Understanding the Problems of the Support of an Endangered Language in Typography: Proposal of a Typeface That Supports the Laz Language

Zeynep Özüm Ak

Coordinator:
Joana Correia

Co-Coordinator:
İrfan Çağatay Aleksiva

MA, Communication Design,
Escola Superior de Arte e Design de Matosinhos

April 2018
I would like to offer my thanks and gratitudes to Joana Correia, my dear adviser, who guided me invariably throughout my thesis studies. Her invaluable work and experience contributed to me considerably in every way possible. I'd like to thank İrfan Çağatay Aleksiva in particular for his considerable help and guidance which enabled me to find relevant sources. Mehmedali Barıs Besli, İsmail Avcı Bucaklisi, Yavuz Yazıcı, and the creator of the Lazoglu alphabet, Wolfgang Feurstein, all of whom spared their precious time for me without declining my constant interview requests about the subject. I would also like to thank Nurten Kurnaz, Abdullah Akim, Tamyris Rodrigues, Raquel Peixoto, Eylül Erdem, Elif İbas and Filiz Funda Genç for their support and encouragement as well as my dear family and my husband, Yunus Ak, who always made me feel their support all the way through.
Abstract

This project addresses the diacritic-based literary problems of the endangered Laz language and has aimed to design a typeface that supports non-Unicode letters in Lazoglu alphabet. In the first part of this project, language erosion has been examined by taking into account the ‘The Atlas of the World’s Language in Danger’ document published by Unesco. On the following part, reference is made to the relation between language and writing, and the evolution of writing and typography. In the third step, history of the Latin-based Laz alphabets is examined from the Soviet era to the formation process of the present Lazoglu Alphabet.

The misuse of non-Unicode letters in the Lazoglu alphabet by literate Lazes has been analyzed with utilizing handwriting samples, existed typefaces and printed matters. The design process of the Helimisi typeface is detailed from the early sketches until the digitization of the glyphs with the Glyphs software. Firstly the diacritic alternatives have been designed by taking into account that the form and position of diacritics affect legibility as much as the main form components of the typeface. The project was terminated by making kerning and spacing adjustments after the uppercases, lowercases, punctuation marks and numbers were designed.

Keywords: Unicode, Diacritics, Laz language, Endangered Language, Typography
Resumo

Este projeto aborda os problemas literários dos diacríticos da linguagem Laz que se encontra atualmente ameaçada, tendo como objetivo projetar uma fonte tipográfica que suporte letras não-unicode do alfabeto Lazoglu. Na primeira parte deste projeto é feita uma análise sobre a erosão da linguagem Laz tendo em conta, e, como principal referência, o documento “Atlas das Línguas em Perigo no Mundo”, publicado pela Unesco. Na segunda parte, fala-se sobre as relações entre linguagem e escrita e sobre a evolução da escrita e da tipografia. Na terceira parte, a história dos alfabetos latinos Laz é examinada desde a Era Soviética até ao processo de formação do alfabeto Lazoglu atual. Em seguida, o uso indevido de letras não-unicode no alfabeto Lazoglu por literatos Lazes foi analisado a partir da utilização de alguns exemplos de escrita caligráfica, fontes tipográficas e material impresso. É demonstrado todo o processo de design da fonte Helimisi, desde os primeiros esboços até a digitalização dos glifos no software Glyphs. Em primeiro lugar, as alternativas diacríticas foram concebidas levando em conta o facto de que a forma e a posição dos diacríticos afetam tanto a legibilidade como os principais componentes formais do tipo de letra. Por fim, foi feita a criação das letras maiúsculas, minúsculas, sinais de pontuação e números, terminando este projeto com os ajustes finais ópticos e de espaçamento entre as letras.

Palavras-Chave: Unicode, Diacritics, Laz language, Endangered Language, Typography
Abstract

Introduction

1. Language
   1.1. Unesco’s Interactive Atlas and Endangered Languages 14

2. Writing and Typography
   2.1. Writing and Typography 18

3. The Laz Language
   3.1. Writing Systems of The Laz Language 22
      3.1.1. Features of The Laz Language 26
      3.1.2. Laz Writing Systems 30
         3.1.2.1. Pre-Republic Period 32
         3.1.2.2. Soviet Period Latinisation Politics 36
         3.1.2.3. Turkish Letter Revolution 40
         3.1.2.4. First Latin Based Alphabet and Chitasi 44
         3.1.2.5. Today’s Alphabet: Lazoglu 54
         3.1.2.6. Other Alphabets Used 58
   3.2. Writing Systems and Diacritics 64
      3.2.1. Diacritics in Laz Language 66
         3.2.1.1. Handwriting Analysis 68
4. Design Process

4.1. Focus Group and Usage Area  
4.2. Typography Classes and Early Sketches  
4.3. The Harmonisation of Ubuntu into Lazoglu Alphabet  
4.4. Design Parameters of Helimisi Typeface  
   4.4.1. Metrics and Glyphs  
   4.4.2. Diacritics in Helimisi Typeface  
   4.4.3. Spacing  
   4.4.4. Kerning  

5. Conclusion

Bibliography

List of Figures
Introduction

The language, which is shaped with the cultural and environmental structure of the society, is a carrier of the whole cultural information that exists, far beyond being a means of communication. One of the most essential features of the language, which is being the pre-determinant of inter-community and inter-individuals relationships, is determining the way of thinking and perception of individuals. Each language, be it currently prevalent or no longer existent, is a common cultural heritage of all mankind.

The evolutionary process, ranging from symbolic drawings to represent objects to contemporary alphabets, has made it possible to examine the transformation of the language in the graphical sense, which is the building block of communication.

Typography, as composed of a combination of Greek ‘form’ and ‘writing’ words, is made up of visual components representing the written language. Transformation of the word through typography into visual language is one of the main domains of interest in graphic design. Designers take over a key role in the progress of written culture by means of their communication tools.

The purpose of this project is to analyze the typography based problems of the Laz language in printed matters, which is one of the languages of ‘the Atlas of the World’s Language in Danger’ document published by Unesco in 1996, and create a font which supports non-Unicode letters. The design process focuses primarily on designing non-Unicode letters with the appropriate anatomy. Although the study concentrates on the Lazoglu alphabet, from the literary adventure of the Laz language, which began to take shape in the USSR in the 1920s, the whole process of the alphabets used in today’s printed documents have
been taken into consideration. In order to be able to comprehend the problem better, the historical development of the diacritics in Polish, Czech, and Hungarian has been researched and the use of diacritic has been examined by taking samples of handwriting from the Laz people from different age groups and education levels.

The general framework of this project which is constructed according to the above-mentioned criteria has been made with reference to electronic resources, linguistics and graphic design books and periodicals. Apart from these sources, resources are strengthened by interviews with linguists and individuals who have contributed to the literary venture of the Laz language.

The target mass of the project is linguists, researchers and designers who are studying revitalization of languages at risk of disappearance, the aim of the project is to contribute the survival of the Laz language and the archiving the Laz cultural heritage. In this regard, it is aimed to contribute to Anatolian and world language civilization studies.
1. Language
1.1. Unesco’s Interactive Atlas and Endangered Languages

Besides being a means of communication, language is a means of defining the self and the community in which the individual's consciousness and the perception of the world are shaped. Language is the common heritage and richness of humanity as it mirrors the pure reflection of the culture for the collective experiences of thousands and millions of people.

Archaeological findings have been indicating a complex linguistic structure as well as vocabulary coverage used by our ancestors for at least 40,000 years similar to contemporary languages of today. If we grant the fact that tool-makers were able to speak, we can presume that languages have existed for two million years (Janson, 2012, p.19).

In modern societies, moral values affecting language, identity and group belongingness, while material aspects influencing social statutes, all which have been developing together in a complex interaction (Eraydin, 2008, p.150).

Individuals who speak the language of ethnic minorities have been switching on using languages spoken by the majority of people by leaving local languages as a result of the language politics of the society in which they live. The widespread use of school education and those institutions empowered by the state-public communication being within the monopoly of major languages account for the main reasons why minority languages face the danger of extinction. In the initial stage of language erosion, families become bilingual and in the following generation, children learn the language spoken by the majority rather than learn their own original language. In further stages, they ignore their own mother tongues (Janson, 2012, p.130-269).

Since 1934, according to the reports of SIL International which is basically concerned with endangered languages, that half of the number of 7105 languages existing today face the risk of extinction within the next few decades (Cahill, n.d.).

---

1 U.S. based SIL International (formerly known as The Summer Institute of Linguistics, Inc.), founded in 1934, is a Christian missionary non-governmental organization, which has been assisting the minority communities by raising awareness of language. Thanks to created typefaces by typographer partners in SIL International, minority languages have been able to document (“Discover SIL”, 2017).
It is stated in “the Atlas of the World’s Languages in Danger”, a paper published by Unesco in 1996 that 600 languages around the world face the danger of extinction. This figure is 900 in the second edition published in 2001 and goes up to 2500 in the third edition published in 2010. In this article, those languages facing the danger of extinction are categorised in six groups. These classifications are: safe, vulnerable, definitely endangered, severely endangered, critically endangered and extinct (Moseley, 2010, p.11-12).

The Interactive Atlas of the World’s Languages in Danger, which is the continuation of Unesco’s project, is a freely accessible database that allows users to filter information about life, country, number of speakers, names, etc., about 2500 languages under threat of extinction.

The Caucasian and Anatolian lands, which have been host to the cultures of the ages, also contain different languages in danger. Unesco’s report has been showing us that 36 languages are spoken in Anatolia, Turkey and 18 of them are endangered. One of the languages, in ‘Definitely Endangered’ level, is the Laz Language that has been speaking by the Laz society living in the Northern East Anatolian region.

![Fig. 01- The Laz language on Unesco’s Interactive Atlas of the World’s Languages in Danger](image)

3 According to UNESCO Interactive Atlas of the World Languages in Danger, the languages in danger in Turkey are Abaza, Abkhaz, Adyghe, Cappadocian Greek, Gagauz, Hertevin, Homshetsma, Judezmo, Kabard-Cherkes, Laz, Mlahso, Pontic Greek, Romani, Surat, Turoyo, Ubykh, Western Armenian, Zazaki. In the same Atlas, The Laz language is also regarded among the dangerous languages in Georgia (“UNESCO Atlas of the World’s Languages in danger”, n.d.).
2. Writing and Typography
According to Walter J. Ong (2014), writing is a technology shaping and cementing the structure of modern man's consciousness, and transforms the way of thinking by adding the sense of 'vision' to the boundaries of the audio verbal sense of speech. Ferdinand De Saussure (1998) pointed out that language is a whole embracing audio images whereas writing is the concrete form of them all.

The need for recording was born twenty-five hundred years after the first villages were formed (Barthes, 2014, p. 28-29), human beings were in need of 'keeping records'. The methods used for 'recording formats' or 'memory assistants' vary from geography to geography (Ong, 2014, p.103).

Previously, visual pictograms representing objects directly had been replaced by cuneiform scripts providing the visual representation of the abstract world created by imagination (Ong, 2014, p.105-106). Initially, this script, involving sounds, had been originating in times of Sumerian communities and had been carrying on until the times of Christianity (Barthes, 2014)( Manguel, 2004).
The first alphabet is the Phoenician alphabet in the 15th century BC, which was only composed of consonants. Greeks adopted this alphabet in about 8th century by adding vowel letters and the writing had been arranging from left to right (Laberre, 2012).

The significance of writing has lasted for centuries and thanks to printing technology developed by German Johaness Gutenberg in 1456, it led to increasing process of modernization, enabling the infiltration of knowledge and its availability to the masses. Those imitable typographic elements of manuscripts in times of Gutenberg had been reshaped by Humanists in the course of Renaissance. By virtue of those typefaces redesigned by Bodoni and Didot, typographic developments had gained speed. Thus, this new setting presented by developing technology, both Bodoni and Didot had been redefining the serifs substantially by differentiating between thick and thin stroke thickness of letters (Dündar, 2015, p.15-28).

The outcome of typography shaped in the 19th century under the influence of the new social structure following the Industrial Revolution, letterforms had been accepted as a flexible, independent and variable system. Thanks to the eclectic production of this period, typeface could be designed in italics, thick, thin, narrow and wide formations coupled with other variations. At the outset of the 19th-century, sans-serif typeface had been designing and initiating by William Caslon.

The grid system was developed at the beginning of 20th-century and a number of typefaces with a new understanding of typography were designed. “Railway Typeface” designed for London Underground by Edward Johnston and “Gill Sans” series of Eric Gill and Paul Renner’s “Futura Type-family” are the most striking examples (Dündar, 2015, p.16-18).

In parallel to technologic changes, typographic language has undergone a considerable break and, thus, it has facilitated a different assessment of the rules forming the wholeness of the language by designers. The linear structure of the act of reading has been transformed into a system that is capable of interaction and of triggering the mobility of multifarious sensations.
3. Laz Language
3.1. Writing Systems of The Laz Language

According to the report published in 1996 by Unesco, Laz language regarded at the level of definitely endangered is one of the 18 endangered languages spoken in Turkey.

Christopher Moseley (2007) mentions the Laz language in ‘Encyclopaedia of the World’s Endangered Languages’ as follows:

The Laz (or Chan) Turkey and Georgia. Spoken along the Black Sea coast in the northeast of Turkey and the southwestern corner of Georgia, including the towns of Pazar (Atina), Ardesen, Çamlıhemşin and Findikli in Rize Province and Arhavi (Arkabi/Arxave), Hopa (Xopa), Borçka and Sarp (Sarpi) in Artvin Province in Turkey; Sarpi is partly in the Republic of Ajaria on the Georgian side; there are also the Laz villages, founded by refugees of the 1877–1878 War, in the western parts of Turkey mainly in Sakarya, Kocaeli and Bolu provinces. The number of speakers in Turkey is 20,000 to 30,000, in Georgia 1,000 to 2,000, and in an expatriate community in Germany, it is approximately 1,000. A language shift to Turkish and Georgian has proceeded increasingly rapidly. There is no literacy in the Laz. Definitely endangered (p. 256).

