



DISSERTATION | DOCTORAL THESIS

Titel | Title

Phonological Variation in Southern French: Perception vs.
Representations

verfasst von | submitted by

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angestrebter akademischer Grad | in partial fulfilment of the requirements for the degree of
Doktorin der Philosophie (Dr.phil.)

Wien | Vienna, 2025

Studienkennzahl lt. Studienblatt | Degree
programme code as it appears on the
student record sheet:

UA 792 236

Dissertationsgebiet lt. Studienblatt | Field of
study as it appears on the student record
sheet:

Romanistik

Betreut von | Supervisor:

Univ.-Prof. Dipl.-Journ.Univ. Dr. habil. Elissa Pustka
M.A.

Acknowledgements

This doctoral dissertation would not exist without so many people to whom I want to express my deepest gratitude.

First and foremost, I want to thank Elissa Pustka, who already supervised my master's thesis (Zulassungsarbeit) about the accents of Toulouse and Marseille at LMU Munich in 2013, and who gave me the opportunity to continue and deepen the research at the University of Vienna. Her sharp mind and her ability to see the greater context, her vast knowledge and profound understanding of language variation and change, paired with her constant accessibility, helpfulness and openness to any questions I had, make her the best and most supportive supervisor I could have wished for.

I also want to thank all the researchers I was able to meet at the University of Vienna and at various conferences who were so kind to listen to me present my project and to share their ideas on how to improve my methodology or how to analyze and interpret the data. The PFC conferences were especially fruitful in this regard, and I am very appreciative of having been welcomed by this international circle of researchers all focusing on the phonology of spoken French, annually meeting up in Paris to discuss their work and drinking really good orange juice. Their collaborative efforts to gain a thorough understanding of French phonology are something I am very grateful to have experienced.

The most important person I met in the PFC program is Léa Courdès-Murphy, *vraie Toulousaine*, conducting a research project about the accents of Toulouse and Marseille with substantial knowledge in statistics. Thank you for helping me in so many ways; from finding listeners for my accent identification tests to providing me with my first Excel template for conducting χ^2 tests to listening to some of my stimuli and helping me with logistic and linear regression models in R! Léa is not the only former PhD student who served as an important academic and emotional support during this research project. Marc Chalier, Linda Bäumlér, Irene Fally and especially Anna Kocher were always there to help create perception tests or to find tweaks on how to explore or interpret the data, but also to take a break and have coffee or a picnic in Hof 8. All other colleagues at the University of Vienna, former PhD students or postdocs who spent their lunch or coffee breaks with me were, of course, equally valuable.

This project has financially benefited from the University of Vienna and the Rosita Schjerve-Rindler Fonds which have financed various fieldwork stays and conference attendances, as well as some proofreading and some help from the Statistical Consulting

Unit (StaBLab) of the LMU Munich. Another person who needs to be thanked here is Christoph Draxler (LMU Munich) who helped me create my first accent identification test using Percy. I also want to thank Sarah-Kay Hurst and Hannah Meurice as well as Elisabeth Heiszenberger, Sabine Leis, Marylise Rilliard, and, again, Linda Bäumler for proofreading my thesis, making the English sound more natural or giving valuable suggestions and remarks.

There is one more group of people to whom I want to express my deepest gratitude: all the people who were willing to participate in my research by being recorded, filling out questionnaires, or participating in accent identification tests. I am extremely thankful to every single person I recorded, for being so kind to let me get to know you, to hear your thoughts about your language and about your lives, and sometimes also to invite me into your homes. Another thank you goes out to all the people who helped me find speakers, especially Caroline Barouh, Rémi Canot, and those who not only helped me find speakers but also gave me shelter during my stays in Marseille and Oraison: Laurence and Olivier Kuhn, and Jolanta and Vincenzo Lombardi.

