Artvin ili Arhavi ilçesi Derecik köyü ağzı (inceleme, metinler ve sözvarlığı)*: Eastern Mediterranean University (EMU)-Doğu Akdeniz Üniversitesi (DAÜ) MA thesis.

Benus, Stefan. 2010. *Dynamics and transparency in vowel harmony*. Universal-Publishers.

Berdak, Yusuf. 2010. Ali Şir Nevayi ve Şimdiki Özbek Dilinin Ünlüleri Üzerine. *Türk Dili ve Edebiyatı Bölümü* 67.

Binnick, Robert I. 1991. Vowel harmony loss in Uralic and Altaic. *Studies in the historical phonology of Asian languages* 35–52.

Blevins, Juliette. 2004. *Evolutionary phonology: The emergence of sound patterns*. Cambridge University Press.

Boeder, Winfried. 2005. The South Caucasian languages. *Lingua* 115(1-2). 5–89.

Botma, Bert & Marc Van Oostendorp. 2012. A propos of the Dutch vowel system 21 years on, 22 years on. *Phonological explorations: Empirical, theoretical and diachronic issues* 135–154.

Bradley, David. 2013. Language attitudes: The key factor in language maintenance. *Language endangerment and language maintenance: An active approach* 1–10.

Brendemoen, Bernt. 1989. Laz Influence on Black Sea Turkish Dialects? In *Altaica Osloensia. Proceedings from the 32nd Meeting of the Permanent International Altaistic Cionference, Oslo*, 49–64.

Brendemoen, Bernt. 2002. The Turkish Dialects of Trabzon. *Their Phonology and Historical Development I-II* .

Burgos, Pepi, Catia Cucchiarini, Roeland van Hout & Helmer Strik. 2014. Phonology acquisition in Spanish learners of Dutch: Error patterns in pronunciation. *Language Sciences* 41. 129–142.

Butler, Joseph, Caroline Floccia, Jeremy Goslin & Robin Panneton. 2011. Infants' discrimination of familiar and unfamiliar accents in speech. *Infancy* 16(4). 392–417.

Çağaptay, Soner. 2002. Otuzlarda Türk Milliyetçiliğinde Irk, Dil ve Etnisite. *Milliyetçilik* 245–262.

Can, Busra. 2021. *Standard Accented Turkish Speakers' Perception of Kurdish Accented Speakers: The Factors Behind the Evaluations*. Southern Illinois University at Carbondale.

Casali, Roderic F. 1995. Labial opacity and roundness harmony in Nawuri. *Natural Language & Linguistic Theory* 13(4). 649–663.

Çetintaş Yıldırım, Filiz. 2020. Language choice and identity: An investigation based on the comparison of language attitudes from two different localities. *Journal of Language and Linguistic Studies* 16(2). 1032–1042.

Chirikba, Viacheslav A. 2003. *Abkhaz*. Lincom Europa.

Clements, George N & Elizabeth Hume. 1995. The internal structure of speech sounds. *Handbook of phonological theory. Oxford: Blackwell* 245–306.

Clements, George N & Engin Sezer. 1982. Vowel and consonant disharmony in Turkish. *The structure of phonological representations* 2. 213–255.

Çolak, Yilmaz. 2004. Language policy and official ideology in early republican Turkey. *Middle Eastern Studies* 40(6). 67–91.

Comrie, Bernard. 2005. Endangered numeral systems. In *Bedrohte vielfalt: Aspekte des sprach (en) tods*, 203–230. Weißensee-Verl.

Comrie, Bernard. 2008. Linguistic diversity in the Caucasus. *Annual Review of Anthropology* 37. 131–143.

Comrie, Bernard, BG Hewitt, John R Payne et al. 1981. *The languages of the Soviet Union* 2. CUP Archive.

Corbin, Lindsey. 2006. The phonetics and phonology of s-lenition and vowel laxing in eastern Andalusian Spanish. *Williams College, Williamstown, MA, BA honors thesis* .

Cremona, Cristiana & Elizabeth Bates. 1977. The development of attitudes toward dialect in Italian children. *Journal of Psycholinguistic Research* 6(3). 223–232.

