

# Abstract

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This is a sociophonetic study on the Barese variety and the Barese language, which are spoken in the city of Bari in Italy, and their use among high school students and their teachers. The phonetic data was gathered through recorded wordlist readings and interviews carried out with 12 high school students from different classes and 5 adults for an apparent-time comparison. The formant values extracted were then processed and plotted utilizing the Python and R programming languages. The consequent description of the Barese variety's vowel repertoire will be presented, which will confirm the mid-back vowel merger of [o] and [ɔ], and show the possibility of a mid-front vowel merger of [e] and [ɛ]. The phonetic analysis will also deal with the presence and environment boundaries of [ə]. The phenomena pertaining consonants examined are the devoicing of [z] in VCV position, the possible devoicing of [ptk] after nasals and the deaffrication of [ts] after nasal and lateral consonants. On the other hand, the sociolinguistic data was acquired by means of a questionnaire given to 97 students from the same school. The results were parsed in Python and plotted through the Matplotlib library, dividing the data according to different criteria such as gender and social class. The results show a general negative attitude towards the Barese language, which does not seem to be recognized as a language by almost 40% of the informants, even though it seems to be extensively used by students. Moreover, the answers to the questionnaire indicate that the Barese language is used as a mean to integration for foreign students and that teacher use it in their classes in different contexts and for different purposes. Finally, this thesis will also introduce the notion “interlect”, and how it applies to bilingual or biletal speakers of dialects and varieties when they speak in the target standard variety.

# Abstract

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Questo è uno studio sociofonetico sulla varietà barese e la lingua barese ed il loro uso tra gli studenti di scuola superiore ed i loro insegnanti. I dati fonetici sono stati raccolti attraverso letture di liste di parole registrate ed interviste fatte con 12 studenti di diverse classi e 5 adulti, questi ultimi usati per un confronto in tempo apparente. I valori delle formanti estratti sono stati successivamente elaborati e tracciati utilizzando i linguaggi di programmazione R e Python. Le descrizioni che ne conseguono del repertorio vocalico della varietà barese saranno presentate confermando il merger delle vocali posteriori medie [o] e [ɔ] e mostrando la possibilità di un merger delle vocali anteriori medie [e] ed [ɛ]. L'analisi fonetica tratterà anche la presenza e boundaries di [ə]. I fenomeni analizzati che riguardano le consonanti sono la desonorizzazione di [z] in contesto VCV, la possibile desonorizzazione di [ptk] dopo le nasalì e la deaffricazione di [ts] dopo le consonanti nasalì e laterali. Invece, i dati sociolinguistici sono stati ottenuti tramite un questionario dato a 97 studenti della stessa scuola. I risultati sono stati analizzati in Python e rappresentati su grafici tramite la libreria Matplotlib, raggruppando i dati secondo diversi criteri, come gender e classe sociale. I risultati mostrano un'attitudine negativa verso la lingua barese, che non sembra essere riconosciuta come lingua da quasi il 40% degli informanti, anche se sembra che sia usato estensivamente dagli studenti. Inoltre, le risposte ai questionari indicano che la lingua barese sia utilizzata come mezzo di integrazione per gli studenti stranieri e che gli insegnanti lo utilizzano nelle loro lezioni in diversi contesti e per diversi scopi. Infine, questa tesi introdurrà la nozione di “interlect” e come si applica ai parlanti bilingue o bilectal di dialetti e varietà quando comunicano nella varietà standard target.

## Acknowledgments

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I would like to thank that brave fish-amphibian-like creature that decided to get outside of the water about 400 million years ago and allowed me to be here today to discuss of the most microscopic shifts in human utterances.

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# Chapter 1

## Introduction

In the face of the ever-growing number of endangered languages in the world, with cultures, subcultures and history being lost forever, an effort must be made to preserve all those languages and varieties which are not protected or well documented. It is in the interest of every linguist to gather and collect concrete data that can help revitalize what may be lost or what is being lost. In Italy there are 30 endangered languages according to UNESCO, but the reality is that in Italy, like in many other European countries, there are hundreds of dialects, which are language systems on their own and they are not recognized as languages by the government or the public. As it will be shown, this results in stigmatization and in the restricted use of the language, which may lead to language loss and death. Although most dialects have societies and institutions founded to protect them, like the “Accademia della Lingua Barese” in Bari, phonetic data and analysis is scarce compared to the impressive number of dialects present in the country, this is why it should be imperative to have at least an accurate phonetic description based on quantitative and physical data of every dialect. Literature, transcripts and phonetic annotations can help preserve the language up to a certain point, once there are no speakers left and the sound of a language is lost, it is lost forever.

This thesis is the result of more than one year of research, study and fieldwork in the city of Bari in Italy. A lot of effort and time has been spent in order to: gather data on the Barese variety spoken by teenager in a high school and by adults, design speaking tasks and questionnaires to elicit the phonetic tokens and social identity evidence needed, elaborate and analyze the data from different points of view using multiple soft-wares and programming languages, and finally draw a preliminary phonetic and phonological description which can be accurate and reliable, while also providing the sociological background and sociolinguistic framework necessary to determine the status of the Barese variety and the Barese dialect.

Henceforth “Barese variety” will indicate the Italian variety spoken in the city of Bari which allows intelligibility between the local population and the rest of the Italian speakers in the country. While “Barese dialect” or “Barese language” will refer to the local language which does not enable intelligibility with monolingual “Standard Italian” speakers or speakers from outside the Barese variety isogloss. The Barese variety is characterized by phonetic, syntactic and lexical differences from “Standard Italian” and it will be the main focus of this research, even though results from a lexical task as well as bibliography references to the Barese dialect will be present.

The next chapter will give a description of the geographical and political landscape of Bari and the Apulia region. It will also provide an historical background and the main events in the history of Italy and Bari that can have had an impact on the local varieties and languages, from the 7th century B.C. to nowadays passing through the kingdom of Frederick II and the fascist “Italianization” period. This chapter will then provide the historical precedents that can partially explain the stigmatization of specific dialects and the current negative attitude that everyday speakers, but also the ones with an education focused on foreign languages, have towards the Barese language.

The methodology will be extensively explained in Chapters 3 and 4, the very specific steps that will be found are not only there to be up to academic standards, but also to allow future researchers or people interested in the dialect to learn what is needed and what steps should be taken in order to do a similar analysis or improve this one. It will be explained how the interviews and the language tasks were planned, how the data was extracted and by which means, giving also a general guidance on the use of different softwares and programming languages that allow to analyze the data from different perspectives and reliably. Unfortunately, there are no courses in phonetics, experimental phonetics or computational linguistics that I know of in the city of Bari and at the university of Bari. As a consequence, pessimism, lack of guidance or any practical help can discourage whoever would like to make a meaningful contribution to the field to even start gathering data or it could make the researcher feel lost and unsure on the steps which should be taken. This is why in Chapter 4 the processing of data will include snippets of code used to obtain the desired results, spectrogram examples and best practices on how to store and organize the data acquired.

The phonetic analysis, which is found in Chapter 5, will show the results from the data processed, analyzed and represented through means of PRAAT, Matplotlib and R. The main features and phenomena being investigated are: the possible merging of [e] and [ɛ], the merging of [o] and [ɔ], the position of [ø], the devoicing of /s/, the voicing of /t/ plus different cases of possible deaffrication and voicing in consonant clusters. The vowel results will be represented on different scatter plots, thanks to the R coding language, which will provide a picture of the current phonetic vowel repertoire

of the Barese variety speakers and at the same time they will provide evidence on the merging of /o/ and hints on the possible merging of /e/. On the other hand, the resulting spectrogram pictures, obtained through the use of PRAAT built-in functions, will be shown as supporting evidence of the claims put forward regarding the speakers' consonant production, such as the confirmed and constant devoicing of /s/ in VCV position, the possible devoicing of /t/ and /k/ after the nasal /n/ plus the deaffrication of /nts/ and devoicing of /p/ after /m/.

This thesis will also analyze the social structure upon which dialect speakers are distributed and how dialect is used in each social class and in different contexts or registers, these data were collected by means of a questionnaire given to 97 students from different classes in the same school and then they were parsed and analyzed in the Python programming language and plotted utilizing the Matplotlib library. The sociolinguistic analysis, found in Chapter 6, will also focus on the social stigma that is attributed to the Barese dialect, and who may feel this embarrassment the most, while also trying to understand how much dialect knowledge can be important to integration in the social life of the high school student body for students who come from different provinces, abroad or are first generation Italians. It will also be shown how dialect is implemented by teachers in their classes and how they use it outside the teaching context with students and vice versa. This last point can probably build the foundations that possibly can possibly enable teachers to use in a constructive and useful way the local language to improve the students involvement in the lessons and improve the attitude towards the dialect and its status among the population. The chapter will also introduce the term “interlect” and its defition according to the sociolinguistic environment of the Barese language.

# Chapter 2

## Historical And Linguistic Background

If there is something that should always be considered when studying a variety or dialect, it is the historical background of the speakers' community and place, as Labov (2012) does in a way that is accessible and informative to the general public. By providing the social and cultural transformation of the area within an isogloss<sup>1</sup>, it is possible to have a broader understanding of which factors may have led certain varieties and dialect to be relegated to specific classes or sub-areas. Furthermore, implementing even a general historical knowledge to the sociolinguistic or sociophonetic analysis and framework may eventually explain lexicon singularities and borrowings. This cooperation between the two fields can also allow to restructure the results' presentation in a way which is more accessible to the general public, similarly to how the previously mentioned work from Labov did, and inform the speakers on their heritage as well as the possible reasons why they speak the way they do.

### 2.1 Geography

Bari is the capital city of the Apulia region in Southern Italy with 324,198 inhabitants and the sixth biggest metropolitan area in Italy counting about 1,300,000 inhabitants. The region itself is divided in 6 provinces: The Metropolitan City of Bari, Barletta-Andria-Trani, Foggia, Taranto, Brindisi and Lecce. Often times the southern area of the region which covers the last province, is referred to as "Salento". In the well known comparison of the country's shape to a boot, the Apulia region is typically referred to

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<sup>1</sup>An isogloss is a geographic borderline that delimits the area of a speech community or a shared syntactic, lexical or phonetic feature. In literature as Wolfram and Schilling (1998) and Labov (2006) provide the results of extensive work in drawing the borderlines which separate speakers of different varieties or dialects.

as the heel on the boot and it is bordered by the regions of: Molise, Campania and Basilicata, while it faces both the Adriatic and Ionian Seas.

Bari is on the Adriatic Sea and, on the other side of it, it faces Croatia, Montenegro and Albania. It is easy to imagine how this has always given Bari a good strategic position for importing and exporting goods, while also it allowed the city to be always in contact with different cultures and be subject to waves of immigration. Even though merchants probably played the biggest role in the development of the city, fishing has always been an important part of the local economy, the products obtained through this activity have also contributed to some peculiar culinary recipes which include raw sea food such as octopuses, urchins, squids and mussels. Meanwhile, in the inner towns olives, grapes, cherries, tomatoes, artichokes and cucumbers are the most farmed and grown produce which also result in extensive exportation.

Since this study includes informants from a Barese high school it is necessary to provide some context on the Italian school system and the different kinds of high schools that are present in the country. The school system in Italy is divided into elementary, middle and high school. There are different types of high schools, which usually range from “professional” ones that teach highly manual or technical skills like photography, cooking or carpentry, to “technical” high schools that teach accountancy or electrical engineering, and lastly “licei” that give broad basis on either scientific or literary fields. Italian schools can be public (meaning they are run by the State and their employees are considered government employees) or private (by way of example Catholic schools are private). The first is the kind of school from which the student informants were selected. Public schools have considerable lower costs compared to private ones which, therefore, would exclude part of the population that cannot afford to pay a high tuition for their children’s education.

## 2.2 History

There are many holes in the history of the city of Bari, some of them are due to lack of archaeological evidence while others to the scarcity of reliable historical documents. Nevertheless, much can be reported on the life of the Apulian capital city, which was originally colonized by the Peucetians, a tribe of the Iapygian people in classical antiquity (7th century B.C.). The Iapygian were divided in three tribes: Messapians (in Messapia, which is now the Salento region), Daunians (who lived in the Gargano area) and Peucetians (who lived in Peucetia, now the Barese and part of the Barletta-Andria-Trani provinces). The Iapygian people spoke Messapian (or Messapic), an indo-European language of the area, and are said to have arrived from Illirya, a region

on the western part of the Balkans, guided by Iapyx (hence the name) son of Lycaon. Even though different sources confirm the geographical origin of the Iapygii people, the possible link to Iapyx is considered to be a legend. Still, many early Grecian geographers and historians as Pausanias acknowledge the existence of indigenous people before their colonization, considering them as barbarians (Peck, 1898).



Figure 2.1: Map detail of the Peucetia region and the neighboring Messapia and Daunia from Shepherd (1967)

Broadly, what is known about the Peucetians before they were taken over by the Romans, is that, according to Lomas (1993) they were often allied with the other neighboring Messapians and Tarantines (people from the city of Taranto) against Greeks since after the 334 BC, but they also allied with other Greeks against the Lucanians (people from Basilicata) and Samnites. It is clear that the situation was complex and being from one faction did not necessarily exclude an alliance in a time when multiple tribes constantly fought against each other.

In this period of time Bari (called “*Baotov*” by the Grecians, later referred to as “Barium” by the Romans) was not really one of the most important settlements in what is nowadays the Province of Bari. The city slowly became more and more important thanks to its position on the sea and its potential for commerce during the Roman domination. The city was then taken by the barbarians and by the Byzantines after. The latter had to battle for the city against the Longobards for two centuries before

the Saracens took over and established the biggest and longest lived caliphate in the history of southern Italy.

Of popular knowledge is the myth that much of the Barese language derived from Arabic, since the city had been the longest lasting emirate in southern Italy from 847 until 871. This belief is widespread also by local tabloid, channels and books<sup>2</sup>, although it is hardly convincing, since many of the words usually reported are claimed to come from Arabic but are more likely linked to Latin. It is evident, though, that the brief but intense Saracen domination has left a long lasting scar in the history of the city and its population.

Apparently, after seizing Brindisi in 838 and Taranto in 840 (Kreutz, 1996), the Arabs, that probably came from Sicily, started attacking Bari without any success in the same year in hopes to gain control of the major Adriatic Southern port. The Saracens finally conquered the city 7 years later in 847 and started attacking other Italian cities such as Conza, Ascoli and San Vincenzo al Volturno. The Arabic rulers may have forced the Christian population to live under Islamic law, nonetheless they seemed to be more focused on exploiting the newly acquired position on the Sea and financially draining the local population to their advantage rather than establishing a long-lasting emirate (Metcalfe, 2009). The only kind of relevant infrastructure built seems to be a Mosque where now stands the Cathedral of Saint Sabino.

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<sup>2</sup>The tabloids BariInedita and BariToday have written short articles loosely based on historical events and philological facts on the possible influences on the Barese language, sometimes including as source the self-published author Maddalena Malcangio and her book *La Puglia nel periodo dei saraceni* (2014).



Figure 2.2: Italy about 1050 from Shepherd (1967).

After the Arabic domination, the Normans started infiltrating the South at first as mercenaries hired to contrast the Byzantines in Salerno, which became their capital city after defeating them. From there, the Normans expanded their territories towards Apulia and Sicily. In the XI and XII century, Frederick II rebuilt the castle in the city and one of the seven great fairs of the Kingdom of Sicily. It should be kept in mind that even though Frederick tended to rule with an iron fist, he was always open to multiculturalism and different cultures. During his kingdom, Jews were protected and had the right to practice usury, they also had the monopoly on silk, and while Muslims were welcome to stay and live in the southern part of the peninsula but they were not allowed to be part of public affairs. Frederick II had an encyclopedic education and he studied the Middle Eastern culture extensively enough to be able to acquire Jerusalem, Nazareth, Bethlehem and other cities only by negotiating with the sultan Al Kamil who was impressed by the emperor's knowledge of the Arab ways and language (Montanelli and Gervaso, 2010). Under this kind of ruler and still relatively close to the brief Muslim domination, it can be expected a certain degree of multiculturalism and people of different cultures coming and going in the city which was one of the major harbors in southern Italy.

In the XVIII century, the city was first controlled by the Austrians and afterwards by the Bourbons from Spain, but only until 1806, when Joseph Bonaparte took over Bari, succeeded two years later by Joachim-Napoléon Murat, who made the city the capital of its province. However, in 1815 it was again under the Bourbons' control until, in 1860, it became part of the Kingdom of Italy. (Touring Club Italiano 1978).

After the unification of Italy, which lasted from 1848 until 1876, the North and the South developed a school system quite different. Still, the education system in the country as a whole was poor and ineffective if compared to the same systems that were developed in Germany and England since the 16th century. The first Italian census reported that 78% of the population was illiterate, and possibly more than a fourth of the remaining 22% was semi-illiterate, since the first census that distinguished who could barely read and sign their name from who could actually read and write with decent understanding, and even following that, the few schools in the south allowed illiterate substitutes, teachers who just had to know Italian orthography and even in Naples, which was the biggest city in the Kingdom of the Two Sicilies, schools and students had no learning materials such as notebooks, pencils or papers (De Mauro, 1963: 36-40).



Figure 2.3: The unification of Italy 1815-1870 from Shepherd (1967).

In 1931, more than 38% of the population was illiterate and still almost 30% in 1958 in the South and, according to De Mauro (1963), in these years dialect speakers were pushed more and more, along with public school teachers, towards the “Italianization” of local dialects, making them speakers of regional varieties of Italian which were, allegedly, phonetically highly influenced by the dialect repertoires. Schools above the elementary grade (middle and high schools) were attended only by a really small minority of the children and youth. The consequent elitism caused the enforcement of the literary Italian language over the spoken varieties and dialects, which were regarded negatively and whose lexicon and syntax was always to be avoided. The educated and literate population seems to be built then on this belief that dialects are dangerous towards the Italian language, that they are not only part of subcultures not worthy of being part of history, but they are a threat to Italian and the aesthetics of language. In (De Mauro, 1963) writer, poet and Nobel winner Montale is quoted, by the linguist, from a newspaper article:

Original Italian:

“... ed il Montale («Corr. d. Sera, luglio 1959») ha lamentato «l'aggressione che la lingua italiana subisce da parte dei dialetti... perpetrata da radio e TV (lingua italiana in bocca meridionale)»”

(De Mauro 1963: 356)

English Translation:

... and Montale («Corr. d. Sera, July 1959») complained on the «the aggression that the Italian language is subjected to by dialects... perpetrated by the radio and TV (the Italian language in the southerner's mouth)»

(De Mauro 1963: 356)

More Italian scholars and writers are mentioned and the quotations that De Mauro reports can be found in the Appendix A, their statements are sometimes backed by pseudo-scientific deductions according to which the economic, political and scientific progress cannot advance if dialects with limited lexicon are to survive Italian.

This climate of intolerance towards dialect worsened during the fascist regime. For the dictatorship to have a firm grab on the country, the citizen had to be heterogeneous in their primary language of communication and this meant that firm measures had to be taken to “Italianize” the south and the allochthonous populations in the Alto Adige, Valle d'Aosta and Venezia Giulia<sup>3</sup> (but based on the previously mentioned data on illiteracy, most of the southern areas could have been considered as allochthonous). In the case of these

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<sup>3</sup> Along with Italian, people in Alto Adige speak German and Tyrolean, in Valle d'Aosta French and Franco-Provençal and in Venezia Giulia Istrian and Slovenian. These are still considered allochthonous areas, which defines areas where the primary language is not the country's official language.

regions, clerks and factory workers were moved there from Italian speaking areas in order to force locals to use Italian more and feel forced to slowly abandon their primary language.

All of these events clearly point to an attitude of linguistic purism<sup>4</sup> that can be shared throughout the country, especially in the South where the economy is in worse conditions and the education levels have been lower, leading to discrimination towards southerners who may feel that their phonological and lexical features are something to be ashamed of or to be “fixed”.

Finally, it is worth mentioning that Southern Italy faces many problems compared to the North or the central regions. Unemployment, youth unemployment, lower wages, worse education, organized crime and more are just some of what afflicts the whole area which includes the island of Sicily. This has led in the past (1991) to the formation of the “Lega Nord”, a political party that openly discriminated and accused southerners of ruining the Italian economy and image. While their tones now are different and they are even trying to find voters in the South, they are switching from the Southerner invaders concept to an African invaders one. This resentment towards southerners, that reached the political sphere, is something that will give context and may explain the reason for the stigmatization that Barese speakers bear.

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<sup>4</sup>In Brunstad (2003: 52), linguistic purism is defined as a “language planning ideology involving resistance to foreign elements”. However, it is also noted how linguistic purism may also target dialectisms and it mainly applies to the lexical level.

## 2.3 Literature on the Barese Language

Aside from the *I dialetti italiani: dizionario etimologico* (Cortelazzo and Marcato, 1998) which lists lexical items from many different Italian dialects, one of the earliest and most exhaustive works that can be found on the Italian dialects is *Grammatica storica della lingua italiana e dei suoi dialetti* (Rohlfs, 1966) and its volume dedicated to the phonology of the Italian dialects is the one that will be used as a reference throughout this thesis. Instead, Filipponio and Cazzorla (2015) provide one of the latest phonetic analysis on both Barese variety and Barese language speakers. Other works such as Calabrese (2000), Maiden and Parry (1997) and Canepari (1983) also offer detailed information, even though not all of them deal specifically with the Bari area.

Rohlfs (1966) gives an enormous contribution to the field in a time from when other data is really rare or difficult to acquire. The phonetic transcription is not in I.P.A. but the whole manual is well annotated and explained nonetheless. Many of the reported features provide valuable resources in building the language change that the dialect might have gone through. His analysis (Rohlfs, 1966: 11-12) on the front and back vowel mergers of *ī*, *ē* and *ë* and the respective back vowels, in the area from Apulia to Abruzzo, gives historical evidence on the phenomenon already in place back then. According to the author, this has led to the development of a vowel system with 5 phonemes, namely /a e i o u/, and even though the /ə/ is acknowledged further on in the work, it is not included in the repertoire. However, he also reports how there is a distinction between [e] and [ɛ] on the East coast of Apulia, particularly in the B.A.T. province<sup>5</sup>, but also in some towns in the Barese province itself (Bitonto) there is a gliding of /ɛ/ into /ɛj/ in open syllables, but this phenomenon does not affect the city of Bari as it does not affect other provinces in the region such as the Taranto and Lecce ones. Moreover, Rohlfs notifies on how there is no metaphony affecting the back vowels and there is no gliding of the back vowels, rather, Bari keeps an older form by not developing the back vowel into the glide /wɛ/, except in words that end in /o/ or /i/ and have a /o/ in their stressed open or closed syllable such as ['kweddə] 'collo' (neck), ['kwernə] 'corni' (corni) and ['bwənə] 'buono' (good), even though as it is mentioned in Filipponio and Cazzorla (2015), this gliding can be the result of an infix which indicates whether an adjective, like the latter, is singular or plural. In addition to this, Filipponio and Cazzorla (2015: 69-70), which uses a quantitative approach, show how there is a loss in distinction between low and high vowels in both the back ones and front ones. This feature was shared by adult and young Barese speakers that either moved abroad or still are in Bari.

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<sup>5</sup>The Barletta-Andria-Trani province is located about 40 km. North from Bari

Maiden and Parry (1997), instead, report a possible merger of /u/ and /ə/ in the Barese dialect, also, it is reported that the glide /we/, previously mentioned, can be produced as /uə/ at times while it keeps the semivowel especially before /k/. They note a distinction in the production of the mid front and back vowels that depends on whether the syllables are open or close, but more importantly, they also report a production of /ɛ/ in a higher position, which is what was found in this study.

Regarding the consonants, Calabrese (2000) and Canepari (1983) both highlight how in the majority of the South and, therefore, also in the Apulia region, /s/ between vowels does not undergo the same process of devoicing which can be found in Northern Italy, but it just stays unvoiced, which will be later confirmed in Chapter 5. Meanwhile, Rohlfs (1966) and Calabrese (2000) both report the sonorization of /p/ after /m/ in words like ['lampo] ('lightning') → ['lambə].

# Chapter 3

## Data Collection

In this chapter the methodology that was used to design and structure the collection of data will be explained. All the information regarding the equipment used can be found as well, while the processing of data will be showed in the next chapter.

First of all, this study works from two perspectives: a phonetic and a sociolinguistic one. In order to answer the questions pertaining to the first field, 1-on-1 interviews were carried out using different strategies and tools to elicit the phonetic data necessary to draw a broad description of the Barese variety and clarify some of the features described in previous works. These interviews were set in the school itself and the informants were chosen according to criteria decided in advance. Moreover, to put the data in a wider context and use them to have some information on the possible development the Italian variety and dialect went through, phonetic tokens were collected from 6 adult informants. This apparent-time analysis allowed to put forward some hypothesis regarding how the phonetic structure might have changed and what difference there might be in the stigmatization of the local dialect and variety.

To address the sociolinguistic issues put forward, questionnaires were designed and submitted to 97 students (all of them different from the interview ones) randomly chosen from about 7 different classes

### 3.1 Interviews

The method used to elicit phonetic data, but also some lexical and sociolinguistic information, was the open interview method followed by the reading of a wordlist. The only information needed about the informant was their age, gender and their parents' jobs, keeping their identity anonymous. For this reason the informants will be referred to as male informant or female informant (e.g.: male informant 2, female informant 4) throughout the thesis. The 1-on-1 interview method proved to be quite effective

for this work. Most of the informants started to feel at ease after 10-15 minutes into the conversation, as it is reported in Sociolinguistic Patterns (Labov, 1972). Group interviews might have been even a better choice, since social dynamics in high schools are very important and a group of informants made up by talkative friends could have provided lots of valuable information, but the available equipment would not have been enough to have clear and reliable recordings from multiple speakers in the rooms provided by the school. One attempt at a group recording was made and, even though the lexical data from it has been kept into account, the phonetic data is not usable to help draw a phonetic description of the Barese variety, but it still contributes to the study.