The preliminary documents about the language of the Lazes were published by Lorenzo Hervas in 1787. In 1843, German Lazalog George Rosen talks about the Laz language as follows:

It is no longer understood whether Laz people use Greek writing or other writings, especially because the region does not have any architectural monuments. Yet now, just like other Muslim societies (Persians and Turks etc.); Lazes have been using the Arabic script with some insertions but rarely written in their own language. Because they regard it as an old sin that

Fig. 04- A Laz gentleman in traditional costume
should be eradicated by the root of it, and when it comes to writing, they benefit from the Turkish language settled together with Islam. There is no doubt that Laz literature has never been written; Because if it was so, a certain dialect was brought to the forefront and strengthened as a regional language. Yet I have not come across anything of that sort and as it is reported to me, there are dialectical differences in the Laz language that is distinctive from other valleys and peculiar to each region ( Çağatay Aleksisi, 2015, p. 52).

In the travel notes published by Nikolay Marr in 1910 says that the majority of the Laz people had been downplaying their mother tongue. So much so that some locally specific phrases recorded by George Rosen in 1840 were no longer known (Marr, 2016, p. 101).

Attempts to write in Laz language, before the period of 1990, were carried out in two sites, namely in Georgia and Turkey. In the pre-Republic period, a group of Laz intellectuals in Istanbul had been starting to put an effort on ‘writing’ activities in the Laz language and they were organised in a social and political sense.
Poems written by Nuri Dudusi with the Ottoman Turkish alphabet and The Vesîletü’n-Necât translated to the Laz language during the Sultan II. Abdülhamit period gives information about the written history of the Laz language in the Ottoman period. As for the period between the proclamation of the republic and 1993, there are no studies on the Laz language (Çağatay Aleksisi, 2015, p. 52-57).

Nikolay Marr, one of the most prominent linguists of the USSR period in Georgia, wrote “the Laz Grammar and Texts” in 1910, written in the Georgian alphabet (Çağatay Aleksiva, 2014). Undoubtedly the most important work in this period is the publication of the Latin-based Laz alphabet under the leadership of Iskender Chitasi in 1928. The intellectuals of the period brought important works to the Laz literature with national and communist poems, stories and plays (Yilmaz, 2015). These developments, which started in Abkhazia, ended in 1938 with the execution of Chitasi and with the exile of the Laz of Asia residing in Abkhazia (Çağatay Aleksisi, 2015, p. 53).

The Lazoglu alphabet, which was created under the leadership of Wolfgang Feurstein in 1984, and the Laz movement which started in Germany as a result of this, gained momentum in the 90’s in Turkey. In 1993, the Ogni magazine was published by a group of Laz intellectuals, namely, Ahmet Kirim, Ali İhsan Aksamaz, İsmail Avci Bucaklisi and Mehmedali Baris Besli but the first issue of the magazine was confiscated (Besli, 2016). Between 1993 and 1996, the number of the magazines was six and the seventh issue of the Ogni magazine was published in the spring of 2017 (Çağatay Aleksiva, 2017). Following the publication of the first Laz dictionary in March 1999, the Mjora magazine was
published in 2000 and Turkey’s first Laz language newspaper, the Ağani Murutsxi, was published in 2013. In 2011, for the first time in a formal institution, lectures in the Laz language were given lessons in the Department of Western Languages and Literature of Bosphorus University. In 2013, the Laz Institute was established and under the influence of the demand for Kurdish education, in the primary schools’ curriculum for the optional Laz language classes were opened.

The creator of the Lazoglu alphabet, German Wolfgang Feurstein (2016), notes that the most important factor in the disruption of Lazes’ social structures as a result of his visits to the region is the domination of tea farming after the 1950s. As a consequence of language erosion, Laz language, which is mostly used in domestic communication nowadays, is being synthesized with the official language Turkish. Parents do not often teach Laz language to their children because they do not wish their proper Turkish dictions to deteriorate. There is no doubt that the influence of the Laz speech prohibition in the classes in the 1930s is also considerable (Özgün, 2000) (Aksamaz, 2013). Because as they are often dealing with the state and Turkish language, especially in the shores and seasides, the language degeneration is rather intense (Çağatay Aleksiva, 2017).
3.1.1. Features of The Laz Language

The South Caucasus language family comprise of Laz, Georgian, Svan and Megrelian languages. Structurally close to each other, Lazca and Megrelian form the Zan branch, which is thought to be the continuation of the Ancient Colchis language.

Arnold Chikobava admits that Megrelian and Laz languages are dialects associated with Colchis (or Zan). Scientists such as Nikolay Marr, Guram Kartozia, Ioseb Qipsidze and French Theologian and Linguist George Dumézil emphasize the fact that both languages should be regarded as separate languages since they have been largely completed in the process of their linguistic development (Çağatay Aleksiva, 2012) (Çağatay Aleksiva, 2015).
The district between Batumi and Pazar (Rize), there are three dialects, namely Xopa-Çxala dialect, Arkabi-Vişe dialect and Atina-Artaseni dialect are spoken. Xopa-Çxala dialect is the closest Laz dialect to Megrelian. The Laz language has the highest number of consonants among the South Caucasian languages. In some dialects, there are only five vocals despite the existing number of consonants up to thirty-three (Çağatay Aleksiva, 2012).

Fig. 09- The Lazes from Atina

Fig. 10- The Megrelian Alphabet
INTRODUCTION.

Les textes qu’en a vu leur ont été notés à Constantinople, en 1905 et 1911. Ils m’ont été dictés par un jeune Laz de Baroum, qui a grandi à Archavi et porte le dialecte de cette localité. Nini Bas, qui avait alors vingt ans, est éclaté d’esprit, curieux de toutes sortes de choses, notamment de folklore, et possède une remarquable collection de contes et de chansons. Je n’ai pas tenu à l’affirmer que tous les contes qu’il m’a donnés soient en trois : à Constantinople, civilisations et folkloristes sont inégalement négligés. Nini Bas est d’ailleurs cultivé et le héros. Je commente les textes VII et VIII, pour lesquels il avait pris des notes, d’être d’origine livrée. Les contes [il] point certains petits textes qui ont un intérêt folklorique.

Pour faciliter la lecture, il indique, dans le premier texte, en notes, pour tous les noms de personnes, leur nom difficile de la langue, les références au dictionnaire de M. Marx (Glossaire de l’alphabet et du vocabulaire) dans la littérature. Le texte est publié, 1900). En outre, il utilise quelques faits dans l’ensemble général que j’ai donné du verbe causer (Récit du camouflement sur le verbe causer, Bulletin de l’Institut de Linguistique, XV, 1935). Dans les notes, toutes les formes communes sont de Nini Bas et les « rapports de conjugaisons » indiqués sont ceux
t, 265, 3 = p. 265, première colonne; 265, 3 = p. 265, deuxième colonne. Le point d’interrogation apparaît que le nom se trouve pas dans le dictionnaire de Marx.

Fig. 11,12,13,14,15 -
The Contes Lazes written by Dumezil, 1937
3.1.2. Laz Writing Systems

The Laz language, besides being rich with its oral literature, its written language has been developed rather late under the influence of various political, social and cultural events. The feudal structure before the 1700s is one of the most important factors for Laz’s political disunity. The Tuzcuoğlu Uprisings, which emerged as a result of efforts to form of political unity in the early 1800s, was suppressed by the Ottoman State. In the Pre-Republic period, the lack of population and the lack of an agricultural product that would uplift the region prevented the Laz people from becoming urbanized, the absence of city life. Because of these reasons, a systematic alphabet was not needed (Besli, 2016) (Çağatay Aleksiva, 2017).

The Lazes who was using the language and writing systems of the communities in which they live together, used to write probably in Greek during the Pre-Islamic Period, yet practiced Ottoman Turkish alphabet in the period from the acceptance of Islam to the declaration of the Republic. These milestones in the literary adventure of the Lazes can resemble the plight of written Polish which had been changed in 996 B.C, which show how the political changes are decisive in the alphabets used by the people (Małecka & Oslislo, 2016).

The most crucial work related to the writing of the Laz language with a systematic alphabet is the Latin-based alphabet prepared by İskender Chitasi in 1928. 56 years after Chitasi, with the influence of the Laz movement starting in Germany, Wolfgang Feurstein formed the Lazoglu alphabet which was supported with the contributions of Selma Koçiva and Fikri Özdemir who later joined the working group.
A prayer book and business cart which are belonging to Ahmed Gümülyazici from Hopa

**Fig. 16** - The business card of Gümülyazici

**Fig. 17** - On the left page of the prayer book: A Turkish text written in Arabic script.

On the right page: Turkish handwriting written in Latin script

**Fig. 18** - Arabic text written in Arabic script (tesbihat).
3.1.2.1.  
Pre-Republic Period

Following the first Lazian poems of 1898, a considerable portion of the Laz Literature products was transcribed between 1918 and 1936. In 1910, the book “the Laz Grammar and Texts” written with the Mxedruli script has been published by the Georgian Linguist Nikolay Marr (Çağatay Aleksiva, 2014).

In addition to all these developments in the Soviet Union era, the studies of the alphabet on the Turkish side were too few. In 1914, The Laz Student Community (Laz Talebe Cemiyeti) was set up for supporting the Laz students who lived in Istanbul in terms of their primary responsibilities, their shelter and socialization. In 1918, together with the new members of the society, Lazes established the Society of National Developmental Assembly (Laz Tekamül-i Milli Cemiyet-i Hayriyesi). In the period of Abdulhamid II, Asikzade Abdullah prepared a petition for the request of the education in the Laz language but as a result of the outbreak of the Balkan War (1912-1913), the project failed to materialise. Another name who used to work on the Laz language is Faik Efendi, a clerk from the center of Hopa. He worked on the Laz language during the period of Abdülhamit II but was sentenced to prison for his work (Çağatay Aleksiva, 2017) (Yilmaz, 2015).

According to the research, Nuri Dudusi wrote his poems with the Ottoman alphabet, but after his death in 1918 in Trabzon, these documents were burnt by his wife. The famous work called the Vesiletü'n- Nectat (is known as the Mevlit) by Katip Çelebi, which was translated in the Laz language during the reign of Abdülhamit II, is still unattainable (Çağatay Aleksisi, 2015, p.52). In studies conducted up to this time, It hasn’t come across any systematic Arabic script study which was used for the Laz language (Çağatay Aleksiva, 2017).

From 1921 to the end of the 1980s, the Laz Language remained as a taboo for the Lazes from Turkey. The process that started with the creation of the alphabet in Germany in the 80s, triggered the Laz movement in Turkey in the 90s.
Fig. 19- Ali Pasha from Çürüksu with Georgian and Laz Bashi-bazouks (irregular soldiers). Photo by Abdullah Frères, 1865
Материалы по яфетическому языкознанию. II.

Н. Марръ.

ГРАММАТИКА

ЧАНСКАГО (ЛАЗСКАГО) ЯЗЫКА

СЪ ХРЕСТОМАТИЕЮ И СЛОВАРЕМЪ.

С.-ПЕТЕРБУРГЪ.
Типография Императорской Академии Наукъ.
Въ Остр., 9 лин., № 12
1910.
Fig. 20, 21, 22, 23, 24 - The Laz Grammar and Text book written by Nikolay Marr, 1910
3.1.2.2.

Soviet Period
Latinisation Politics

During the 1920s and 1930s, the alphabet change process, often used as a trojan horse by linguists and political leaders, became a form of social and cultural determinant for the changes in the Soviet societies.

The Bolsheviks had used the latinisation policy for building a bridge that would facilitate communication between the proletariat of the west and the east. The Pro-Western Russian intellectuals argued that one of the most important steps that could bring Russian society closer to European standards was to internalize the Latin script in Russian writing language (Siscanu, 2011, p.102-104). Initially, the Bolsheviks focused their activities on the North Caucasus and the Central Asian people. The main purpose of the latinization studies of the languages in the region, which would be completed towards the end of 1925, was to break the ties of people using Arabic script, with the World of Islam and/or to snatch them away from Turkish roots. Throughout the process, Azerbaijan was seen as the pioneer of latinization (Siscanu, 2011, p.107).

During the period of the USSR, as a result of the studies of the institute where Nikolay Marr was at the head, Latin-based alphabets for non-traditional literary languages such as Circassian, Adyghe and Abkhazian were prepared. The textbooks were prepared for all ethnic groups and schools were opened with their own mother tongue. The Laz language, which is one of the languages without traditional literature, was transformed into Latin script from 1923 to 1929, in which the Laz language was included, in the period when the number of written languages in the USSR was 72 (Siscanu, 2011, p.107).

On January 25, 1930, the decision to suspend activities related to latinisation - with the influence of the alphabet revolution in the Republic of Turkey - was accepted as a result of Stalin’s decision and all activities were stopped. The project, which aims at cyrillising the alphabets of the people of the USSR, started in 1938 and all 50 alphabets that had previously been Latinized were replaced by the Russian alphabet. In 1940, the act of liquidation of latinisation was essentially completed (Siscanu, 2011, p.110-111).

Fig. 25- Nikolay Marr (1865-1934)
Intellectuals who worked on latinisation, were accused of spying and Pan-Turkism and some of them were punished with imprisonment and sent to concentration camps. A great majority were executed (Kerimli, n.d.).
Fig. 27 - The second issue of the Isik Yolu newspaper, which was published in Tbilisi. Both Arabic script and Latin script were used in the newspaper written in Azerbaijani Turkish. March 1924
Fig. 28 - The second page of the İsk Yolu newspaper, 1924
3.1.2.3. Turkish Letter Revolution

Turks had been using different scripts when historical changes were taken into consideration. The oldest known alphabet is the Göktürk script used in Orhun inscriptions. Turks who adopted Islam were influenced by the Arabic script in the middle of the 9th century, however, the adaptation of the alphabet to Turkish was completed in the 16th century (Simsir, 2008 p.2-6).