Darcy, Isabelle, Laurent Dekydtspotter, Rex A Sprouse, Justin Glover, Christiane Kaden, Michael McGuire & John HG Scott. 2012. Direct mapping of acoustics to phonology: On the lexical encoding of front rounded vowels in L1 English–L2 French acquisition. *Second Language Research* 28(1). 5–40.

Day, Richard R. 1980. The development of linquistic attitudes and preferences. *TESOL quarterly* 27–37.

Demir, Nurettin. 2010. Türkçede varyasyon üzerine. *Türkoloji Dergisi* 17(2). 93–106.

Demirok, Omer. 2014. The status of roots in event composition: Laz. *Lingue e linguaggio* 13(1). 83–102.

Dikmen, Furkan & Stefano Canalis. 2020. Palatalized Turkish consonants and vowel harmony, Fifth workshop on Turkic and languages in contact with Turkic (TU+5).

Dohlus, Katrin. 2005. Phonetics or phonology: asymmetries in loanword adaptations; french and german mid front rounded vowels in japanese. *ZAS Papers in Linguistics* 42. 117–135.

Dombrowski, Andrew. 2010. Vowel Harmony Loss in West Rumelian Turkish. In *LSA Annual Meeting Extended Abstracts*, vol. 1, 51–1.

Dombrowski, Andrew. 2013. *Phonological aspects of language contact along the Slavic periphery: An ecological approach*. The University of Chicago.

Dorian, Nancy. 2014. Small-language fates and prospects: Lessons of persistence and change from endangered languages: Collected essays. In *Small-language fates and prospects*, Brill.

Dragojevic, Marko, Fabio Fasoli, Jennifer Cramer & Tamara Rakić. 2021. Toward a century of language attitudes research: Looking back and moving forward. *Journal of Language and Social Psychology* 40(1). 60–79.

Duman, İlker Hasan. 2005. Azınlık hakları ve Lozan Antlaşması. *Türkiye Büyük Millet Meclisi Dergisi* 57. 307–321.

Dündar, Fuat. 1999. *Türkiye nüfus sayımlarında azınlıklar*. Doz Yayınları.

Eberhard, David M., Gary F. Simons & Charles D. Fennig. 2020. Ethnologue: Languages of the World, Dallas, Texas: SIL International. Twenty-third edition. Online version: `https://www.ethnologue.com`.

Edwards, John. 1999. Refining our understanding of language attitudes. *Journal of language and social psychology* 18(1). 101–110.

Eilers, Rebecca E, Barbara Zurer Pearson & Alan B Cobo-Lewis. 2006. Social factors in bilingual development: The miami experience. *Childhood bilingualism: Research on infancy through school age* 68–90.

Erdal, Marcel. 1998. Old turkic. *The Turkic Languages* 138.

Erdal, Marcel. 2004. *A grammar of Old Turkic*, vol. 3. Brill.

Erdem, Mehmet D. 2006. Ağızlardan Etkilenme Derecelerine Göre Osmanlı ve Eski Anadolu Türkçesi Metinleri ve Bu Metinterin Diline Kaynaklık Eden Ağızlar. *İlmî Araştırmalar* (22). 83–110.

Ergin, Ayşe Dicle. 2010. Azınlık dillerinin kullanımı konusunda Türkiye nerede duruyor? *Ankara Üniversitesi Hukuk Fakültesi Dergisi* 59(1). 1–34.

Essegbey, James & Adam G McCollum. 2017. Initial prominence and Tutrugbu labial harmony. *Ms, University of Florida and University of California-San Diego* .

Féry, Caroline. 2003. Markedness, faithfulness, vowel quality and syllable structure in French. *Journal of French Language Studies* 13(2). 247–280.

Feurstein, Wolfgang. 1983. *Untersuchungen zur materiellen Kultur der Lazen*. Verlag nicht ermittelbar.

Finley, Sara. 2006. Vowel harmony in Korean and morpheme correspondence. *Harvard Studies in Korean Linguistics* 11. 131–144.

Fishman, Joshua A. 1980. Bilingualism and biculturism as individual and as societal phenomena. *Journal of Multilingual & Multicultural Development* 1(1). 3–15.

Fishman, Joshua A. 1991. *Reversing language shift: Theoretical and empirical foundations of assistance to threatened languages*, vol. 76. Multilingual matters.