It is well known in the sociolinguistic community that it is hard and challenging to obtain field data in high schools and public schools<sup>1</sup> in general, but the Giulio Cesare high school was willing to collaborate enough to allow each informant to leave class for about 20 minutes to do these interviews after they (or their legal guardians) signed the required forms developed in compliance with the school's directives.

Regarding the methodology behind the interviews, it is probably impossible to build a manual on how to carry out and elicit the data you want from an informant and what to say during an interview. Every informant is different and they are and should always be regarded as people during a study, it is not always easy or possible to get an informant to code-switch or to speak in the most natural way as possible. The only thing that could be attempted is to treat each informant with respect, try not to make them feel like a mouse in a maze and chat with them to get them to talk about the things they want and like to talk about. Everyone selling recipes for a perfect interview, with programmed questions and every possible follow-up question to each possible answer is probably just selling a recipe for an interview that will feel very awkward for both the linguist and the informant and will give the most unnatural and controlled speech

### 3.1.1 Equipment

The microphone used for the interviews was the Blue Snowball, a condenser microphone with USB digital output, which ensures good quality recordings and has 3 different recording modes. These are namely: Cardioid, Omni and Cardioid with -10db pad. The first is ideal to record sounds coming from the front of the microphone, therefore this was the only mode used in this research. The second is a mode that allows

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<sup>1</sup>As it was previously explained in Chapter 2, 'public schools' (same as 'state schools') refers to schools owned and run 100% by the government, where teachers have to get certified by the state in order to be allowed to teach.

to record sounds coming from all around the microphone, this is especially useful for group recordings. The third is similar to the first, with the difference that it reduces the sensitivity of the microphone, reducing loud sounds, this is not really appropriate to the kind of work that sociolinguists usually have to do, since a lot of times informants tend to speak quietly or get far from the microphone. The recordings were all made with the freeware Audacity 2.1.1. The software was mostly run on Linux based operating systems, since on Windows recording issues were definitely more frequent. The freeware also gives a tool which can clean the recording from echoes and environmental noise, but such tool can distort the spectrogram and the formants position, resulting in inaccurate data. The files were saved in WAV format, since this format is optimal for a clear spectrogram reading (Schilling, 2013) and it is also supported by Praat, which is the next software used.

Praat is a freeware developed by Paul Boersma and David Weenink at the University of Amsterdam. It provides tools for spectrogram reading, annotation, editing and most importantly scripting. For this research there was not any scripting involved, but it is always better to know and inform fellow phoneticians and linguists that Praat script can help with the automation of extrapolating formants and editing the audio recordings. By doing so, it is possible to get data from huge number of recordings or very long recordings with minimal manual work, resulting in fewer human mistakes and less time spent on clicking and therefore more time spent on researching. For this study the formants were obtained most of the times manually, since reverberation and environmental factors often misled the software's automatic formant tracking feature.

Even though some of these technical issues have caused 3 interviews to be completely unusable, most of the spectrograms can be read easily and provide the data needed to draw a general description of the variety of Italian spoken at the Giulio Cesare high school.

Most of the interviews were carried out in small rooms or empty classes. In the first case there were few environmental interferences while, in the latter, reverberation and occasional sounds from the hallways or nearby classes were detected and recorded by the microphone. Nevertheless, all of the wordlist readings were completed without overwhelming interferences which could corrupt the data. Even if these environments may not be evaluated as optimal, they were the only available option provided by the school, which kindly gave permission to their students to be involved in this project and to me to carry out my research interests. The key point in choosing the school itself as the place where to do the interviews is that students will see the interviewer as an outsider in their environment. Therefore, the students will feel more comfortable and at ease in their school rather than in a recording studio or in a recording booth, giving a chance to have a less careful and filtered speech.

### 3.1.2 Methodology

In order to obtain the most balanced results as possible, a judgment sampling was chosen (Schilling, 2013: 35-36). A judgment sampling is made by choosing categories and subcategories in which to organize the samples before actually choosing them. By way of example, for this study it was decided to take into consideration only young speakers, both females and males, only from the city of Bari but belonging to any social class. Then, from there, these categories and subcategories were then filled with random informants. Since the type of speakers were already established and only their social class selection was completely random (Schilling, 2013: 31-32), the only thing left to do was to choose a small sample of students with different linguistic background to compare to the interested main sample. Therefore, 3/4 of the informants have been raised in the city of Bari like their parents, while the remaining 1/4 have either been raised outside the province of Bari or have parents who are not from the province. This was the chosen option because it can give a hint on how much being native of the city can influence the role of learning Barese dialect. Plus, it can also give contrasting data useful to future comparisons.

Obviously, it cannot be expected by such a small sample that the results of the informants raised outside the province or with parents from outside can give a definitive description of the phonetic system of students who are possibly still integrating in the school social environment. That being mentioned, it is always useful to have a small different sample to compare data, giving a wider perspective which can less easily be skewed by the research objectives.

The interview was divided into two parts to try to get the best results possible from the short time available. Each interview had to be no more than 20 minutes long, even though some interviews lasted longer.

The first part of the interview consisted in a conversation with the informants. A conversation map was prepared in order to try to hit some topics which could lower the Observer's Paradox<sup>2</sup> (Labov, 1972: 113) barrier. However, this should lower after 15 minutes from the beginning of the interview (Labov, 2006).

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<sup>2</sup>Labov argues that systematic observation of the informants has them feel observed, even though the aim is to analyze speech as it occurs when people do not feel observed. Since interviews or recorded tasks should always have the consent of the informant for ethical but also possible legal reasons, the person interviewed will always be conscious of being observed, whereas the interviewer will always seek the most natural form of speech. This conundrum should always be kept in mind when planning an interview or any task to collect data. While some techniques, as the ones employed by researchers in articulatory phonetics, cannot provide the necessary time to work around the problem, when possible the linguist researcher should always try to minimize the effects of the Observer's Paradox. Labov suggests different ways to distract the informants so that they forget being interviewed.

After asking for the informants' personal information and about their families, the next step was to try to have them talk about hobbies and things they are passionate about. Next, informants were asked if they liked the school and what they would like to change about it. This question was often asked to indirectly elicit conditional forms which typically differ from the standard ones.

Then, a series of questions about experiences were asked that could have had emotional impact on the students' school experience or life. These questions were often about bad experiences witnessed or lived, for example bullying episodes with schoolmates or petty crimes in the city of Bari. If the informants seemed still uneasy about speaking, questions about very funny memories or school trips were asked instead. The reason why such questions charged with strong feelings were asked is that it has been shown that, during an interview, when informants tell these stories they are less careful about their speech, allowing sociolinguists to collect precious data which is less filtered by the unusual and formal situation of a recorded interview (Schilling, 2013; Labov, 1972).

In the second part of the interview, the informants had to read a list of 31 words meant to elicit specific phonetic and phonologic data:

- Merging of [ɔ] and [o]. This is a feature already known to this Italian variety. The goal was to see to which extent the merger occurred in stressed and unstressed position.
- Merging of [ɛ] and [e]. This merging was reported in different environments but the distinction was reported to be still active in some words. The feature was elicited both in stressed and unstressed position.
- Devoicing of /s/ in VCV position. This is another well known variation of many southern varieties. The research was meant to study the frequency at which this variation still occurred.
- Voicing of /s/ after nasal consonants. Sometimes it is possible to hear a voicing of the [s] when they follow nasal consonants, this feature is often exaggerated by comedians or when people mock those who tend to use more features of the Barese variety.
- Voicing of /t/ after nasal consonants. As for the previous feature, this is one of those that is used in entertainment and that is used as deterrent to mock people.
- Fricative or affricate /z/ following approximant laterals and nasals.

Down below there is a list with the Italian words used for the students to elicit the Barese variety's phonetic features. Adult informants read the same 31 words plus 51 additional ones and the same table can be found in Appendix B.1.

Mondo	/'mondo/	Penso	/'penso/	Milza	/'miltsa/
Mente	/'mente/	Immenso	/im'menso/	Bene	/'bene/
Casa	/'kasa/	Roba	/'roba/	Cena	/'tʃena/
Senza	/'sentsa/	Anche	/'anke/	Faro	/'faro/
Inverno	/in'verno/	Trenta	/'trenta/	Vogliamo	/voλ'λamo/
Inferno	/in'ferno/	Vincenzo	/vin'tʃentso/	Sogniamo	/son'namo/
Pisa	/'pisa/	Incendio	/in'tʃendjo/	Magia	/ma'dʒia/
Agile	/'adʒile/	Scoppio	/'skoppjo/	Scatola	/'skatola/
Azione	/at'tsjone/	Conscio	/'konʃo/	Sento	/'sento/
Campo	/'campo/	Analisi	/a'nalizi/	Viso	/'viso/
Alzare	/al'tsare/				

Table 3.1: Reading Wordlist

Finally, few questions about local culture and dialect were asked to the informants, especially in which context they usually speak dialect.

Meanwhile, the adult informants chosen for the apparent-time comparison were selected through a social network oriented method. Some of them were direct acquaintances while others were either relatives or partners of the first selected informants. The total number of informants was 6, 2 men and 4 women, 4 of them fell into the working class group and 2 into the middle class one. Even though this method may not reflect the actual social distribution it is the fastest and easiest way to collect data, nonetheless if planned and structured correctly it can result in evenly class-distributed samples who can at least be used to carry out an analysis on the possible changes that the language went through in the last decades. The recent article by Filipponio and Cazzorla (2015) was also taken into account to compare the results between adults and high school students.

These adult informants only had to read a word list of 82 words (which also included the 31 of the high school students wordlist). These words were selected to elicit the same consonant and vowel tokens while also allowing the Observer's Paradox to lower its effect by midway through the list, hopefully. Some of the words were selected merely for the phonetic environment provided, while others were chosen based on bibliographies which provided Italianized or Regionalized versions of either dialect or latin words such as 'Palta' ('pocket').

## 3.2 Questionnaires

The questionnaires submitted to the students of the Giulio Cesare high school were designed to understand: how many students use dialect, have an indicative measure of how much they use it, in which contexts they use it, if teachers use it as well and what are the feelings towards language identity. As with the interviews, the identity of the informants was kept anonymous and only their age and gender are taken into account.

Almost half of the questionnaires were submitted during assembly hours. The students were chosen by teachers from about 5 different classes, while the other half took the questionnaires during recess and the informants were from 2 different classes. Out of a total of 97 informants, it is fairly accurate to claim that they were from about 7 different classes (it is possible that some extra students took the questionnaires during the assembly hours). To make the bureaucratic process faster and easier, only students over the age of 18 took the questionnaire, therefore all the informants are either from fourth or fifth year classes.

However, a higher variety in the classes the informants are from is a positive point, since there are questions pertaining to teachers and their use and attitudes towards dialect. Having a wider pool of classes to get information from means that there is also a wider range of teachers taken into consideration.

### 3.2.1 Methodology

The format chosen for the questionnaire was a multiple choice one. The possible answers were: “Yes”, “No”, “Sometimes”. Out of a total of 20 questions, 13 of them had 3 possible answers while the remaining 6 had only two possible answers. Only one question, the last one, asked to explain the multiple-choice answer with an as-concise-as-possible open answer. The questionnaires were submitted

The reason why 13 questions allowed 3 possible answers comes from the fact that during the interviews (which were carried out before developing the questionnaires) most of the informants would automatically answer “No” to questions about whether they spoke dialect in certain contexts. However, upon asking a second time, if the use of dialect ever or just sometimes happened their answer then changed to either a “Yes” or a “Sometimes”. From the informant point of view, speaking dialect just sometimes or rarely is very different from speaking it consistently, although, from a sociolinguistic point of view, even speaking a variety or dialect just sometimes means that a repertoire of that language is present in the speaker and it is just activated less frequently and it

probably has just fewer lexical items. As a result, the choice to include a “Sometimes” answer to the questions about dialect use is a way to bypass the informant’s belief that a small use of the dialect excludes its presence from his/her repertoire. It will also be shown in the next chapter, that these 13 questions will then be elaborated as having only 2 possible answers, counting the “Sometime” ones as “Yes”.

This last process also allowed to make what may be called a sentiment analysis on the general attitude towards the dialect. Indeed, one important aspect of this study is to understand how much the social stigma that the Barese dialect and its variety bring with them influences the informants too.

The questions that only allowed 2 answers asked about the use of dialect by teachers and whether or not the Barese dialect was useful to integration or considered a language. The last one was followed, as previously mentioned, by a couple of blank lines where the informant was asked to provide a short explanation on why he/she thought that the dialect was a language or not.

Finally, the questionnaire included a small section where the informant had to fill in the information regarding their parents’ jobs and highest education degree. Based on these two data, it was possible to determine the social class to which the informant belonged to (the process of categorizing the informants into social classes will be explained in the next chapter, as well as the criteria chosen to establish the 3 social classes determined). Here below there is a list with all the questions from the questionnaire:

1. Do you ever speak dialect at home with your parents?
2. Do you ever speak dialect at home with your parents to joke?
3. Do you ever speak dialect at home with your parents to argue?
4. Do you ever speak dialect at home with your parents to chat?
5. Do you ever speak dialect at home with your parents to explain ideas and concepts?
6. Do you ever speak dialect with your teachers?
7. Do you ever speak dialect with your teachers to joke?
8. Do you ever speak dialect with your teachers to argue?
9. Do you ever speak dialect with your teachers to chat?
10. Has a teacher ever used dialect to joke?

11. Has a teacher ever used dialect when upset?
12. Has a teacher ever used dialect to clarify or explain a concept during class?
13. Has a teacher ever explicitly ordered not to speak dialect?
14. Do you ever speak dialect with your friends and/or classmates?
15. Do you ever speak dialect with your friends and/or classmates to joke?
16. Do you ever speak dialect with your friends and/or classmates to argue?
17. Do you ever speak dialect with your friends and/or classmates to chat?
18. Have you ever taught some dialect to students who came from different places?
19. Do you think dialect is useful to integration?
20. Do you think dialect is a language? (like French, Spanish or English for example)
21. Why do you think dialect is or is not a language?

# **Chapter 4**

## **Data Processing**

In order to get the data desired which could answer this research questions and give a description of the Barese variety spoken among high school students, in both an acceptable form and format, few steps were needed in order to process the raw wav files from the interviews, the answers to the questionnaires.

Data processing is not always easy and as intuitive as it might be thought, there are also different ways of processing formants and questionnaires which can give different results. In this chapter, every step that went into the transformation and quantification of the useful information collected will be explained, preceded by a quick paragraph on the best data storage practices.

### **4.1 Interviews**

#### **4.1.1 Data Classification**

Organizing the data collected may seem a not-so-useful task or too time-consuming, but the truth is that having your data well organized (being it numbers in a table or files in several directories) can pay back quite generously the time you spent on it. Even when working with less than 20 informants, the amount of audio files edited can become useless if it is impossible to trace back a track to its original informant while organizing a good directory tree and naming files properly can not only save you time tracing them back, but it can also help other researchers who would like to work on your data. To put it in a poetic way by using a metaphor, working with big datasets from different informants is like working on a puzzle. If you have to put together the pieces of a Mondrian's painting, it will be a lot easier than putting together the pieces of a pointillist one.

First, in order to achieve a level of organization which can avoid other researchers to have a hard time, a directory for each informant was made (these directories are also

divided based on gender into two parent directories) where all the raw WAV segments were stored. These audio segments were edited manually on Praat from the single interview files, they only contain single words or two-word phrases allowing quick and easy access to the single words needed, without having to scroll through the whole interviews on PRAAT.

As each informant's directory was named according to the criteria mentioned in the previous chapter(e.g.: “minf1” for “male informant 1”, etc...), the WAV segments were named the same, plus the word recorded in the file. When building these directories, it is important to remember to keep the files' names short, coherent with the study and avoid special characters that can create conflict on different operating systems or software. To better explain this, take as an example the file minf1\_casa.wav, this file contains: the gender of the informant (m), its research identity (informant number 1) and the word stored into the short edited audio file. The underscore (or the dash) symbol should always be used instead of the spacebar or other special characters which can arise problems on different operating systems, when dealing with the files on Windows or Linux for instance. By way of example, in the following directory tree representation, which is the same one used for this research project, the structure follows the guidelines previously listed: informants are first divided in gender directories, then each one has their own personal directory which stores the WAV files properly named.

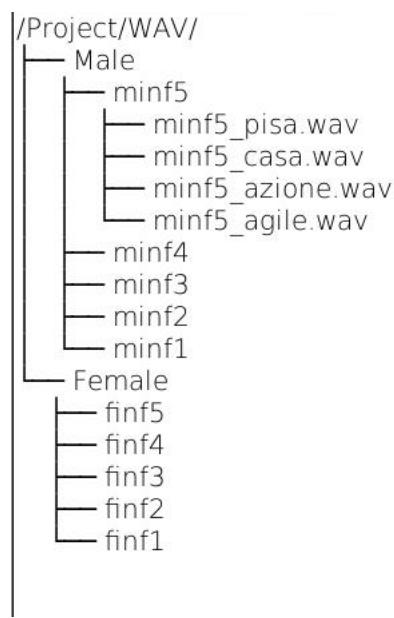


Figure 4.1: Directory Structure

Once the files were all properly stored in the directories it was possible to analyze each single word carefully and, most importantly, there was no work needed to trace them to their respective informants. After getting the formants from each single vowel

on the PRAAT software, the F1 and F2 values were stored into a xlsx file which contained all of the formant values from a single informant and made them ready to use in the Python programming language.

The formants were either extracted manually or obtained through the automated formant extractor in PRAAT (which works by simply pressing F1 or F2 on the keyboard), which allows the user to select a portion of the spectrogram and calculate the mean value for F0, F1, F2 and F3. It is crucial though to get the formant values from the right points in order to get values which are not influenced by nearby consonants or glides. To achieve this, the researcher must have an idea of the general look of vowels on a spectrogram in the first place. The following image from Acoustic Loci and Transitional Cues for Consonants (Delattre, Liberman, Cooper, 1955) gives a general idea of where vowel formants are located on a spectrogram.

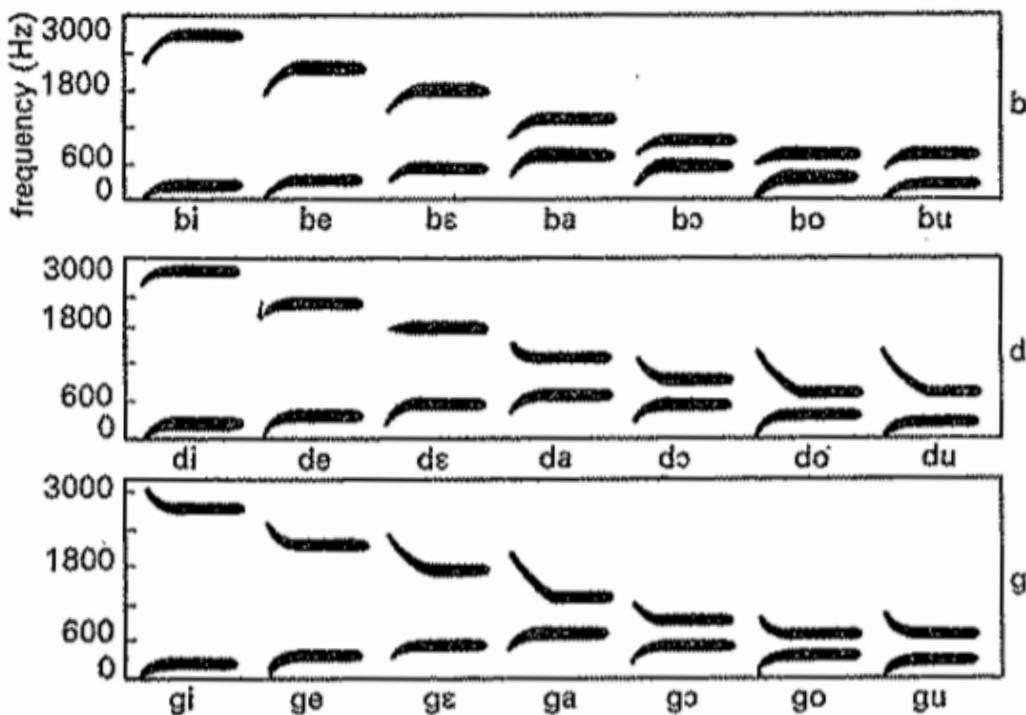


Figure 4.2: Spectrogram Guideline

It is important then, when choosing the point of formant extraction, to select an area which should be far from both of its ends, and therefore not influenced by nearby phones. Determining if the interested vowel is checked or free and if it is stressed or not it is also essential, since stressed vowels tend to be clearer on the spectrogram than the unstressed ones. This implies that, more often than not, unstressed vowels' formants will have to be extracted manually if the recordings were made outside a recording booth (at least in this study's case it was so). For example, in the following picture,

which shows the “Mente” word’s spectrogram, it can be noticed how the F1 and F2 lines of the first vowel start in a much lower position than their following development. Since the vowel is preceded by a nasal such distortion is to be expected as an ending one might be present before the next nasal phone. Therefore, the ideal area to be chosen is in the middle where the influence of the phones on the sides is minimal or equal to none. Moreover, it is possible to note the slight difference in clearness between the two vowels, where the F2 of the last one is fainter than the first which is stressed. Surely, the most difficult vowel to detect in this study was the schwa [ə] since it is often present in unstressed syllables, especially in final word position, lasts shortly and it is rarely pronounced loudly.

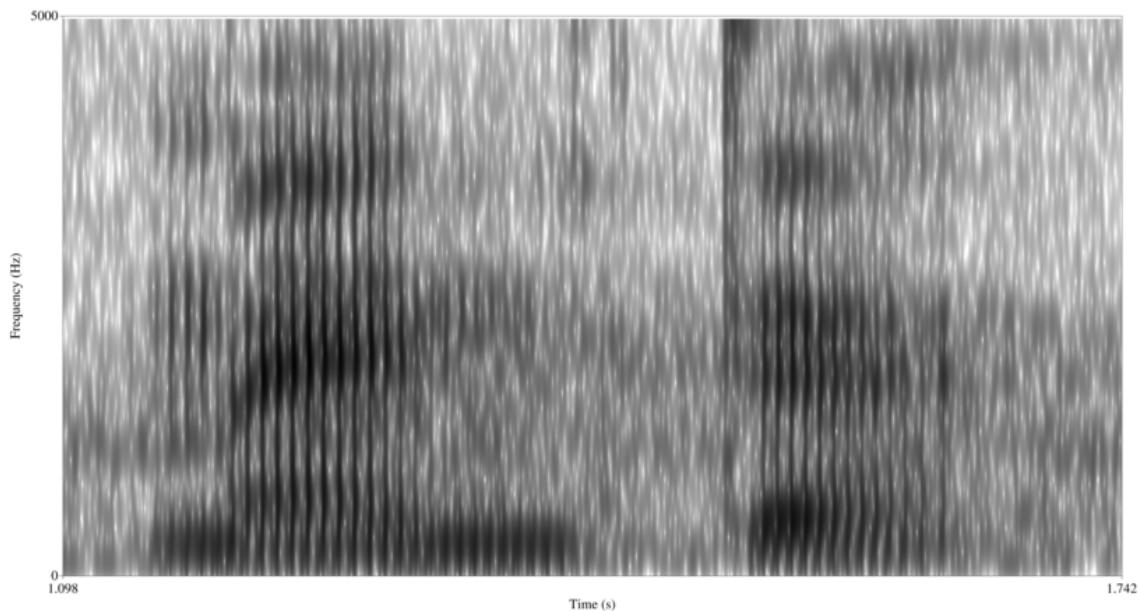


Figure 4.3: minf8: “Mente”

Next, the formants’ values were organized and stored into tables in CSV files, even though the xlsx format would work well too, with each informant having their personal one. These files were then saved following the same guidelines previously explained for the WAV files. In order to make these tables easy to be read by the pandas Python library, they were made up by 4 columns: the first is just an index, the second lists the words from which the formants are taken, while the last two respectively store the F1 and F2 values.

Then, the adults’ tokens were extracted by the Mietta Lennes’ PRAAT script<sup>1</sup> after the audio files were properly edited and tagged with the same software. The tagging

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<sup>1</sup>Mietta Lennes’ script can be found in the following repository <https://github.com/lennes/spect> and on the website of the University of Helsinki

process is rather simple: the user has to manually highlight the portion of the audio track which contains the formants that the script will then extract and store in a txt or CSV file. Since each adult provided more than twice each student's amount of tokens, the choice to use a simple but efficient script was the most obvious one to save time and store the values without any possible human errors. However, the script can sometimes extract wrong values and those that were obviously too far from any previously known or possible value were manually discarded.

### 4.1.2 Tools

Python is a high-level programming language, meaning that it has strong abstraction compared to the low-level languages and it can use human natural language elements in its syntax. This means that it is ideal to work with data for the sake of their analysis and plotting purposes in an intuitive way, without requiring hardware or computer software knowledge. Python is also an interpreted language and therefore it does not need compiling, since different instructions fall into subroutines already compiled and ready to be understood by the machine. Python has many libraries available, and in order to work with the formants obtained from the interviews and plot them (but also with the questionnaires) the two libraries best suited for the task are Pandas and Matplotlib.

Pandas is a Python library which supplies tools to work with datasets or dataframes. It allows to index, divide and merger dataframes, but also to use the data stored in each single cell as the user prefer. The pandas library works well with Matplotlib, another python library which can plot data in many different ways and styles. With this library it is possible to make plots, scatterplots, histograms, bar charts and pie charts using the data processed with Pandas.

The other programming language which was used for plotting, and especially vowel normalization, is R. R is used for statistical and graphic purposes and it offers a wide range of libraries. While Python's Matplotlib is more precise and allows extensive customization, R (in the phonetic field) allows to plot vowels in a quicker and simpler way thanks to its "Vowels" library and to apply vowel normalization in the process. R and its IDE Rstudio are perfect for anyone who has little experience in programming but wants to work with considerable amounts of data and have plot charts easily available.