As the Ottomans tried to adapt to the modern world, Latin script had been used in international correspondence. The discussion of scripts had started between the Ottoman intellectuals in the Tanzimat era and later the Azerbaijani intellectuals had participated in this debate. They argued that the low rate of literacy should be increased because the Arabic script is not in conformity with the Turkish language, it is difficult to learn and use, and as a result, the adaptation process to the westernization would speed up (Dündar, 2011, p. 104).

After the establishment of the Republic of Turkey on October 29, 1923, the controversy had continued. Although the number of advocates for the use of the Latin alphabet increased in this period, the number of opponents of the Latin alphabet for whom Arabic script regarded as sacred constituted the majority.
The Arabic script, which had been used for almost 1000 years, was abandoned after the Turkish Writing Revolution, which took place on 1st November 1928 under the leadership of Mustafa Kemal Atatürk. By virtue of the initiation of Alphabet and Language Revolution, a new national identity was created and a cultural tabula rasa was created (Balçık, 2008, p. 86-87). With the introduction of the Latin alphabet, the Turkish Language Institution was established for the adaptation of Turkish voices which had no alphabetic correspondence and for the development of language grammar. As a consequence of the Latinisation process, the literacy rate of one million and a hundred thousand readers before the Alphabet Revolution went up thrice as much after five years from the alphabet revolution (Simsir, 2008, p.244).
Marche d’indépendance

Fig. 32- The cover of the Turkish National Anthem brochure, 1926
Fig. 33. The last page of the Turkish National Anthem brochure, 1926

**MARCHÉ D'INDÉPENDANCE**

Korkma seunmèz' bou chafaklarda yuzên' al sandjak
Seunmèdëng' yourdourmoun ustundë tutën en son odjak
O bénim' millétimin' yildizidir parlayadjak
O bénimdir, o bénim' milletimindir andjak.

Tchatma, kourban olayam tchéhréni éy nazli hilal
Kahraman irkima bir ghul, né bou chiddèt' bou djélal
Sana olmaz deuquélèn kanlarimiz sonra hêlal
Hakkidir hakka tapan millétimin' istiklal.

---

Fig. 34. The first page of the Turkish National Anthem brochure, 1926

**MARCHÉ D'INDÉPENDANCE**

Körküm senmez' bou chaflard'a yüzen' al sandjak
Seunmeden' yourdoumoun ustunde tutun en son odjak
O bénim milletimin' yıldızıdır parlâyadjak
O bénimdir, o bénim' milletimindir andjak.

Tchatma, kourban olayam tchéhréni ey nazli hîlal
Kahraman irkima bir ghül, né bou chiddét' bou djélal
Sana olma deuquel'in kanlarımız sonra hêlal
Hakkıdır hakkı tapan milletimin' istiklal.
3.1.2.4. First Latin Based Alphabet and Chitasi

In the early stages of the USSR, as a result of dedicated studies of Iskender Chitasi (İskender Tzitasi, Iskender Ɵıtasi, İskender Tsitasi Teymurazovic), who was an intellectual, activist and founder of the Laz literature, Laz language has been written in Latin script since 1928.

Chitasi, who was born in Viçe (known as Fındıklı now), which was bound to the Ottoman Empire in 1904, began his education both at semi-religious and semi-secular Turkish village schools where he was taught Arabic script at the age of seven. Despite being immigrated to Russia, his father and uncle wishing him to be registered in Batumi High School in 1913, as he was a foreign Muslim, he was not admitted to the school. He studied at Moscow State University between 1922 and 1923. In 1927 he went to Adjara for the organizational activities of Lazes (Chitasi, 2017, p14-18).

In 1928, he began to study at a postgraduate preparatory unit at the Institute of National and Ethnic Cultures. Then he followed Nikolay Marr’s lessons, whom would be awarded the Order of Lenin in 1931, and he personally participated in works of the Laz language (Çağatay Aleksiva, 2015).

Chitasi worked on the Laz people in the national minorities bureau of the Provincial Committee of the Communist Party of Georgia, all throughout the summer of 1929. In the same year, he prepared first Latin-based alphabet on behalf of the institution called “the New The Laz Alphabet Unit” affiliated to the USSR named “The All-Russian Central Executive Committee” and put it into effect by complying with the decision of this institution. The new alphabet was prepared on the basis of Marr’s analytical method. Chitasi and his colleagues used thirty letters to represent thirty-four phonemes of Arhavi dialect. The Chitasi alphabet, which was prepared in Abkhazia with the reference to the Latin-based Abkhaz alphabet was developed by Marr in 1926, was used in the first Lazian newspaper the Mçita Murutsxi (Red Star) (Çağatay Aleksiva, 2015) (Chitasi, 2017). In November 1929, the journal was banned by the decision of the Cabinet of Turkey, which included the signature of Mustafa Kemal Atatürk, and the newspaper was closed after the second edition owing to the reactions coming from Turkey (Çağatay Aleksiva, 2017, p.8).
This alphabet, containing thirty-four letters, was revised in 1930, twenty-eight letters out of thirty-two Latin-based Azerbaijani alphabet, which was used between 1929 and 1939, was employed. In addition to these letters, ‘z with dot below’ and ‘Latin letter Ezh (Ʒ)’ have been used in the new revised Laz alphabet. The /q/ sound of Hopa dialect had not been considered in the alphabet, q is used instead of k and k is used instead of k breve (Feurstein, 2012, p. 9-11).

In 1931, he started working on Japhetic Theory at the Institute of History and Archeology in Transcaucasia with Marr’s proposal. In 1932, he worked as a lecturer and research assistant at the Institute of Caucasian Studies. In 1933 and worked as the chair at the Science Academy Transcaucasia Branch Presided over the language division established in the Azerbaijan Department. The books he prepared in Sokhumi within 3 months were used at the Laz schools, which had given education from 1933 to 1936, in Sarpi and Abkhazia (Çağatay Aleksiva, 2015).

Çquni Çhara- Alboni Supara (Our Literature-Alphabet Book), the first textbook published in Sokhumi in 1932, printed 675 units. The book was basically are prepared to teach Laz children to read and write in their mother tongue. Most of the chapters in the book were shaped according to the ideology of the period (Feurstein, 2012, p. 9-13).

The Oxesapusi Supara (the Calculation Book) published in 1933 is the translation from the Russian textbook of the same name by Russian mathematician and pedagogue Natia Popova. Some chapters were added by Chitasi and translated into Laz language. The book, prepared for the first and second grades, consists of two volumes.
Fig. 37 - The first Lazian newspaper: Mçita Muruxi, November 1929
Fig. 38 - The second page of the Mçita Muruçi, November 1929
The Alboni (Alphabet Book) is a book about the basics of the Laz alphabet published two years after the Oxesapusi Supara. The Okitxuseni Supara (Reading Book), prepared for the second year students was published in 1937, in two volumes, but only the 2nd volume has reached us today (Çağatay Aleksiva, 2015).

Since there was no font in Georgia, many of Chitasi books were published in Giz publishing house, Abkhazia (Chitasi, 2017, p.24).

In 1935, Chitasi started to work as a chairman of the Lazology and senior scientist at the University of Tbilisi at the Caucasus University. After the death of his greatest political supporter, Abkhaz President Nestor Lakoba, in December 1936, Arnold Chikobava (1898-1985), who was a distinguished academician in Georgia, clashed over with the leading scientists and about the idea of the Laz language and its problems. Çikobaba argued that the Laz language ought to remain as “home language” and that if the literary language was to develop, it must have been Georgian (Çağatay Aleksiva, 2017, p.11). In his letter to Stalin in 1935, Chitasi did not receive any results, he requested for the conversion of the elementary school in Laz language and the retraining of teachers and the printing of textbooks (Chitasi, 2012).

Owing to Stalin’s ideological changes, Latin-based alphabets of other minority languages outside the borders of Georgia had been cyrilized since 1936. Georgian efforts against cyrillicism had been affected by factors such as the powerful influence of Georgia in the ruling the Soviet bloc, Stalin’s being Georgian and Lavrenti Beria’s being Megrelian (Çağatay Aleksiva, 2015).

As a result of all these developments, in 1938 the Latin-based Laz alphabet was replaced by the Georgian script, under the pressure of Georgian scientists who came together under the leadership of Chikoba. Later, the language of education was gradually removed from the curriculum and replaced by Georgian, Russian and Turkish education (Chitasi, 2017, p.23-24).

By Chikobaba’s request and Beriya’s order, Chitasi was on the list of subjects to trial, on 10 June 1938, with a document signed by Stalin and Molotov. He was executed in Tbilisi on 22 June 1938, on the grounds that he was a member of the Turkish intelligence agency and spied on. The period of 1936-38, which was called as “Great Terror”, forty-three Lazes of Abkhazian origin in the URSS of Georgia was punished for similar reasons (Çağatay Aleksiva, 2017, p. 11).
Fig. 40 - The court minutes in which the death sentence of Chitasi is stated.

<table>
<thead>
<tr>
<th>Слушали:</th>
<th>Постановили:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Заседания тройки при Комиссариате Внутренних Дел Грузинской ССР от . . . г., 193 . г.

Президент тройки НКВД Груз. ССР.

Члены: Премурор по спецделам.

Слушали: Постановили:

Сложено 193 г. в Управлении НКВД Грузинской ССР.

Слушали: Постановили:

Слева: Докладчик.

Справа: Рассмотрев.

Имеется приведение в уголовное дело.

Вопрос: Заключение.

Члены: Секретарь.

Слева: Докладчик.

Члены: Председатель тройки.

Слева: Заключение.

Члены: Секретарь.
Fig. 50, 51, 52, 53, 54, 55, 56, 57, 58 -
The cover and pages of the Alboni, 1935
After Chitasi’s death, the first studies on the alphabet started in the 80’s in Germany.

The first step in the work of the German Ethnologist Wolfgang Feurstein was made up of the tea and hazelnut agriculture, which are the source of income for the Laz people, and the geography. Feurstein turned to ethnology later on and made researches on language and history. Feurstein went to the region twelve times, learned the Laz language from the people in the district and started to develop an alphabet to write Georgian, Megrelian and Armenian with the same alphabet. Since the three languages were intended to be written in one alphabet, the visual representation of each voice is provided with one letter (one sound, one sign principle) so as to minimize the problems that may arise (Feurstein, 2016).

Feurstein, who continued his efforts to perpetuate the Laz language in Germany alone until the spring of 1984, later formed the Lazoglu alphabet with the Laz activists Selma Koçiva and Fikri Özdemir living in Germany. The alphabet was presented to the Caucasus Congress in the same year. The fact that the use of real names due to the political conditions of the period was inappropriate, the identity of the Laz architects of the new alphabet was kept secret in the Parpali Booklet published in 1984 (Feurstein, 2017). Feurstein did not want to use the name alone, instead, he chose the name of Fahri in order to honor his friend Fahri Kahraman who had worked on the Laz language, and chose ‘Lazoglu’ as the surname, and thus, Fahri Lazoglu eke-name showed up. There is the signature of Wolfgang Feurstein in the second introductory writing of the book in German.

Feurstein (2016), five years after the publication of the Lazoglu alphabet, reached a textbook and an edition of the first Lazian newspaper, Mçita Murutsxi. Hence, we may say that there is no organic link between the Lazoglu alphabet and the Chitasi alphabet and that there are serious differences between the two alphabets.

Feurstein (2016) have pointed out that during the period up to the time of association, the Laz people in Germany were afraid of the Turkish authorities.

Fig. 59- A Page from the Parpali booklet used Wolfgang Feurstein and Fahri Lazoglu eke-name, 1984
Between 1992-1997, The Lazebura group continued to work as part of the Kulturkries Katschkar “Internationale Gesellschaft für südkaukasische Sprachen und Kulturen e.V.” (Kackar Culture Circle, International Southern Caucasian Literature and Culture Society). Even though The Laz Activist Salma Koçiva, living in Germany, supported the political work of the foundations, yet Feurstein refused to make political demands on language and continued his work on language survival. According to the German Ethnologist, most of his work was misinterpreted by the Lazes living in Turkey.

We may comprehend the policy of ‘no language other than Turkish’ was also effective in that period from the fact that Feurstein was deported two times as well as Laz activist Selma Koçiva sneaking the alphabet secretly into Turkey. The confiscation of the ‘The Laziko’ brand of cologne by the State, which was purchased by Feurstein is an absurd example that can give us clues about language politics in the period.