Flege, James Emil. 1991. The interlingual identification of Spanish and English vowels: Orthographic evidence. *The Quarterly Journal of Experimental Psychology* 43(3). 701–731.

Gal, Susan & Judith T Irvine. 2019. *Signs of difference: Language and ideology in social life*. Cambridge University Press.

Garrett, Peter. 2010. *Attitudes to language*. Cambridge University Press.

Garrett, Peter, Nikolas Coupland & Angie Williams. 2003. *Investigating language attitudes: Social meanings of dialect, ethnicity and performance*. University of Wales Press.

Geiger, Bernhard, Tibor Halasi-Khun, Aert H. Kuipers & Karl H. Menges. 1959. *Peoples and Languages of the Caucasus: A Synopsis* Janua Linguarum. The Hague, Netherlands: ‘S-Gravenhage: Mouton and Co.

Giles, H., R.Y. Bourhis & M. Y. Taylor. 1977. *Towards a theory of language in ethnic group relations* 307–348. Academic Press.

Gluszek, Agata & John F Dovidio. 2010. The way they speak: A social psychological perspective on the stigma of nonnative accents in communication. *Personality and social psychology review* 14(2). 214–237.

Gök, Fatma. 2007. The history and development of Turkish education. *Education in "multicultural" societies—Turkish and Swedish perspectives* 247–255.

Gökçe, Aziz. 2009. Eski Anadolu Türkçesinden Osmanlı Türkçesine dudak uyumu ve ünsüz uyumu. *Electronic Turkish Studies* 4(3).

Göksel, Aslı & Celia Kerslake. 2005. *Turkish: A comprehensive grammar*. Routledge.

Gordon, Matthew & Ayla Applebaum. 2006. Phonetic structures of Turkish Kabardian. *Journal of the International Phonetic Association* 36(2). 159–186.

Gravina, Richard. 2014. The phonology of Proto-Central Chadic. *LOT dissertation series* .

Günay, Turgut. 1978. *Rize ili ağızları: inceleme-metinler-sözlük*, vol. 4. Ankara Üniversitesi Basımevi.

Hadodo, Matthew John. 2023. Hellenes and Romans: Oppositional characterological figures and the enregisterment of Istanbul Greek. *Journal of Sociolinguistics* .

Haig, Geoffrey & Ergin Öpengin. 2018. Kurmanji Kurdish in Turkey: Structure, varieties, and status. *Linguistic minorities in Turkey and Turkic-speaking minorities of the periphery* 157–229.

Hammine, Madoka. 2021. Educated not to speak our language: Language attitudes and newspeakerness in the Yaeyaman language. *Journal of Language, Identity & Education* 20(6). 379–393.

Hann, Chris. 1997. Ethnicity, Language and Politics in North-east Turkey. In *The politics of ethnic consciousness*, 121–156. Springer.

Hantgan, Abie & Stuart Davis. 2012. Bondu-so vowel harmony: A descriptive analysis with theoretical implications .

Harris, Tracy K. 2011. The state of Ladino today. *European Judaism* 44(1). 51–61.

Harrison, K David, Mark Dras & Berk Kapicioglu. 2002. Agent-based modeling of the evolution of vowel harmony. In *Proceedings-NELS*, vol. 1 32, 217–236.

Harrison, K David & Abigail R Kaun. 2003. Vowels and Vowel Harmony in Namangan Tatar. *Amsterdam Studies in the Theory and History of Linguistic Science Series 4* 193–206.

Hayes, Bruce. n.d. Turkish simulation. `https://linguistics.ucla.edu/people/hayes/Acquisition/TurkishReadMe.pdf`.

Haznedar, Belma. 2018. Türkiye'de Lazcanın mecvut durumu. *Laz Enstitüsü* .

Hewitt, George. 1999. Abkhazia, Georgia and the Circassians (NW Caucasus). *Central Asian Survey* 18(4). 463–499.

Hoole, Philip, Christine Mooshammer & Hans G Tillmann. 1994. Kinematic analysis of vowel production in German. In *Third international conference on spoken language processing*, .

Hualde, José Ignacio & Mahir Şaul. 2011. Istanbul Judeo-Spanish. *Journal of the International Phonetic Association* 41(1). 89–110.

Van der Hulst, Harry. 2016. Vowel harmony. In *Oxford Research Encyclopedia of Linguistics*, .