### 4.1.3 From Numbers to Figures

In order to obtain graphical cues from the formants extracted which can help us making a description of the vowel system of the language, as well as assess the different situations and variation happening, it is necessary to process these data with the previously mentioned tools, this is also useful to find out whether some of the data collected might be skewed or plainly wrong. This paragraph is also meant as a guide for those who have little knowledge of the Python programming language (v. 3.5) and Pandas but would still like to make nice scatterplots from their formants collected or would just like to get closer on how to implement programming on linguistic analysis.

First of all, it is necessary to parse the xlsx tables so that they can be read by the Pandas library in Python, this will allow working freely with every single column, row or cell. It has to be kept in mind that usually the module for parsing xlsx file has to be downloaded separately, while working with tables in the CSVformat can let you skip this extra step. Here below are the lines needed to parse the file:

```

1 from matplotlib import pyplot as plt
2 import pandas as pd
3 import numpy as np
4 inf = pd.read_excel('finf3.xlsx')
5 ### This to make sure the file is correctly read ###
6 print(inf)

```

Second, now that it is possible to analyze the dataframe, the first step is to divide all vowels into dedicated lists for their F1 and F2 values. This study divided vowels based on whether they were stressed or not too. In order to do this, the DataFrame.ix is the indexer you want to use to get the values from single cells throughout the dataframe's coordinates. This will generate long or short lists according to the size of the formants collected. Therefore, it is important to be careful during the process of listing the values. As a plus, in this study the average- Italian formant values from Ferrero, Caldognetto (1986) were added to have a general point of comparison. This is an example of how you would extract a single cell value from your table and store it into an appropriate list:

```

1 xus = [inf.ix[92, 'F1'], inf.ix[102, 'F1']]
2 yus = [inf.ix[92, 'F2'], inf.ix[102, 'F2']]

```

Third, it is now possible to start working with the Matplotlib library as the work with Pandas is finished. The two libraries are very well implemented, they function intuitively and easily with one another. Your list will now provide the coordinates for the plot. Trying to instantly scatterplot the data will result in a figure that has F2

as its X axis and F3 as its Y axis. Even though this is fine and not really an issue, it would still be better to invert both of the axis with the `invert_axis()` class and allow the formants to have the same orientation as the vowel trapezium. Moreover, to avoid all of the points on the plot to look the same, it is possible to set the unstressed vowels to have only their border colored. Finally, setting the size of the points on the plot can be important in order to avoid excessive overlapping overlapping, if the case is one dealing with several values. These next lines of code are the ones used to set all of the above-mentioned mentioned modifications, while the result should be similar to the one in the following figure.

```

1  plot1 = plt.gca()
2  plot1.scatter(yus, yus, xus, facecolor='none', edgecolors='c')
3  plot1.scatter(yu, xu, s=50, color='c', alpha=0.5)
4  plot1.invert_yaxis()
5  plot1.invert_xaxis()
6  plt.show()

```

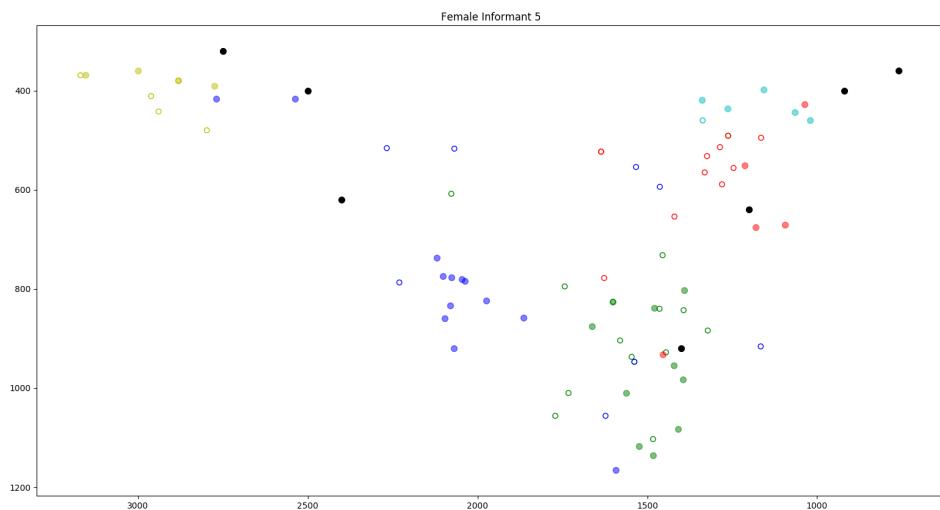


Figure 4.4: finf5 Vowel System

In order to plot your results in R, which is highly recommended when dealing with big amounts of data, you first need to import the “vowels” library, now called “Norm”, and its documentation can be found at <https://lingtools.uoregon.edu/norm/>. After storing in a CSV or TXT file your vowels in the layout required by the library or by the normalization algorithm, you have to store its content in a handle (line 2 of the next code block) and then either plot it as it is in a scatter plot or normalize it

first (in this case the Lobanov algorithm was used). It is possible to modify the legend, the style in which the data are represented and also sort either by informant or by vowel. The next figure (Figure 4.5) shows the scatter plot of all informants' formants normalized and sorted by stress and the vowel they belong to. As it can be noticed, the library “Vowels” allows to easily plot big numbers of tokens giving enough freedom on how to set colors, the legend and even ellipsis.

```

1 > library("vowels", lib.loc = "/R/x86_64-pc-linux-gnu-library/3.2")
2 > myvowels <- load.vowels("/home/andrew/allinf.txt")
3 > normed.vowels <- norm.lobanov(myvowels)
4 > vowelplot(normed.vowels, color = "vowels", leg = "vowels")

```

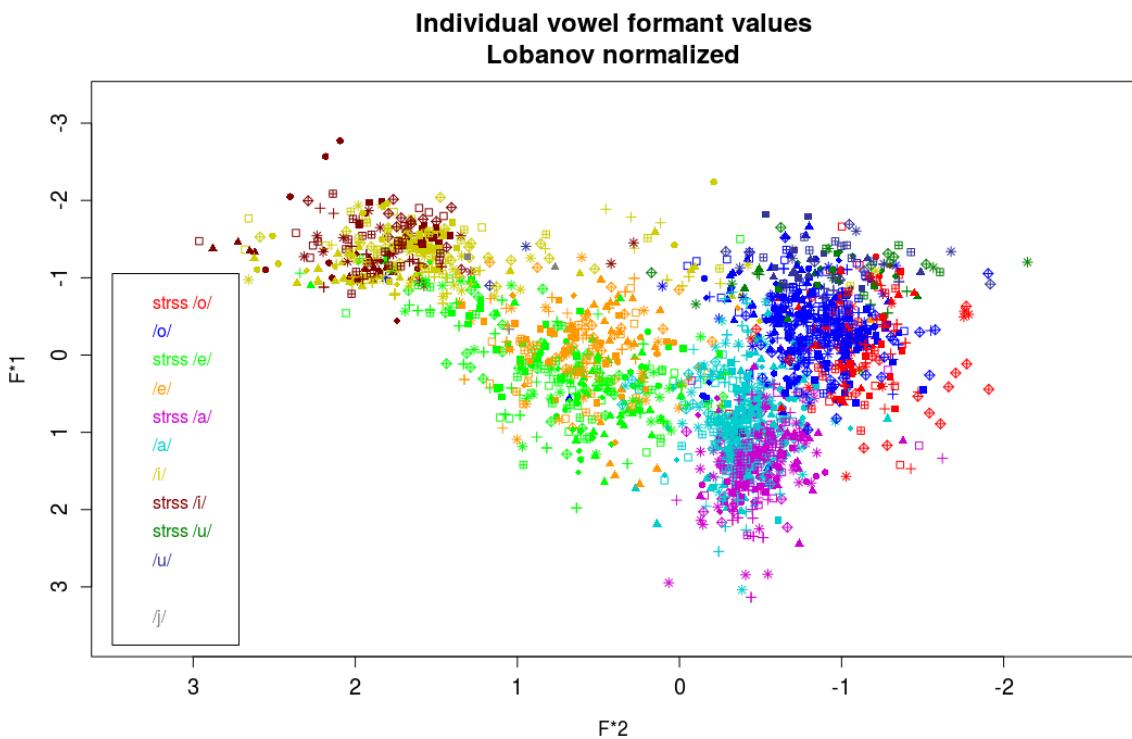


Figure 4.5: Scatter plot of all informants normalized made in R

## 4.2 Questionnaires

### 4.2.1 Data Classification

A total of 97 questionnaires (47 for women and 50 for men) about the Barese dialect use in school life and every day life was submitted for this study, even though more will probably be added to the repository in the nearby future. To work with all the answers given to the 20 questions, different tables were prepared based on different

social criteria which were used to group the informants. The three different points of view from which the results were analyzed were: a gender one between males and females, a social class one between working class, middle class and upper middle class informants, and finally a sentiment one where the answers to the questions were used as hints about the either positive or negative attitude towards the Barese dialect.

Categorizing the informants into social classes was not easy. The main problem is that information on average income and benefits on the Italian job market is not easily retrievable, it can be difficult to find precise or well organized data and is even more difficult to find extra statistics to make comparisons. Nonetheless, the ISTAT website (which does not offer secure https protocol) hosts private research results on economics, demographics and more completely free of charge and available to the public, even though it appears to hold a monopoly on the nation-wide statistics market. According to a report published in December 2016, in the year 2014 the average Italian hourly wage was equal to € 14,1; while in the same year, according to the Eurostat database, the average annual net income for a family with 2 children and one salary was € 24,391.18. These are already some of the lowest numbers in all of the western and northern industrialized EU, as reported by several national and international news outlets, taking also into account the stumbling and clumsy pseudo-development in the human rights and the workers' rights law, it is not so unexpected to discover that the situation is quite stagnant throughout all of the working fields. Moreover, the fact that the country lacks a minimum wage limit makes the process even harder. As it can be seen from the following graph released by the ISTAT website, the previously-mentioned average hourly wage is indeed € 14.1, but over 44% of the employees has an income lower than the median, equal to € 10,75, in the histogram.

This gives a general idea of the state in which Italy is swamped in with the Financial Times citing the country as an example of kakonomy (an economy consciously based on the exchange of low-quality goods and services). The article is based on Gambetta, Origgi (2009), where it is explained how mediocrity is a social norm which prevents exchanging parties from being disappointed from the quality or timing of the goods or services received, while at the same time it deteriorates the quality of standard education, politics, tolerance and lowers the actual wages or payments.

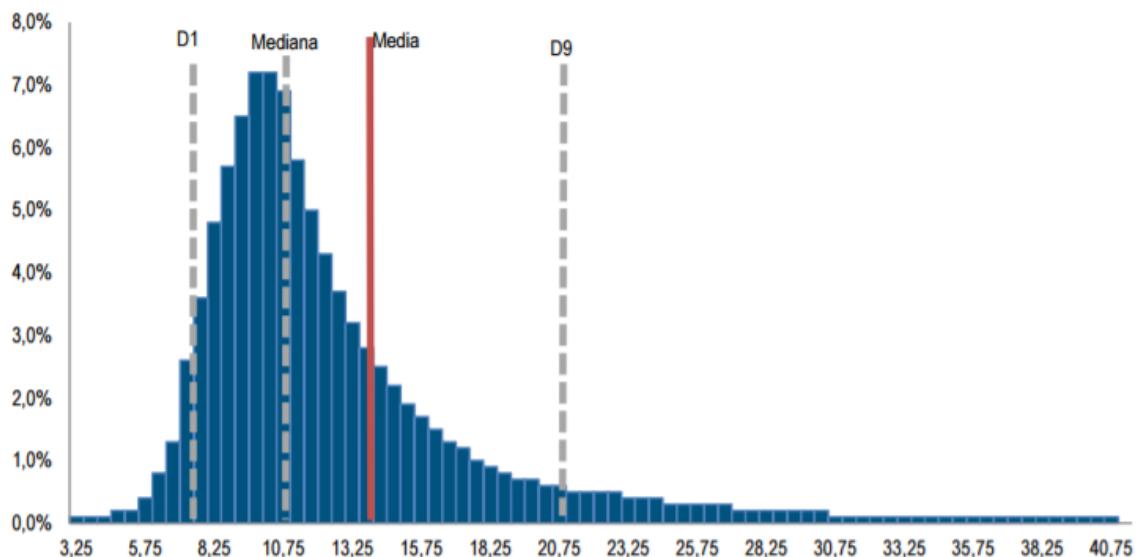
Aside from being a critique (which it is), this information is essential to understand how difficult it may be to establish social classes and their borders in a society and economy where everyone is leveled about the same. By keeping all the above-mentioned in mind, these are the social classes and their criteria of evaluation designed for this study.

	Single Income	Double Income	Education
Working Class	1		
Middle Class		1	
Upper Middle Class		1	1

Table 4.1: Social Class Classification

The table shows how the main criteria (single income, double income and education) result in the social class to which the informants belong to. By way of example, an informant may fall into the Middle Class group if he lives in a double income household or if he lives in a single income one but one of his parents has a university degree. Obviously, sometimes these criteria had to be overruled and some other times informants did not exactly belong to any of these classes (both parents unemployed or orphans). It is clear then that the family income is not the only thing which contributes to the classification.

The questionnaires were not submitted in digital form. Therefore, in order to make them machine-readable, it was necessary to transcribe them into different csv files according to the purpose of each file. Even though the questionnaires were anonymous, the little personal information given by the informants allowed to divide and categorize them into the different social groups. As explained in the previous chapter, the blank areas in the questionnaire where the informants had to fill in their parents or legal guardians jobs and the one about their gender gave all of the needed information to proceed.



(a) La coda destra della distribuzione è stata tagliata per favorire la leggibilità del grafico.  
Fonte: Istat, Registro RACLI Anno 2014

Figure 4.6: Directory Structure

The first step was to divide the students into social classes, which were also divided by gender, by summing up all of the results from the questionnaires together. This means that it is not possible to view each single questionnaire directly from the csv files but their results are collective. They are already summed in order to make the elaboration process faster and easier in Python. Once the first socialclass table was made it was easy to build the gender one by just adding the previous results by gender into a new file.

The tables, along with their respective plots and the code used to develop them, can be found in the GitHub repository at <https://github.com/andcarnivorous/questionnaire-plots> where there will be further updates in the future when more questionnaires and informants will be added from different social backgrounds.

Now that everything is set, using again the Pandas library along with the Matplotlib one, it is possible to start working with the data collected to get an idea of the situation. In the first place, the tables need to be parsed as it was done with the formant tables. Second, according to which point of view the data are being analyzed from, it may be necessary to modify the dataframe by excluding some rows or columns and then concatenate the results into a new dataframe. In the end, using Matplotlib, plots based on the column results will be generated. Since usually the columns are organized by gender and social class, each column will represent the results from either males or females who belong to a specific class. The following lines are an example from the repository on how the men's plot was made.

```

1 ##### MEN #####
2 questA.Si_M.plot.bar(position=2, color="blue", width=0.25)
3 questA.No_M.plot.bar(position=1, color="black", width=0.25)
4 questA.A_volte_M.plot.bar(position=0, color="grey", width=0.25)
5 plt.axis([-1, 20, 0, 50])

```

In these lines the columns “Si\_M”, “No\_M” and “A\_volte\_M” are being taken from the “questA” dataframe and then plotted on a bar chart format. Notice that the axes are being adjusted by the plt.axis() class. Moreover, graphical editing is applied to each bar so that the results can easily be distinguished. In this case, since the analysis by gender is done on a sample of 97 informants that are equally divided between males and females, we do not need to normalize our data. Having a samplelike this, well balanced and round, can help you avoid any normalization, but in certain cases it is a necessary step to have a more realistic and reliable idea of the situation.

On the other hand, in a case where the number of informants per group is significantly different, the data collected should be normalized in order to have results which

can actually be compared among them. If in the first case from this study normalization was not needed to adjust the questionnaires' results by gender, it was mandatory instead when comparing the informants based on social class. In this instance the groups were 6: 29 working class females, 31 working class males, 13 middle-class females, 15 middle-class men, 5 upper-class males and 5 upper-class females. In order to normalize these data, the results were transformed into percentages before being plotted on the bar chart. The following lines show how to directly make a percentage.

```

1 ( df3 .Si_M_F*100 / df3 .ix [2 , 'Tot_M_F' ] ) . plot . bar ( width=0.25, position=1)
2 ( df3 .Maybe_M_F*100 / df3 .ix [2 , 'Tot_M_F' ] ) . plot . bar ( width=0.25, position=2,
    color='y')
3 ( df3 .No_M_F*100 / df3 .ix [2 , 'Tot_M_F' ] ) . plot . bar ( width=0.25, position=3,
    color='r')

```

In the example above, the Si\_M\_F column (middle-class females who answered “Yes”) is multiplied by 100 and then divided by the Tot\_M\_F column (Total number of middle-class females) in order to get the percentage of questions answered with “Yes”. The results can be compared by looking at the different images but they can also be compared in the same frame by building a 2 or more figure layout. An example is the next piece of code which generated two horizontal bar charts (by using the barh() class) one next to the other, facing opposite

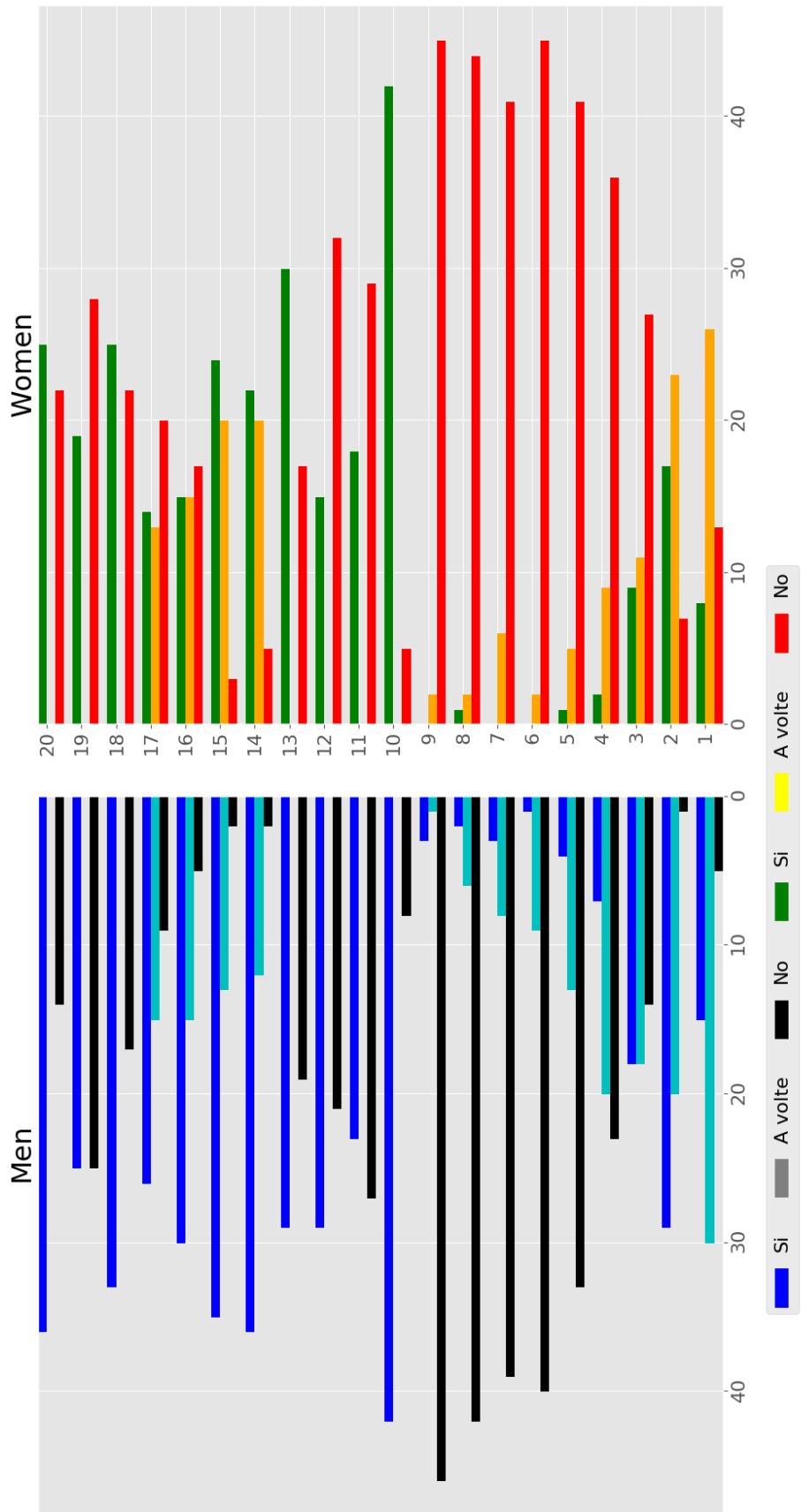
```

1
2 plt . subplot (121) . invert_xaxis ()
3 plt . title ( 'Men' )
4 questA .Si_M. plot . barh ( position=0, color="blue" , width=0.25)
5 questA .No_M. plot . barh ( position=2, color="black" , width=0.25)
6 questA .A_volte_M. plot . barh ( position=1, color="c" , width=0.25)
7 cur_axes = plt . gca ()
8 cur_axes . axes . get_yaxis () . set_visible ( False )
9 plt . subplot (122)
10 plt . title ( 'Women' )
11 questA .Si_F. plot . barh ( position=0, color="green" , width=0.25)
12 questA .No_F. plot . barh ( position=2, color="red" , width=0.25)
13 questA .A_volte_F. plot . barh ( position=1, color="orange" , width=0.25)
14 ( df3 .Si_M_F*100 / df3 .ix [2 , 'Tot_M_F' ] ) . plot . bar ( width=0.25, position=1)
15 ( df3 .Maybe_M_F*100 / df3 .ix [2 , 'Tot_M_F' ] ) . plot . bar ( width=0.25, position=2,
    color='y')
16 ( df3 .No_M_F*100 / df3 .ix [2 , 'Tot_M_F' ] ) . plot . bar ( width=0.25, position=3,
    color='r')

```

The result will be two bar charts in the same frame like in the following figure.

Figure 4.7: Answers by gender



# Chapter 5

## Phonetic Analysis

### 5.1 Consonants

#### 5.1.1 Devoicing of /s/

The devoicing of /s/ (which will be referred to as the southern sibilant devoicing) is very common throughout the South of Italy. In the northern regions if the /s/ appears between vowels (VCV) it becomes voiced in any instance and environment. On the other hand, this is not true in Tuscany where, according to Rohlfs (1966) the situation seems to him not as clear and simple. What is reported in the first volume of Grammatica Storica della Lingua Italiana e dei Suoi Dialetti is a variety of options for the pronunciation of /s/ in VCV environment that could be summarized in an easier way than the extensive list of examples that are provided in the volume:

/s/ → [s] / **V\_V**

A similar environment is reported, still by the aforementioned author, to be present in most of the central area of the country. Also in L'italiano standard e pronunce regionali (Canepari, 1983) [s] is reported to be the only option between vowels in most of the South, including some of the exceptions that were instead reported by Rohlfs in some areas in Calabria. However, this does not happen in the Barese variety. As previous reliable research has shown, almost the entirety of the South, from the Abruzzo region to the southernmost point of Sicily (except some small areas in Calabria and Basilicata), has a systematic devoicing of /s/ when it occurs in any case between vowels: in stressed or unstressed syllables, as prefixes/suffixes or infixes.

#### High School Informants

Almost every informant showed a devoiced /s/ while reading the word list, providing substantial supporting evidence to this feature. This devoicing is easily detectable by

noticing how the spectrum is suddenly and sharply cut between the onset and the coda of the previous syllable. The clear cut in the spectrogram is due to the closing of the vocal tract which can then perform the sibilant sound, that can usually be seen on the top in the F3 section, and finally release the air for the next vowel to be pronounced.

Instead, when there is a voicing process taking place the /s/ is pronounced [z] in VCV position and it can be seen in the spectrogram that there is no clear cut between the vowel in final position and the following onset consonant sound, but there the F2 and F1 spectrums are uninterrupted and the density in F3 is noticeably inferior. Luckily, one informant provided more than one example for this variant.

Down below the images from the spectrogram of the word ‘casa’ /’kasa/ can be observed, the segment selected is the one of /asa/. As it can be noticed, Male informant 2 and 4 along with Female informant 3 produce a [s] like all the other subjects but female informant 1. The latter is the only informant who produced [z] in most of the words (only ‘Pisa’ and ‘analisi’ were produced with a [s]). It is hard to determine whether or not this is the result of hypercorrection or an actual feature of the speaker, since the anomalous number of vowel tokens in [e] suggests that it may be a result of hypercorrection. However, since only one of the informants shows a voiced /s/ in VCV, it cannot be put forward that a shift toward voicing is taking place.