This research project hasn't always been easy and should have been finished a few years ago. The two things, however, that made me still come back during school breaks were my supervisor, Elissa Pustka, who never scolded me but rather encouraged me to continue, even after longer breaks, and the feeling of gratefulness towards all the Southern French people that I had the chance to meet.

This project can be split into different stages: the preliminary studies at LMU Munich in 2013, the time at the University of Vienna and the fieldwork in southern France, but also the last five years in Munich, when I was working as a French and English teacher, including a maternity leave, during which I wrote the last chapter of the dissertation. The one person who accompanied me through all these stages is Tony. It might be impossible to mention all the different reasons why I am grateful to him, such as for standing by me, for supporting me in every possible way, so let me finish these acknowledgements with the words of an important FC Bayern official dedicated to him:

“Danke, danke, danke sehr.”

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1 Introduction

The accent of Marseille is beloved and celebrated in song and in poetry. It evokes images of the sun, summer holidays, and the sea. Actors such as Fernandel and Raimu have helped shape the image of the *vrai accent marseillais* – the real accent of Marseille – an image that is held by many French speakers (Binisti & Gasquet-Cyrus, 2003). There is thus no doubt that this accent exists. However, if it is to be approached from a linguistic point of view, several methodological challenges arise. First and foremost, what exactly is the accent of Marseille, and how can it be defined? Who are its speakers? What distinguishes it from other varieties spoken in Southern France? If several different Southern French varieties exist as such in the representations of the speakers, can these varieties be identified when using anonymous acoustic stimuli in perception tests? And if not, what are the consequences for French linguistics? This leads to the broader theoretical question: What exactly is a variety?

The aim of this dissertation is to offer a methodological approach to working with varieties. The varieties in question are varieties of Southern French, starting with the two important cities Marseille and Toulouse and adding the two smaller rural municipalities of Salles-Curan (Aveyron) and Oraison (Alpes-de-Haute-Provence), see Figure 1.1.

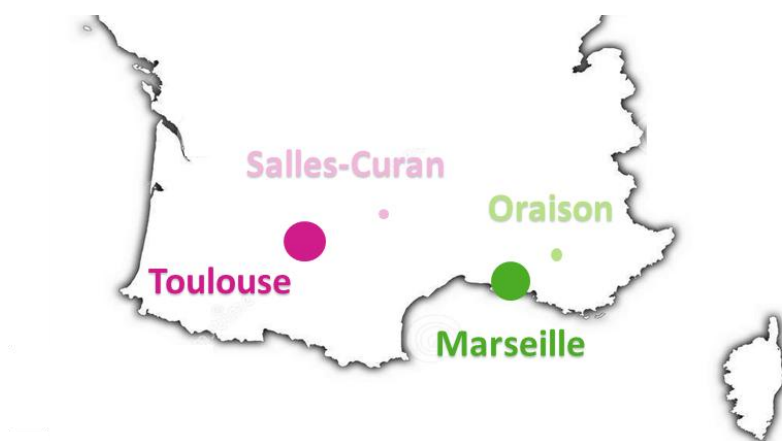


Figure 1.1: Southern French varieties under investigation in this dissertation.

The dissertation not only provides valuable insights into these specific cases but also sharpens the concept of varieties for future research, particularly in the exploration of their existence, distinction, and definition across different languages.

1.1 Theoretical framework

Language is characterized by variation and change (Labov, 1972b). According to Saussure (1967, pp. 281–282), this is due to two opposing forces: *l'esprit de clocher* (commonly translated as ‘provincialism,’ the need for identity that makes members of a linguistic (sub-)community speak alike) and *intercourse* (the need for members of a linguistic (sub-)community to be able to communicate with people outside of their (sub-)community). While *intercourse* leads to linguistic unity, the *esprit de clocher* leads to the development of different *varieties* of a language. However, the concept of what a *variety* is changes with each linguistic current, and the term itself lacks a universally accepted definition (cf. Chapter 2.1).