Fig. 60- The Laz alphabets with transcription and equivalent of IPA (The International Phonetic Alphabet)

<table>
<thead>
<tr>
<th>Cjkısi</th>
<th>Lazégli</th>
<th>Gürcü</th>
<th>Transcription</th>
<th>IPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ə</td>
<td>a</td>
<td>ã</td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
</tr>
<tr>
<td>c</td>
<td>ç</td>
<td>ç</td>
<td>ç</td>
<td>ç</td>
</tr>
<tr>
<td>ğ</td>
<td>ğ</td>
<td>ğ</td>
<td>ğ</td>
<td>ğ</td>
</tr>
<tr>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>ê</td>
<td>ê</td>
<td>ê</td>
<td>ê</td>
<td>ê</td>
</tr>
<tr>
<td>f</td>
<td>f</td>
<td>f</td>
<td>f</td>
<td>f</td>
</tr>
<tr>
<td>g</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td>h</td>
<td>h</td>
<td>h</td>
<td>h</td>
<td>h</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td>j</td>
<td>j</td>
<td>j</td>
<td>j</td>
<td>j</td>
</tr>
<tr>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td>l</td>
<td>l</td>
<td>l</td>
<td>l</td>
<td>l</td>
</tr>
<tr>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>q</td>
<td>q</td>
<td>q</td>
<td>q</td>
<td>q</td>
</tr>
<tr>
<td>r</td>
<td>r</td>
<td>r</td>
<td>r</td>
<td>r</td>
</tr>
<tr>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
</tr>
<tr>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
</tr>
<tr>
<td>v</td>
<td>v</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>w</td>
<td>w</td>
<td>w</td>
<td>w</td>
<td>w</td>
</tr>
<tr>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>y</td>
<td>y</td>
<td>y</td>
<td>y</td>
<td>y</td>
</tr>
<tr>
<td>z</td>
<td>z</td>
<td>z</td>
<td>z</td>
<td>z</td>
</tr>
</tbody>
</table>

Between 1992-1997, The Lazebura group continued to work as part of the Kulturkries Katschkar “Internationale Gesellschaft für südkaukasische Sprachen und Kulturen e.V.” (Kackar Culture Circle, International Southern Caucasian Literature and Culture Society). Even though The Laz Activist Salma Koçiva, living in Germany, supported the political work of the foundations, yet Feurstein refused to make political demands on language and continued his work on language survival. According to the German Ethnologist, most of his work was misinterpreted by the Lazes living in Turkey.

We may comprehend the policy of ‘no language other than Turkish’ was also effective in that period from the fact that Feurstein was deported two times as well as Laz activist Selma Koçiva sneaking the alphabet secretly into Turkey. The confiscation of the ‘The Laziko’ brand of cologne by the State, which was purchased by Feurstein is an absurd example that can give us clues about language politics in the period.
Fig. 61 - The cover of the Parpali booklet, 1984
Fig. 62 - The Lazoglu alphabet in the Parpali booklet, 1984
3.1.2.6. Other Alphabets Used

In the period up to 1984, some of Lazes from Turkey, who had reached to Dumezil’s books, tried to use the Dumezil system in which there were some letters in the Greek script (Avci, 2015) (Besli, 2016). Half a century after the Chitasi Alphabet, the Lazoglu alphabet was published in 1984, under the influence of the Laz Movement in Germany. However, the meeting of the Laz intellectuals with the alphabet of Chitasi, the first Latin-based alphabet, took place in the early 2000s. Stories of creating ‘personal alphabets’ of Lazes, who are not aware of the existence of alphabets, are often encountered.

With the launch of the printed matters in Laz language, even more questions have been asked about the way alphabet can be used of, taking into account new technological challenges, and the number of alphabets has increased since there has been no satisfactory answer. Although the Lazoglu alphabet has been used by a group of the Laz intellectuals within the limits of technical possibilities, the literate Lazes of today can also use different alphabets for various personal preferences. Besides personal use, arbitrary applications are also common in printed publications.

The first opposite critical opinion about the Lazoglu alphabet came from Sevim Genç who suggested that using ‘ɣ’ instead of ‘Ğ’ in the alphabet. However, the proposal was turned down since it was unaccepted by other linguists and authors (Yazici, 2016).

The Arhaviler Association, based in Ankara, which continues to work on the Kemalist line 4, uses the alphabet developed by Teacher Fahri Kahraman from Arhavi, in the early 1980s ( Çağatay Aleksiva, 2017). The letter ‘x’ exists in the Bedirxan Alphabet adopted by Kurds of Turkey has not been used (Roshani, n.d.) in documents belonging to the association. We can see that the Laz people who are not members of the association come up with different personal solutions so as not to use the letter ‘x’ even it is on the keyboard. For example, for the village name ‘Dutxe’, writings such as Dutge, Duthe, and Dudğe can be preferred (Yazici, 2016).

* Kemalism (Turkish: Kemalizm) is an ideology which had been taking shape with the ideas, principles, and implementations of the first president of the Turkish Republic, Mustafa Kemal Atatürk. Kemalism, the founding ideology of the Republic of Turkey, has six principles: republicanism, statism (in economic policy), populism, laicism, nationalism, and reformism. According to this ideology, all ethnicities living in Turkey without exception have been identifying as the Turkish nation (“Kemalism - Oxford Islamic Studies Online”, n.d.) (“Atatürkçülük”, n.d.).

---

4 Kemalism (Turkish: Kemalizm) is an ideology which had been taking shape with the ideas, principles, and implementations of the first president of the Turkish Republic, Mustafa Kemal Atatürk. Kemalism, the founding ideology of the Republic of Turkey, has six principles: republicanism, statism (in economic policy), populism, laicism, nationalism, and reformism. According to this ideology, all ethnicities living in Turkey without exception have been identifying as the Turkish nation (“Kemalism - Oxford Islamic Studies Online”, n.d.) (“Atatürkçülük”, n.d.).

---

The Bedirxan alphabet

The Bedirxan alphabet

---

Fig. 63- The Bedirxan alphabet
Japanese Gôichi Kojima formulated the Kojima alphabet with the reference to IPA 5 (The International Phonetic Alphabet). Kojima added the letters Ç, K' X, in addition to the letters Ky, Ky ' and Gy used in the Lazian Dictionary published by Ismail Avci Bucaklisi in 1999 (Avci Bucaklisi, 2017). One of Kojima’s most radical decisions is to use z with asterisk (z*) instead of ‘z with breve’ (Kojima, n.d.). With the new letters added, the number of letters has increased from thirty-five to thirty-eight. The alphabet was not accepted by the majority because there were inconsistencies about the letters representing the sound and sound.

IPA (The International Phonetic Alphabet) is a global sound chart that primarily based on the Latin alphabet. The symbols used in this systemized sound alphabet had been determined according to the position of the tongue (“IPA Chart with Sounds | International Phonetic Alphabet Sounds”, n.d.) (“International Phonetic Alphabet”, n.d.).

5 IPA (The International Phonetic Alphabet) is a global sound chart that primarily based on the Latin alphabet. The symbols used in this systemized sound alphabet had been determined according to the position of the tongue (“IPA Chart with Sounds | International Phonetic Alphabet Sounds”, n.d.) (“International Phonetic Alphabet”, n.d.).
One of the founders of the Laz Institute, Ismail Avci Bucaklisi (2016), who has many works on Laz culture, stated that he has been writing on the computer since 1990. Bucaklisi, who also prepares materials for the Open Laz Lecture, is the adapter for one of the two alphabets used for the Optional Laz Lessons. When Bucaklisi's books are examined, it appears that the different alphabets were used in different periods. According to him, these changes have been made for facilitating writing and reading and minimizing the problems associated with font usage (Bucaklisi, 2016).

Fig. 65- The cover of the Lazuri Alboni published by Lazika Yayin Kollektifi, 2011

Fig. 66,67,68,69- The pages from the Lazuri Alboni, 2011
Fig. 70, 71, 72, 73 - The pages from the Lazuri Alboni published by Lazika Yayin Kollektifi, 2015

Fig. 74 - The cover of the Lazuri Alboni, 2015
According to Besli (2016) and Avci Bucaklisi (2016), the use of social media and of different alphabets has strengthened the communication of the Laz people on both sides of the Sarpi Border. However, since it can not be supported by technological infrastructure, the Lazoglu alphabet cannot be used on digital platforms.

Two different alphabets are used in the documents today created within the Optional Laz course. However, both alphabets were prepared without the consensus and presented to the students by means of educational materials (Çağatay Aleksiva, 2017).

In 2009, Lazolog and activist İrfan Çağatay Aleksiva shared the new alphabet which was revised by him with the Laz intellectuals in 2010, with the idea of the Lazoglu alphabet was difficult to match with the technology, and prepared a declaration in 2015 together with Hasan Uzunhasanoğlu, after having met and consulted with all the Laz groups. The project, which Wolfgang Feurstein also partially approved of, was not applied as it was not supported by all the Laz intellectuals. Alternative alphabetical letters revised by Aleksiva were arranged according to the German writing system and suggested to be shown in two letters instead of letters with the breve (Çağatay Aleksiva, 2017).

In addition to the above-mentioned examples, it is possible to say that each printed matters about Laz culture have its own alphabet.

According to Feurstein (2016), the reason for the formation of different alphabets nowadays has been that they do not have a holistic responsibility for the Laz ethnicity, and they tend to emphasize the individuality of the Laz literary producers. Alphabets created without adequate scientific and academic work has been unable to find a response in the public opinion of the Lazes. According to the chairman of the Laz Culture Association Mehmedali Besli (2016) and the Editor of Ağani Muratsxi Newspaper, İrfan Çağatay Aleksiva (2017), the most important step to be taken on behalf of the Laz alphabet is to form a consensus and make a central decision.
<table>
<thead>
<tr>
<th>Örnet</th>
<th>Latfiye</th>
<th>чество</th>
<th>Transkripsiyon</th>
<th>IPA</th>
<th>Giriş</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>/æ/</td>
<td>ə</td>
</tr>
<tr>
<td>Bb</td>
<td>Bb</td>
<td>Bb</td>
<td>Bb</td>
<td>/æ/</td>
<td>ə</td>
</tr>
<tr>
<td>Cc</td>
<td>Cc</td>
<td>jj</td>
<td>_MODIFIED_JJ</td>
<td>/g/</td>
<td>k</td>
</tr>
<tr>
<td>Çç²</td>
<td>Çç</td>
<td>çç</td>
<td>çç</td>
<td>/g/</td>
<td>k</td>
</tr>
<tr>
<td>Dd</td>
<td>Dd</td>
<td>Dd</td>
<td>Dd</td>
<td>/æ/</td>
<td>ə</td>
</tr>
<tr>
<td>Đđ²</td>
<td>Đđ</td>
<td>Đđ</td>
<td>Đđ</td>
<td>/æ/</td>
<td>ə</td>
</tr>
<tr>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>/æ/</td>
<td>ə</td>
</tr>
<tr>
<td>FF</td>
<td>FF</td>
<td>FF</td>
<td>FF</td>
<td>/f/</td>
<td>ð</td>
</tr>
<tr>
<td>Gg</td>
<td>Gg</td>
<td>Gg</td>
<td>Gg</td>
<td>/g/</td>
<td>k</td>
</tr>
<tr>
<td>Çç***</td>
<td>Çç</td>
<td>Çç</td>
<td>Çç</td>
<td>/g/</td>
<td>k</td>
</tr>
<tr>
<td>Hh</td>
<td>Hh</td>
<td>Hh</td>
<td>Hh</td>
<td>/æ/</td>
<td>ə</td>
</tr>
<tr>
<td>Ii</td>
<td>Ii</td>
<td>Ii</td>
<td>Ii</td>
<td>/i/</td>
<td>ɨ</td>
</tr>
<tr>
<td>Jj</td>
<td>Jj</td>
<td>Jj</td>
<td>Jj</td>
<td>/ʃ/</td>
<td>ʒ</td>
</tr>
<tr>
<td>Kk</td>
<td>Kk</td>
<td>Qq</td>
<td>Kk</td>
<td>/k/</td>
<td>k</td>
</tr>
<tr>
<td>Ll</td>
<td>Ll</td>
<td>Ll</td>
<td>Ll</td>
<td>/l/</td>
<td>l</td>
</tr>
<tr>
<td>Mm</td>
<td>Mm</td>
<td>Mm</td>
<td>Mm</td>
<td>/m/</td>
<td>m</td>
</tr>
<tr>
<td>Nn</td>
<td>Nn</td>
<td>Nn</td>
<td>Nn</td>
<td>/n/</td>
<td>n</td>
</tr>
<tr>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>/o/</td>
<td>ɔ</td>
</tr>
<tr>
<td>Pp</td>
<td>Pp</td>
<td>Pp</td>
<td>Pp</td>
<td>/p/</td>
<td>p</td>
</tr>
<tr>
<td>Phph</td>
<td>Phph</td>
<td>Phph</td>
<td>Phph</td>
<td>/p/</td>
<td>p</td>
</tr>
<tr>
<td>Qq</td>
<td>Qq</td>
<td>Qq</td>
<td>Qq</td>
<td>/q/</td>
<td>ʢ</td>
</tr>
<tr>
<td>Şş***</td>
<td>Şş</td>
<td>Şş</td>
<td>Şş</td>
<td>/ş/</td>
<td>ʃ</td>
</tr>
<tr>
<td>Tt</td>
<td>Tt</td>
<td>Tt</td>
<td>Tt</td>
<td>/t/</td>
<td>t</td>
</tr>
<tr>
<td>Çç</td>
<td>Chşh</td>
<td>Çç</td>
<td>Çç</td>
<td>/ʃ/</td>
<td>ʒ</td>
</tr>
<tr>
<td>Thth</td>
<td>Thth</td>
<td>Thth</td>
<td>Thth</td>
<td>/θ/</td>
<td>ʒ</td>
</tr>
<tr>
<td>Çç</td>
<td>Çç</td>
<td>Çç</td>
<td>Çç</td>
<td>/θ/</td>
<td>ʒ</td>
</tr>
<tr>
<td>Çç</td>
<td>Çç</td>
<td>Çç</td>
<td>Çç</td>
<td>/θ/</td>
<td>ʒ</td>
</tr>
<tr>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>/u/</td>
<td>ʊ</td>
</tr>
<tr>
<td>Vv</td>
<td>Vv</td>
<td>Vv</td>
<td>Vv</td>
<td>/v/</td>
<td>ʋ</td>
</tr>
<tr>
<td>Xx</td>
<td>Xx</td>
<td>Xx</td>
<td>Xx</td>
<td>/x/</td>
<td>ʃ</td>
</tr>
<tr>
<td>Yy</td>
<td>Yy</td>
<td>Yy</td>
<td>Yy</td>
<td>/j/</td>
<td>ʒ</td>
</tr>
<tr>
<td>Zz</td>
<td>Zz</td>
<td>Zz</td>
<td>Zz</td>
<td>/z/</td>
<td>ʒ</td>
</tr>
</tbody>
</table>

* Değişiklikler Latinice karakterlerin kullanılmadığı ortamlarda (Ch şh) olarak yazılar.
** Değişiklikler Latinice karakterlerin kullanılmadığı ortamlarda (Ch şh) olarak yazılar.
*** Değişiklikler Latinice karakterlerin kullanılmadığı ortamlarda (Sh şh) olarak yazılar.
3.2. Writing Systems and Diacritics

Diacritics (accents or diacritical marks) are used to change meanings and pronunciations; can appear above or below of the letter. The word derives from the Greek word διακρίνειν, which means ‘that distinguishes’ (Blažek, 2016, p.64).