Van der Hulst, Harry & Jeroen Van De Weijer. 1991. Topics in Turkish phonology. *Turkish linguistics today* 11–59.

Hume, Elizabeth V. 1992. *Front Vowels, Coronal Consonants and their Interaction in Non-Linear Phonology*: Cornell University dissertation.

Inkelas, Sharon, Gunnar Ó Hansson, Aylin Küntay & C Orhan Orgun. 2001. Labial attraction in Turkish: An empirical perspective. *Turkic Languages* 5. 169–197.

Irvine, Judith T. 1989. When talk isn't cheap: Language and political economy. *American Ethnologist* 16(2). 248–267.

Janse, Mark. 2002. Aspects of Pontic grammar. *Journal of Greek linguistics* 3(1). 203–231.

Janse, Mark. 2009. Greek-Turkish language contact in Asia Minor. *Études Helléniques/Hellenic Studies* 17(1). 37–54.

Jastrow, Otto. 2006. Arabic dialects in Turkey: Towards a comparative typology. *Türk Dilleri Araştırmaları 16* 153–164.

Jiménez, Jesús & Maria-Rosa Lloret. 2019. Vowel harmony. In *The routledge handbook of spanish phonology*, 100–128. Routledge.

Johanson, Lars. 1978. The indifference stage of Turkish suffix vocalism. *Türk Dili Araştırmaları Yıllığı-Belleten* 26(1978-1979). 151–156.

Johanson, Lars. 1998. The history of Turkic. *The Turkic Languages* 81–125.

Johanson, Lars. 2006. Turkic language contacts in a typology of code interaction. *Turkic languages in contact* 4–26.

Johanson, Lars & Éva Á Csató. 1998. Turkish. *The Turkic Languages.* 203–235.

de Jonge, Keryn, Olga Maxwell & Helen Zhao. 2022. Learning on the Field: L2 Turkish Vowel Production by L1 American English-Speaking NGOs in Turkey. *Languages* 7(4). 252.

Joshua Project. 2005. Joshua Project: Bringing Definition to the Unfinished Task. `https://joshuaproject.net/people_groups/13727/GM`.

Kabak, Bariş. 2011. Turkish vowel harmony. *The Blackwell companion to phonology* 1–24.

Karaağaç, Günay. 2012. *Türkçenin dil bilgisi*. Ankara.

Karacan, Hasan. 2020. Kurmanji and Zazaki Dialects: Comparative Study on their Phonetics. *International Journal of Kurdish Studies* 6(1). 35–51.

Karanja, Peter N. 2012. Kiswahili dialects endangered: The case of Kiamu and Kimvita. *International Journal of Humanities and Social Science* 2(17). 95–117.

Karimova, Nigar & Edward Deverell. 2001. *Minorities in Turkey*. Utrikespolitiska Institutet.

Kaun, Abigail. 2004. The typology of rounding harmony. *Phonetically based phonology* 87416.

Kavakli, Nurdan. 2015. Novus ortus: The awakening of Laz language in Turkey. *Idil Journal of Art and Language* 4(16). 133–146.

Kavaklı, Nurdan. 2017. Language choice, use and transmission: Laz at the crossroads. *Tehlikedeki Diller Dergisi* 7(11). 51–66.

Kavitskaya, Darya. 2012. Opacity in Crimean Tatar: The Interaction of Vowel Harmony and Syncope. In *Annual meeting of the berkeley linguistics society*, vol. 38, 223–237.

Kavitskaya, Darya. 2013. Segmental inventory and the evolution of harmony in Crimean Tatar. *Turkic languages* 17. 86–114.

Kaya, Nurcan. 2009. *Forgotten or assimilated?: Minorities in the education system of Turkey*. Minority rights group international London.

Kerslake, Celia. 1998. Ottoman Turkish. In *The Turkic Languages*, 174–194. Routledge.

Kidda, Mairo E. 1993. *Tangale phonology: a descriptive analysis*. Reimer.

Kılıç, Murat. 2007. Erken Cumhuriyet Dönemi Türk Milliyetçiliğinin Tipolojisi. *Süleyman Demirel Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi* 2007(16). 113–140.