19th-century dialectologists believed that dialects (the term *variety* was not yet established at that point) should be stable and homogeneous, delineated by isoglosses, and possess distinct features (cf. Gauchat, 1903, pp. 396–397). Some structuralist linguists proposed dividing language into different subsystems (e.g., Weinreich, 1954, p. 389). In sociolinguistics, interest focused on speech communities and their social structures, reflected in the linguistic features they employed (Labov, 2006, p. 34). Varieties in the sociolinguistic sense can therefore be seen as constructs in which linguistic features co-occur with extralinguistic factors (cf. Berruto, 2004, p. 189). Lastly, Romance-based *Varietätenlinguistik* (‘linguistics of varieties’) was initially based on a structuralist approach in which varieties were viewed as subsystems of a *diasystem*, determined by extralinguistic factors (cf. Chapter 2.1.3.4).

This dissertation adopts the propositions made by *perceptual linguistics of varieties* as well as *cognitive sociolinguistics*, viewing *varieties* as cognitive prototype-structured constructs (Kristiansen, 2003; Pustka, 2007; Kristiansen, 2008; Pustka, 2009b; Krefeld & Pustka, 2010a). *Varieties* are consequently not to be found in speech production, which is heavily characterized by variation; instead, they are perception-based constructs in the representations of the speakers (cf. Krefeld & Pustka, 2010a).

1.2 Research questions

The main focus of this dissertation is to operationalize the theoretical assumption that Southern French varieties are prototype categories that may or may not be discernible by French speakers. The research process that ensued from taking this theory as a starting

point was predominantly marked by various methodological questions and challenges. Applying different methods showed the extent to which even small changes in methodology can influence the outcome of the research process. This consideration becomes even more important in an era marked by the increasing use of statistical analysis in linguistics, an era that one might even call a new age of empiricism. This is why the following research questions are not purely descriptive and theoretical, but, even more importantly, methodological.

1. Descriptive: Phonological variation in Southern French

RQ1a: **Representations:** Which linguistic and non-linguistic associations and representations exist of Southern French and its varieties?

RQ1b: **Attitudes:** How do French speakers evaluate accents in terms of correctness and pleasantness?

RQ1c: **Perception:** How accurately do French speakers identify sociodemographic features (Marseille vs. Toulouse, southeast vs. southwest, rural vs. urban, level of education) when listening to isolated speech data in experimental settings?

2. Theoretical: Prototype categories

RQ2a: **NORM speakers:** Are NORMs (“nonmobile, older, rural males,” Chambers & Trudgill, 1998/2004) the prototypical speakers?

RQ2b: **Linguistic shibboleths:** Which linguistic features are the most typical of the varieties in question and thus function as shibboleths?

3. Methodological

RQ3: How do the following factors influence the outcome of accent identification tests?

- The speaker sample used
- The mode of testing (online vs. offline)
- The selection of answer categories (Toulouse vs. Marseille, southeast vs. southwest, no category at all)
- The speech style of the stimuli (read vs. spontaneous speech)
- The characteristics of the listener group (young vs. old, familiar with the accent vs. not familiar)
- The amount of data collected

1.3 State of the art

The data of the *Atlas Linguistique de la France* (ALF) clearly show that at the beginning of the 20th century, distinct Occitan dialects existed in Southern France (Gilliéron, 1902; Goebel, 2003). Shortly after this data had been collected, French became more and more prevalent in everyday life in Southern France, partly due to the introduction of compulsory schooling (in 1881) and other factors, such as internal migration driven by centralism and rural exodus.. Today, Occitan has been largely replaced by Southern French, a variety that differs considerably from Northern French. The question of whether discernable Southern French varieties exist has led to contradictory results so far.

Studies on Southern French are relatively scarce. The first modern linguistic analyses of Southern French emerged in the early 20th century, with Brun (1931) focusing on Marseille and Séguy (1951) focusing on Toulouse. Roughly 30 years later, interest in Southern French was rekindled, leading to several sociolinguistic studies (e.g., Durand, Slater, & Wise, 1987; Jill Taylor, 1996b; Mooney, 2018) (see Chapter 3).