Accents are used in many writing systems; for expression of tonality in Greek, for optional vowel accentuation in Arabic and Hebrew, and for some of the Indian syllabic writing systems to change the spoken vowel. In languages that use the Latin script, they support languages that have different voices by enriching them with the basic 26 letters accents in the alphabet (Březina, 2009).

‘The Orthographia Bohemica’ written by Jan Hus at the beginning of the 15th century is the oldest document that uses the Latin alphabet and deals with the modern writing and orthography of the diacritically rich Czech language. The new orthography system recommended by Hus was not used immediately and the digraphic style continued to be used until the mid 16th century in parallel with this system (Blažek, 2016, p.15-16).
The Polish, one of the diacritical rich language, had no writing system in the pre-Christian era. Georgian, Armenian and Cyrillic alphabets took the Glagolitic Alphabet (Glagolitsa) created by Christian missionaries as a reference, however, Polaks and Czechs adapted the alphabet according to their language needs. The Golden Age of Printing (also known as the Polish Golden Age of Printing) was a rapid development in the 16th century, and the system has changed very little to the present day (Małecka & Olsislo, 2016, p.68).

When the orthography of the Hungarian language is examined, in almost every book published starting from the 16th century, it appears that problems arise from the lack of standard alphabet. At the beginning of the 19th century, the Hungarian writing system was outlined and has been used up to this date without any alteration (Kravjanszki, 2016, p.50).
3.2.1. Diacritics in Laz Language

The Lazoglu alphabet is formed by preserving all the letters, except the letter ‘W’ in the traditional Latin alphabet, and taking the letter references from the Turkish alphabet. Two diacritics, ‘cedilla’ and ‘breve’ have been used in the alphabet.

Feurstein (2016) began his experiments with the ‘acute’ accent. Owing to the fact that it is thought that visual harmonics were not proper, acute was not used. Later, the ‘caron’ accent was tried but the letter was not used as writing rhythm was distorted due to referencing Slavic alphabet and its angular form.

Finally, since the target population of the alphabet was the Lazes of Turkey, it was considered appropriate to take references from the Turkish alphabet. The letters ‘ç’ and ‘ğ’ used in Turkish alphabet are preserved and the breve diacritic of the letter ‘ğ’ decided to use for the accented letters. It was thought that children in the school age who are familiar to the diacritics will be able to adopt the alphabet easily (Feurstein, 2016).

The diacritic breve is also used in the phonetic transcriptions of Turkish, Esperanto, Tohono O’odham, Romanian, Vietnamese languages. ("Diacritics Project @ Typo.cz", n.d.).
The accented letters are as follows:

\[\begin{align*}
\begin{array}{ll}
\text{Ç} & - c \text{ with cedilla for the sound of } /\mathcal{C}/ \\
\text{Đ} & - z \text{ with breve for the sound of } /\mathcal{Dz}/ \\
\text{Ğ} & - g \text{ with breve for the sound of } /\mathcal{G}/ \\
\text{P} & - p \text{ with breve for the sound of } /p'/ \\
\text{K} & - k \text{ with breve for the sound of } /k'/ \\
\text{Č} & - c \text{ with breve and cedilla for the sound of } /\mathcal{C}/' \\
\text{T} & - t \text{ with breve for the sound of } /t/ \\
\text{Š} & - s \text{ with breve for the sound of } /\mathcal{S}/'
\end{array}
\end{align*}\]

The actual letters on the project are Đ, P, K, Ć, T and Š which are in the Lazoglu alphabet but not in the Unicode character chart.
3.2.1.1. Handwriting Analysis

For the handwriting analysis, the poetry of Yılmaz Avcı, “Ar Xliği Ar Xliği Çkva” was selected and handwritten samples were had from seven individuals with ages between 10 and 47. In the prepared document, samples of upper and lowercase texts and the letter combinations were included to be evaluated.

When the samples were examined we found:

- Because of the fact that the letters with the breve diacritic, the writing does not always stable and harmonic. Due to the speed of writing, the breve diacritic has been seen sometimes like a caron or macron. But this would be the natural differences one can see in handwriting also in other languages with accented characters.

- The distances between the breve and the letters have preserved.

- In general, the breve has positioned at the same level as the other diacritics on the t and k lowercase.

- The Latin letter Ezh can be easily confused with a number ‘3’ in the handwriting samples.
C with cedilla and breve:

Ezh:

Ezh with breve:

K with breve:

P with breve:

T with breve:

Z with breve:

Fig. 83- Handwriting samples for uppercase and lowercase letters with breve

Fig. 84, 85, 86, 87, 88, 89, 90- Non-Unicode letters and word combinations
Fig. 91- Handwriting sample, Age 10

Fig. 92- Handwriting sample, Age 23

Fig. 93- Handwriting sample, Age 31

Fig. 94- Handwriting sample, Age 37
Fig. 95- Handwriting sample, Age 38

ar xliipi ar xliipi akva

Ntxenv wtde kelabcan tiparpun.
xe ovurdi namokasun potikos
ar xliipi okche xliipi movendi
kivincpe gunkapun galx tiraps.

Fig. 96- Handwriting sample, Age 44

ar xliipi ar xliipi akva

Ntxenv wtde kelabcan tiparpun.
xo ovurdi na moksax potikos
ar xliipi ar xliipi movendi
kivincpe gunkapun galx tiraps.

Fig. 97- Handwriting sample, Age 47

Ketxen koninu limxonape
xonele xini gunkapun nulpape
ar xliipi okche ar xliipi
visiexepedi moncapan selamepe.
3.3. Technical Problems of Typography

Harmonizing languages with Latin scripts and involving different diacritics was first handled by people with limited typography knowledge and the letters were used incorrectly. Today these problems have been seemed to have been partially solved in the Eastern European languages. However, problems related to the harmonization of some Latin-based alphabet with different diacritics can be seen even today. ("Technology for Language Development", n.d.).

The process of harmonizing with languages using Latin scripts and involving different diacritics was first handled by people with limited typography knowledge and the letters were used incorrectly. Today these problems seem to have been partially solved in Eastern European languages, but the problems of attunement have not been limited to this period here instead of the use of the Latin-based alphabet. The problems related to the attunement of the languages with different diacritics have been in existence even today.

When the diacritical process of Laz language, which is one of these languages, is considered, it is seen that in the early periods when the Lazoglu alphabet started to spread, the fonts used were manually intervened and the letter anatomies were distorted, leading to readability problems.

When existing printed matters are considered, we can say that the missing letters in Unicode character table and the lack of typefaces cause the existing problems related to writing, and different alphabets are used for almost every work. As a result of the developed solutions, serious problems have been encountered regarding the use of the Lazoglu alphabet and legibility. It is observed that the most important uses established are arbitrary diacritic positioning and the use of number 3 instead of letter Ezh.

Çağatay Aleksiva, the editor of the Agani Muruƣxi newspaper, has been using Times and Arial fonts which he has positioned diacritics himself, rather than harmonized fonts. Additionally, he has used the Keyman software and selected the Lithuanian alphabet to assign the Lazoglu Alphabet. However, the created documents cause various problems depending on the extension and the program used (Çağatay Aleksiva, 2017).
Even though Besli, the head of the Laz Culture association, uses the Lazoglu alphabet in his handwriting samples, he says that he prefers to use two-consonant combinations for the non-Unicode letters, instead of using harmonized fonts (Besli, 2016).

The Laz Institute founder, Bucaklisi, who uses his own alphabet, says that he uses DIN next pro font in the printed matters he prepared for the national education textbooks, and Arno Pro font for other books. In his book “The Lazca Ders Kitabi-1 (The Laz Course Book-1)” published in 2015, it is seen that two consonants combinations are used instead of three letters which have breve diacritic (Avci Bucaklisi, 2016).

The creator of the Laz alphabet, Feurstein says that he has edited up to fifty free fonts with the High-logic Font Creator 7 software, and had positioned the letters on the keyboard with the Clavier 8 software. Feurstein is able to write in German, Turkish and Laz language with a single font by using different key combinations for non-Unicode letters (Feurstein, 2017).

---

7 High-Logic Font Creator is a font editor software which allows designing and producing new fonts, editing existed glyphs or adding new glyphs (“FontCreator - the most popular font editor!” , n.d.).

8 Clavier is the programme that allows the users to create keyboard shortcuts (“UtilFr – Clavier+ 10.8.1”, 2018).
3.3.1. Unicode and OpenType

Along with the progress of computer science, communities using different writing systems have faced with restrictive obstacles to access the technology. In the initial stage, English as "lingua franca" of technology, and other Latin-based languages had been supported. Languages such as Chinese and Arabic haven’t been included in the system. A considerable number of computer technicians have interpreted the multilingualism as a problem due to lack of certain special characters and hence, it was thought that to be added all the characters which needed for languages would fix the problem. On the other hand, the PostScript or TrueType standard formats which reduced to 256 characters set had fallen short of solving the problem of polyscript (Balius, 2017).

As an outcome of studies beginning in the late 20th century, the Unicode standard for character encoding has been developed. Thanks to the standard developed by the Unicode Consortium, a universal character map has been created to define all writing systems and signs (Balius, 2017).

Developing and marketing of the OpenType format which is a standard for digital fonts have been another turning point. The OpenType format is compatible with operating systems like Macintosh, PC Windows and contains 65,536 glyphs and symbols in a single font (“Wells: Orthographic diacritics”, 2017).

In addition to these studies, Adobe InDesign was introduced to the market, the use of mislocalized diacritics in languages such as Czech, Polish and Hungarian has begun to decrease dramatically (Blažek, 2016, p.24-25).

When the enhancement process of written languages evaluated, it could be saying that the state of Hungarian is relatively better. However even today, prints that tilde or circumflex are used instead of hungarumlaut can be found (Kravjanszki, 2016, p. 55-56).

Although the use of font families supporting Latin-based languages have been increasing gradually, yet it has not been harmonized some Latin-based writing systems which belong to languages spoken by small communities.
Fig. 101- Combining Diacritical Marks of Unicode Character Table

<table>
<thead>
<tr>
<th>030</th>
<th>031</th>
<th>032</th>
<th>033</th>
<th>034</th>
<th>035</th>
<th>036</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0300</td>
<td>0310</td>
<td>0320</td>
<td>0330</td>
<td>0340</td>
<td>0350</td>
</tr>
<tr>
<td>1</td>
<td>0301</td>
<td>0311</td>
<td>0321</td>
<td>0331</td>
<td>0341</td>
<td>0351</td>
</tr>
<tr>
<td>2</td>
<td>0302</td>
<td>0312</td>
<td>0322</td>
<td>0332</td>
<td>0342</td>
<td>0352</td>
</tr>
<tr>
<td>3</td>
<td>0303</td>
<td>0313</td>
<td>0323</td>
<td>0333</td>
<td>0343</td>
<td>0353</td>
</tr>
<tr>
<td>4</td>
<td>0304</td>
<td>0314</td>
<td>0324</td>
<td>0334</td>
<td>0344</td>
<td>0354</td>
</tr>
<tr>
<td>5</td>
<td>0305</td>
<td>0315</td>
<td>0325</td>
<td>0335</td>
<td>0345</td>
<td>0355</td>
</tr>
<tr>
<td>6</td>
<td>0306</td>
<td>0316</td>
<td>0326</td>
<td>0336</td>
<td>0346</td>
<td>0356</td>
</tr>
<tr>
<td>7</td>
<td>0307</td>
<td>0317</td>
<td>0327</td>
<td>0337</td>
<td>0347</td>
<td>0357</td>
</tr>
<tr>
<td>8</td>
<td>0308</td>
<td>0318</td>
<td>0328</td>
<td>0338</td>
<td>0348</td>
<td>0358</td>
</tr>
<tr>
<td>9</td>
<td>0309</td>
<td>0319</td>
<td>0329</td>
<td>0339</td>
<td>0349</td>
<td>0359</td>
</tr>
<tr>
<td>A</td>
<td>030A</td>
<td>031A</td>
<td>032A</td>
<td>033A</td>
<td>034A</td>
<td>035A</td>
</tr>
<tr>
<td>B</td>
<td>030B</td>
<td>031B</td>
<td>032B</td>
<td>033B</td>
<td>034B</td>
<td>035B</td>
</tr>
<tr>
<td>C</td>
<td>030C</td>
<td>031C</td>
<td>032C</td>
<td>033C</td>
<td>034C</td>
<td>035C</td>
</tr>
<tr>
<td>D</td>
<td>030D</td>
<td>031D</td>
<td>032D</td>
<td>033D</td>
<td>034D</td>
<td>035D</td>
</tr>
<tr>
<td>E</td>
<td>030E</td>
<td>031E</td>
<td>032E</td>
<td>033E</td>
<td>034E</td>
<td>035E</td>
</tr>
<tr>
<td>F</td>
<td>030F</td>
<td>031F</td>
<td>032F</td>
<td>033F</td>
<td>034F</td>
<td>035F</td>
</tr>
</tbody>
</table>
3.3.2.
Freely Placed Diacritics:
Books About Lazes

When we examine the books that use Laz language, it is seen that different alphabets exist in almost every book. There is no unity and consistency due to the ‘discretionary diacritic usage’ and this is an obstacle for the people who are trying to learn the Lazoglu alphabet.