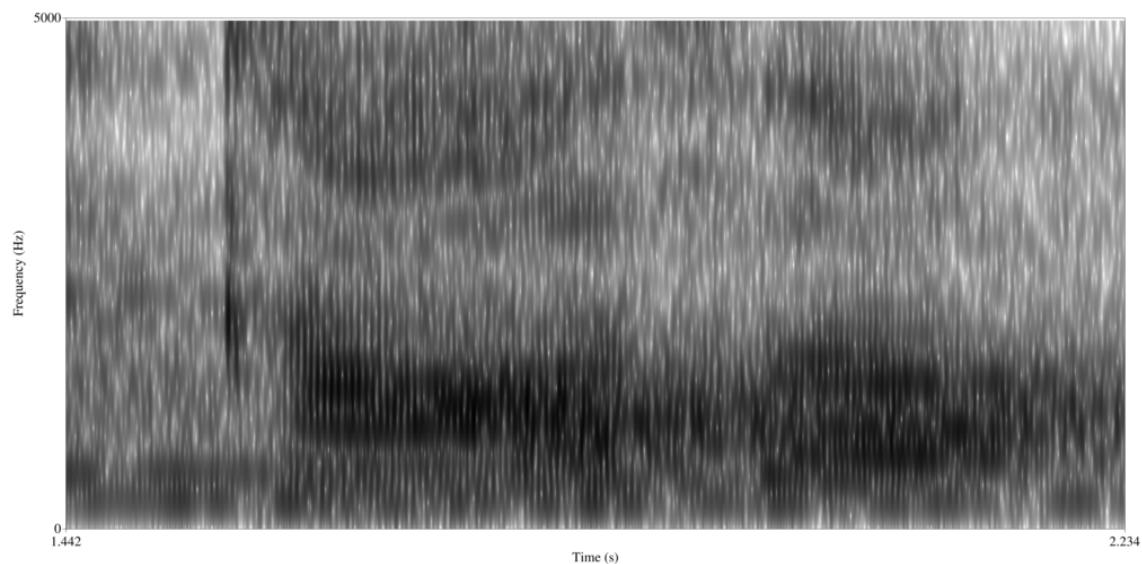


Figure 5.1: finf1: ‘Casa’

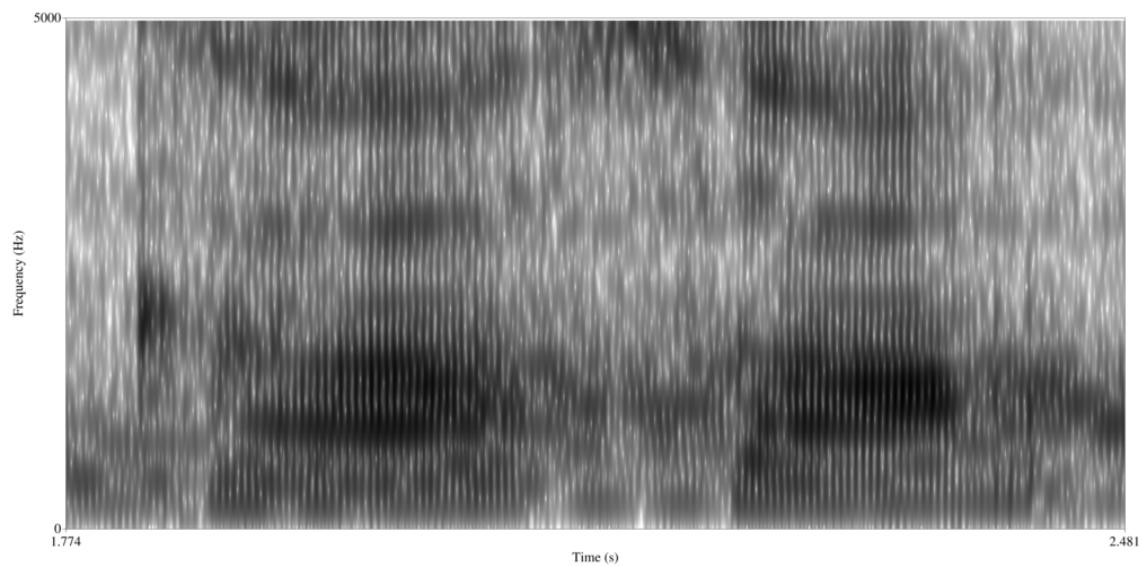


Figure 5.2: finf3: ‘Casa’

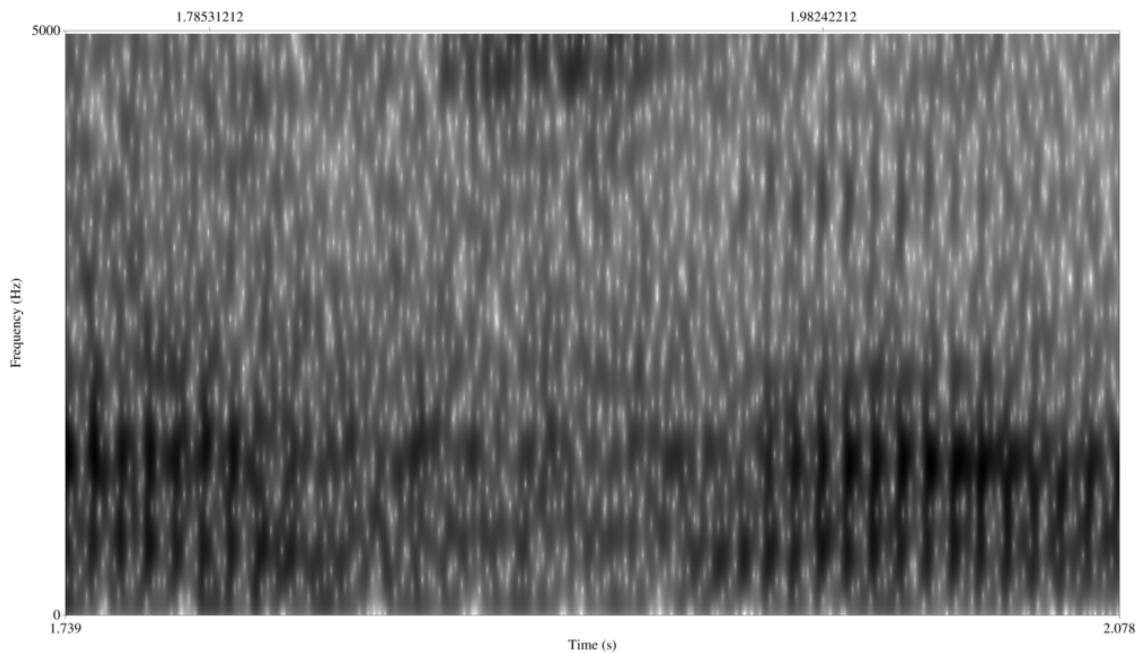


Figure 5.3: minf2: ‘Casa’

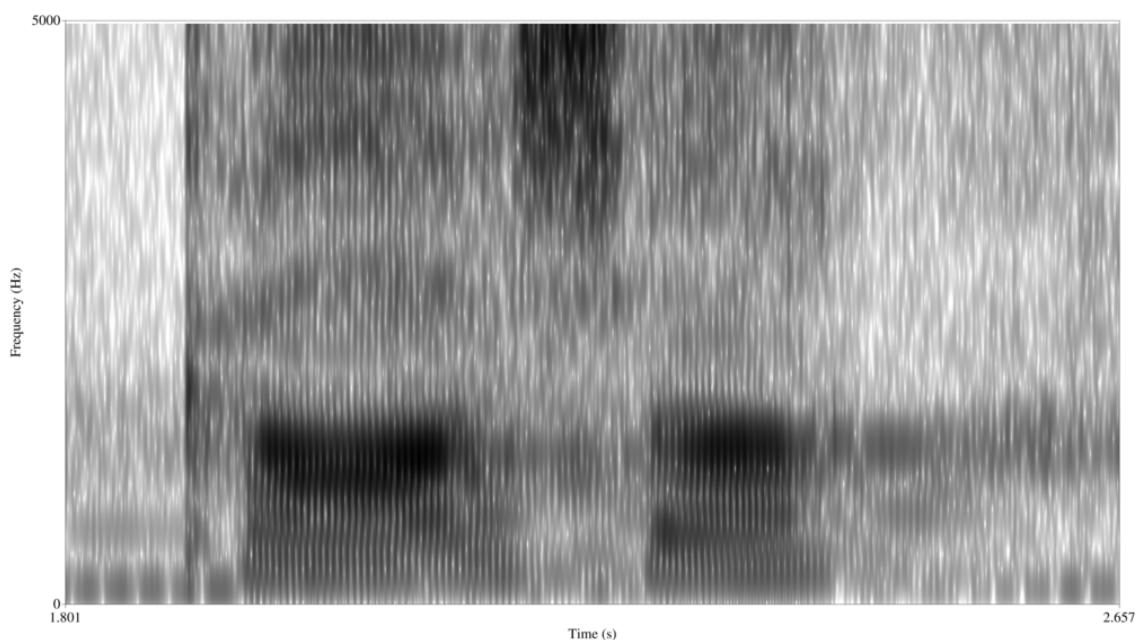


Figure 5.4: minf4: ‘Casa’

The words ‘Pisa’ /’pisa/ and ‘Viso’ /’viso/ show the same behavior, even though Rohlfs claims the former to be one of the exceptions to the southern sibilant devoicing. As it can be seen in the following instances from the spectrograms, the unvoiced alveolar fricative is always present except, again, in the female informant 1. This goes against Rohlfs’ claims and in support of Canepari’s who sees the southern sibilant devoicing as an absolute feature throughout the south.

Even though the word ‘casa’ was a perfect fit for this task, it is also true that the voicing which affects its sibilant is more of a northern feature which is slowly spreading across the country. In order to have more samples from different words and phonetic environments, the following images represent the spectrograms of other words which were used to elicit the voicing of /s/ between vowels phenomenon. It is important to remember that perceptive analysis should also be included when dealing with recordings that are made outside of a recording booth. This is why in most cases a perceptive analysis was implemented to have more reliable results which would not just depend on the spectrogram representations. As it can be seen, all of the following cases show an unvoiced consonant in both stressed and unstressed syllables. The first group of images belongs to the female informants, while the second group belongs to the male ones.

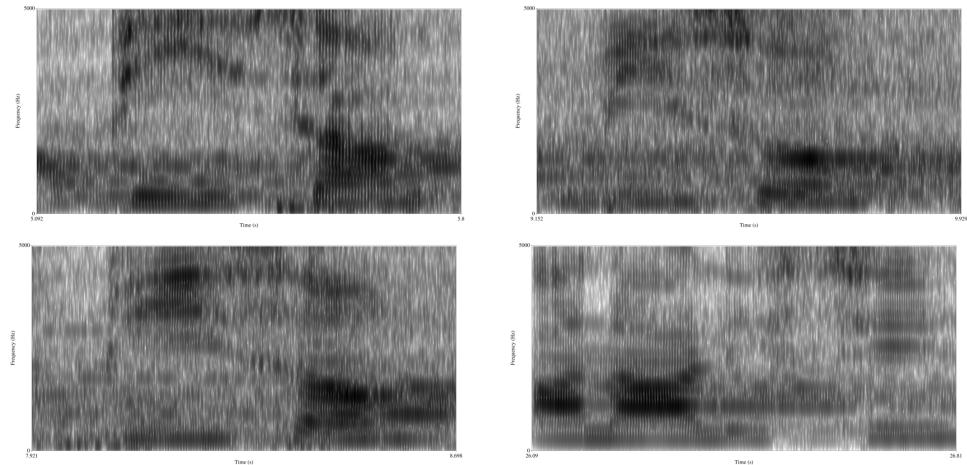


Figure 5.5: clockwise from the top left: finf3 ‘Pisa’, finf4 ‘Viso’, finf4 ‘Pisa’, finf2 ‘Analisi’.

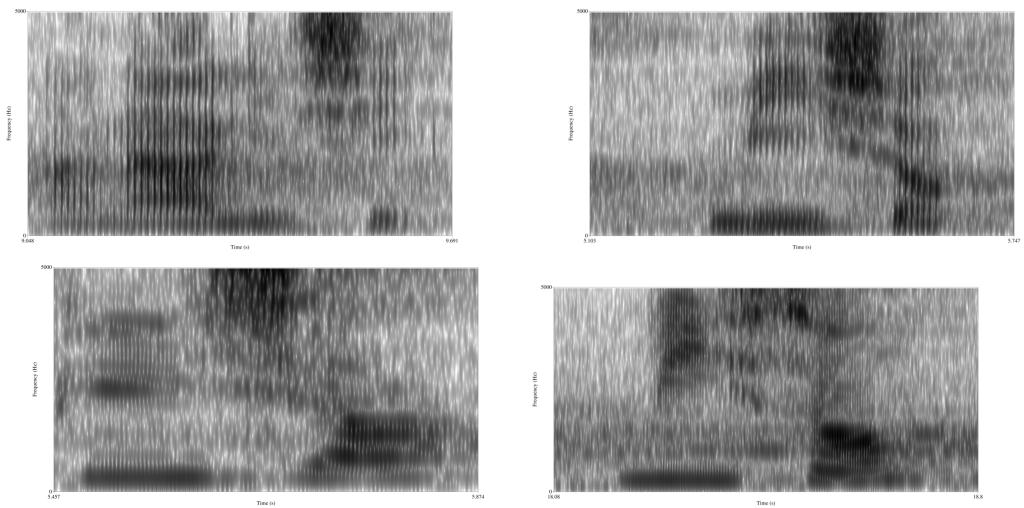


Figure 5.6: clockwise from the top right: minf8 ‘Analisi’, minf8 ‘Viso’, minf6 ‘Pisa’, finf2 ‘Viso’.

### Adult Informants

One of the adult informants, adult\_minf2, showed a case of self-correction at the beginning of the wordlist, as did in an lighter way another adult informant, adult\_finf4, pronouncing the /s/ in VCV position in its voiced form [z]. In the spectrogram of adult\_minf2, there is clear voicing evidence in the F1 and F2 areas. The word which was in both cases pronounced with a voiced sibilant is ‘Casa’ (‘house’), which is also the first occurrence of /s/ in VCV in the list, therefore it can be hypothesized that the informants, conscious of being recorded, tried to produce the most standard pronunciation of the words at the beginning, but ultimately failed in keeping such controlled behavior. Proportionally, the amount of voiced /s/ can be determined to be just slightly higher instead of that found in the Giulio Cesare high school students, where only one female informant possibly showed hypercorrection. This may be a sign that the constant devoicing of /s/ was more stigmatized in the past or the voicing of /s/ was more consciously recognized as a prestigious form, while it is unlikely that the feature was less present, since there is consistent and abundant evidence of the contrary (Rohlfs, 1966).

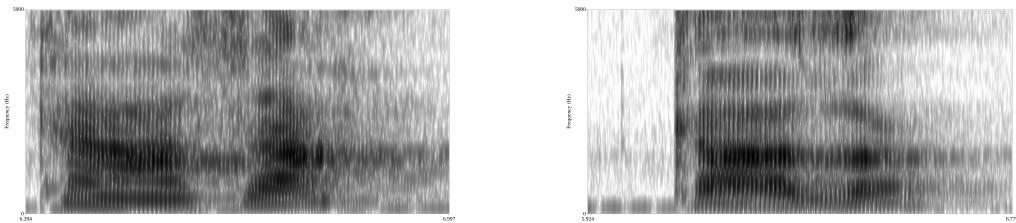


Figure 5.7: From left to right: adult\_finf4 and adult\_minf2 ‘Casa’.

### 5.1.2 Voicing of /t/

This feature is rarely discussed and analyzed even though, from a highly personal point of view, seems to be one of the most distinguishing features of the Barese variety which can also be found across the province and in the whole Apulia region. In Rohlfs (1966) the voicing of /t/ is briefly and indirectly mentioned when addressing the phenomenon of consonant sonorization when following /r/. Some of the examples given in the manual also contain cases of sonorization following /n/ in the resulting segment /nt/. In this case we are clearly dealing with a case of assimilation, where the voiceless consonant receives the sonorization feature from the preceding voiced consonant. As a matter of fact, Rohlfs reports that this assimilation happens with many different voiceless consonants when they follow /n/, /m/, /l/ or /r/ (Rohlfs, 1966: 404). Nevertheless, it is important to remember that some of the examples given seem not to acknowledge

the existence of the schwa sound in the varieties. Therefore, some of the examples reported such as ‘mardà’ from ‘maritare’ /mari’tare/ are not actually events of voicing caused by the preceding voiced consonant, they are instead phenomena of assimilation due to the influence resulting by the preceding mid-central vowel and the following vowel. It would be more appropriate, then, to transcribe the word ‘mardà’ as ‘marədà’ or even better [marə’də]. According to these examples the following formulas can be put forward:

$$/t/ \rightarrow [d] / n\_V$$

$$/t/ \rightarrow [d] / \emptyset\_V$$

The first formula states that /t/ is pronounced [d] when it is placed between the nasal [n] and a vowel sound. It is general, but this first formula excludes the case reported by Rohlfs, which is of devoicing after trills, since the position in which the change takes place would have to be reported as ‘r\\_V’. However, by taking into account also the fact that the schwa [ə] is acknowledged, it could be also possible to put forward the second formula, which states that if the consonant [t] is preceded by the mid-central vowel and followed by any vowel, it will undergo a voicing process.

By taking now into consideration the previous event from this new perspective, a new hypothesis that not only the Barese variety may have not only a feature of voicing after nasals, trills and laterals but also a feature of /t/ voicing between vowels. It is also nice to think how this contrasts the fact that /s/, as seen in the paragraph before, is always unvoiced between consonants. The issue of the schwa and its acknowledgement is something that was already explained in the previous chapter and these examples give further evidence to the fact that counting this vowel as part of the variety’s repertoire can open new possibilities and questions regarding careful language documentation and phonetic phenomena.

Concluding this introduction and the short tangent about the mid-central vowel, this research has focused only on the voicing of /t/ following /n/, leaving the other cases of voicing after the lateral and trill consonants to future research. It is important to notice though that, in order to avoid similar misinterpretations, all the words chosen for the wordlist to elicit this feature do not allow the presence of the mid-central vowel between them.

In this study, in almost all of the occurrences of /t/ after the nasal /n/, the informants produced a voiceless consonant. This can clearly be seen in some of the spectrograms presented below, since the voiced alveolar plosive can usually be recognized by the presence of sound at the F1 level. Nonetheless, it can be hard to determine

whether the plosive is voiced or unvoiced since they both show F2 and F3 activity. The F1 values can be decisive for the evaluation but also the release burst which follows /t/ usually has a higher frequency. Nevertheless sometimes perceptive analysis must be included to make sure that the spectrogram interpretation is reliable and accurate.

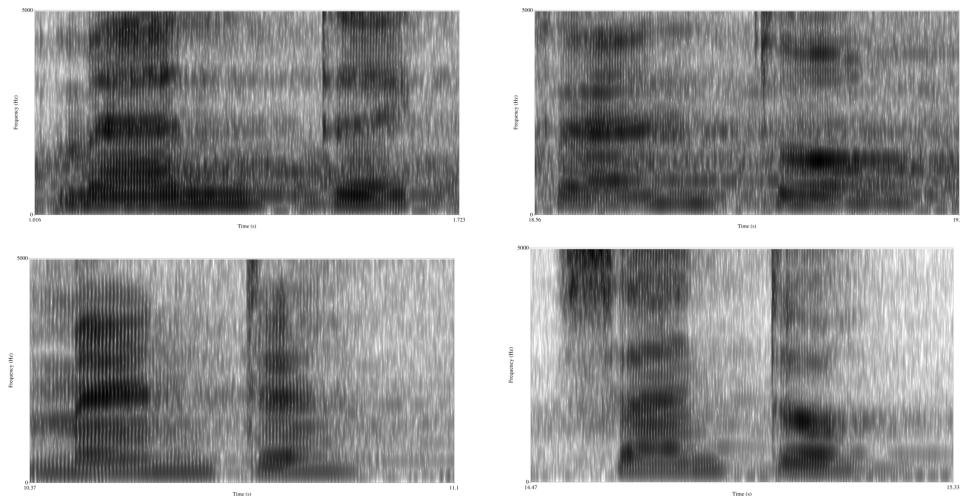


Figure 5.8: clockwise from the top left: finf3 ‘mente’, finf4 ‘sento’, minf7 ‘mente’, minf4 ‘sento’

As it can be seen in the previous four spectrogram shots, all of these informants produced an unvoiced consonant, since the burst of air which precedes the vowel sound can clearly be noticed. Even though the spectrogram of Male informant 4 may suggest the presence of F1 frequencies, those can be excluded since they are clearly interferences which occur throughout the shot. However, the F2 and F3 frequencies are rather different from those in a completely unvoiced consonant /t/ and they might be due to some voicing occurring. Only two spectrogram shots seem to suggest some kind of voicing, but the majority of the informants certainly produced unvoiced consonants in all of the instances collected. In the following images there is also the word ‘trenta’ /‘trenta/ which was used in the wordlist. All of the previous words plus this one had only the segment /nt/ to try to elicit the needed feature of /t/ voicing after nasals (/n/), laterals (/l/) or trills (/r/) mentioned in Rohlfs (1966).

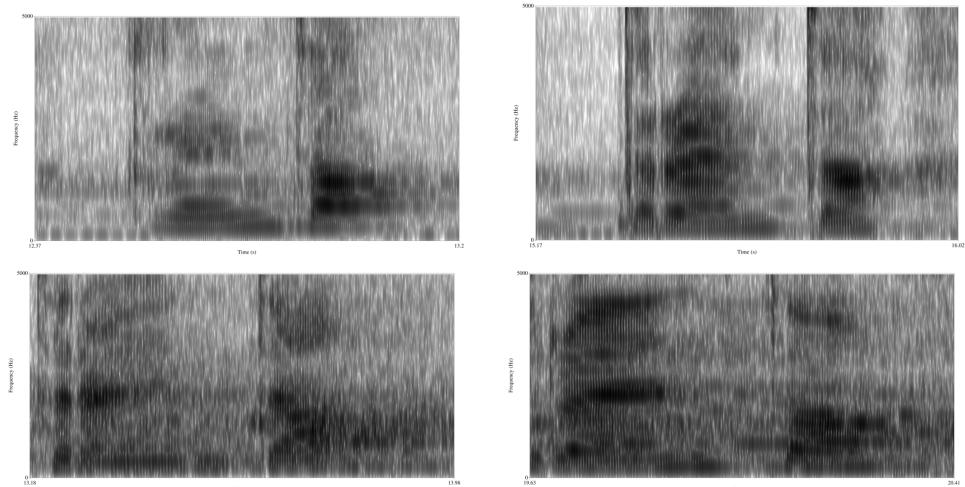


Figure 5.9: clockwise from the top left: minf6, minf4, finf1, finf4 ‘trenta’

### 5.1.3 Alterations after nasals and laterals

As it was previously mentioned, in Grammatica Storica della Lingua Italiana e dei Suoi Dialetti (Rohlf, 1966: 392), the Barese variety and most of the other southern ones reportedly share the sonorization of voiceless consonants which follow nasals. This voicing phenomenon seem to occur also after laterals and trills. The latter will not be discussed and neither was analyzed during this study, but the effects of nasals and the lateral-approximant [l] on following voiceless consonants were successfully recorded. The segments which are reported in the manual regarding the voicing influence of the nasals are /nt/, /mp/, /nk/, /ns/ e /nz/ (which really is a deaffrication of /ts/). The previous paragraph focused on the /nt/ segment and for this reason it will not be reiterated in this paragraph, while the others will instead be discussed in the same order.

The most interesting feature may be the deaffrication of /ts/ when it follows the phone [l]. This has been analyzed in two different words in the wordlist and even though it is not reported in any previous research it could be something which occurs in and is part of the Barese variety. Affricates, just as voiceless fricatives, can be problematic to distinguish, thus making the claim of such features more precarious but not implausible.

First of all, the segment /mp/ was analyzed in the context of ‘campo’ ['campo]. None of the informants provided evidence for the voicing of [p]. Not only this feature is reported in the Barese variety, but it is also evident in the dialect itself as the example ['lampo] (‘lightning’) → ['lambə] provided in Rohlf (1966: 404) and ['tsompo] (‘jump’) → [tsum'bwe] (‘to jump’) Calabrese (2000: 64) show. This could mean that the feature could be lost or in the process of becoming lost. However, this could also mean that /mp/ → [mb] is not embedded in the variety but still present in the dialect, making the variety closer to ‘standard’ Italian than Barese. In the following spectrograms it is possible to observe how all of the presented cases clearly show an unvoiced plosive being produced in the word ‘campo’.

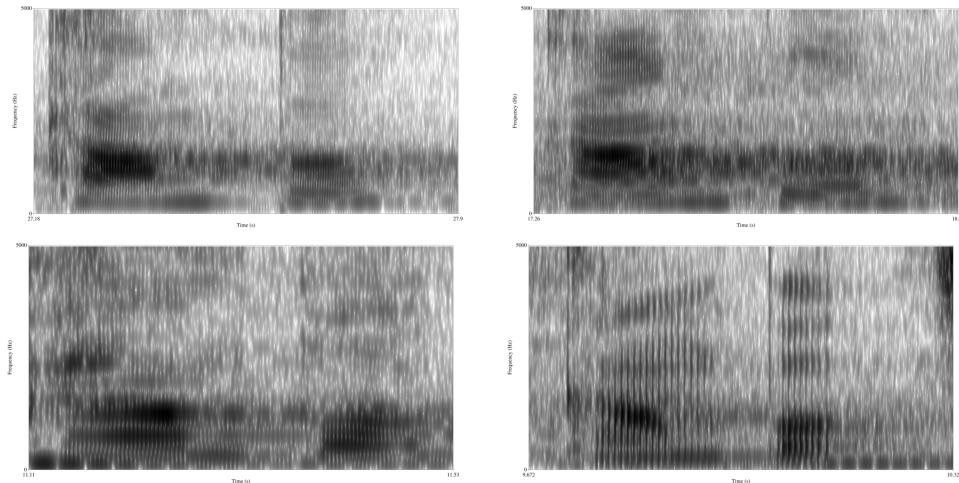


Figure 5.10: clockwise from the top left: finf2, finf4, minf6, minf8 ‘campo’

Second, the segments /nk/, /ntʃ/ and /ns/ seem to occur only in their unvoiced form, respectively [ŋk] and [ns], as the previous one. Nonetheless, one informant (minf9) produced a velar consonant which sounds quite voiced and also a sonorization of /tʃ/ to /dʒ/ in the word ‘Vincenzo’, still the problem is that the spectrogram for this informant is not as clear as the others and he is the only one who showed an instance of these two phenomena, so the claim cannot be certain and must rely more on perceptive analysis than objective evidence. Rohlfs does not give any examples for these three cases, but he does state that in the south every unvoiced consonant goes through a process of sonorization when following a nasal. However, Loporcaro (1988) reports the word ‘dolce’ ['doltʃe] as ['doltʃə] in the dialect of Altamura. The same source also provides an example of /nk/ sonorization in ‘accocchiare’ [akkok'kjare] → [ak'koggjə]. This may suggest that the deaffrication, palatalization and sonorization of the unvoiced plosive [k] into [g] may have been lost for a longer time than just in recent years in the variety or may have undergone a sonorization process becoming /dʒ/, even though only one informant so far has showed this shift. It is also true, however, that there is an enormous lack of data between the data collected by Rohlfs in the 40’s, the data collected by Loporcaro in 1988 revised by Calabrese and this study which is based on interviews carried out in 2016. That being mentioned, it is possible to confirm thanks to the following spectrograms that the /nk/ and /ns/ segments are always produced in their unvoiced form.