Most of the existing research has concentrated on production, focusing on phonological features such as schwa, mid vowels, nasal vowels and prosodic aspects (e.g., Durand et al., 1987; Armstrong & Unsworth, 1999; Coquillon, 2005; Courdès-Murphy, 2018; Eychenne, 2006; Lonnemann, 2006; Pustka, 2007; Mooney, 2018). A recurring observation in these studies is that Southern French varieties are undergoing levelling processes, possibly fueled by linguistic insecurity (see Chapter 3.3).

As theoretical frameworks which emphasize perception date back roughly 20 years and are thus relatively new, only a few studies have investigated the perception of Southern French, with varying results (cf. Coquillon, 2005; Woehrling & Boula de Mareüil, 2005, 2006a; Pustka, 2007, 2009b, 2010b; Avanzi & Boula de Mareüil, 2019) (see Chapter 3.6). To my knowledge, only Pustka (2007, 2009b) has employed questionnaire surveys, interviews and perception tests to gain a fuller understanding of perception and representations of Southern French. This dissertation provides an extensive account of all the different methods that I have applied in order to approach the interplay of production, perception and representations of Southern French.

1.4 Methodology

To thoroughly examine intra-Southern differences, I employed a triangulation of methods (Albert & Marx, 2017): I collected production data, conducted questionnaire surveys and interviews, and used the collected production data to conduct several accent identification tests.

Production

This dissertation presents and analyzes data collected in Marseille, Toulouse, Oraison/Manosque and Salles-Curan. The methodology for the recordings is based on the PFC protocol (*Phonologie du français contemporain*, Durand, Laks, & Lyche, 2002, <https://www.projet-pfc.net/>). Except for the Salles-Curan data, which was collected and transcribed by Pustka (2007) following the full PFC protocol, I personally recorded all of the other speakers. In total, I recorded 72 speakers from Marseille and Toulouse using the text and word list of the PFC project, and 12 speakers from Oraison/Manosque following the full PFC protocol. Additionally, I interviewed 25 speakers from Toulouse and Marseille, adding spontaneous speech to the Marseille/Toulouse data (see Chapters 4.3.1 and 4.3.2.2).

Representations and Attitudes

Since regional varieties are seen as cognitive constructs shaped by social and linguistic categorization (cf. Kristiansen, 2008, p. 45), this dissertation focuses not only on approaching the linguistic aspects of Southern French varieties observed in the representations of the speakers, but also on social aspects associated with these varieties. I thus also examined attitudes towards and associations with these accents, asking about them directly or indirectly (e.g., through an accent *gestalt test*) with the help of interviews and several questionnaires, both online and offline (see Chapter 4.4).

Perception

Perception lies at the core of this dissertation. In total, I conducted four accent identification tests: two with stimuli from Toulouse and Marseille and two with stimuli from all four research sites. There is a large amount of variation between the four tests. Several methods were tried out which led to the observation that small changes in methodology can substantially influence the results (see Chapters 4.5 and 8).

Statistical Analysis

The data was analyzed using correlation and significance testing, logistic and linear regressions and conditional inference trees in the software R (R core team, 2008).¹

1.5 Structure of the dissertation

This dissertation examines Southern French in production, attitudes, representations and perception, with an emphasis on perception. These dimensions shape the structure of this dissertation.

Chapter 2 presents the theoretical framework of this dissertation, giving an overview of how different linguistic currents have defined the term *variety* and introducing the theoretical assumption of varieties as prototype-like cognitive constructs. It also devotes a section to the impact of perception on these cognitive constructs.