One common mistake in use is the usage of a caron diacritic instead of breve diacritic. In a large majority of books, lowercase k with vertical caron is used for the lowercase ‘k with breve’ (with reference to t’). Another rare application is to use double-letter combinations for the letters with breve. Furthermore, in some works, letters with breve have not existed.

Another common implement is to use the number ‘3’ instead of the Latin ezh. In most cases, the number 3 used, instead of the letter ezh, disproportionately shifted to the bottom of the baseline. In the texts, which the alphabet was used correctly and serif fonts were preferred, sans-serif has used only for the letter ezh. The improper usage of letter ezh causes kerning problems that might disturb the rhythm of writing.

The harmonized fonts were often used for printed books which have been published by the people who want to write with the Lazoglu alphabet. Because of these harmonized fonts were created by individuals who don’t have proper knowledge about creating a typeface, in the text, the lack of visual rhythm can be seen. In texts where serif fonts are used, the breve diacritic and the letter ezh have been used with sans serif. The breve diacritics of the capital letters have shifted towards the small letter next to them. Kerning problems are observed due to the incompatible letter form of the type style with the and incorrect positioned diacritics.
3.3.3. The Lazoglu in Times New Roman, Arial and Verdana

Before 2000’s, the only font that supports the Lazoglu alphabet had been Lazuri Athletic which is Times New Roman with ‘.ttf’ extension. The Lazuri Athletic was revised by Yavuz Yazici, who lived in Germany, with the proposal of Ismail Avci Bucaklisi. Yazici had revised the font by applying programs, such as Font Creator primarily, Adobe Photoshop and Adobe Flash, thus he had alleviated kerning based problems (Yazici, 2016).

After supporting the Lazoglu alphabet partially fonts such as Lazuri Athletic, Lazuri Times, Lazuli Megrelli, Lazuri Arial, Lazuri Verdana are harmonized by Yazici. After revising Lazuri Athletic typeface, Yazici harmonised Lazuri Athletic, Lazuri Times, Lazuli Megrelli, Lazuri Arial, Lazuri Verdana fonts. The fonts have been published in both .otf and .ttf extensions at www.lazuri.com and the installing and using the process of the fonts had been explained.

In the revised fonts the positioning of the letters on the keyboard had made according to the German keyboard layout. For instance, the letter ‘ö’, in the keyboards used in Turkey but not in the Laz language, is replaced by ‘c with cedilla and breve’, and the letter ‘ü’ is replaced by ‘k with acute’ or ‘k with caron’. Another misapplication is using the number 3 instead of the letter ezh. Furthermore, the letter ‘a’ has been replaced by the letter ‘z’. Such decisions concerning the assignment of letters on the keyboard have made it difficult for the Lazes living in Turkey to use the fonts.

Although it was prepared with reference from the Lazoglu alphabet, for all the fonts except Lazuri Megreli, have been used caron instead of breve diacritic. Despite this problem, Yazici and Bucaklisi stated that they have not argued over the breve-caron distinction with the linguists they have studied so far.
For all the fonts prepared, ‘lowercase k with acute’ is used in lieu of ‘lowercase k with breve’. All the fonts but the Lazuri Athletic have been arranged in regular, bold, italic and bold italic. The most crucial difference between Lazuri Athletic and Lazuri Times typefaces is the placement of diacritics. In Lazuri Athletic, carons are positioned closer to the letters.

For non-Unicode letters, Unicode values which are used for different letters, have been assigned. For instance, for the Latin letter small capital ezh with caron which is not in the Unicode character table, Latin small letter w with U+1D23 code is used. As a result, confusion emerged in cases where the index was required in printed publications.

![Fig. 108- The Lazuri Arial Regular, Italic, Bold, Bold Italic](#)

![Fig. 109- The Lazuri Megreli Regular, Italic, Bold, Bold Italic](#)
Fig. 110 - The Lazuri Athletic

Fig. 111 - The Lazuri Times New Roman Regular, Italic, Bold, Bold Italic

Fig. 112 - The Lazuri Verdana Regular, Italic, Bold, Bold Italic
3.3.4. Case Studies: Different Writing Systems and Unicode

When the Unicode character table is examined, it is observed that languages, which use different scripts and symbol groups, have existed. It is seen that besides the majority of languages used currently, scripts such as cuneiform and old Turkish, which are no longer used today, are all found on the system. Title of the ‘Symbols and Punctuation’ shows that wide-scale symbol groups including such as Ancient Greek Musical Notation, Braille Patterns, Emoticons have been supported (“Code Charts”, n.d.).

Some of the Archaic and Obsolete scripts that are no longer used and some of the languages that are used today cannot be supported by Unicode. The works concerning the scripts of Languages such as Rohingya Hanifi, Medefidrin, Nyiakeng Puachue Hmong, that still survive, have been maintained by Unicode Technical Committee (“As Yet Unsupported Scripts”, 2017). In addition, the letter ‘g with tilde’ in the Latin-based alphabet of Guaraní, the common official language of Paraguay, does not exist in the Unicode character table (“Guarani Language”, n.d.).

![Latin-based Guaraní alphabet](image-url)
Fig. 114- Ancient Greek Musical Notation in Unicode Character Chart

Fig. 115- Emoticons in Unicode Character Chart
4. Design Process
4.1. Focus Group and Usage Area

This project is named ‘Helimisi’ after the name of the Laz Poet Xasan Helimisi, who was also an author, poet, painter and musician and spent most part of his life in exile. The creativity of Helimisi, who had yielded products in different areas, has been taken as a reference for the typeface.

Because the rising generation plays an important role in an endangered language, type Helimisi is designed to be used in printed matters prepared for the schoolchildren who are learning the Lazoglu Alphabet. Therefore, individuals and institutions, who want to prepare printed matters such as educational materials and storybooks for this age group in Laz language, are designated as the target group.

The Helimisi typeface supports the Laz language, Turkish and English.

Fig. 116- Author, Poet, Painter and Musician Xasan Helimisi

Fig. 117- A drawing by Xasan Helimisi
4.2. Typography Classes and Early Sketches

The design process was developed in three parts.

In the first stage, we attended typography classes lectured by Joana Correia where it was given the basic framework with an emphasis on the anatomy of type and calligraphy in a first moment. After this, there was an introduction to the software GlyphsApp where one can translate the first drawings into digital form. The necessary information was obtained about GlyphsApp, which was executed the digital part of the project. The ‘Ubuntu’, which is one of the Google’s font, was harmonized into Laz language and the relation of the letters to the breve was evaluated.

In the second stage, sketches were made by examining Campton, Fugue, Mark and Future fonts. Although the letter experiments were primarily made in Adobe Illustrator, the sketching process on the proposal of project coordinator Joana Correia continued to be developed with hand sketches. In the first step of the sketching process, the concept references of the design were identified and focused on the lowercase ‘o’ and ‘single story a’. Using the word ‘adhesion’ as a first test word, three different sketches with different design choices were made. As a result of the interview with Project Coordinator Joana Correia, the alternative number was reduced to one.

The third part of the design process was the digitalization of the drawings. We used the scanned samples to have a basis to the digital design by using the software GlyphsApp.
Fig. 119, 120, 121, 122, 123, 124, 126, 127 - Early sketches of diacritics and lowercase letters alternatives, 2016-2017
The sketch process made it possible to get a better understanding of the importance of form and position of diacritics.

As a result of sketching process, it had been observed that the form of the diacritics can be caused legibility problems. For this reason, using radical forms was avoided for the form of diacritics.

Alternative diacritic sketches have shown us that, applying angular and rounded details together makes to differentiate between breve and caron diacritics difficult.

It had been observed that if the focal center of the diacritics, positioned below, doesn't apply with the proper angle, comma and cedilla diacritics can be confused. Additionally, shifting the focal center can be caused that the breve diacritic has been seeing like the tilde diacritic.

The end of the sketching process, it has been achieved that dots can shift to the letter next to the letter with diaeresis, if the gap between two dots is more than it is needed.
Fig. 128, 129- Sketch of an alternative design choice, 2017

Fig. 130, 131, 132- Sketch of an alternative design choice, 2017
Fig. 133, 134, 135, 136, 137, 138, 139, 140, 141 - Sketches for the Helimisi typeface, 2017
Fig. 142,143 - Sample word 'adhesion'
4.3.
The Harmonisation of Ubuntu into Lazoglu Alphabet

In order to be able to have a better understanding of how to use the diacritics in the digital support, it has been a useful exercise to add to an existing font with the Laz accented characters. In this step, we went through the Google Fonts library and found some typefaces where the Latin character ezh was already existing in the font. From this selection, we chose Ubuntu typeface to do this exercise.

This exercise was developed as follows:

1. Identification of non-Unicode letters on the program: Each added glyphs is automatically sorted under the heading of ‘other’. The names of the glyphs have manually been entered.

![Image of identification of non-Unicode letters on the program]
2. Calling the components of the letter selected: By using the ‘Add Component’ option, the components that composed the glyphs can be accessed.

![Image](image1.png)

Fig. 145, 146 - Calling the components of the letter selected

3. Template creation by adding anchors to letter ‘ç’ and breve diacritics: By using the ‘Add Anchor’ option, the diacritic have been positioned with the reference to the places marked on the letter and diacritic.

![Image](image2.png)

Fig. 147, 148 - Adding anchors to ccedilla and to the accent breve
4. Applying the template to all lowercase glyphs in the character set:
By choosing the letters that should have has diacritis, the breve accent has been called. The program automatically has placed the accents.

5. Manual correction of diacritic positions: Although the diacritic-addition process is technically completed, some of the diacritics on asymmetric letters such as ‘ç’ or ‘p’ need to be manually positioned.

6. Adaptation of specific glyphs combinations: Some glyphs combinations need adjustment to make the legibility better. In order to this problem caused by ‘lowercase t with breve’, the apex of the ‘lowercase t’ shortens to the crossbar level.
7. Comparison of lowercase ‘k’ alternatives: Since the asymmetric gap between the lowercase ‘k’ and the breve diacritics distorts the text balance, lowercase ‘k’ with breve alternatives have been developed and the ascender level of lowercase ‘k’ has been pulled down to the midline. However, this try might not be the best solution for all typefaces.

8. Applying breve diacritics to the uppercases: The same steps as in the lowercase have been applied in the uppercase letters.
4.4. Design Parameters of Helimisi Typeface

The characteristic features of the Laz people and the difficult geographical conditions in which they live have been used as a reference to provide contrast within the font. The design has low contrast so it performs well in the targeted sizes of 10-12 pts.

The font designed in a regular weight. The character set includes all uppercase and lowercase letters of the classical Latin alphabet, the non-Unicode Laz letters and also diacritics, numbers and punctuation marks. The x-height of this geometric font was determined so as to accommodate comfortable way with the height of the letters with breve.

Letter-diacritic compatibility has been taken into consideration as well as the form consistency. The characteristic contrast elements aim to provide overall visual integrity by using the letters in a balanced manner.
4.4.1. Metrics and Glyphs

Letterforms details determine the content of the message being transmitted and tips about the media to be used. Each typeface design which is structured on geometric or handwriting basis should be in harmony when the whole is considered. The decision of x-heigh level, descender and ascender height, the width of the character, counter spaces, crossbar placement and curve shape dramatically affect fonts overall feel, legibility and usefulness (Willen & Strals, 2009, p.97-100).

In the design process of Helimisi typeface, firstly the main characteristic structure of the typeface had been building on the lowercase ‘single story a’, ‘n’ and ‘o’. Afterward, glyphs have been grouped by taking into account the form repetitions. The letters had been grouped into stem and bowl, special cases, circular, stem and shoulder, and triangular.

![Fig. 154- Height anatomy of the Helimisi typeface](image1)

![Fig. 155- Lowercase letter groups](image2)

Circular: 
- abdgpq

Stem And Shoulder: 
- ceo

Special Cases: 
- hlijnmru

Triangular: 
- fstz3

Stem And Bowl: 
- kvwxy
Metrics of Helimisi typeface:
- Ascender: 726
- Cap-height: 700
- X-high: 500
- Descender: -230

Fig. 156 - The main structure of the typeface

Fig. 157 - Thickness of the reference letters
**Fig. 158** - Style detail in the junction of the round with the vertical stem.

**Fig. 159** - The lowercase single story ‘a’ as a reference.
Since capital letters have a more rigid structure, they offer less scope for imagination and differentiation (Henestrosa, Meseguer & Scaglione, 2017, p. 43). After the lowercase and uppercase letters were finished by the form consistency was kept, the rest of the character set was developed such as the numbers, symbols and punctuation.
Fig. 161: The lowercase letters in Helimisi Typeface
Fig. 162 - The harmonized numbers in width and weight with the rest of the character set.
Fig. 163- Punctuation Marks
4.4.2. 
Diacritics in Helimisi Typeface

There are two diacritics in the Lazoglu alphabet; breve and cedilla. The dieresis and dot diacritics are also designed so that the font can support Turkish. Dieresis and dot diacritics are designed by considering variables such as asymmetry, width harmony, vertical spacing references. Since the contrast between the thick and thin strokes has been kept to the minimum, the glyphs have been designed in relation to the basic letterforms.

The position of the diacritics has been chosen at certain levels so the harmony of the text has not disturbed. When the distance between the glyphs and the diacritics is not been as wide as necessary, misinterpretation of words and reducing legibility may cause (“Diacritics Project @ Typo.cz”, n.d.).

Fig. 164- Uppercase and lowercase letters with breve

Fig. 165- Sketches for the letter c with cedilla

Fig.166- Alternative breves in sketches
Breve:

Breve diacritic has been applied to the letters ‘ç’, ‘g’, ‘k’, ‘p’, ‘t’, ‘z’, ‘ʒ’. As Feurstein (2016), the creator of the Lazoglu alphabet, has been stated, the diacritic ‘breve’ should be in a slightly flattened form.