Kim, Kong-On. 1977. Sound symbolism in Korean. *Journal of Linguistics* 13(1). 67–75.

Kimper, Wendell. 2017. Not crazy after all these years? perceptual grounding for long-distance vowel harmony. *Laboratory Phonology: Journal of the Association for Laboratory Phonology* 8(1).

Kinzler, Katherine D, Emmanuel Dupoux & Elizabeth S Spelke. 2007. The native language of social cognition. *Proceedings of the National Academy of Sciences* 104(30). 12577–12580.

Kircher, Ruth, Lena Zipp, R Kircher & L Zipp. 2022. An introduction to language attitudes research. *Research Methods in Language Attitudes* 1.

Kirkgöz, Yasemin & Ali Karakaş. 2022. *English as the Medium of Instruction in Turkish Higher Education: Policy, Practice and Progress*, vol. 40. Springer Nature.

Kleinewillinghöfer, Ulrich. 1996. Relationship between Adamawa and Gur languages: The case of Waja and Tula. *Cahier Voltaïques/Gur Papers I* 25–35.

Komondouros, Markos & Lisa McEntee-Atalianis. 2007. Language attitudes, shift and the ethnolinguistic vitality of the greek orthodox community in istanbul. *Journal of Multilingual and Multicultural Development* 28(5). 365–384.

Kornfilt, Jaklin. 2013. *Turkish*. Routledge.

Kubilay, Çağla. 2004. Türkiye'de Anadillere Yönelik Düzenlemeler ve Kamusal Alan: Anadil ve Resmi Dil Eşitlemesinin Kırılması .

Kulaksızoğlu, Adnan, Murat Çakar & Bülent Dilmaç. 1999. Türkiye'de ve dünyada özel okullarin yapisi ve işleyişi. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi* 11(11). 219–232.

Kuncha, Rekha M & Hanoku Bathula. 2004. *The role of attitudes in language shift and language maintenance in a new immigrant community: A case study*. AIS St Helens, Centre for Research in International Education.

Kurdadze, Ramaz. 2015. Kartvelian vocabulary as an intangible cultural heritage and Georgian-Megrelian-Laz-Svan-English dictionary. *International Journal of Multilingual Education* 6. 46–54.

Kutscher, Silvia. 2008. The language of the Laz in Turkey: Contact-induced change or gradual language loss? .

Lacroix, René. 2009. *Description du dialecte laze d'Arhavi (caucasique du sud, Turquie): Grammaire et textes*: Université de Lyon 2 dissertation.

Lacroix, René. 2019. *Laz*, vol. 6 830–860. The world of linguistics De Gruyter Mouton.

LaCross, Amy. 2015. Khalkha Mongolian speakers' vowel bias: L1 influences on the acquisition of non-adjacent vocalic dependencies. *Language, Cognition and Neuroscience* 30(9). 1033–1047.

Ladefoged, Peter & Keith Johnson. 2014. *A course in phonetics*. Cengage learning.

Lahdo, Ablahad. 2009. *The Arabic Dialect of Tillo in the Region of Siirt:(south-eastern Turkey)*. Acta Universitatis Upsaliensis.

Lee, Sang-Oak. 1984. An overview of issues in the vowel system and vowel harmony of Korean: disharmony among the hypotheses of vowel harmony .

Lees, Robert B. 1966. On the interpretation of a Turkish vowel alternation. *Anthropological Linguistics* 32–39.

Leger, Rudolf. 2011. On vowel systems in the Southern Bole-Tangale languages. *Globalisation and African Languages: Risks and Benefits* 156. 253.

Lewis, Geoffrey L. 1970. Turkish grammar .

Lippi-Green, Rosina. 2012. *English with an accent: Language, ideology, and discrimination in the united states*. Routledge.

Mackridge, Peter. 1987. Greek-speaking Moslems of north-east Turkey: prolegomena to a study of the Ophitic sub-dialect of Pontic. *Byzantine and Modern Greek Studies* 11. 115–137.

Maddieson, Ian. 1985. Phonetic cues to syllabification. *Phonetic linguistics: Essays in honor of Peter Ladefoged* 203. 221.

Mahanta, Shakuntala. 2008. Local vs. non-local consonantal intervention in vowel harmony. In *Proceedings of console xiv*, vol. 165, 188.