Chapter 3 gives an account of the state of the art, with an extensive section on the origin and development of Southern French. It also presents the findings of studies focusing on production, representations, attitudes, and perception of Southern French. Lastly, it outlines an innovative study using visual *gestalts* to explore attitudes towards German varieties (Berthele, 2006, 2010a), a study I adapted to French varieties (see Chapters 4.4.4 and 5.3).

Chapter 4 describes all the methods applied during the research process when collecting the data, highlighting necessary changes in methodology as a result of continually questioning and reworking the approach. It briefly outlines the perception tests, leaving room to present each of the four tests in detail, from their design to the analysis of their results in Chapter 8.

Chapter 5 focuses on attitudes, associations and accent *gestalt* by describing the results of the questionnaires conducted online and offline.

¹ Due to the complexity of the data, mixed effects models did not lead to meaningful results. Significantly more data points would have been required for this approach to be effective.

Chapter 6 is concerned with the linguistic representations of the Southern French varieties as examined in questionnaires and interviews.

Chapter 7 presents an analysis of the stimuli used in the accent identification tests.

Chapter 8 gives an extensive account of all the perception tests conducted during the research process, including the methods employed and a discussion of the results.

Chapter 9 summarizes the findings, discusses the limitations of the study, and gives an outlook on future work.

2 Theoretical framework

This dissertation examines whether we can distinguish between several regional varieties in Southern France using perception. For this, the following two aspects have to be examined in greater detail: *varieties* (Chapter 2.1 and 2.2) and the role of perception in linguistics (Chapter 2.3). These two aspects will be discussed on the basis of the theoretical assumptions of cognitive sociolinguistics (Kristiansen & Dirven, 2008), perceptual dialectology (Preston, 1999b) and perceptual linguistics of varieties (Krefeld & Pustka, 2010b).

2.1 The concept of varieties

The term *variety* is frequently used in many linguistic sub-disciplines, but it lacks a precise and commonly accepted definition (cf. Dufter & Stark, 2003; Hambye & Simon, 2004; Krefeld & Pustka, 2010a; Ghyselen & Vogelaer, 2018). Thus, the following chapter focuses on the term itself and its primary reason for existence: language variation. It starts with a description of language variation (Chapter 2.1.1), and is followed by a clarification of some terminological issues, outlining the differences between the terms *variety* and *dialect* (Chapter 2.1.2). Chapter 2.1.3 gives an overview of the different linguistic theoretical currents and their definitions and conceptualizations of varieties (or dialects). Chapter 2.2 discusses and develops the proposals of Kristiansen (2003, 2008) and Pustka (2007, 2009b), who view varieties as cognitive prototypically structured schemata in the speaker's cognitive representations.

2.1.1 Language variation

The fact that linguistic unity is nowhere to be found in speech production, even in the smallest linguistic community, had already been noted more than a century ago. The Swiss dialectologist Louis Gauchat concluded the account of his fieldwork in a secluded village in the Swiss Alps as follows: “L’unité du patois de Charmey, après un examen plus attentif, est nulle.”² (1905, p. 222). This lack of linguistic unity is due to one of the key characteristics of language: variation and change (cf. Martinet, 1970, p. 12; Labov, 1972b, p. 225; Keller, [1990] 2014, p. 21). Reasons for these key characteristics have

² ‘The unity of the dialect of Charmey is, after a thorough examination, non-existent’.

been formulated ever since the beginning of modern linguistics. Saussure (1967), for example, gives a very convincing account of the causes of language variation and change. He describes them as follows:

Dans toute masse humaine, deux forces agissent sans cesse simultanément et en sens contraires : d'une part l'esprit particulariste, l'«esprit de clocher» ; de l'autre, la force d'«intercourse», qui crée les communications entre les hommes. [...] C'est par l'esprit de clocher qu'une communauté linguistique restreinte reste fidèle aux traditions qui se sont développées dans son sein. [...] Mais leurs effets sont corrigés par l'action de la force opposée. Si l'esprit de clocher rend les hommes sédentaires, l'intercourse les oblige à communiquer entre eux. [...] En un mot, c'est un principe unifiant, qui contrarie l'action dissolvante de l'esprit de clocher. (Saussure, 1967, p. 281)³