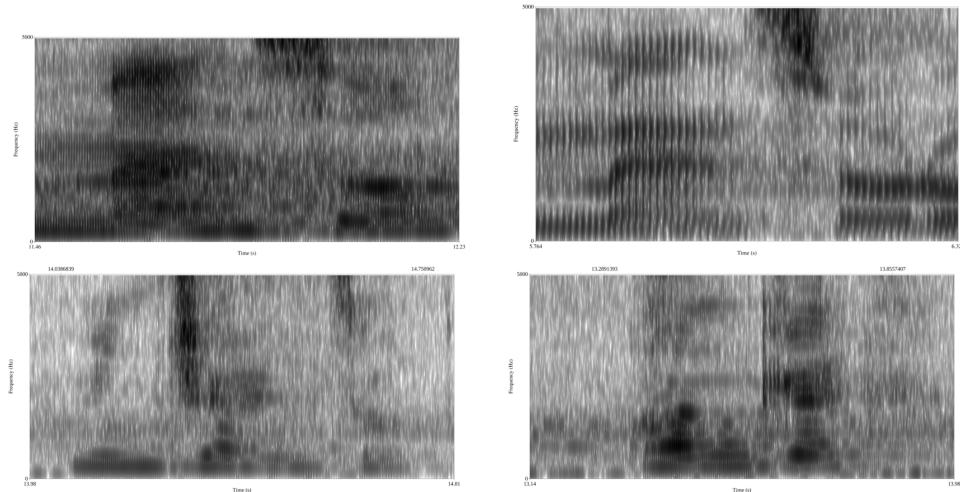


Figure 5.11: clockwise from the top left: finf4, minf5 ‘immenso’, minf8 ‘Vincenzo’, ‘anche’

Lastly, the deaffrication of /nts/ and /lts/ is the only one that was recorded in some cases even though it did not always occur in a clear way, it might be said that in some instances the affricates were pronounced with a slight level of sonorization which could not exactly be considered as a deaffrication case. In order to elicit the consonants needed, the words ‘senza’ [‘sentsa], ‘Vincenzo’ [viŋ’fɛŋtso], ‘alzare’ [al’tsare] and ‘milza’ [miltsa] were chosen. The informant who showed the greatest level of deaffrication is finf4, who produced a clear [al’zare] instead of [al’tsare] as it can be seen in the next figure after the corresponding formula (unfortunately [n] and [l] share the same features as [r] and since there is no data available on the affricate behavior after the trill it is not possible to generalize into a full feature formula the rule).

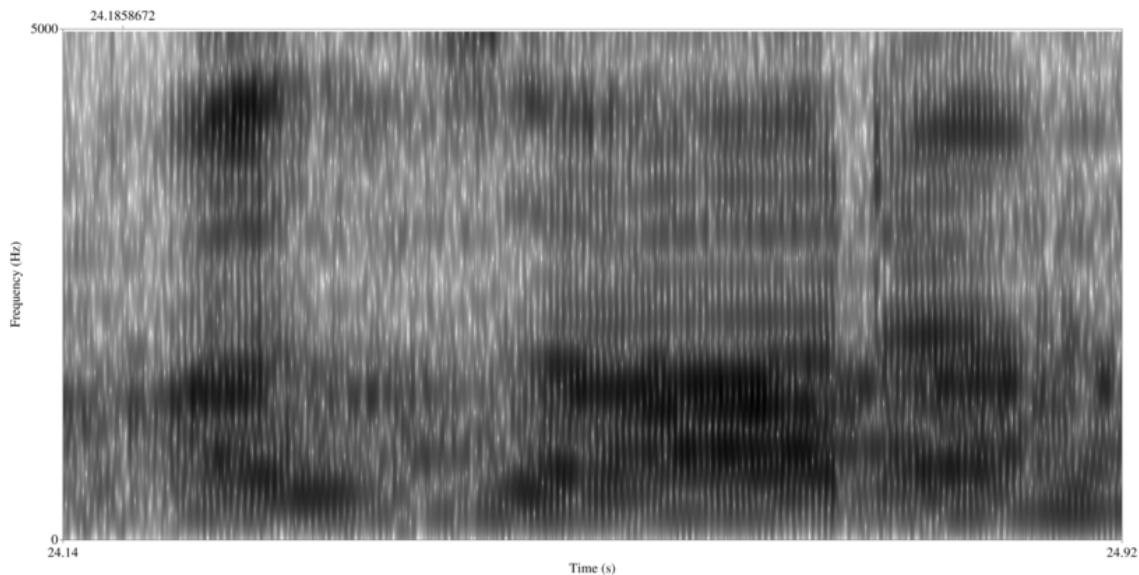


Figure 5.12: finf4: ‘Alzare’

There is definitely less noise in the higher frequencies where usually the affricates produce a clear cut and a noticeable trace in the spectrum. The other informants who showed deaffrication or some degree of it were minf2, minf4 and minf9. Especially minf9 showed deaffrication in all of the /nts/ instances to different extent. In the word ‘senza’ ['sentsa] → ['senza] the consonant produced was clearly a [z], while in the others it was an affricate with slight or consistent voicing. Minf9 is also the informant who showed the sonorization of /tʃ/ to /dʒ/.

Therefore, it can be asserted that this feature is still present in the variety and it surely still is in the dialect. It is also interesting to notice how the lost variety’s features are now closer to Italian than Barese and how it seems that going in this direction the result may be that what will differentiate the Barese variety from ‘standard’ Italian will mainly be vowels. Thus, it can be asserted that the Barese variety is going through a process of “standardization” in regards to consonant phonemes and clusters, since the only two features preserved among the 7 features researched only 2 appear to be still active. This adds up to the possible front vowel split which might be taking place and that will be addressed in the next paragraph, indicating a possible standardization process which might bring considerable change to the Barese dialect. If this were to happen it would possibly develop into a drastic case of language loss with dangerous consequences on the survival of the language or the marginalization of it to a smaller fraction of the population. The evidence which phonetic analysis can provide must be taken seriously and further analyzed, since it may show the first symptoms of a kind of change which is negative and deteriorating to the language. This statement does not mean nor want to imply that language change should be avoided or always considered as an unacceptable phenomenon, such a claim would be regarded as ridiculous if not ignorant and whoever claims to be part of the linguistic field while asserting similar ideas should always be ignored since language change is an unavoidable and ever present process. Rather, language change should always be monitored in order to prevent languages from disappearing. This topic will be further discussed in Chapter 6 in relation to the sociolinguistic factors other than the phonological ones.

## **Adult Informants**

Following the same order in which the previous features of the high school informants were presented, the first one of the [ts] deaffrication is reported in adult\_minf02 who produced a [z] in the word ‘Bolzano’. It is worth to notice how this feature seems to be more present in the high school students even though adults had three times more words aimed at eliciting the feature ('Alzare', 'Milza', 'Bolzano', 'Calzoni', 'Si alza', 'Calza'). It is possible then that this feature is more prominent nowadays or simply that the sample of adult informants is too small. Either way, it still is interesting

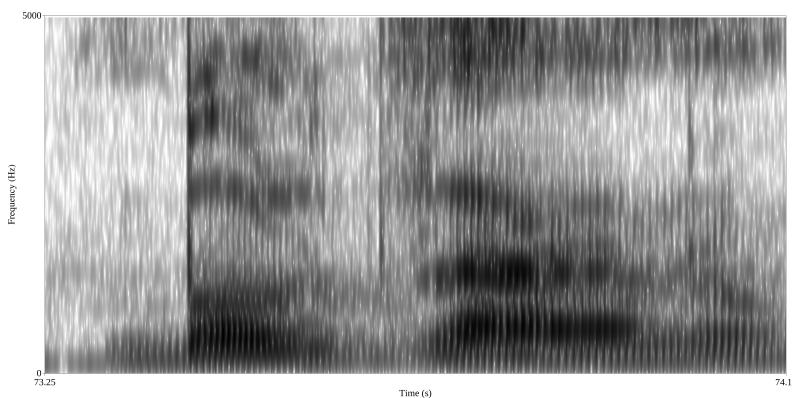


Figure 5.13: adult\_minf02 ‘Bolzano’

how only adult men produced the feature, while none of the women did. It might be possible that this deaffrication process, not mentioned in the previous works collected until now, could have been passed on by men, which defies the well known and shared fact that language variation is usually initialized and transmitted to new generations by women (Eckert and McConnell-Ginet, 2003).

Regarding the sonorization of [p] after nasal [m], no one of the adult informants provided tokens of this feature (even though for adults there were two words eliciting it), producing an unvoiced plosive every time, even though it seems to be acknowledged by locals and previous works (Rohlfs, 1966). It can be concluded that this feature is probably the most controlled by speakers in formal situations or interviews, while it is unlikely that it may have disappeared.

## 5.2 Vowels

### 5.2.1 General Description

The general phonetic results of this study are meant to draw a preliminary but reliable description of the current Barese phonetic repertoire and its phonological system. Even though some descriptions have been attempted (Rohlf, 1966; Filippino and Cazzorla, 2015; Canepari, 1983) they seem to either lack the physical acoustic data to support them, making them the result of simple and unreliable impressionistic methodology<sup>1</sup> for nowadays standards (thanks to digital and quantitative analysis), or they provide a number of informants and tokens not close enough to be able to have a satisfying and accurate description of the sounds that make up the Barese variety. This paragraph is meant to show the general results that provide some of the first quantitative data in support of an accurate description Barese variety's vowel repertoire. Although these results are consistent and they show reliable trends in the phonetic production of the Barese speakers who participated, they are still to be considered preliminary if compared to wider range studies with considerable wider pools of data such as Labov (1994) or Wolfram and Schilling (1998). Nevertheless, I hope this work will help whoever in the future will be interested in researching and improve the Barese description and its longitudinal changes.

From the data gathered in this research, the following are the vowel phones of the Barese variety:

#### Barese Variety Phonetic Vowel Repertoire:

[a] [ə] [ɛ] [e] [i] [o] [u]

The schwa was not directly elicited and most of the tokens obtained are probably not approximate enough to the schwa that the speakers would produce in a less restrictive task than the wordlist one, but some vowels belonging to that area have clearly come up and they can be seen in Figure 5.14, they mainly consist in the unstressed /a/, /e/ and /o/. It must be kept in mind that, according to the bibliography but also the data acquired, it is possible to find schwas in word-final position in the Barese variety, but it is rather uncommon to find them in unstressed syllables. In order to obtain schwas in unstressed in-word-position syllables, like in proparoxytones and paroxytones such as they were elicited in Filippino and Cazzorla (2015), it would be necessary to have

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<sup>1</sup>Contemporary manuals such as Hayward (2014: 41) highlight how the scope of impressionistic, or perceptive, analysis can be quite limited and highly influenced by the phonetician's own repertoire and command of the language being studied

speakers switch to dialect or read a wordlist of dialect lemmas<sup>2</sup>, therefore most of the tokens positioned in the central area come from word-final position. The following are the main features that can be derived from the analysis of the plots:

- The phones [e] and [ɛ] are considered allophones in the Barese variety (Filipponio and Cazzorla, 2015: 59), but to determine whether they are in free variation or in complementary distribution data gathered through perception tasks is needed, as it is unclear if Barese variety speakers can detect the distinction (which from anecdotal experience does not seem to be the case) or perceive someone using [e] in [’bene] as non-local. When in unstressed position, this vowel has values range from the unstressed /a/ (and also [ə]) to the unstressed /i/.
- From Figure 5.14 and Figure 5.15 it can be clearly determined that the presence of [e] is scarce but whether a merger may be actually taking place will be discussed later.
- The phone [a] in unstressed position can be drastically raised and centralized.
- The phones [o] and [ɔ] are almost completely overlapped in both stressed and unstressed position. It is clear that there is a completed merger and that only the unstressed /o/ may be distinguished when they are pronounced in a more centralized position, closer to [ə].

As it was explained in Chapter 4, the formant values were first extracted through PRAAT and stored in a TXT file. Then, the file was processed by means of the “vowels” package in RStudio, which normalized the data using the Lobanov algorithm. This algorithm only requires the F1 and F2 values and it allows to compare male and female speakers. Figure 5.14 and Figure 5.15 show the tokens collected and normalized from all the informants. The legend indicates the vowels that are present, dividing them according to their position in either stressed (reported as ‘strss’ in the legend) or unstressed syllables. As supporting evidence of the previously reported results, the ellipsis calculated and drawn in RStudio show clear cases of centralization in the unstressed vowels, where /a/ and /o/ can share values as well as /a/ and stressed /e/ can, but there is never enough centralization of stressed /e/ and /o/ to have them overlap as well. It is also interesting to notice how /u/ in both stressed and

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<sup>2</sup>Even though the mentioned study had the speakers use Barese dialect other than Barese variety, their task was to translate a wordlist into dialect. Although this can be optimal enough to elicit the phonetic data needed, it is not certain if the speakers’ translations are accurate and actually belong to the dialect or a form of interlect. For this reason, future tasks to elicit specific dialect phones will be created based on the available lexical bibliography, no matter how scarce it may be, presenting the informants with dialect words written in a way that may be intuitive and understandable to them.

unstressed position seems to be lowered towards /o/ while, at the same time, some tokens are drastically centered towards /ə/ as Maiden and Parry (1997) report in a possible merger of the two vowels. Finally, instead of the spread of stressed /e/ which indicates the presence of [e] and [ɛ], the concentration of /o/ in the same area clearly proves a vowel merger of [o] and [ɔ].

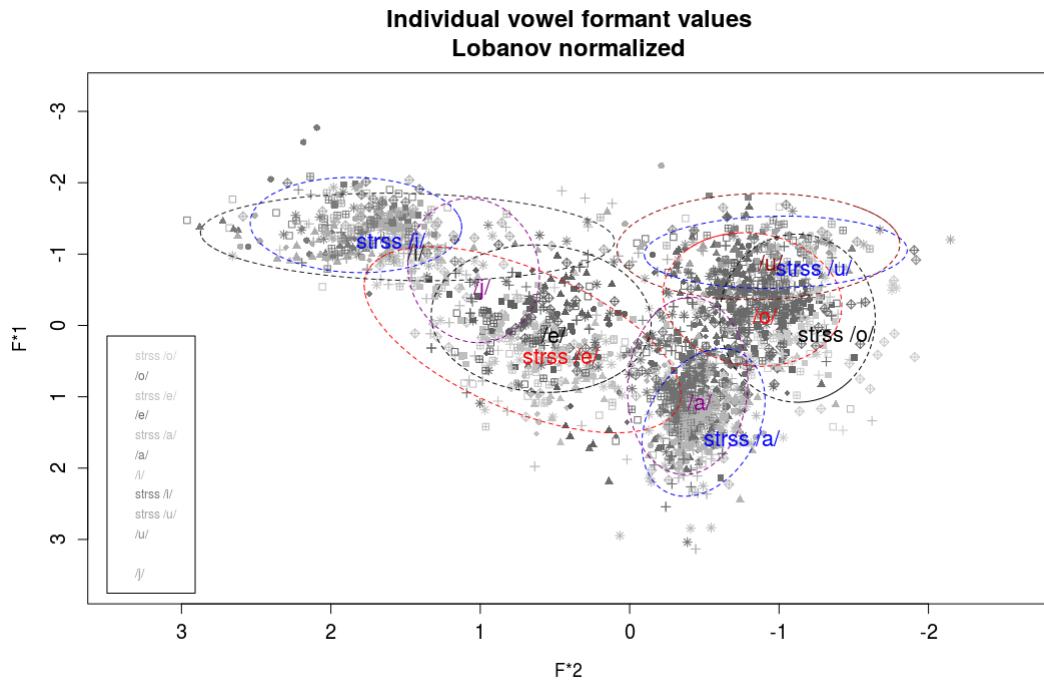


Figure 5.14: Ellipses of Barese vowels and glide /j/. ‘strss’ indicates a stressed vowel, while the others are unstressed.

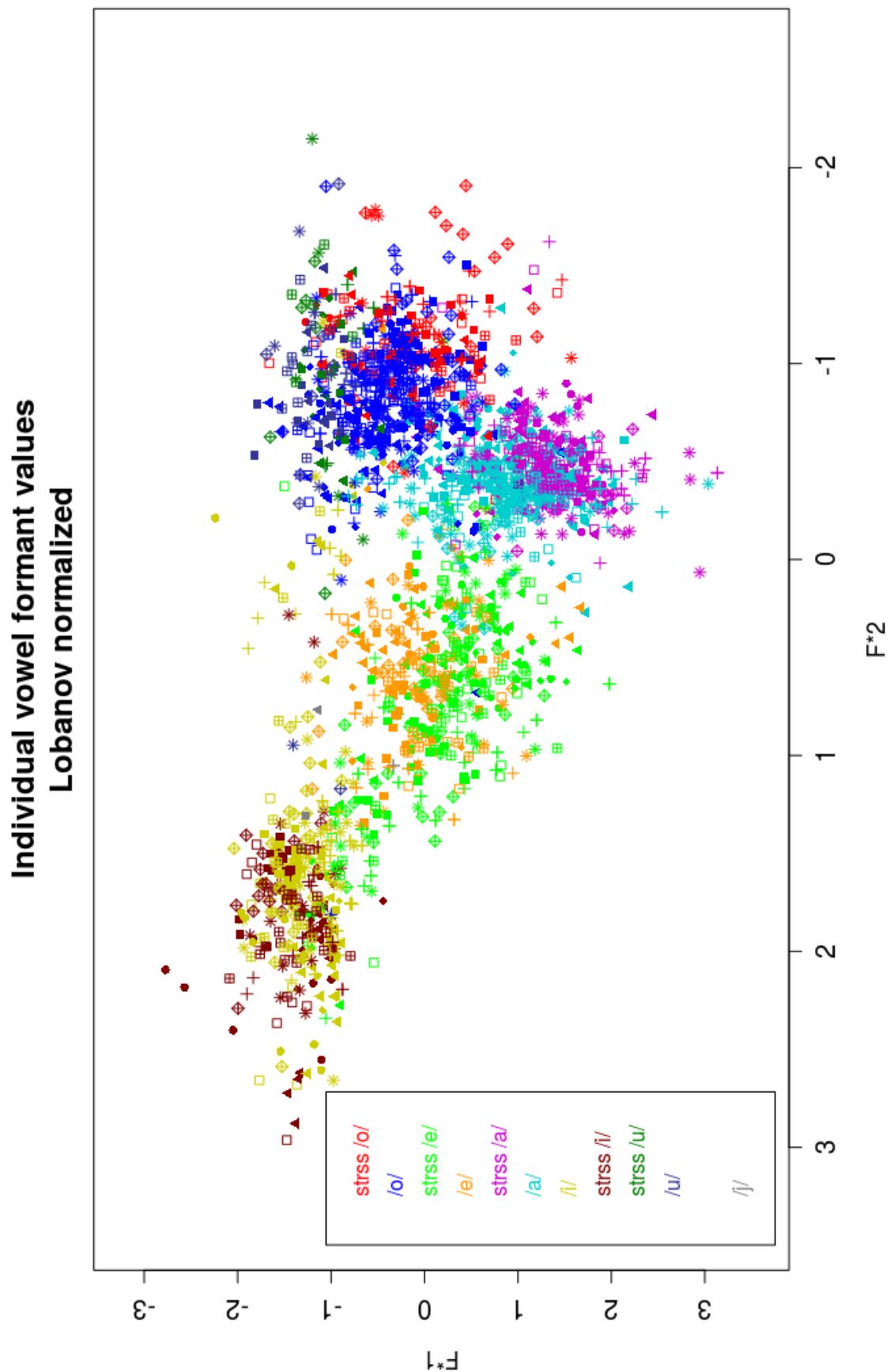


Figure 5.15: Normalized formant values of Barese vowels and glide /j/.

According to Rohlfs (1966: 11-12), even though the regions of Calabria, Basilicata and Apulia share the same phonologic system, they went through different developments. While in Calabria and Western Basilicata the long and short back and front vowels developed in their respective /u o e i/ phonemes, in Easter Basilicata and part of Apulia ī, ē and ě merged into /e/, while the respective long and short back vowels merged in the respective /o u/ as shown in Figure 5.16. This is might be similar to the process the Barese variety went through, given the previously shown results. Even though Rohlfs does not mention the Bari area in any case, and the vowel system he describes for the region of the Marche misses /e/, but he also describes the possible development in the Northern side of Apulia and Southern Abruzzo where the front vowels have undergone the same merger of Eastern Basilicata and ū, ō and ō have merged into /o/ through a process of metaphony<sup>3</sup>that could apply to Barese. In fact, it fairly well represents the vowel system resulted from this study, except the neglected [ə] in the repertoire, since [u] does appear to be lowered and centered.

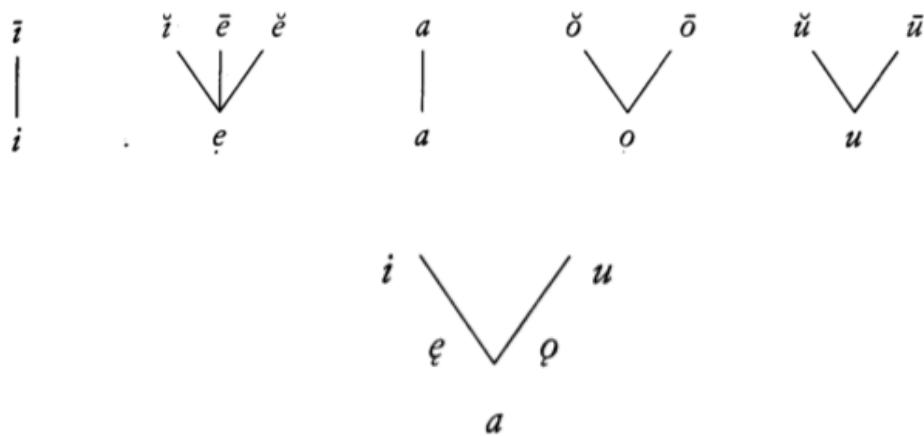


Figure 5.16: Vowel development and System that applies to most of the South-East, from Rohlfs (1966: 11)

Moreover, in Filipponio and Cazzorla (2015) it is already shown how the front and back vowel mergers are present and the opposition between the open and close vowels is absent<sup>4</sup>. Their results also show a possible fronting of [a] in the Barese variety for adult males and migrant females, but also in the Barese language in female speakers, even though it is mentioned that the scarce quantity of informants may make this last statement less reliable. However, even though adults have not shown any particular fronting of [a] towards [æ], students have produced some tokens in both stressed and

<sup>3</sup>Metaphony is a process of assimilation, it happens when a stressed mid or low vowel changes because of the influence of an unstressed high vowel in the next syllable.

<sup>4</sup>This phenomenon was already documented in Calabrese (2000) in the city of Altamura, which is in the Province of Bari, although close to the Basilicata border.

unstressed position which seem to be fronted and they can be seen in Figures 5.17 and 5.18.

### 5.2.2 The Mid Front Merger

A merger is the result of sound changes that lead two or more phones to move together and, therefore, reduce the set of phones available in a language, it may be due to the principle of economy since consequently there is less effort required from an articulatory point of view, but this cannot yet be confirmed (Labov, 1994). However, it is obvious that mergers may have important effects on the morphology of a language, as the study lead by Filipponio and Cazzorla (2015) showed, the result of the back vowel merger is a possible loss in the distinction between masculine and feminine adjectives in the Barese dialect.

Rohlf (1966: 84-85) reports the gliding of /ɛ/ → /ɛj/ throughout the eastern coast in the South, mentioning the same process happening for /a/ and /o/ especially in the North of the province. This process should be present especially in closed syllables, nonetheless, aside from a very scarce number of /ɛj/ detected, this feature seem to be almost lost in the Barese variety and language according to the results of this research on the Barese variety (which included 8 words with [ɛ] in closed syllables followed by /n/) but also according to Filipponio and Cazzorla (2015) which indicates how only one of the older and most conservative male speakers presented this feature which he used to discriminate between masculine and feminine adjectives. Therefore, as of now with the data acquired, it is fair to define the feature endangered as Filipponio and Cazzorla (2015) do, but it can only be defined as such if the shift is happening due to the influence of “standard Italian” and not because of internal factors, which is still hard to determine due to the scarcity of the data so far available. Still, Labov (1994: 27) highlights how it is difficult to attribute mergers to social pressure because speakers are usually not aware of them.

As the plots in Figure 5.17 and 5.18 show, adult informants have tokens spread throughout the area from [ɛ] to [i], while student informants have not only a more raised [e] which even overlaps [i] in some stressed cases, but they also indicate a more clear differentiation between [e] and [ɛ]. The other difference is the shift of both [e] and [ɛ] that seems to be more prominent in younger speakers in both stressed and unstressed position. This may suggest that in controlled speech younger speakers tend to be less careful in avoiding to produce the schwa than adults, who try to enunciate the words in the list more precisely. On the other hand, if this is analyzed through an apparent-time approach, this could also well be a developing contrast between the two

vowels in a split that is happening with the raising of [e] and lowering of [ɛ]. If a split<sup>5</sup> like this were to take place, Barese variety speakers would become able to differentiate between homographs such as /'pɛska/ ‘peach’ and /'peska/ ‘fishing’.

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<sup>5</sup>A phonemic split is the opposite of a merger, where a single phoneme develops into two or more distinct phonemes.