Mailhammer, Robert, William W Kruger & Alexander Makiyama. 2015. Type frequency influences phonological generalizations: Eliminating stressed open syllables with short vowels in West Germanic. *Journal of Germanic Linguistics* 27(3). 205–237.

McCollum, Adam. 2019. *Gradience and locality in phonology: Case studies from Turkic vowel harmony*: UC San Diego dissertation.

McCollum, Adam G. 2015. Labial harmonic shift in Kazakh: mapping the pathways and motivations for decay. In *Proceedings of the annual meeting of the berkeley linguistics society*, vol. 41 41, .

McCollum, Adam G & James Essegbey. 2018. Unbounded harmony is not always myopic: Evidence from Tutrugbu. In *35th West Coast Conference on Formal Linguistics*, 251–258. Cascadilla Proceedings Project.

McPherson, Laura & Bruce Hayes. 2016. Relating application frequency to morphological structure: the case of Tommo So vowel harmony. *Phonology* 33(1). 125–167.

Meeker, Michael E. 1971. The Black Sea Turks: some aspects of their ethnic and cultural background. *International Journal of Middle East Studies* 2(4). 318–345.

Meyers, Barton. 1984. Minority group: An ideological formulation. *Social Problems* 32(1). 1–15.

Milroy, James & Lesley Milroy. 2012. *Authority in language: Investigating Standard English*. Routledge.

Milroy, Lesley. 2004. Language ideologies and linguistic change. *Sociolinguistic variation: Critical reflections* 161–177.

Moseley, Christopher (ed.). 2010. *Atlas of the World's Languages in Danger, 3rd edn.* Paris, UNESCO Publising online version: `http://www.unesco.org/culture/en/endangeredlanguages/atlas` edn.

Nazzi, Thierry, Peter W Jusczyk & Elizabeth K Johnson. 2000. Language discrimination by English-learning 5-month-olds: Effects of rhythm and familiarity. *Journal of Memory and Language* 43(1). 1–19.

Németh, Michał. 2014. A historical phonology of Western Karaim. The evolution of consonant harmony in the north-western dialect. *Studia Linguistica Universitatis Iagellonicae Cracoviensis* 131(4). 353–369.

Nevins, Andrew & Bert Vaux. 2004. Consonant harmony in karaim. *MIT Working Papers in Linguistics* 46. 175–194.

Ohala, John J. 1994a. Hierarchies of environments for sound variation; plus implications for 'neutral'vowels in vowel harmony. *Acta Linguistica Hafniensia* 27(1). 371–382.

Ohala, John J. 1994b. Towards a universal, phonetically-based, theory of vowel harmony. In *Third International Conference on Spoken Language Processing*, .

Öhman, Sven EG. 1966. Coarticulation in VCV utterances: Spectrographic measurements. *The Journal of the Acoustical Society of America* 39(1). 151–168.

Oran, Baskın. 2007. *The minority concept and rights in Turkey: The Lausanne Peace Treaty and current issues* chap. 3, 35–56. University of Pennsylvania Press Philadelphia.

Özcan, Şimal. 2019. *Adige dilinde (batı lehçesi) fiiller ve yapıları*: Sosyal Bilimler Enstitüsü MA thesis.

Özçelik, Öner & Rex A Sprouse. 2017. Emergent knowledge of a universal phonological principle in the L2 acquisition of vowel harmony in Turkish: A 'four'-fold poverty of the stimulus in L2 acquisition. *Second Language Research* 33(2). 179–206.

Özdarendeli, Nursel. 2005. Türk dilinde geçmiş zaman. *Trakya Üniversitesi Sosyal Bilimler Dergisi* 7(2). 73–108.

Özkan, Hakan. 2013. The Pontic Greek spoken by Muslims in the villages of Beşköy in the province of present-day Trabzon. *Byzantine and Modern Greek Studies* 37(1). 130–150.

Öztürk, Balkız. 2019. The loss of case system in Ardeshen Laz and its morphosyntactic consequences. *STUF-Language Typology and Universals* 72(2). 193–219.

Öztürk, Balkiz & Markus A Pöchtrager. 2011. *Pazar laz*. Lincom Europa.