Saussure's proposition of two antagonizing forces: *esprit de clocher* 'provincialism' and *intercourse* 'communications among men' reflect the two functions of language as a means of expressing identity and as a means of information transfer (cf. Pustka, 2007, pp. 21–22). The *esprit de clocher* is influenced by the function of language as a means of expressing identity. It leads the speakers of a particular linguistic (sub-)community to speak more or less alike, thus creating a particular regional variety that reflects local identity and differs considerably from others. The force of *intercourse*, on the other hand, emerges from the need that members of different linguistic (sub-)communities have to communicate across community boundaries. This force of *intercourse* thus leads to the linguistic homogenization of different varieties because people need to understand speakers from other speech communities in addition to their own. The two forces antagonize each other constantly, leading to a never-ending dynamic of variation and change. Although Saussure only applied these two forces to regional variation, it is possible to enlarge this definition to other types of language variation. Social dialects (or varieties) can also be driven by these two forces (cf. Laks, 2002; Pustka, 2007).

Saussure's dynamic view of language is not often mentioned when his work is cited. This is primarily due to his separation between language as a system (*langue*) and the language that is actually produced (*parole*). Additionally, further structuralist research focused on the *langue*, and as such on postulated homogeneous and stable systems.

³ 'In every human collectivity two forces are always working simultaneously and in opposing directions: individualism or provincialism [*esprit de clocher*] on the one hand and intercourse – communications among men – on the other. [...] Provincialism keeps a restricted linguistic community faithful to its own traditions. [...] But intercourse, the opposing force, limits their effect. Whereas provincialism makes men sedentary, intercourse obliges them to move about. [...] In a word, it is a unifying force that counteracts the splintering action of provincialism.' Saussure [1916] 2011, pp. 205–206.

Through this, Saussure's scholars rather neglected language variation (cf. Coseriu, 1975, pp. 102–103).

Across linguistic currents, fundamental questions have been examined in great detail (see Chapter 2.1.3). Different linguistic theories, focusing either on the homogeneous or the heterogeneous aspects of language, have proposed their own definitions for *language* and its subsystems. Sometimes, these subsystems were called *varieties*, sometimes *dialects*. How these two terms differ is explained in Chapter 2.1.2. Chapter 2.1.3 then outlines how linguistic currents have changed the definition of varieties or dialects, starting with 19th-century dialectology.

2.1.2 *Variety, dialect and accent*

The terms *variety* and *dialect* can both designate a particular speech form.⁴ While the term *dialect* is much older and had already been used to discuss regional variation in ancient Greece, *variety* was only established in linguistics at the beginning of the 20th century (cf. Ammon & Arnuzzo-Lanszweert, 2001, p. 793; Dufter & Stark, 2003, p. 82). This is why most of the older literature only uses the term *dialect* or German or French equivalents⁵ (cf. Saussure, 1967; Martinet, 1954). Additionally, the terms *dialect* and *variety* differ in regard to their use by non-linguists: *Variety* is usually restricted to linguistic discourse, whereas *dialect* also appears in everyday, non-scientific contexts. Just like the terms *language* and *grammar*, which are not purely linguistic categories but also belong to folk categorization, *dialect* has often been used without a clear definition, as Martinet pointed out in his preface to Weinreich's book on languages in contact (1968). However, the purely linguistic term *variety* is also sometimes used without a clear definition.

In the Anglo-American linguistic tradition, the terms *variety* and *dialect* are used synonymously, with *variety* being a more neutral scientific term (cf. Sinner, 2014, p. 26; Mooney, 2018, p. 17) and therefore applicable to a larger number of 'ways of speaking'. Sometimes, *variety* is also specifically used when authors try to avoid precision, as we can see in Chambers and Trudgill's definition:

We shall use 'variety' as a neutral term to apply to any particular kind of language which we wish, for some purpose, to consider as a single entity. The term will be used in an ad

⁴ A thorough definition of the nature of such a speech form follows in 2.1.3.