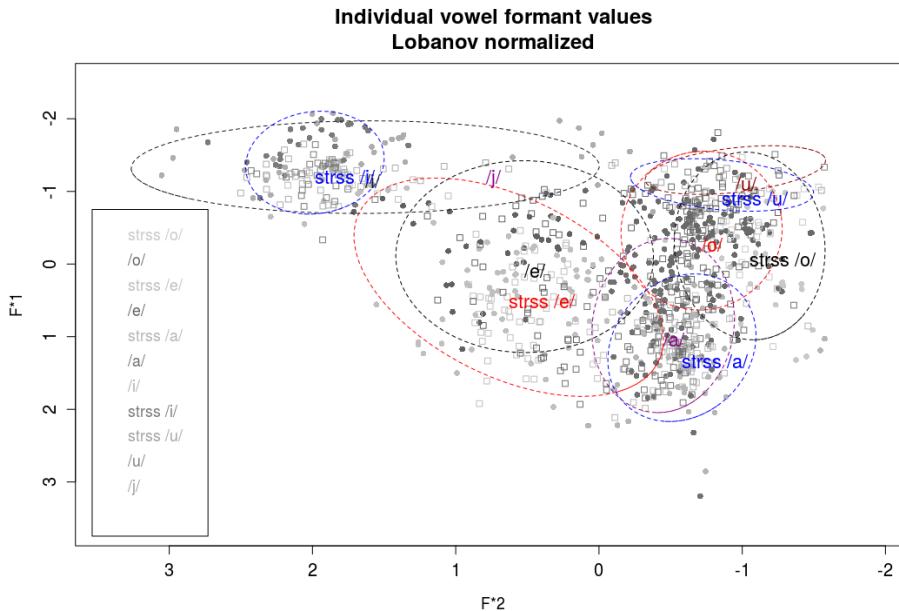


Figure 5.17: Normalized formant values of all student informants. “strss” indicates a stressed vowel, while the others are unstressed.

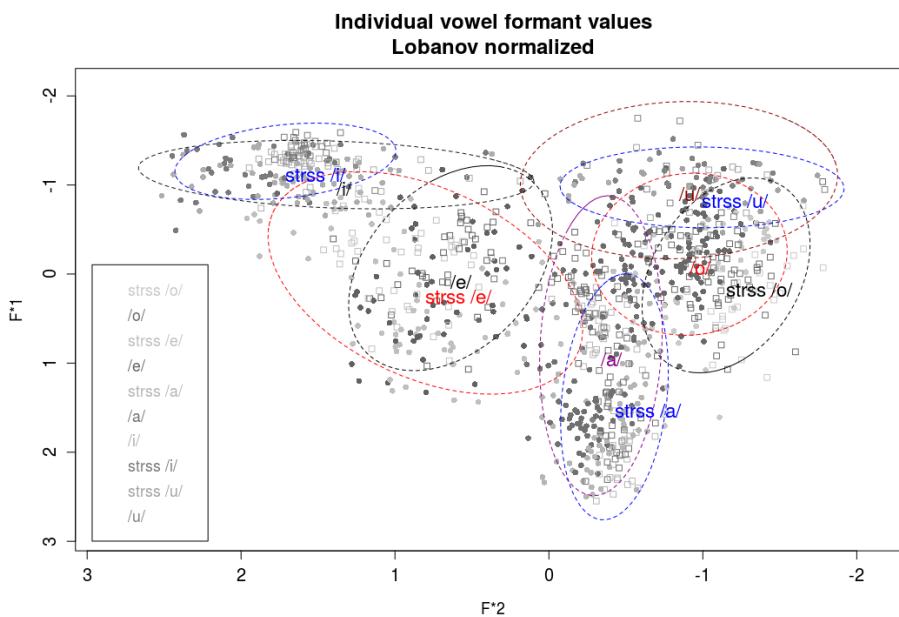


Figure 5.18: Normalized formant values of all adult vowels.

### 5.2.3 The Mid Back Merger

In the Barese dialect hiatuses and /o/ in final position are always close according to Rohlfs (1966), therefore a word like ['due] ‘two’ will be produced as ['do]. The same also reports that on the Eastern coast the South was not influenced by metaphony and that most back vowels developed into diphthongs, only some areas, like the city of Bari, did not go through the same vowel breaking process and kept an older and more conservative structure. Instead, Filipponio and Cazzorla (2015) report the completed merger and its historical development, underlying how [o] and [ɔ] can be considered allophones in the Barese variety and language as well. As the previous figures such as Figure 5.14 and 5.15 have shown, the vowel merger is clearly complete and this implies that the speakers do not perceive the two sounds as distinctive phonemes since in their repertoire the low-mid back vowel is absent. Moreover, looking at figures 5.17 and 5.18, while in the mid front vowel merger adult women seem to be more careful in the distinction between low and high vowels than men, in the back vowel merger there is no such distinction, as both genders show the formant values in the same compacted area, though adult women seem to centralize /o/ more than adult men. This could mean that the mid back vowel merge is older and well established, confirming what was previously cited from Rohlfs (1966), compared to the mid front one, where older speakers seem to be aware of the distinction in “Standard Italian” but only to a certain extent. However, a comparison between adult men and women (figures 5.19 and 5.20) shows more centralization of /o/ in the latter, even though the merger is consistent just as it is in student informants.

In conclusion, it is clear that the mid back vowel merger is present in adult and young Barese speakers, confirming what previous works (Filipponio and Cazzorla, 2015; Calabrese, 2000; Rohlfs, 1966) had already reported and the regularity of this feature found in the Barese variety and Barese language.

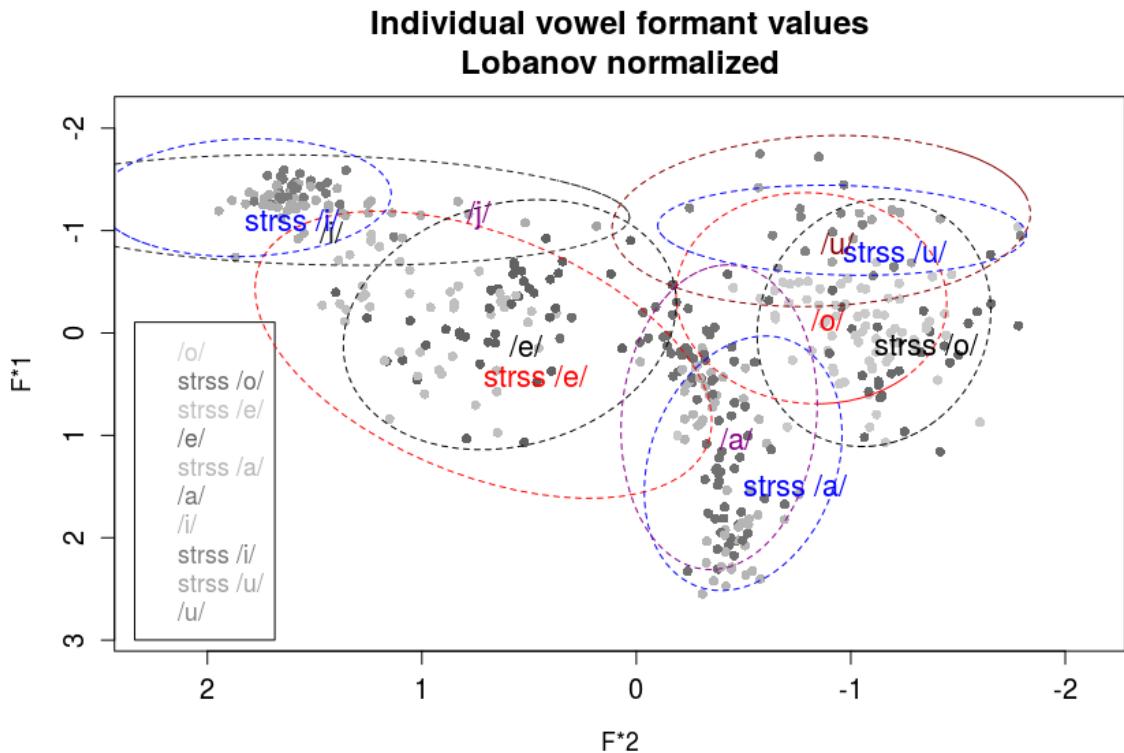


Figure 5.19: Formant values for all adult men normalized.

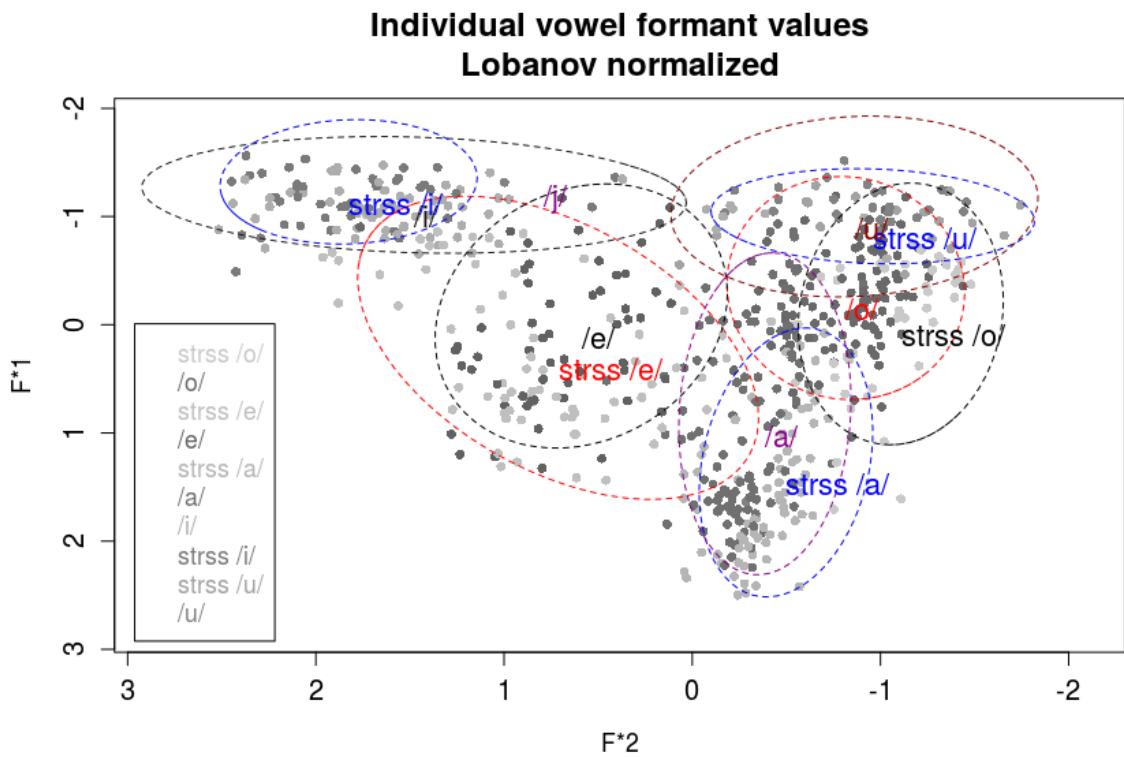


Figure 5.20: Formant values from all adult women normalized.

# Chapter 6

## Sociolinguistic Analysis

This chapter will inspect the results of the questionnaires submitted to 97 students first and finally it will give possible links between the social environment of both students and adults and the phonetic change in the Barese variety.

In Chapters 3 and 4 the means through which the attitude and sentiment towards dialect, as well as its use in different social context, were calculated and quantified had been briefly explained in order to give a general idea on the approach chosen to evaluate the sociological situation present among the students of the Giulio Cesare high school. The social requirements set for this study were the job position and education of both parents, in the interviews extra sources of income were taken into consideration (e.g. working siblings) while in the questionnaires such extra info was not included. As it will be seen, the results were analyzed from different points of view, classifying the questions into two different groups and the student in several different ones according to social status, gender and both simultaneously. The idea of “interlect” will also be introduced and how it relates to previous research on bialectalism and bidialectalism

Finally, hypotheses on the relationship between the social factors and the phonetic phenomena among young and adult speakers (such as stigmatized items or language switches) will be put forward to find a solution to the foreseeable spreading of language loss. This section will also address the possible influences that media, stigmatization and social background can have on the Barese variety and its phonetic system, as well as the gender differences which can be found in the use of dialect.

### 6.1 Interpreting the Questionnaires

The 97 questionnaires submitted to the students from the Giulio Cesare high school only allowed multiple choice answers to the 21 questions designed: 7 of them only allowed “Yes” or “No” answers, while 14 also included the option “Sometimes” and the

last one was an open one where the students could give a short explanation on why they believed whether the Barese dialect could be considered a language or not (even though some informants left the area blank). The questionnaires also collected valuable social data by requiring to fill in their parents' occupations as well as their highest education degree obtained. The questionnaires' results were then transcribed in digital form and they can be found in the CSV format on the dedicated repository on github at <http://github.com/andcarnivorous/questionnaire-plots>. Although this does not give the chance to inquire every single one of them, it allows to drastically reduce the processing time involved in their analysis and plotting. In order to have a reference point, you can consult `tableX` which lists all of the questions, since some specific ones will be mentioned and some others are crucial to the study, these will be reported on the plots only by their numbers since including the questions in their entirety would be highly impractical and visually confusing.

### 6.1.1 General Overview

The first point of view from which the data collected was observed could be considered one of the most general ones. Figure 6.1 shows the collective and final result from the questionnaires. These results can give an overall idea of the situation in the Giulio Cesare high school social system. Most importantly, it can be immediately stated that the case in which most students claim to switch to Barese is when they joke (compare questions 2-5, 7-9, 15-17) and even teachers are reported by 80% of the students to have used dialect to joke. Moreover, by a slight margin, the majority of the students believe that dialect is not useful to integration even though almost 60% of them report to have taught dialect to students who came from outside the area and that also the same percentage of students report that at least one teacher has told them not to speak dialect in question 13. This kind of contradiction can be a symptom of the general shame that Barese speakers usually have to bear: since they are told not to speak dialect by their educators (also parents tell them not to speak it in public or with adults) they believe their dialect is not a legitimate language and therefore it cannot be seen as socially acceptable, while at the same time there must be situations when dialect knowledge is needed in order to be considered part of the high school's social environment or enjoy and understand dialect jokes or idioms.

The second point of view was the first to separate into two groups based on gender the informants. From the bar chart in figure 6.2 it can be noticed that initially the result was clearly that men proved to have the tendency to answer more often with "Sometimes" when possible than women, especially on the use of dialect at home and with teachers, while women gave larger amounts of the same answer on speaking it with friends. Therefore, this could be interpreted as some kind of uncertainty, since

the rest of the answers are mostly negative. As it can be seen in the same figure, men show predominantly negative answers to the questions about speaking dialect with teachers and using it to fight or chat with parents but at the same time they seem to provide more positive answers than women, who show higher rates of “No” to all of the questions, except number 13 and 10. This is why a sentiment approach set to work in a binary fashion could give a clearer look and avoid the misleading interpretation that men may switch to the local language in fewer circumstances than when they actually do. The outcome of this filtering system will then be a chart that answers to the same questions but in a stricter way that gives the real values for the number of instances in which the students have switched to Barese.

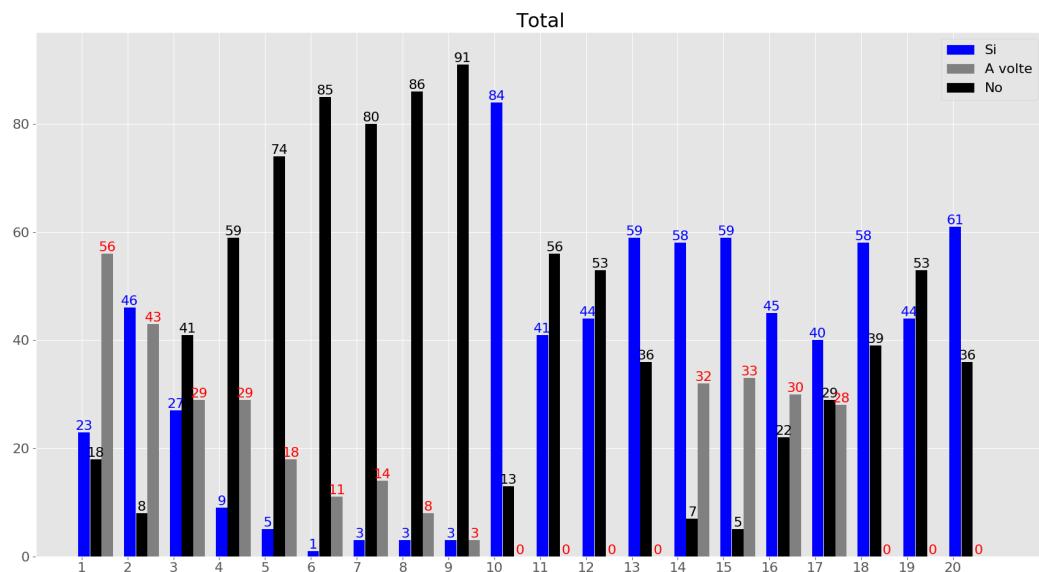


Figure 6.1: Questionnaire total answers

Therefore, to obtain a result which just gives two options a simple solution which can be applied in this case is to count the “Sometimes” answers as “Yes”. This is possible thanks to the fact that the questions were developed and structured as closed questions, in a way then which allows only yes or no answers while the “Sometimes” option was included only to establish the degree of uncertainty and the general attitude of the informants towards the Barese variety. However, by summing the two options together we can have a clearer view on how men and women respond to questions about dialect use and how much they claim to use it in either a positive or negative way.<sup>1</sup>

<sup>1</sup>I use the term ‘claim’ due to the fact that switching or even to know dialect is usually stigmatized and parents, along with teachers, seem to enforce the idea that dialect should be avoided. Thus, this

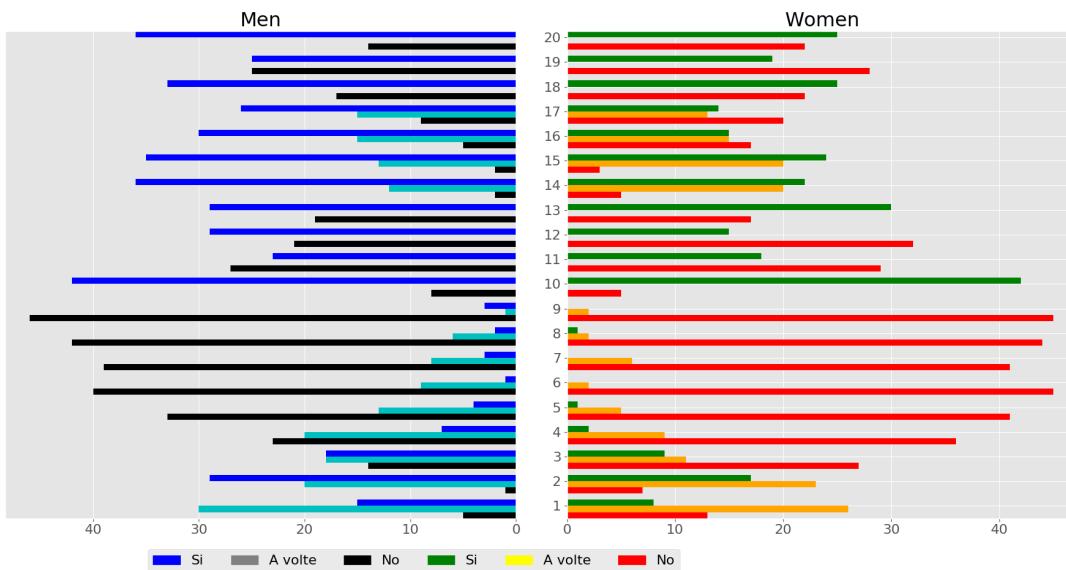


Figure 6.2: Questionnaire answers for men and women

The next figure (Figure 6.3) represents the results in a bar chart which clearly shows women giving more negative answers to all questions than men. The answers to questions 10-13 were not included in these sentiment charts since they already just gave only “Yes” or “No” options as did questions 18-20, and they pertained to the dialect use by teachers and not by the students themselves. It is interesting to notice that, while they seem to use dialect to joke the same (question 15), women tend to use dialect much less with friends or classmates than men when fighting or chatting, even though in question 14 they seem to claim general use to the same extent. This may suggest that even though from a quantitative point of view men and women use dialect in the same proportion, men tend to spread its use to more registers than women including it in fights or chats. This could be explained by the fact that women seem to be pushed more than the other sex to avoid dialect, since it would make them appear less “*lady-like*”. <sup>2</sup> It is also clear that men are more inclined to speak dialect with their families, since almost all of them claim to have used dialect to joke, and while the majority of women does not seem to switch to the local language when fighting (and even a higher majority for chatting) with parents, the opposite appears to be true for men still in the same proportions.

These claims are made on the  $p$  value results from the answers to the questions compared between genders. The only questions where the  $p$  value is higher than .05 in

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can influence to an unknown degree questionnaire takers to answer in a way that would not admit or emphasize the extent to which they resort to the dialect.

<sup>2</sup>finf4 and finf5 reported this behavior, where their parents would tell them off if they used dialect, especially in public.

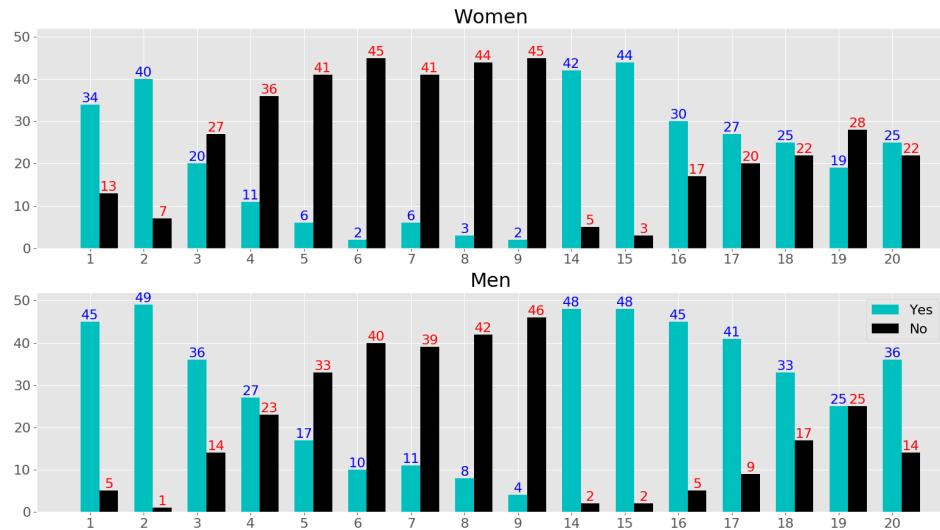


Figure 6.3: Sentiment answers for men and women

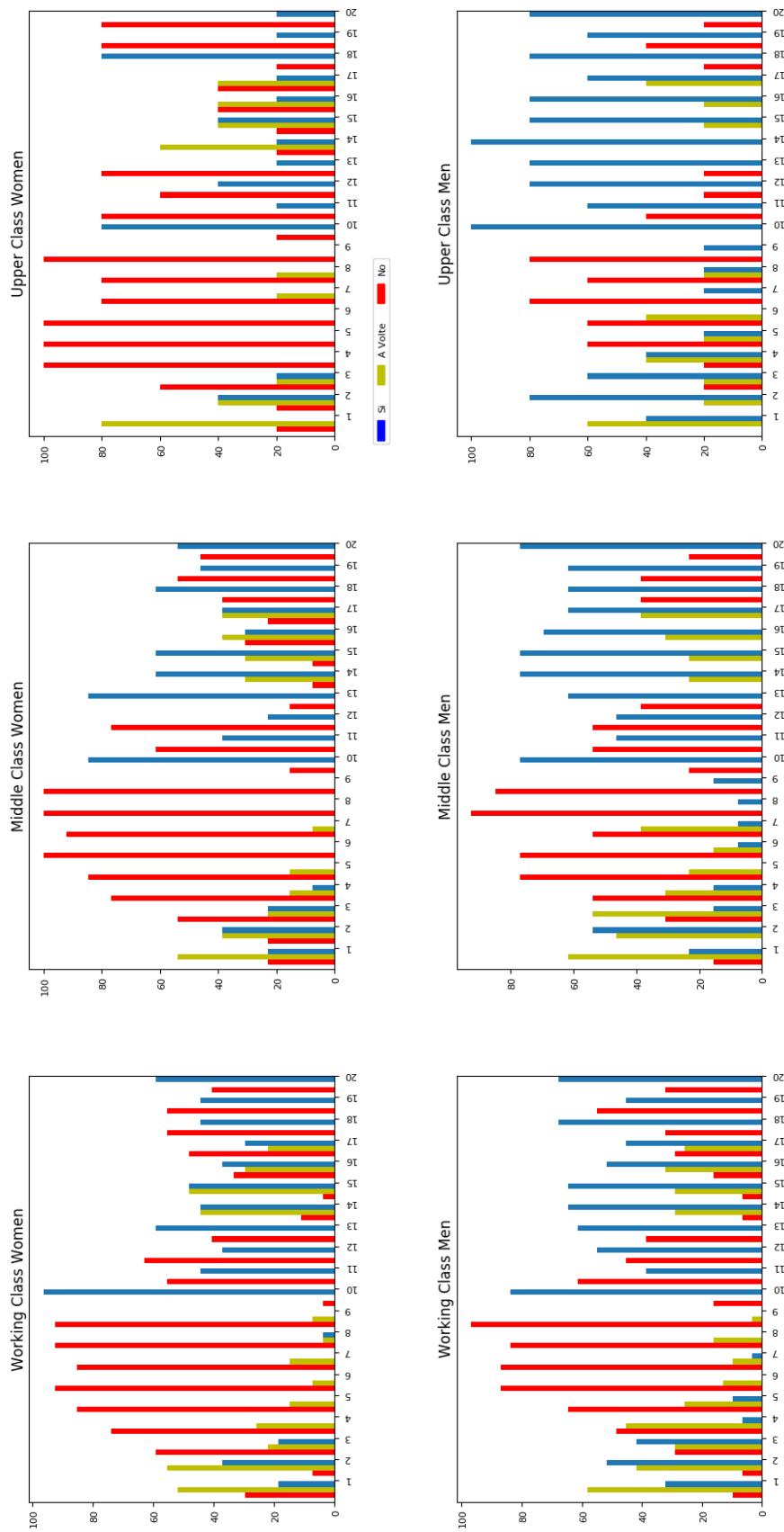
the sentiment approach are the questions from 1 to 6, 16, 17 while question 20 has a *p* value of 0.056, which will be considered statistically significant. Therefore, the answers where the both gender might have answered in a similar way are the ones on dialect use with the teachers, speaking dialect with friends, teaching dialect and considering dialect important to integration. The single *p* values can be found in Appendix D.1

Finally, the informants were divided not only based on their gender but also based on their social class. In Chapter 2 it was explained which criteria determined the categorization process that assigned each informant to one of the 3 possible social classes namely: Working Class, Middle Class, Upper Middle Class; even though, as it was stated in the same chapter, a couple of informants did not even meet the Working Class minimum requirements. In the resulting 6 bar charts (Figure 6.4) it is fascinating to notice how men consequentially still lead the positive answer scores but they also differ a lot among themselves. Ironically, the result seems to confirm Labov (1972: 31)<sup>3</sup> as the upper and middle class gives more positive answers to whether Barese is a language on its own (question 20) and useful to integration. The same classes of men have higher report percentages on the use of dialect with friends and by teachers while the working class chooses the “Sometimes” option more often. However, it must be kept in mind that the number of men and women who belong to the Upper Middle Class is just 10 (5 each), thus the results concerning them cannot be considered highly

<sup>3</sup>Labov states that the highest social class is not always the innovating group in language change, but it is rare that change might start from the bottom up. Moreover, it is usually speakers from social groups in-between the main ones to initiate language change as upper working class or lower middle class ones.

reliable even though it is fair to say that a really low number of students (1/10) meet the requirement to be considered into this class. Nevertheless, it is interesting that Upper Class women have a very different opinion, basically opposite, than the one of the male counterpart on the last 2 questions even though about the same percentage of them has taught dialect to outsiders.