Pajak, B & Roger Levy. 2012. Distributional learning of L2 phonological categories by listeners with different language backgrounds. In *Proceedings of the 36th boston university conference on language development*, 400–413. Cascadilla Press Somerville, MA.

Park, Sayhyon. 1990. Vowel harmony in Korean .

Pater, Joe & Anne-Michelle Tessier. 2006. L1 phonotactic knowledge and the L2 acquisition of alternations. *Inquiries in linguistic development: Studies in honor of Lydia White* 115–131.

Paul, Ludwig. 2013. Zazaki. In *The iranian languages*, 621–662. Routledge.

Pearce, Mary. 2003. *Vowel harmony in Kera (Chadic)*: Univ. London dissertation.

Pierce, Joe E. 1961. A frequency count of Turkish affixes. *Anthropological Linguistics* 31–42.

Plešković, Maša, Branka Drljača Margić & Tihana Kraš. 2021. Speakers' attitudes and perceptions in relation to the maintenance of the fiuman dialect. *Suvremena lingvistika* 47(91). 69–92.

Polgárdi, Krisztina. 2008. The representation of lax vowels in Dutch: A Loose CV approach. *Lingua* 118(9). 1375–1392.

Przezdziecki, Marek. 2005. *Vowel harmony and coarticulation in three dialects of Yoruba: phonetics determining phonology*: Cornell University dissertation.

Ritchart, Amanda & Sharon Rose. 2017. Moro vowel harmony: implications for transparency and representations. *Phonology* 34(1). 163–200.

Rolle, Nicholas, Florian Lionnet & Matthew Faytak. 2019. Areal patterns in the vowel systems of the Macro-Sudan Belt .

Rose, Sharon & Rachel Walker. 2011. Harmony systems. *The handbook of phonological theory* 2. 240–290.

Rosenthal, Marilyn S. 1974. The Magic Boxes: Pre-school children's attitudes toward Black and Standard English. *The Florida FL Reporter* Spring/Fall. 55–93.

Sadoğlu, Hüseyin. 2017. Türkiye'nin Yakın Dönem Dil Politikaları. *PESA Uluslararası Sosyal Araştırmalar Dergisi* 3(1). 57–66.

Sallabank, Julia. 2013. Can majority support save an endangered language? a case study of language attitudes in guernsey. *Journal of Multilingual and Multicultural Development* 34(4). 332–347.

Salminen, Tapani. 2007. Europe and North Asia. *Encyclopedia of the world's endangered languages* 211–282.

Sarhon, Karen Gerson. 2011. Ladino in Turkey: The situation today as reflected by the ladino database project. *European Judaism* 44(1). 62–71.

Sarigil, Zeki. 2012. Ethnic groups at 'critical junctures': The Laz vs. Kurds. *Middle Eastern Studies* 48(2). 269–286.

Schluter, Anne Ambler. 2021. Atatürk's long shadow: standard Turkish speakers as younger, more successful, and more attractive than their Kurdish-accented regional counterparts. *Journal of Multilingual and Multicultural Development* 42(9). 840–853.

Schreiber, Laurentia. 2018. Romeyka. *The languages and linguistics of Western Asia: An areal perspective* 892–933.

Seloni, Lisya & Yusuf Sarfati. 2013. (Trans) national language ideologies and family language practices: a life history inquiry of Judeo-Spanish in Turkey. *Language Policy* 12(1). 7–26.

Şen, Meryem. 2006. Bölgesel Ağızlara Karşı Tutumlar. *Türkiye'de Dil Tartışmaları (der. Astrid Menz, Christoph Scroeder), İstanbul: İstanbul Bilgi Üni. Yay* .

Serdar, Ayşe. 2015. Yerel ve ulusal ölçekte Lazlığın etnik sınırlarının yeniden inşası: dil, hafıza, kültür. *Mülkiye Dergisi* 39(1). 93–134.

Simonian, Hovann. 2007. *The Hemshin: history, society and identity in the highlands of Northeast Turkey*. Routledge.

Sitaridou, Ioanna. 2013. Greek-speaking enclaves in Pontus today: The documentation and revitalization of Romeyka. *Keeping languages alive. language endangerment: documentation, pedagogy and revitalization* 98–112.

Sjoberg, Andrée F. 1997. *Uzbek structural grammar*. Curzon.