⁵ The German term *Mundart* and the French term *patois*.

hoc manner in order to be as specific as we wish for a particular purpose. [...] More particular terms will be accent and dialect. [...] ‘Dialect’ [...] refers to varieties which are grammatically (and perhaps lexically) as well as phonologically different from other varieties. If two speakers say, respectively, *I done it last night* and *I did it last night*, we can say that they are speaking different dialects. (Chambers & Trudgill, 2004, p. 5)

In the Romance and German traditions, on the other hand, the terms *dialect* and *variety* are not used synonymously. While it is possible to speak of *social dialects* in English, in German *dialect* only refers to regional varieties and is usually not applied to social variation (Berruto, 2004, p. 189). In the Romance and German paradigm, *variety* is thus the generic term for *dialect*, *sociolect* and *style* (Ammon, 1995, p. 1).

Romance linguistics goes further, also distinguishing between different kinds of dialects based on their relationship to the standard from a synchronic or diachronic perspective. Coseriu (1980, p. 113) classifies them as *primary*, *secondary* or *tertiary dialects*. This classification is based on their specific development and thus on their relation to the standard variety. *Primary dialects* are those whose origin can be traced back even further than the origin of the one dialect that was selected and codified to become the standard variety of a certain country. An example of a primary dialect in France is Picard. *Secondary dialects* are those that emerged from the koinéization of primary dialects and the emerging standard variety, primarily influenced by colonization, such as Canadian French. Lastly, *tertiary dialects* emerged as the product of contact between primary dialects or regional languages (such as Occitan) and the standard variety. These tertiary dialects only differ slightly from the standard variety, mostly on the level of phonetics and phonology. It is this kind of dialect that we still find in France, with primary French dialects having died out (see Chapter 3.2) (Coseriu, 1980, p. 113). Therefore, from the Romance linguistic point of view, regional varieties in southern France cannot be called dialects without the additional classification of *tertiary*.

From a German linguistics point of view, the term *dialect* cannot be applied to regional Southern French either. According to Lenz’s (2010) definition, regional varieties are only dialects when they diverge considerably from the standard:

[D]ialect can in turn be defined as the ‘lowest’ (most linguistically divergent from the standard) and the most spatially confined variety in the dialect – standard constellation. Like a variety in general, a dialect is not a homogeneous construct, but a variable subsystem with a varying degree of internal substructure, which can exist alongside other dialects or ‘beneath’ other diatopic varieties with a greater areal distribution. (Lenz, 2010, p. 296)

Based on these German and Romance restrictions on the term *dialect*, the term used in this dissertation will be *variety*, alongside another term that fits the purpose of this dissertation: *accent*.

Accent usually refers to varieties that mainly differ from the standard on the phonetic-phonological level and are thus *tertiary dialects* in Romance terminology. In the German tradition, the term is primarily used by non-linguists (cf. Jansen, 2019, p. 432), and since it is a folk linguistic category itself, it has the advantage of fitting the subject in question particularly well. It is used alongside the term *varieties* and *dialects* in several folk linguistic publications (e.g., Coupland, Angie Williams, & Garret, 1999; Kuiper, 1999; Boughton, 2006; Kuiper, 2005), whenever the focus lies on the folk linguistic aspect of the term. Additionally, *accent* is also used in French linguistic discourse (e.g., Durand, 2009a; Moreau et al., 2007; Trimaille & Candea, 2021). Here again, it can often be found in works that focus on perception and representations (e.g., Gasquet-Cyrus, 2016; Avanzi & Boula de Mareüil, 2019; Pustka, Bellonie, Chalier & Jansen, 2019).