Figure 6.4: Answers as a function of social class



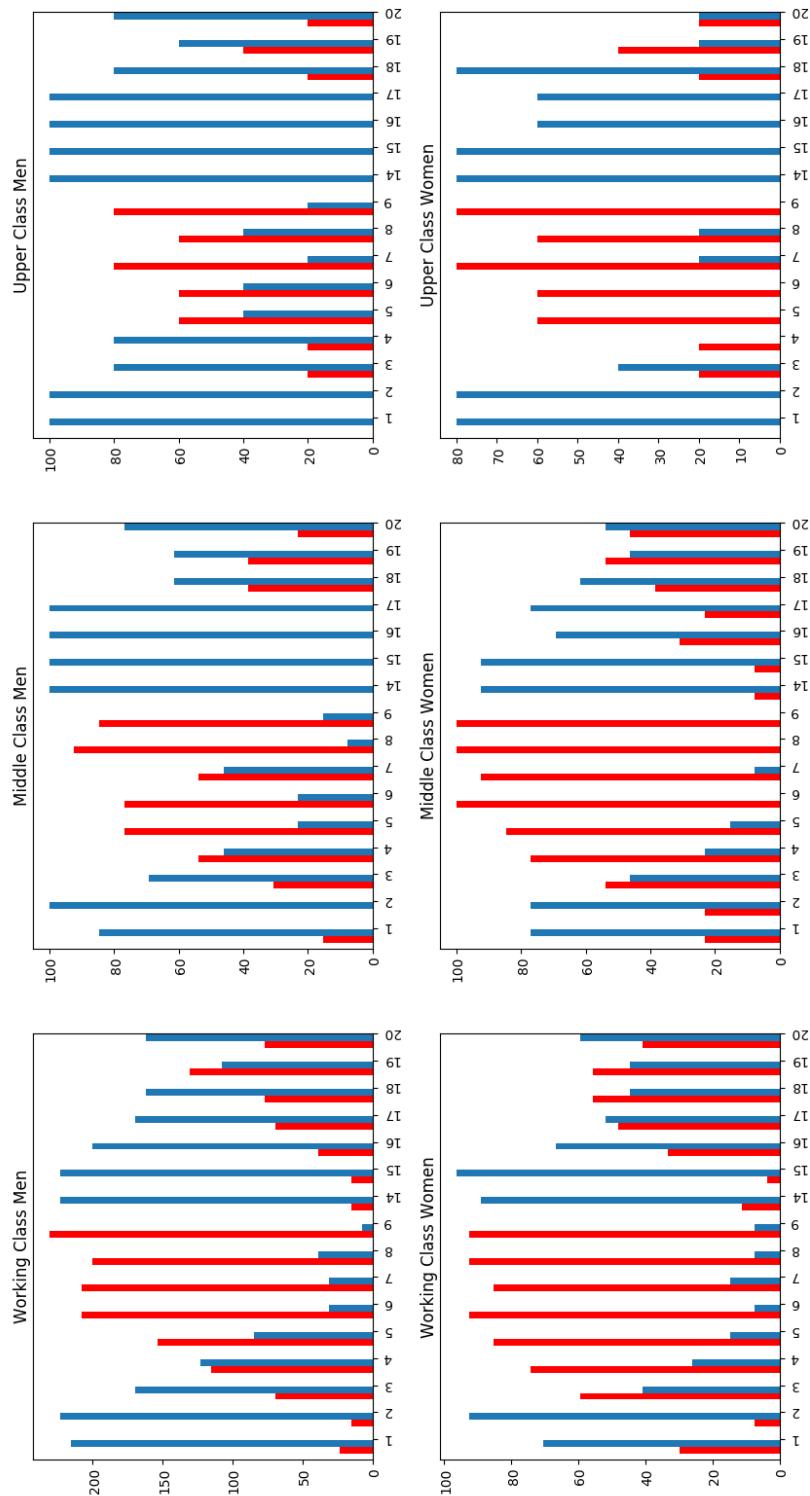
By applying the same previous filter, it is possible to have a clearer idea on the absolute use of dialect use by summing the “Sometimes” answers to the “Yes” once again. This will give us the tables in Figure 6.5 where it is even clearer that men claim to resort to Barese more frequently than women even though between genders in the working class the gap is thinner particularly between the first 4 questions and the last 4. The upper class shows some similar results in the first couple of questions and in questions 14-15 on language use with friends. Women belonging to the same class also gave 0 positive answers on speaking dialect with teachers in general to chat or explain ideas to parents. While the latter could be considered reliable, the first result collides with the following questions (7-8) where at least one informant reported to have switched to dialect with a teacher to make a joke or argue. This is further evidence to the fact that the first answer students give, especially female ones, on dialect use seem to be contradictory when compared to more detailed inquiries on the matter. The automatic response from the informant seem to be a “No” which excludes any dialect with a certain higher social figure, as a parent or an educator, but the answer changes when the student has to narrow their search among memories to a specific emotive context, like happiness or anger, or a specific moment.

Even in Labov (1995: 4) it is mentioned how disputes collusion over vowels pronounced differently from the standard by children rarely make their way outside the middle class household to the wide public eye. Labov highlights how there is no institutionalization on topics about these layers of the national language, but the same cannot be said for the Italian language. Since 1582 in Italy the “Accademia della Crusca” has spent most of its resources in fighting the abomination that disfigure the pure Italian while at the same time trying to preserve the endangered languages still present in Italy, about 30 according to UNESCO<sup>4</sup> if languages spoken by immigrants are counted. This may sound like the classic have your cake and eat it too, but even if the Accademia does not officially states to be against varieties, they do offer guidelines on the “proper” pronunciation of Italian words and features (like the /s/ in VCV position discussed in Chapter 4 par. 1) on their website. Moreover, whenever some neologisms start arising quickly, the first thing the media does is reporting the opinion (or even sentence) on the new word and its legitimacy. This influence that this institution has on a nationwide level contributes to the spreading feeling of guilt when speaking with a thick “accent”.

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<sup>4</sup>On <http://www.unesco.org/languages-atlas/> it is possible to consult an interactive map of the endangered languages in the world. Of the 30 endangered languages mentioned, 4 are located outside Italian soil because they are languages that belong to minorities from different countries that moved to Italy.

Figure 6.5: Sentiment Answers as a function of social class



Then, one more perspective from which the results can be analyzed is from the total number of either positive or negative answers given on dialect use and dialect legitimacy (questions 18-20). This way it is possible to have an idea on which classes have a more positive attitude towards Barese. As the pie charts in the next figure 6.6 show, male informants show a definitely higher number of positive answers in all classes, while the only female informants who show a majority of affirmative answers are the Upper Class ones. It is clear, then, that men tend to use or admit the use of dialect more than women who probably feel the patriarchal pressure to conform more to the standard norms. The other interesting thing to notice is that the Middle Upper Classes seem to have the highest affection among the social classes established in this study. An argument that the Middle Upper Class has a more positive attitude towards Barese could be made, but since the amount of data collected for this class is scarce it has to be taken with a grain of salt.

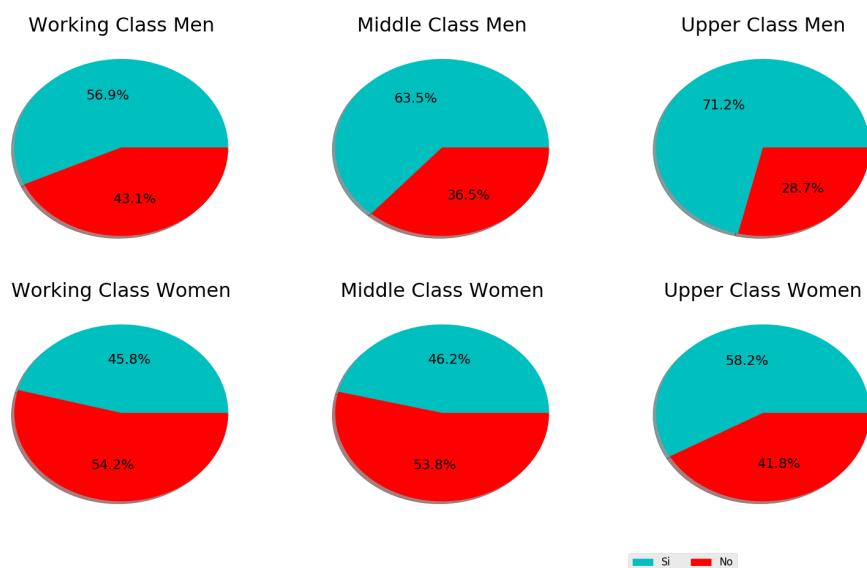


Figure 6.6: Sentiment Answers as a function of social class

Finally, in an ongoing study on Italian L2 acquisition in Dutch learners I am conducting at the University of Tilburg, about 60 Italian speakers (15 from the province of Bari) so far were given an online language test to complete. The test also contained a questionnaire which asked them whether they spoke a dialect and right after whether they were bilingual. The results show that the majority of Barese test-takers until now does not see themselves as bilinguals even though they affirm speaking a dialect. This adds further evidence to the fact that Barese speakers do not assign the language status to their local language even if they speak it and there may be a situation of stigmatization active. The next bar chart shows the results so far obtained from the

test-takers from Bari: Only 2 of the test-takers who confirmed speaking a dialect also affirmed being bilingual, while the remaining 11 gave a negative answer to whether they were bilingual even though they asserted to be dialect speakers

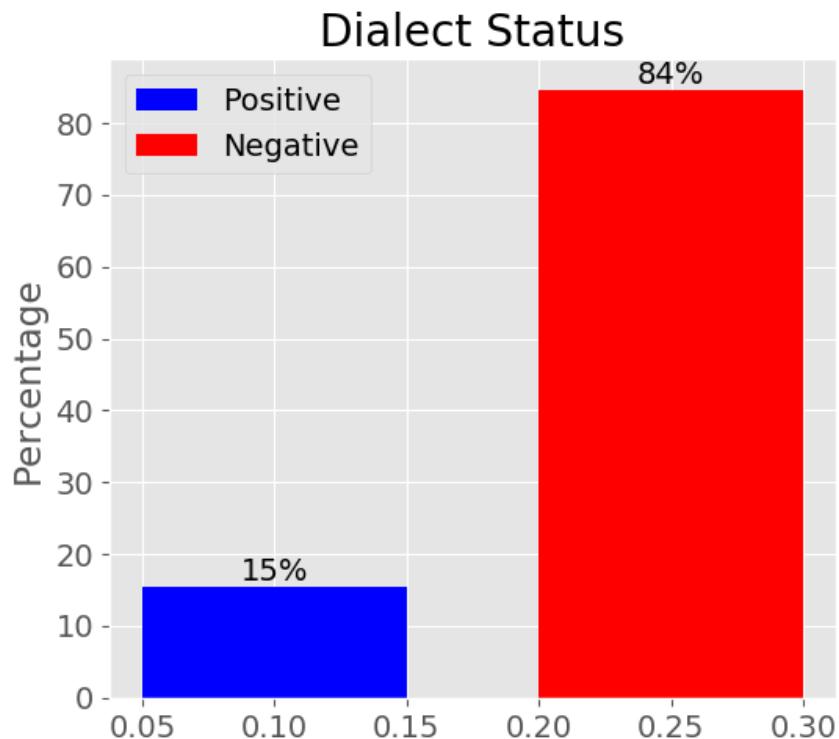


Figure 6.7: Barese dialect speakers who consider themselves bilinguals

### 6.1.2 Barese in the Classroom

Questions 10-13 addressed the issue on whether Barese was used by teachers and how it was used by them. Since these results already allowed only “Yes” or “No” answers, and they did not directly inquire the use of dialect by the students, Figure 5.1 will suffice for the visual representation needed. The results were interesting as were some answers given by the informants selected for the phonetic study. The questionnaires do not provide data on how many teachers exactly speak dialect regularly, but they provide at least instances of the phenomenon and, having informants from at least 7 different classes (including the interview ones), it is fair to assume that more than just one teacher speaks it.

First of all, it can be stated that teachers do, in fact, resort to the local dialect for different purposes, the most common one being joking. The vast majority of the questionnaire takers, more than 80% of them, reported that teachers use dialect to make jokes. The high occurrence in this setting is shared among all questions in all classes and therefore there is no surprise, even though in this case the people using it are the informant’s educators, who should also be role models. Thus, if we look at the situation from their social point of view, they should be the ones who condemn switching to dialect and regard it as an improper way of communicating. This, of course, seems not to be exactly the case or, to put it more accurately, it seems at the same time to be and not to be the case. Even though the majority of the students reported teachers speaking Barese to have a laugh, almost 60% of them also answered positively to question 13, claiming that some teachers actually explicitly forbid the use of dialect in their class. This contradiction is even stronger if it is also taken into account that more than 40% of the questionnaire takers, and some of the interview informants, have reported teachers to resort to dialect in order to make their teaching clearer during class. However, by taking a look at Figure 5.2 it is possible to note how women have given, in this instance too, more negative answers than men. So, while the majority of men answered “Yes” to question 12, the opposite is true for women, but since some informants were from the same classes, it could be inferred that women tend to admit less dialect use than men or that on the latter group dialect use by teachers has a stronger impact.

Second of all, the same fact that a good amount of students has reported that some teachers use dialect to better explain ideas not only presents a further contradiction, but it also introduces further evidence to how linguistic diversity in a class can be considered a useful resource and a powerful educational tool. The interview informants explained how the teachers who sometimes used dialect during classed did so when they were trying to break down complex ideas or when the class was not paying enough attention, and as one of the informants said it is a more “direct” way to explain and

relate to students. In the first case, it is clear that Barese is used to simplify concepts usually explained in books by accessing a more colloquial register. In the second case, instead, teachers seem to apply the strong adoption of the language in entertainment and jokes to lower the affective filter<sup>5</sup> in the class, so that a lesson would not turn out to be too boring or that students would not pay enough attention and get distracted.

Moreover, the fact that very few students report speaking dialect with their teachers, while the majority of them report teachers doing so, highlights the fact that youngsters and children are taught not to speak Barese with adults or people in a higher social position, while the opposite seems to happen without any problems. Teachers are reported by almost 60% of the informants to have forbidden dialect in their classes, but still they are reported by an even higher majority to resort to it for one purpose or another. This may seem a contradiction at first, but it makes a strong statement on the social layers and how strongly they are perceived in the city of Bari. In general, the use of the dialect can be considered allowed or appropriate if it is used from the top down in a social ladder, while it is avoided from the bottom up<sup>6</sup>. This situation of stigmatization that is born especially on the lower classes, which are also the classes where the phonetic variety features are most prominent, may be a contributing factor in the standardization of the Barese variety, but this issue will be further discussed in the next paragraph.

Lastly, as it was previously mentioned, a slight majority of students (54%) claim that dialect is not useful to integration. This question was positioned right after one that asked whether the informant had never taught dialect to an outsider. The aim of locating these questions next to each other was to find out whether even the proximity of the two topics could have made students conscious of the contradiction which language stigmatization could have created. Needless to say this was not the case. It is too far fetched to wonder whether positioning questions 18 and 19 could have given more negative results for the second, but the difference in positive answers between the two has resulted significant nonetheless. While 59.7% of the informants responded

<sup>5</sup> According to Krashen (1982): “The Affective Filter hypothesis captures the relationship between affective variables and the process of second language acquisition by positing that acquirers vary with respect to the strength or level of their Affective Filters. Those whose attitudes are not optimal for second language acquisition will not only tend to seek less input, but they will also have a high or strong Affective Filter—even if they understand the message, the input will not reach the part of the brain responsible for language acquisition, or the language acquisition device. Those with attitudes more conducive to second language acquisition will not only seek and obtain more input, they will also have a lower or weaker filter. They will be more open to the input, and it will strike deeper”. based on Stevick (1976). In this case it is used also in relation to all the other subjects taught in the school like mathematics, IT, chemistry, physics, italian, etc...

<sup>6</sup> However, if a teacher switched to dialect when angry it would probably still be considered inappropriate.

affirmatively to question 18, 54% of them responded negatively to question 19. The gap between the two answers in question 18 is double than the one between the two answers in question 19 and the resulting  $p$  value is 0.044, making it significant and contributing, therefore, to the hypothesis there may be a connection between the use of dialect and the social stigma associated with it. Indeed, how could then teaching dialect not be considered part of an integration process, if most students have done it already? Could this reluctance in recognizing Barese knowledge as a key part of the school social life the result of the shaming and stigmatization of the language?

## 6.2 The Bilingual Issue

This paragraph briefly presents some considerations on the bilingual implications of speaking a variety and / or dialect. Recent research (Vangsnes, Söderlund, and Blekesaune, 2017; Grohmann, 2014; Rowe and Grohmann, 2013) is proving that speakers of both a standard language and a dialect show similar cognitive advantages and skills to those of speakers of two or more standard languages. Even though it is needless to say that this further strengthens the point which is commonly shared among academics in the field of linguistics that dialects are proper languages and should be treated as such, the attention to such statements and recognitions should be brought on a more mainstream level, not only to avoid possible irreversible language loss, but also to counter the cultural stereotypes and discriminations that weigh upon speakers of certain varieties and dialects, resulting in what Wolfram and Schilling (1998) define as “linguistic profiling”<sup>7</sup>. That is, the natural and immediate way that humans have to index someone’s social status, nationality or even education based on what variety or dialect they speak. More awareness on the issue could also benefit the general population since most of the modern studies on bilingual speakers, as those above mentioned, prove the cognitive advantages these speakers have.

This recognition of dialects as standard languages also arises more linguistic and socio-cultural questions such as the classic general ones: “What is a language?”, “Are varieties dialects too, and therefore languages?”, “Are speakers of a dialect and standard language also bicultural, other than bilingual?”. These questions clearly have multiple implications and they easily arise debate in both linguistics and social sciences. The answers that will be given in this paragraph are not meant to be exhaustive or considered as absolute, and they will probably have contestants as well as supporters, but they are meant to possibly show a plausible path to follow in order to reach a more empirical agreement on such issues. Taking into account the fact that it is extremely difficult to quantify and objectively calculate a possible degree of bilingualism, or how much someone feels bicultural or even if someone actually belongs to a social class or social group, it is therefore important to try to stay as close as possible to quantifiable and reliable data.

As this thesis premised in its introduction, the Barese dialect is often referred to as a language, because if communication were to happen between a Barese speaker and an Italian Northerner, there would be an insufficient level of intelligibility to have smooth and effective communication. Therefore, Intelligibility is the key point from which a

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<sup>7</sup>Wolfram and Schilling apply this notion to the way African-Americans are discriminated against, comparing it to visual “racial profiling” behaviors that result in similar kind of unfair treatments by the indexers.

line can be drawn between a language and a variety. The latter, in fact, is nothing but a language influenced in some of its features by a dialect, possibly not so differently from what happens when there are phonetic interference, or approximation according to Flege (1980), in speakers of an interlanguage<sup>8</sup>. Consequently, a variety is nothing but a middle ground between a dialect or simple local features and a standard ideal; it is indeed closer to the latter, but this also implies that a “standard” language is nothing but a mere theoretical construct aimed at preserving the stability of a community of speakers through enforcement and maintenance through the public establishments. It could be argued that the “Standard Italian” is nothing but a semi-artificial way of linking together different dialects across speakers with different linguistic features. The result of what these speakers produce when they try to communicate with each other in a “standard” format is, then, a compromise which is neither the dialect nor “Standard Italian”, in this case. If we want to adopt a more modern nomenclature, which follows the path being built on biletalism and bidialectalism<sup>9</sup> we could refer to this form of interlanguage as interlectalism. This can be defined as the linguistic system which speakers of a certain dialect and/or variety employ and have at their disposal when they try to communicate in the target “standard” language. The interesting applications of this concept are multiple, since it would be rather fascinating to inquire into the different kinds of interlanguages that may exist between people who belong to different social classes and who have been raised speaking dialect more than or as much as their Italian regional variety. This is something which, based on the results of this study, may be found in people from the working class or even lower classes.

Varieties, then, cannot be considered as languages themselves just as dialects can, due to the high intelligibility across them; but rather, they can be seen as the form of interlanguage closest to an ideal standard, which allow speakers to communicate across large areas, while at the same time allowing them to have smaller and more cohesive subgroups on which they can rely on with more trust. The case of Martha’s Vineyard (Labov, 1972) provides a great example of this, where an ever growing risk of standardization pushed the younger speakers, some of who were educated and attended

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<sup>8</sup>According to Selinker (1972), an interlanguage is a separate linguistic system that learners of a L2 use when an attempt is made to communicate in the target language. It is different on all the linguistic levels, from phonetics to discourse, from both the target and source language. This means that learners in the process of acquiring a new language do not produce something which is only the result of L1 interferences on their L2, even though even this point is debated on different levels as in the just mentioned Flege (1980), but rather, they produce the result of a linguistic system which is unique and not made by merely transpositions of linguistic features from an L1 to an L2.

<sup>9</sup>In Antoniou et al. (2016) the term is used to indicate people who speak and have been brought up speaking two Norwegian varieties: Nynorsk and Bokmål. The former is a variety spoken by only less than one fifth of the Norwegian population, while the latter is the predominant variety, used also by the media and employed in the majority of schools.

college on the mainland, to fall back to their local variety (referred in the famous study as a dialect) exaggerating its features. A defensive mechanism as such may be considered on the surface as an attempt to revitalise the language, although in the mentioned case the exaggeration of the features, technically, still misses the desired objective of the speakers, so why is this natural attempt at revitalization happening, if not for the survival of the social subgroup. It could be argued, by those not familiar with the Italian linguistic distribution, that speakers of only the Barese variety and not the dialect/language fall through the cracks of this theory, but speakers of only the Barese variety are indeed different from speakers of both the variety and the dialect because they represent the monolingual speakers of the region. The interlect only concerns bilectal speakers that juggle between the local language and local variety in environments where a widespread standard is not present. Plus, more research on bilectal speakers and monolingual variety speakers could help show whether there are differences in the variety spoken by the two.

In conclusion, the “interlect” can be defined as the interlanguage that bilectal speakers of a dialect and a variety use to communicate in the target “standard” language, which produces what is usually called a variety. In the “interlect”, features from the dialect can be found together with features that are also present in the standard variety, but it is obviously neither one of those since it is a language system on its own and it has to be considered as a dynamic continuum where the speaker unconsciously trades features and items between his L1 dialect and the TL.

# Chapter 7

## Conclusion

This work has taken the task of not only describing the vowel system of the Barese variety in adolescents, young adults and adults, it has also carried an investigation forward addressing the topic of dialect use by high school students and teachers.

The results concerning the vowel system from the phonetic analysis have shown that the mid back vowel merger of [o] and [ɔ] is still present and consistent in all the informants, making it one of the longest and oldest features of the Barese variety and language, with only the phoneme [o] present in the repertoire and adult women showing a more centralized production of the phoneme.

The possible mid front vowel merger has resulted to be instead an allophonic situation where there is some degree of awareness of the existing distinction in “Standard Italian”, particularly in adult women that showed more tokens closer to [ɛ] than adult men. Moreover, student informants show a higher degree of distinction between [e] and [ɛ] compared to adults, which might suggest that a shift or split is taking place. The tokens for the mid front vowels also indicate that young speakers centralize their mid front vowels more than adults, who might be more careful in their speech during the wordlist reading task. Consequently, this suggests that adults are more conservative and careful in their speech than younger Barese variety speakers.

The phonetic data has also proved the presence of several tokens, especially in unstressed position, in the /ə/ area which confirms the centralization of unstressed vowels and in final position. Some tokens in adult informants have been found severely centralized, which could confirm a possible merger of /u/ and /ə/, even though the data so far available on the [u] phoneme is scarce and not enough to confirm such phenomenon being present or taking place.

Regarding the consonants, the spectrogram analysis has confirmed another well established feature by showing a consistent pattern of devoicing of /s/ in VCV position in both adults and students. The only possible voicing of /s/ could be attributed to hypercorrection. The inquiry into the voicing of /t/ produced quite different results,

since it did not show significant signs of voicing. However, the literature review helped produce a more accurate and appropriate set of phonological formulas in case the /t/ voicing were to be still present. The following formulas explain how /t/ undergoes voicing after a nasal or after a mid central vowel:

$$\begin{aligned}/t/ &\rightarrow [d] / \text{n\_V} \\ /t/ &\rightarrow [d] / \text{o\_V}\end{aligned}$$

More phenomena analyzed among the different consonant clusters after nasal and lateral sounds include the deaffrication of /ts/ following /l/ and the sonorization of /tʃ/ into /ʒ/ in the word ‘Vincenzo’ [viŋ'tʃen̪to] in one adult informant and one student informant. Plus, the deaffrication of /ts/ following /n/ and /l/ does not seem to have been reported before and this feature was produced by both a student and an adult informant in different words. Finally, the devoicing of [p] after [n] is probably one of the most controlled ones since none of the informants have produced tokens of it.