Smith, Norval. 2007. Contact phonology. In *Phonology in context*, 76–108. Springer.

Sofu, Hatice. 2009. Language shift or maintenance within three generations: Examples from three Turkish–Arabic-speaking families. *International Journal of Multilingualism* 6(3). 246–257.

Storme, Benjamin. 2017. The loi de position and the acoustics of French mid vowels. *Glossa: a journal of general linguistics* 2(1).

Svantesson, Jan-Olof. 1985. Vowel harmony shift in Mongolian. *Lingua* 67(4). 283–327.

Szurek, Emmanuel. 2020. "Yan, Of, Ef, Viç, İç, İs, Dis, Pulos…": the Surname Reform, the "Non-Muslims," and the Politics of Uncertainty in Post-genocidal Turkey. In *Arabic and its alternatives*, 77–110. Brill.

Taşkın, Nilüfer. 2011. *Representing and Performing Laz Identity "This is not a Rebel Song!"*: Boğaziçi University MA thesis.

T.C. Resmi Gazete. 1934a. Sayı 2741, Kanun No 2525, 2 July 1934.

T.C. Resmi Gazete. 1934b. Sayı 2885, Kanun No 2525, 20 December 1934.

Thomason, Sarah Grey & Terrence Kaufman. 1992. *Language contact, creolization, and genetic linguistics*. University of California Press.

Timurtaş, Faruk. 1976. Küçük Eski Anadolu Türkçesi Grameri. *Türkiyat Mecmuası* 18. 331–368.

Toosarvandani, Maziar & Coppe Van Urk. 2014. The syntax of nominal concord: What ezafe in Zazaki shows us. In *Proceedings of NELS*, vol. 43, 221–234.

Topçu, İrem N. & Akar Didar. 2022. Sıkıcı Ama Eğitimli: Standart Türkçe'ye Karşı Tutumlar Üzerine Bir Çalışma. *35. Ulusal Dilbilim Kurultayi, Bildiri Özetleri* 28.

Tse, Lucy. 2001. Resisting and reversing language shift: Heritage-language resilience among us native biliterates. *Harvard educational review* 71(4). 676–709.

Tunçel, Harun. 2000. Türkiye'de ismi değiştirilen köyler. *Fırat Üniversitesi Sosyal Bilimler Dergisi* 10(2). 23–34.

Turan, Fikret. 1996. *Old Anatolian Turkish: Syntactic Structure*. Harvard University.

Türk, Gülşah. 2019. *Language ideologies of Lazuri speakers in Turkey*: Yıldız Technical University MA thesis.

Vaux, Bert. 2001. Hemshinli: The Forgotten Black Sea Armenians. *Journal of Armenian Studies* 6. 47–71.

Walker, Rachel. 2012. Vowel harmony in Optimality Theory. *Language and Linguistics Compass* 6(9). 575–592.

Werner, Brigitte. 2012. Morphological Sketch of Southern Zazaki. *SIL International* .

Woolard, Kathryn A. 1992. Language ideology: Issues and approaches. *Pragmatics. Quarterly Publication of the International Pragmatics Association (IPrA)* 2(3). 235–249.

Yağmur, Kutlay. 2001. Languages in Turkey. *The other languages of Europe. Demographic, Sociolinguistic and Educational Perspectives. Multilingual Matters* 407–426.

Yelten, Muhammet. 2009. Eski Anadolu Türkçesi ve Örnek Metinler. *Türk Dili ve Edebiyatı Dergisi* (40).

Yeon, Jaehoon & Lucien Brown. 2013. *Korean: A comprehensive grammar: A comprehensive grammar*. Routledge.

Yul-Ifode, Shirley. 2003. Vowel harmony and vowel merger in Agoi. *Studies in African Linguistics* 32(1). 1–16.

Zhang, Donghui & Diana T Slaughter-Defoe. 2009. Language attitudes and heritage language maintenance among Chinese immigrant families in the USA. *Language, culture and curriculum* 22(2). 77–93.

Zimmer, Karl & Orhan Orgun. 1992. Turkish. *Journal of the International Phonetic Association* 22(1-2). 43–45.

Zymet, Jesse. 2014. Distance-based decay in long-distance phonological processes. In *The Proceedings of the 32nd West Coast Conference on Formal Linguistics*, 72–81.