Anchors are positioned on the top of the optical center of the letters. The ideal solution of the diacritic positioning problem of asymmetric lowercases is to position it relative to the optical center of the letter, as in capitals. It has been found appropriate to change the forms of lowercase ‘t’ and ‘k’ because the apex of the ‘t’ and ascender of ‘k’ are overlapping with the breve diacritic.

As a result, the vertical position of the breve can be kept on the same level by means of the apex of the lowercase t was pulled to the crossbar level. As an alternative lowercase ‘k with breve’, the same solution approach has been applied for the ascender of the lowercase ‘k’.

Despite the existence of similar problems with usage of the caron accent in Eastern European languages, the problem of legibility has been minimized through the alternative vertical caron (Blažek, 2016, p. 29-31). However, since vertical breve does not have any other option, it has been decided to change the letterforms.
Dot:

Since dot diacritic has been used with the letter “i”, which is a symmetrical letter, thus diacritic has been visually centered. This accent has been also existing on the lowercase ‘j’. The dot accent, which can be designed in different shapes, has been using as a symmetrical dot on the Helimishi typeface.

Dieresis:

Dieresis diacritic, being one of the other accents, is a combination of two dots placed at the same height. Dieresis has been centered above the letters ‘ö’ and ‘ü’ which exist in Turkish.

Cedilla:

Cedilla accent, which can be designed in various forms according to design dynamics, touches the glyphs that it belongs to in general. The most common use is the number five-like shape which touches below of the glyphs. (“Diacritics Project @ Typo.cz”, n.d.). But the cedilla that used the Helimisi typeface is a more geometric form and does not touch the base glyphs.
4.4.3.
Spacing

The horizontal gaps between two individual glyphs in a well-designed typeface are as important as the letters themselves. Each letter should be designed by considering the black and white fields in the composition. Positive and negative areas which surround glyphs provide visual rhythm in the text (Cheng, 2005, p. 218). The right side and left side of each character called sidebearings play a key role for the legibility (Henestrosa, Mesenguer & Scaglione, 2017, p. 79).

If the sidebearings between the letters would be mathematically equal, the distance between the rounded letters and the letters which have vertical strokes would appear quite wide. Owing to the fact that the triangular spaces at the edges of rounded letters show more volume, the sidebearings of the rounded letters need to be rearranged. In this project, the principles of Walter Tracy’s ‘The Letters of Credit’ had been used for determining the sidebearings. (Henestrosa, Mesenguer & Scaglione, 2017, p. 82).

In the first phase of the spacing process, the left and right sidebearing values of lowercase ‘n’ are determined. By using glyphs combinations, such as ‘nnnnoo’, the sidebearings of the ‘o’ are determined.
Primarily, spacing groups are formed with reference of lowercase 'n' and 'o'. Then, left sidebearing of the lowercase 'n' is applied to 'f', 'n', 'r', 'k', 'l', 'm', 'p', 'r', 'u' and right sidebearing of the 'n' is applied to 'd', 'h', 'i', 'l', 'm', 'q', 'u'. The left sidebearing of lowercase 'o' is used as a reference for 'single story a', 'c', 'd', 'e', 'q' and the right sidebearing of 'o' is used for 'b', 'q'. A value is assigned between straight and curved stroke thicknesses for diagonal letters 'k', 'v', 'w', 'x', 'y'. Irregular letters such as 'j', 's' and 'z' are positioned in the manner to harmonize to other lowerscases. Consequently, singly determined sidebearings of the letters are revised in between the glyphs combination of 'n' and 'o' again.

**Left sidebearing of 'o':** a (single story), c, d, e, q  
**Right sidebearing of 'o':** b, q  
**Left sidebearing of 'n':** i, k, l, m, p, r, u, b, h  
**Right sidebearing of 'n':** a, d, h, i, l, m, q, u

As the sidebearings of uppercases are adjusted, the left sidebearing of 'H' is used as a reference for 'B', 'D', 'E', 'F', 'I', 'K', 'L', 'P', 'R' and 'U'. The right sidebearing of 'H' is used as a reference for 'I' and 'J'. In rounded capital letters, capital 'O' is taken as a reference for the left sidebearing of 'C', 'G', 'Q' and the right sidebearing of 'O' is used for 'D' (Jamra, 2004, p.4). Value of the letter without diacritic is used to adjust the value of sidebearings of the letter with diacritics. Then each letter is rearranged in the glyph combinations such as 'HHOOOH'.

**Left sidebearing of 'H':** B, D, E, F, I, K, L, M, N, P, R  
**Right sidebearing of 'H':** I, J, M, N  
**Left sidebearing of 'O':** C, G, Q  
**Right sidebearing of 'O':** D, Q

Since type design is not a linear process, the values of sidebearings of the letter are rearranged in the text. During this process, the arithmetic parameters are adjusted according to the educated eye of designer.
4.4.4. Kerning

The correct identification of sidebearings does not mean that inter-character spaces, especially in some letter combinations, are perfect. For instance, when the uppercase 'A' and 'V' are used side by side without kerning, legibility problems will occur if the spacing between letters is too large. Hence, it may be necessary to position them closer to one another, according to the spacing that the letterforms when they come together. Kerning means that the gaps between double character combinations. Especially in some letter combinations should be manually arranged. (Henestrosa, Mesenguer & Scaglione, 2017, p. 88-89)

In the first step of kerning setting, glyphs are divided into kerning groups just like on the sidebearings. Thus, the changes, made in the combination of the reference letters with the other letters, are automatically applied to other letters in the kerning groups.
To illustrate this point, the lowercase kerning values have been used for ‘ç’ and ‘ç with breve’ and the same kerning settings are preserved in combinations of letters such as ‘Tc’, ‘Yc’, ‘Vc’.

Fig. 180- Applying the same kerning values of lowercase ‘ç’, ‘ç with cedilla and ç with cedilla and breve’.

In the second step, the gaps between letter combinations such as ‘AV’, ‘AT’, ‘AU’, ‘To’, ‘Vn’, ‘Xv’ were corrected. In the third phase, other glyphs combinations were evaluated by using the sample texts.

For the values of diagonal letters such as ‘k’, ‘v’, ‘w’, ‘x’, ‘y’, ‘a’ are assigned between straight and curved stroke thicknesses. Irregular letters such as ‘j’, ‘s’, and ‘z’ are positioned to provide rhythm to other lowercases (Jamra, 2004, p.3). Consequently, the sidebearings of the letters were relocated one by one with the reference of lowercase ‘n’ and ‘o’ combination.

In the final step of the work, the outputs of the sample texts were taken and it was checked whether visual equilibrium could be established. After this testing, some revisions had been applied to the design.
Takalar geçiyor allı yeşilli
Takalar geçiyor dümenleri Lazlı
Takalar geçiyor en nazlı
Yelkenlilerden de güzel

Takalar geçiyor allı yeşilli
Takalar geçiyor dümenleri Lazlı
Takalar geçiyor en nazlı
Yelkenlilerden de güzel

Takalar geçiyor allı yeşilli
Takalar geçiyor dümenleri Lazlı
Takalar geçiyor en nazlı
Yelkenlilerden de güzel

Takalar geçiyor allı yeşilli
Takalar geçiyor dümenleri Lazlı
Takalar geçiyor en nazlı
Yelkenlilerden de güzel

Fig. 181- Sample text in Turkish (20pt, 17pt, 14pt, 12pt, 8pt)
Yeviseli kodolopti poṭliḳas,
Xoṗe kebzdi kogepxedì feluḳas.
Ar xlipi ačkva ḋapeti xliṕī,
İхи kextu aği zoğati inḳans

Fig. 182- Sample text in Laz language (20pt, 17pt, 14pt, 12pt, 8pt)
Conclusion

In the first part of the research made, we worked through the historical evolution of the Latin-based Laz alphabets and analyzed various applications and the existing literary sources of the Laz language. To understand the basic problems of the typefaces caused by typography and harmonization into the Laz language, we examined these problems from the users’ point of view.

In the second stage, the handwriting samples were analyzed and it has seen that the breve diacritic can be represented in different forms such as caron and macron. The most common way of writing shows the more rounded version of the breve as the correct accent.

The problems we found in the handwriting samples are similar to the ones we found in the printed matters. In typography samples, the chose of diacritic used is more problematic. For this reason, to understand the typography based problems better, the harmonized fonts in Lazoglu alphabet are worked through. The most common issues that we recognized in the analyzed sources were the breve diacritic shape and its positioning, and the use of the number ‘3’ instead of Latin letter Ezh.

After that, we decided to do an exercise using ‘Ubuntu typeface’ which is a free Google font, to understand how the diacritics work in the digital font and how to harmonize that with the Lazoglu alphabet.
The design process has included the early sketches done by hand that later were digitalized into the font software for further development resulting in the font. As a result of this project, our conclusion would be to reach the Unicode Consortium for a better representation of the Laz language and this should be the result of the collaborative work between linguists and designers.
Bibliography

Book


De Saussure, F. Genel Dilbilim Dersleri. Istanbul: Multilingual.


Blog


Dissertation


Mello Vargas, F. (2007). Approaches To Apply Spacing Methods In Serifed And Sans Serif Typeface Designs (Master). The University Of Reading.


E-Book / Pdf


Latif, K. Azarbaycan’da Dil Siyaseti: Alfabə Ve İmla Meseleleri Tarləhəndən (P. 284).


Email


Yazıcı, Y. (2016)
Chapter Of An Edited Book


List of Figures


Fig. 02 - A Kültepe (Karum Kanesh) Cuneiform tablet, Period: Middle Bronze Age, Old Assyrian Trading Colony, Anatolia, Reprinted from List of Art Collection, In The Metropolitan Museum of Art, n.d., Retrieved from https://www.metmuseum.org/art/collection/search/325857

Fig. 03 - William Caslon's Specimen sheet, 1734, Retrieved from https://nl.wikipedia.org/wiki/Lettertype#/media/File:A_Specimen_by_William_Caslon.jpg

Fig. 04 - Laz gentleman in traditional costume, Reprinted from the personal collection of İrfan Çağatay Aleksiva.

Fig. 05 - A map in Arabic and Latin script showing the coastline where most of the Laz people lived.

Fig. 06 - The first Lazian newspaper in Turkey: The Ağani Muruḫxi, Retrieved from http://www.lazca.org/lazca/244-lazca-gazete-agani-muruntsxii-cikti.html#.Wrl43pPwZo4

Fig. 07 - Covers of the Ogni:Skani Nena journal, Retrieved from http://www.kolkhoba.org/teksti24.htm

Fig. 08 - A Megrelian newspaper, 1933. Reprinted from the personal collection of MehmedAli Baris Besli.

Fig. 09 - Lazes from Atina. Reprinted from Lazistan’a Yolculuk (p. 40), by Nikolay Marr, 2016, Istanbul: Aras.

Fig. 10 - The Megrelian Alphabet, Retrieved from https://www.omniglot.com/writing/mingrelian.htm


Fig. 16 - The bussines cart of Gümüsyazici. Reprinted from the personal collection of Z. Özüm Asilkazancı Ak

Fig. 17 - Turkish handwriting written in Arabic script and Turkish handwriting written in Latin script. Reprinted from the personal collection of Z. Özüm Asilkazancı Ak

Fig. 18 - Arabic text written in Arabic script (tesbihat). Reprinted from the personal collection of Z. Özüm Asilkazancı Ak

Fig. 19 - Ali Pasha from Çürüksu with Georgian and Laz Bashi-bazouks (irregular soldiers). Photo by Abdullah Frères, 1865, Retrieved from http://www.canopiaitinerarios.com/autor/abdullah-freres/CNP5067

Fig. 20 - The Laz Grammar and Text book written by Nikolay Marr, 1910

Fig. 21 - The Laz Grammar and Text book written by Nikolay Marr, 1910
Fig. 22 - The Laz Grammar and Text book written by Nikolay Marr, 1910

Fig. 23 - The Laz Grammar and Text book written by Nikolay Marr, 1910

Fig. 24 - The Laz Grammar and Text book written by Nikolay Marr, 1910

Fig. 25 - Nikolay Marr (1865-1934), Retrieved from http://dspace.nplg.gov.ge/bitstream/1234/6907/1/NikolayMarr.jpg

Fig. 26 - The Unified New Turkish Alphabet which was accepted by all Soviet Turks after 1927, Reprinted from Türk Yazı Devrimi (p.423), by Bilal Simsir, 2008, Ankara: Türk Tarih Kurumu

Fig. 27 - The second issue of the Isik Yolu newspaper, which was published in Tbilisi. Both Arabic script and Latin script were used in the newspaper written in Azerbaijani Turkish. March 1924, Reprinted from Türk Yazı Devrimi (p.420), by Bilal Simsir, 2008, Ankara: Türk Tarih Kurumu

Fig. 28 - The second page of the Isik Yolu newspaper, 1924, 1924. Reprinted from Türk Yazı Devrimi (p.421), by Bilal Simsir, 2008, Ankara: Türk Tarih Kurumu

Fig. 29 - The document, dated 6 September 1928, which was taken months before the acceptance of the Turkish alphabet, using the Latin script by the Prague embassy. Reprinted from Türk Yazı Devrimi (p.376), by Bilal Simsir, 2008, Ankara: Türk Tarih Kurumu

Fig. 30 - The Turkish alphabet that was started to be used after the letter revolution, 1928, Retrieved from https://belgelerlegercektarih.files.wordpress.com/2014/08/harf-inkilabi-harf-devrimi-yazi-devrimi-atate3bcrcr-harf-inkilabi-harf-inkilabi-okuma-yazma-oranlari-osmanlida-okuma-yazma-oranlari.jpg

Fig. 31 - Mustafa Kemal Atatürt personally explains how the letters should be pronounced, 1928, Retrieved from https://www.hukukhaber.com.tr/istanbul-borosundan-24-kasim-ogretmenler-gunu-aciklamasi-225687.html

Fig. 32 - Cover of the Turkish National Anthem brochure, 1926. Reprinted from Türk Yazı Devrimi (p.370), by Bilal Simsir, 2008, Ankara: Türk Tarih Kurumu

Fig. 33 - Last page of the Turkish National Anthem brochure, 1926. Reprinted from Türk Yazı Devrimi (p.371), by Bilal Simsir, 2008, Ankara: Türk Tarih Kurumu

Fig. 34 - Creator of the first Latin-based Laz alphabet: İskender Chitasi, Retrieved from https://tr.wikipedia.org/wiki/%C4%B0skender_Chita%C5%9Fi#/media/File:Iskender_Chitashi_1930.jpg

Fig. 35 - The cabinet decree by the Ministry of Board of Turkey with the signature of M. Kemal Atatürk concerning the prohibition of entry of Mcita Murutsxi into Turkey. Retrieved from http://lazoba.blogspot.pt/2015/03/iskender-chitasi.html

Fig. 36 - The alphabet used for the Mçita Muruşxi, Retrieved from https://tr.wikipedia.org/wiki/%C4%B0skender_Chita%C5%9Fi#/media/File:Erly_laz_alphabet.JPG

Fig. 37 - The first Lazian newspaper: Mçita Muruşxi, November 1929. Reprinted from the personal collection of İrfan Çağatay Aleksiva.