Meanwhile, the questionnaires have indicated that boys and girls have very different attitudes towards dialect and its use. While both genders have answered similarly to questions regarding dialect use with and by the teachers, teaching dialect to foreign classmates and whether they think dialect is useful to integration, girls report using dialect in fewer registers and contexts than boys. The latter tend to resort to dialect with friends and classmates significantly more than women when chatting or fighting. In addition, the use of dialect within the family seems to be different quite different since the majority of girls do not resort to Barese when chatting or arguing with their parents while the majority of boys does. These results suggest that women are more subjected to the social stigma tied to the Barese language. This constitutes a real issue which can threaten the survival and integrity of the dialect, since consequent positive attitudes towards linguistic purism, which is part of the linguistic history of the country, can seriously compromise the self sustainability of a language. Plus, the contradiction where the majority of the students says that dialect is not useful to integration while at the same time more than half of them has taught some dialect to foreign students adds evidence to the fact that there is an tendency to downgrade the Barese dialect status when, instead, it shows to be part of the every day interaction in the high school community.

The questionnaires have also showed how dialect is used by teachers during class in different contexts, it is used mainly to joke, but reports of it being used as a teaching tool have given more insight on the actual importance of the dialect in a across-the-board use. At the same time, most students have reported teachers prohibiting the use of dialect, giving further data in support of the claim that speakers of the Barese language carry the social stigma associated with it. This could be seen as a contradiction

but it is most probably a case where teachers are divided in those who resort to dialect as a teaching tool to lower the affective filter and those who completely refuse its use. It has been explained how this issue can have the potential for language revitalization and survival, since an accepted and widespread use of dialect in the classroom as a didactic tool might help alleviate the effects of social stigma while, at the same time, help teachers keep the students involved and active during class.

Finally, the notion of interlect was introduced to indicate the language system used by dialect and variety speakers when communicating in the TL. This concept applies only to speakers of a dialect who are then raised bilectal, like people from Bari who speak both the Barese variety and Barese dialect.

In a world that is every day more globalized, with the effects of post-colonialism taking a toll on languages all over the world, that die at an ever growing faster rate, it is important to counter language stigmatization. This thesis had a limited amount of informants for the phonetic analysis, but the results are still significant and can have implications in a future study with a wider scope. More phonetic data is needed and will be collected in order to achieve a higher quantitative standard in support of the statements made and to investigate different features. Including more adults of different ages and students from different schools such as technical, professional and scientific ones will surely provide a more diverse and general perspective while at the same time it will also allow for a wider range of points of view from which it will be possible to analyze the data. In the end, this work wants to represent a starting point to promote more interest not only in the Barese variety and language, but in every dialect and variety found in Italy that has not received enough interest by phoneticians and sociolinguists. Every area surely offers fertile conditions to learn more about dialects, bilectalism, and language use, meaning that every researcher has the chance to glean and learn from what might be waiting just outside the door. Also, this thesis is a starting point to obtain and increase the tendency to gather more reliable data and results than what can be accomplished through impressionistic methodology. Therefore, this work can and will be further developed in time by collecting more data from different social groups and classes. This is crucial if we want to preserve dialects that may face extinction in the next decades or if we want just to provide reliable literature to future generations that will want to analyze the linguistic change of a dialect or variety.

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# Appendix A

## A.1

Quotes reported in De Mauro (1963) on dialect phobia:

Original Italian:

“... da E. FALQUI **Lingua e gergo**, che ha scritto (pp. 350-51) : «Alla realtà nuova di oggi, per essere espressa fedelmente e compiutamente, il dialetto non può in alcun modo bastare. Si pensi al progresso scientifico, all’indagine filosofica e psicologica, alla lotta politico-economica. Il dialetto è assolutamente e insufficiente a quanto di nuovo e di complicato e di drammatico e di sorprendente c’è, e risalta, nella realtà odierna »”

(De Mauro 1963: 356-357)

English Translation:

“... from E. FALQUI **Lingua e gergo**, who wrote (pp. 350-51) : «Nowadays reality, to be expressed with fidelity and completeness, dialects cannot be enough. Just think to the scientific progress, the philosophical and psychological inquiry, the economic and political struggle. The dialect is absolutely insufficient for all of the new, complex, dramatic and surprising there is and that stands out in the nowadays reality. »”

(De Mauro 1963: 356-357)

Original Italian:

“... il parere di C. PAVESE (**Il mestiere di vivere**, 1a ed., Torino 1953, p. 372) : «Il dialetto è sottostoria. Bisogna invece correre il rischio e scrivere in lingua, cioè entrare nella storia , cioè elaborare e scegliere un gusto, uno stile, una retorica, un pericolo. Nel dialetto non si sceglie, si è immediati, si parla d’istinto. In lingua si crea. Beninteso il dialetto usato con fini letterari è un modo di far storia , è una scelta, un gusto. »”

(De Mauro 1963: 357)

Original Italian:

“... il parere di C. PAVESE (***Il mestiere di vivere***, 1a ed., Torino 1953, p. 372) : «The dialect is subhistory. It is necessary to take the risk and write in language, so to enter history , so to elaborate and choose a taste, a style, a rhetoric, a danger. In dialect you do not choose, you are immediate, you speak through instincts. With language you create. Certainly, the dialect used for literary purposes is one way to make history, it is a choice, a taste.»”

(De Mauro 1963: 357)

# **Appendix B**

## **B.1**

Mondo	/'mondo/	Penso	/'penso	Milza	/'miltsa/
Mente	'mente/	Immenso	/im'menso	Bene	/'bene/
Casa	/'kasa/	Roba	/'roba	Cena	/'fena/
Senza	/'sentsa/	Anche	/'anke	Faro	/'faro/
Inverno	/in'verno/	Trenta	/'trenta	Vogliamo	/voλ'λamo/
Inferno	/in'ferno/	Vincenzo	/vin'tfentso/	Sognamo	/soŋ'namo/
Pisa	/'pisa/	Incendio	/in'tʃendjo/	Magia	/ma'ðia/
Agile	/'adʒile/	Scoppio	/'skoppjo/	Scatola	/'skatola/
Azione	/at'tsjone/	Conscio	/'konʃo/	Sento	/'sento/
Campo	/'campo/	Analisi	/a'nalizi/	Viso	/'viso/
Alzare	/al'tsare/	Uno	/'uno/	Tetto	/'tetto/
Stancato	/stan'kato/	Muso	/'muzo/	Setola	/'setola/
Pronunziare	/pronun'tsjare/	Pecora	/'pekora/	Vedi	/'vedi/
Ride	/'ride/	Conseguenza	/konse'gwəntsa/	Coda	/'koda/
Volta	/'vɔlta/	Rumore	/ru'more/	Tutto	/'tutto/
Marzo	/'martso/	Stanca	/'stanka/	Influenza	/influ'əntsa/
Voltare	/vol'tare/	Palta	/'palta/	Insieme	/in'sjeme/
Lampo	/'lampo/	Dente	/'dente/	Puntura	/pun'tura/
Bolzano	/bol'tsano/	Attenta	/at'tenta/	Cucina	/ku'tʃina/
Santa	/'santa/	Ancora	/an'kora/	Infame	/in'fame/
In fronte	/'in 'fronte/	E apri	/e 'apri/	A Bari	/a 'bari/
In zona	/in 'džona/	Sorco	/'sɔrko/	Insetto	/'in'setto/
Calzoni	/kal'tsoni/	Ricucire	/riku'tʃire/	Forbici	/'forbitʃi/
Mensa	/'mensa/	Si alza	/si 'alza/	Undici	/'unditʃi/
Oggi	/'oggɪ/	Ricco	/'rikko/	Valutare	/valu'tare/
Esce	/'eʃe/	Pure	/'pure/	Altruista	/altru'ista/
Tipo	/'tipo/	Pitto	/'pitto/	Calza	/'kaltsa/
Uscire	/u'ʃire/	Cucina	/ku'tʃina/		

Table B.1: Reading Wordlist for adult informants

**B.2**

1. Do you ever speak dialect at home with your parents?
2. Do you ever speak dialect at home with your parents to joke?
3. Do you ever speak dialect at home with your parents to argue?
4. Do you ever speak dialect at home with your parents to chat?
5. Do you ever speak dialect at home with your parents to explain ideas and concepts?
6. Do you ever speak dialect with your teachers?
7. Do you ever speak dialect with your teachers to joke?
8. Do you ever speak dialect with your teachers to argue?
9. Do you ever speak dialect with your teachers to chat?
10. Has a teacher ever used dialect to joke?
11. Has a teacher ever used dialect when upset?
12. Has a teacher ever used dialect to clarify or explain a concept during class?
13. Has a teacher ever explicitly ordered not to speak dialect?
14. Do you ever speak dialect with your friends and/or classmates?
15. Do you ever speak dialect with your friends and/or classmates to joke?
16. Do you ever speak dialect with your friends and/or classmates to argue?
17. Do you ever speak dialect with your friends and/or classmates to chat?
18. Have you ever taught some dialect to students who came from different places?
19. Do you think dialect is useful to integration?
20. Do you think dialect is a language? (like French, Spanish or English for example)
21. Why do you think dialect is or is not a language?

: Questionnaire questions

# Appendix C

## C.1

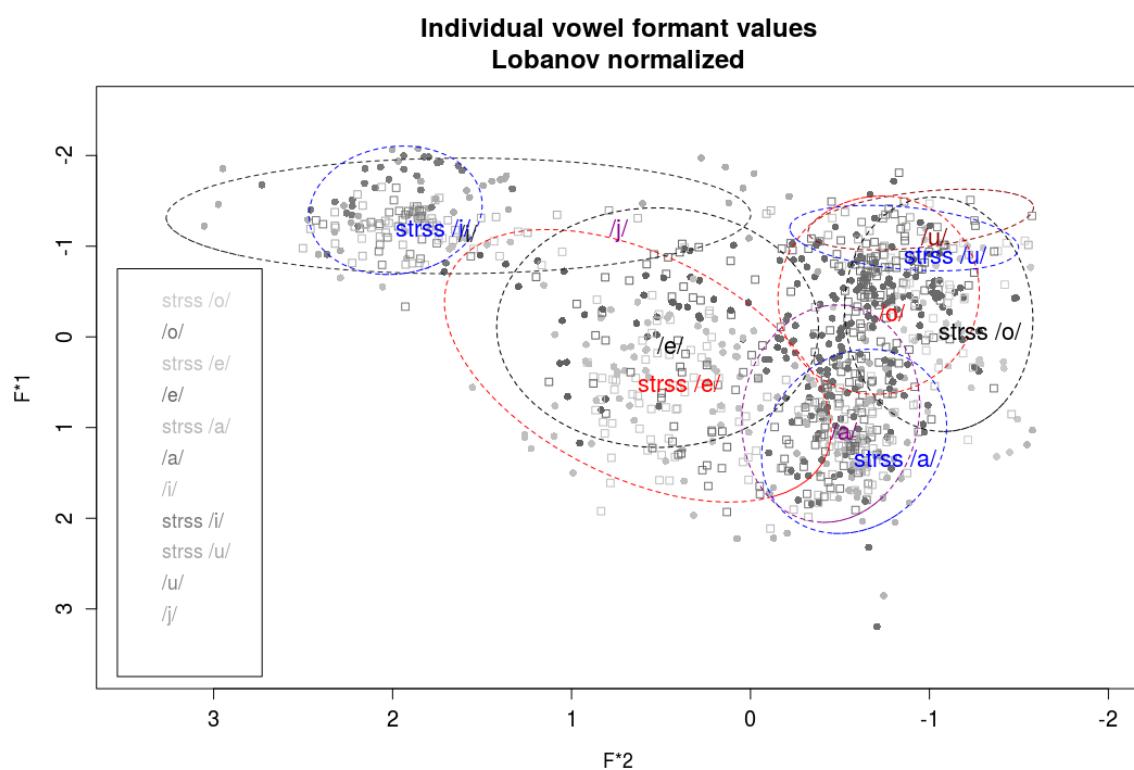


Figure C.1: Formant values from all student informants normalized.

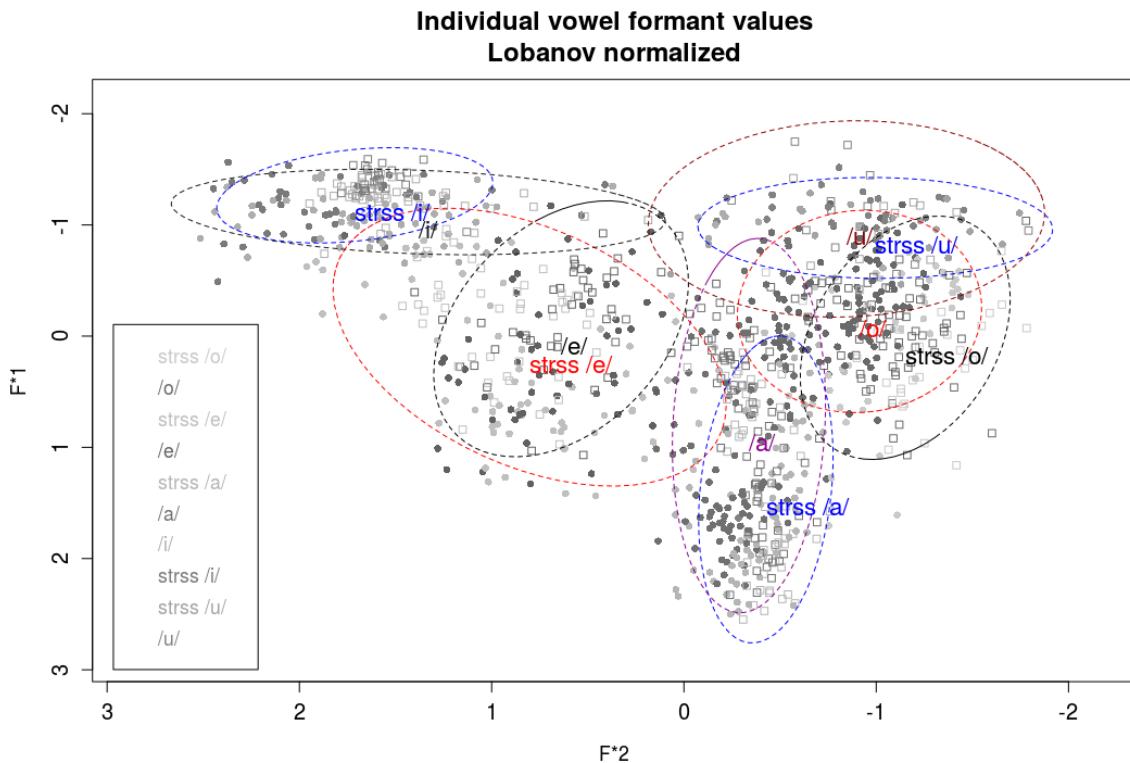


Figure C.2: Formant values from all the adult informants normalized.

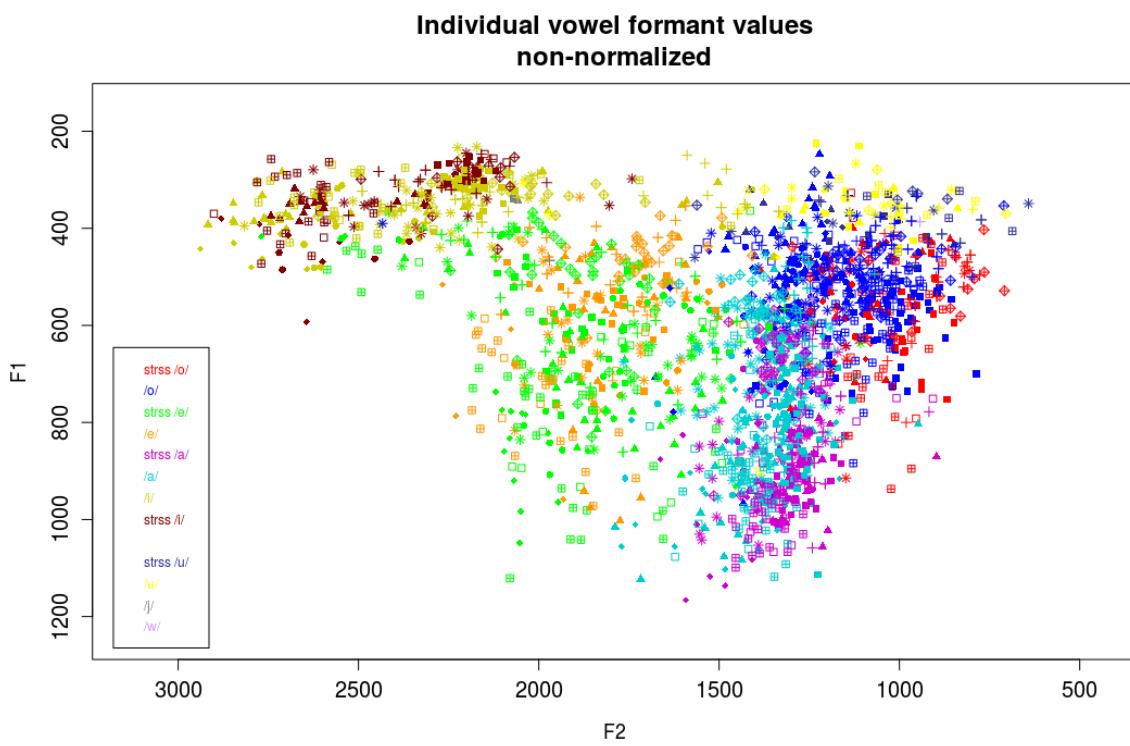


Figure C.3: Formant values from all the informants non-normalized.

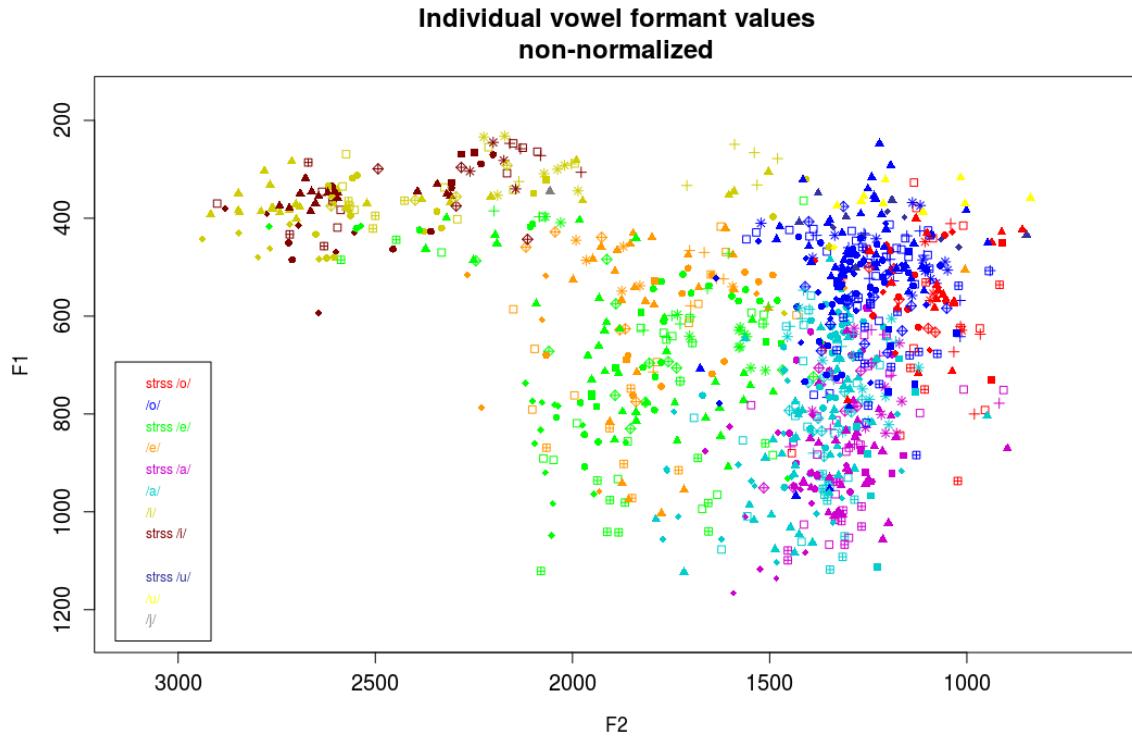


Figure C.4: Formant values from all the student informants non-normalized.

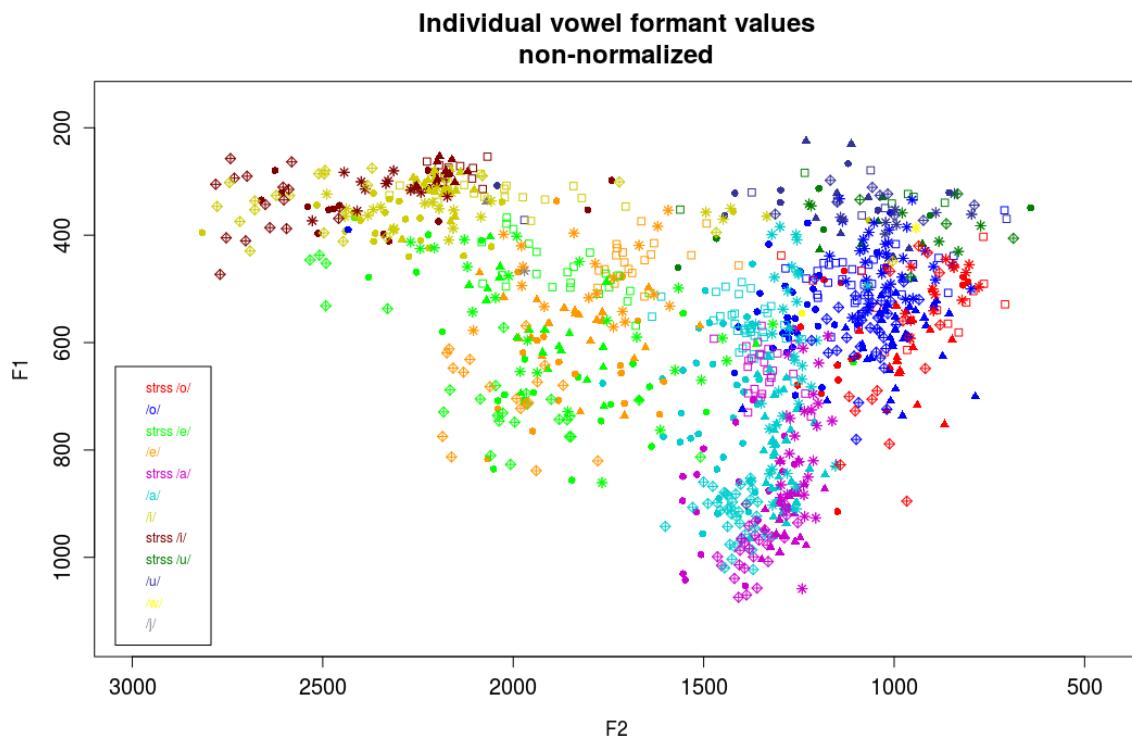


Figure C.5: Formant values from all the adult informants non-normalized.

## C.2

Italian average formant values from Ferrero and Caldognetto (1986).

	<b>Male</b>		<b>Female</b>	
	<b>F1</b>	<b>F2</b>	<b>F1</b>	<b>F2</b>
[i]	280	2240	320	2750
[e]	360	2040	400	2500
[ɛ]	560	1840	620	2400
[a]	800	1280	920	1400
[ɔ]	520	900	640	1200
[o]	420	800	400	920
[u]	280	720	360	760

Figure C.6: Italian average formant values.

# Appendix D

## D.1

1	0.026
2	0.021
3	0.003
4	0.002
5	0.014
6	0.019
7	0.234
8	0.137
9	0.446
14	0.209
15	0.597
16	0.002
17	0.008
18	0.200
19	0.346
20	0.056

Table D.1:  $p$  values for the sentiment approach men and women.

## D.2



Figure D.1: Women answers to the questionnaire.

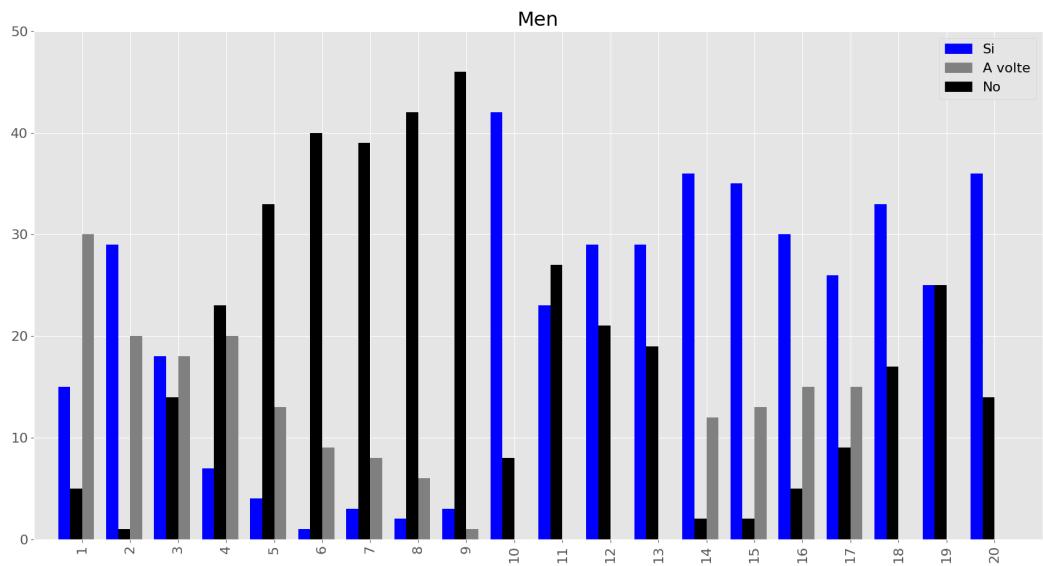


Figure D.2: Men answers to the questionnaire.