Fig. 38 - Second page of the Mçita Muruşxi, November 1929. Reprinted from the personal collection of İrfan Çağatay Aleksiva.

Fig. 39 - The book cover of the Çquni Çhara: Albonisi Supara, 1932, Retrieved from http://www.kolkhoba.org/turha829.htm
Fig. 40 - The court minutes in which the death sentence of Chitasi is stated. Retrieved from https://www.wikisosyalizm.org/%C4%B0skender_Chit%C5%9Fi

Fig. 41 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 20-21), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 42 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 22-23), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 43 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 24-25), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 44 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 26-27), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 45 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 28-29), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 46 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 36-37), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 47 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 38-39), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 48 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 52-53), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 49 - Pages from the Çquni Çhara: Albonisi Supara, 1932. Reprinted from Çquni Çhara: Albonisi Supara (pp. 76-77), 2012, İstanbul: Laz Kültür Derneği Yayınları.

Fig. 50 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 51 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 52 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 53 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 54 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 55 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 56 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 57 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 58 - The cover and pages of the Alboni, 1935, Retrieved from http://apsnyteka.org/file/Chitasi_I_Alboni_1935_the_Laz.pdf

Fig. 59 - A Page from the Parpali booklet used Wolfgang Feurstein and Fahri Lazoglu eke-name, 1984. Retrieved from the Parpali: Lazuri Alfabe
Fig. 60 - The Laz alphabets with transcription and equivalent of IPA (The International Phonetic Alphabet)

Fig. 61 - The cover of the Parpali booklet, 1984.

Fig. 62 - The Lazoglu alphabet in the Parpali booklet, 1984

Fig. 63 - The Bedirxan Alphabet, Retrieved from https://omniglot.com/writing/kurdish.htm

Fig. 64 - The Kojima alphabet in text. Retrieved from http://ayla7.free.fr/laz/

Fig. 65 - The cover of the Lazuri Alboni published by Lazika Yayin Kollekti, 2011. Reprinted from Lazuri Alboni (pp. 6-7), by Ismail Bucaklisi, 2011, Istanbul: Lazika Yayin Kollekti

Fig. 66 - The pages from the Lazuri Alboni, 2011. Reprinted from Lazuri Alboni (pp. 6-7), by Ismail Bucaklisi, 2011, Istanbul: Lazika Yayin Kollekti

Fig. 67 - The pages from the Lazuri Alboni, 2011. Reprinted from Lazuri Alboni (pp. 20–21), 2011, by Ismail Bucaklisi, Istanbul: Lazika Yayin Kollekti

Fig. 68 - The pages from the Lazuri Alboni, 2011. Reprinted from Lazuri Alboni (pp. 30-31), by Ismail Bucaklisi, 2011, Istanbul: Lazika Yayin Kollekti

Fig. 69 - The pages from the Lazuri Alboni, 2011. Reprinted from Lazuri Alboni (pp. 50-51), by Ismail Bucaklisi, 2011, Istanbul: Lazika Yayin Kollekti

Fig. 70 - The pages from the Lazuri Alboni published by Lazika Yayin Kollekti, 2015. Reprinted from Lazuri Alboni (pp. 8-9), by Ismail Bucaklisi, 2015, Istanbul: Lazika Yayin Kollekti

Fig. 71 - The pages from the Lazuri Alboni published by Lazika Yayin Kollekti, 2015. Reprinted from Lazuri Alboni (pp. 18-19), by Ismail Bucaklisi, 2015, Istanbul: Lazika Yayin Kollekti

Fig. 72 - The pages from the Lazuri Alboni published by Lazika Yayin Kollekti, 2015. Reprinted from Lazuri Alboni (pp. 28-28), by Ismail Bucaklisi, 2015, Istanbul: Lazika Yayin Kollekti

Fig. 73 - The pages from the Lazuri Alboni published by Lazika Yayin Kollekti, 2015. Reprinted from Lazuri Alboni, (pp. 48-49), by Ismail Bucaklisi, 2015, Istanbul: Lazika Yayin Kollekti

Fig. 74 - The cover of 'the Lazuri Alboni', 2015. Reprinted from Lazuri Alboni, by Ismail Bucaklisi, 2015, Istanbul: Lazika Yayin Kollekti

Fig. 75 - The alternative alphabet revised by İrfan Çağatay Aleksiva, 2010

Fig. 76 - An edition of the Kralice Bible influenced the later development of the Czech language, published by Protestant Unitas Fratrum, 1596, Retrieved from https://www.gla.ac.uk/myglasgow/specialcollections/teachingandlearningmaterial/slavonicresourcesinspecialcollections/

Fig. 77 - Jan Hus (1369-1415), Retrieved from https://www.magnoliabox.com/products/jan-hus-kw3116319

Fig. 78 - The Old Church Slavonic Glagolitic Alphabet, Retrieved from https://tied.verbix.com/project/script/gl_ocs.gif

Fig. 79 - The publication of the first edition of Academic Orthography (Magyar helyesírás’ és szóragasztás’ főbb szabályai), 1832, Retrieved from https://www.darabant.com/hu/gyorsarveres/279/kategoriak'‘Festmeny-mutargy-

Fig. 80 - Acute, caron and breve diacritics


Fig. 82 - The Brochure distributed by the Ministry of National Education in 1928 to teach new Turkish letters to civil servants. As with all other letters and diacritics, the characteristics of the letter g with breve are also defined. Reprinted from Türk Yazı Devrimi (p. 393), by Bilal Simsir, 2008, Ankara: Türk Tarih Kurumu

Fig. 83 - Handwriting samples for uppercase and lowercase letters with breve

Fig. 84 - Non-Unicode letters and word combinations

Fig. 85 - Non-Unicode letters and word combinations

Fig. 86 - Non-Unicode letters and word combinations

Fig. 87 - Non-Unicode letters and word combinations

Fig. 88 - Non-Unicode letters and word combinations

Fig. 89 - Non-Unicode letters and word combinations

Fig. 90 - Non-Unicode letters and word combinations

Fig. 91 - Non-Unicode letters and word combinations

Fig. 92 - Non-Unicode letters and word combinations

Fig. 93 - Non-Unicode letters and word combinations

Fig. 94 - Non-Unicode letters and word combinations

Fig. 95 - Non-Unicode letters and word combinations

Fig. 96 - Handwriting text samples

Fig. 97 - Handwriting text samples

Fig. 98 - Unicode-compliant Andika font designed by SIL International, Retrieved from http://software.sil.org/andika/design/

Fig. 99 - Misuse of breve diacritic. The sample text from the Ogni Magazine which the diacritics are manually added later on.

Fig. 100 - The sample text from the Ogni Magazine which the diacritics are manually added later on.

Fig. 101 - Combining Diacritical Marks of Unicode 75 Character Table, Retrieved from https://www.unicode.org/charts/PDF/U0300.pdf

Fig. 102 - Usage of caron

Fig. 103 - Usage of lowercase ‘k’ with vertical caron

Fig. 104 - Usage of number 3 instead of Latin Ezh

Fig. 105 - Sans-serif Ezh shifted to the bottom of the baseline

Fig. 106 - Usage of breve with different heights

Fig. 107 - Shifted breves towards the letters next to them.

Fig. 108 - The Lazuri Arial Regular, Italic, Bold, Bold Italic
Fig. 109- The Lazuri Megreli Regular, Italic, Bold, Bold Italic

Fig. 110- The Lazuri ATHLETIC

Fig. 112- The Lazuri Verdana Regular, Italic, Bold, Bold Italic

Fig. 113- Latin-based Guaraní alphabet, Retrieved from https://www.omniglot.com/writing/guarani.htm

Fig. 114- Ancient Greek Musical Notation in Unicode 81 Character Chart, Retrieved from https://unicode.org/charts/PDF/U1D200.pdf

Fig. 115- Emoticons in Unicode Character Chart, Retrieved from http://unicode.org/charts/PDF/U1F600.pdf

Fig. 116- Author, poet, painter and musician Xasan Helimisi. Reprinted from personal archive of İrfan Çağatay Aleksiva

Fig. 117- A drawing by Xasan Helimisi, Retrieved from http://armuri.4forum.biz/t588-hasan-helimisi-hasan-helimisi

Fig. 118- Digitalisation: Variation of the single story a with different design choices for the Helimisi typeface.

Fig. 119- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 120- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 121- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 122- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 123- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 124- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 125- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 126- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 127- Early sketches of diacritics and lowercase letters alternatives, 2016-2017

Fig. 128- Sketch of an alternative design choice, 2017

Fig. 129- Sketch of an alternative design choice, 2017

Fig. 130- Sketch of an alternative design choice, 2017

Fig. 131- Sketch of an alternative design choice, 2017

Fig. 132- Sketch of an alternative design choice, 2017

Fig. 133- Sketches for Helimisi typeface, 2017

Fig. 134- Sketches for Helimisi typeface, 2017

Fig. 135- Sketches for Helimisi typeface, 2017

Fig. 136- Sketches for Helimisi typeface, 2017

Fig. 137- Sketches for Helimisi typeface, 2017

Fig. 138- Sketches for Helimisi typeface, 2017

Fig. 139- Sketches for Helimisi typeface, 2017

Fig. 140- Sketches for Helimisi typeface, 2017

Fig. 141- Sketches for Helimisi typeface, 2017
Fig. 142 - Sample word ‘adhesion’, 2017

Fig. 143 - Sample word ‘adhesion’, 2017

Fig. 144 - Identification of non-Unicode letters on the program

Fig. 145 - Calling the components of the letter selected

Fig. 146 - Calling the components of the letter selected

Fig. 147 - Adding anchors to c with cedilla and to the accent breve

Fig. 148 - Adding anchors to c with cedilla and to the accent breve

Fig. 149 - The application to all lowercase glyphs in the character set

Fig. 150 - Manual correction of diacritic positioning

Fig. 151 - Adaptation of specific shapes

Fig. 152 - Comparison of lowercase ‘k’ alternatives

Fig. 153 - The application of the breve in the uppercase

Fig. 154 - Height anatomy of Helimisi typeface

Fig. 155 - Lowercase letter groups, Retrieved from ‘Approaches to applying spacing methods in seriffed and sans-serif typeface designs (Master)’, by Fernando de Mello Vargas, 2007, Berkshire: The University Of Reading.

Fig. 156 - The main structure of the typeface

Fig. 157 - Thickness of the referance letters

Fig. 158 - Style detail in the junction of the round with the vertical stem.

Fig. 159 - The lowercase single story ‘a’ as a reference.

Fig. 160 - In the lowercase we can see the details have been applied with consistency in all letters

Fig. 161 - In the lowercase we can see the details have been applied with consistency in all letters.

Fig. 162 - The numbers are geometric in its shapes, they are harmonised in width and weight with the rest of the character set.

Fig. 163 - Example of the punctuation

Fig. 164 - Uppercase and lowercase letters with breve

Fig. 165 - Sketches for the letter c with cedilla

Fig. 166 - Alternative breves in sketches

Fig. 167 - Breve alternatives for Helimisi typeface

Fig. 168 - Uppercase and lowercase ‘k’ with breve

Fig. 169 - Overlapped breve and apex of the lowercase ‘t’

Fig. 170 - Lowercase ‘k’ with breve alternatives

Fig. 171 - Pulled down stem of the lowercase ‘t’

Fig. 172 - Centered dot diacritic with ‘ı’, ‘ı’ and ‘j’

Fig. 173 - Letter ‘O’ and ‘U’ with diacritic

Fig. 174 - Cedilla alternatives
Fig. 175- Uppercase and lowercase ‘c with cedilla’

Fig. 176- Proposed compensation so that spaces are perceived as equivalent

Fig. 177- Lowercase glyphs are judged between the control characters ‘o’ and ‘n’

Fig. 178- Uppercase glyphs are judged between the control characters ‘H’ and ‘O’

Fig. 179- Kerning applied ‘AV’ and ‘Av’ letter combinations

Fig. 180- The same kerning values of lowercase ‘c’, ‘c with cedilla’ and ‘c with cedilla and breve’

Fig. 181- Sample text in Turkish (20pt, 17pt, 14pt, 12pt, 8pt)

Fig. 182- Sample text in Laz language (20pt, 17pt, 14pt, 12pt, 8pt)