Ever since the first dialectologists started exploring regional variation in the 19th century, linguistic theories have shaped the understanding of what a *variety* or *dialect* is, and different propositions have been made about how to work with these terms. The following chapter thus presents different definitions of the terms *variety* and *dialect*, based on the linguistic currents in which these definitions were developed. It focuses on 19th-century dialectology, Labovian sociolinguistics, structuralism-based Romance linguistics of varieties, and their current sub-forms: perceptual linguistics of varieties and cognitive sociolinguistics.

2.1.3 From dialectology to cognitive sociolinguistics

Language variation is one of the most fundamental characteristics of language and has therefore been examined in great detail for more than a hundred years. As a consequence, some discussions on the topic were already taking place in the 19th century, and we can find significant conceptualizations and findings of today's dialectological research in the works of Paris (1888) and Gauchat (1903, 1905). For this reason, this chapter begins with a sub-chapter on 19th-century dialectology.

2.1.3.1 Dialectology

Dialectology⁶ was born in the 19th century and is thus older than modern linguistics, which is commonly considered to have emerged with Saussure's *Cours de linguistique générale* (1967). Dialectology fieldwork was born from a desire to gather evidence for Schleicher's model of language as an organism, inspired by the works of the botanist Linné (cf. Gauchat, 1903, p. 376), and for the regularity of change principle proposed by the Neogrammarians (cf. Chambers & Trudgill, 2004, p. 14). They hoped to find material that would help to reconstruct the Proto-Indo-European language (cf. Wechssler, 1900, p. 414). To this end, they went on a quest to find dialects that had undergone sound changes to support the reconstruction of earlier stages of language. However, they did not find evidence to support these assumptions. Instead, they encountered heterogeneity (see Chapter 2.1.1), and could not discover the dialects they were looking for in the field.

The reason for this lies in their definition of dialects. According to Gauchat, this definition was based on three underlying assumptions: Firstly, dialects were supposed to contain characteristic features which could not be found anywhere else. Secondly, they should be surrounded by at least two isoglosses. Thirdly, there should be a unity of sound (Gauchat, 1903, pp. 396–397). Since findings in the field proved to be very different from what was expected, even the idea of the existence of dialects was soon called into question:

[I]l n'y a réellement pas de dialectes ; il n'y a que des traits linguistiques qui entrent respectivement dans des combinaisons diverses, de telle sorte que le parler d'un endroit contiendra un certain nombre de traits qui lui seront communs, par exemple, avec le parler de chacun des quatre endroits les plus voisins, et un certain nombre de traits qui différeront du parler de chacun d'eux. Chaque trait linguistique occupe d'ailleurs une certaine étendue de terrain dont on peut reconnaître les limites, mais ces limites ne coïncident que très rarement avec celles d'un autre trait ou de plusieurs autres traits : elles ne coïncident pas surtout, comme on se l'imagine souvent encore, avec des limites politiques anciennes ou modernes (il en est parfois autrement, au moins dans une certaine mesure, pour les limites naturelles, telles que montagnes, grands fleuves, espaces inhabités). Il suit de là que tout le travail qu'on a dépensé à constituer dans l'ensemble des parlers de la France, des dialectes et ce qu'on a appelé des 'sous-dialectes' est un travail à peu près complètement perdu. (Paris, 1888, p. 163)⁷

⁶ I use the term *dialectology* for what Chambers and Trudgill call *dialect geography*: “*Dialect geography* is sometimes called simply *dialectology*. However, in this book the latter term is used more generally to mean the study of language variety by any methodology” 2004, p. 14.

⁷ ‘In reality, there are no dialects; there are only linguistic features which are combined in various ways, so that the speech of one location will contain a certain number of features which will also be found, for example, in the speech of the four neighboring locations, and a certain number of features which will be absent. Besides, every linguistic feature can be found in a certain area for which we can delimit the borders,

As a consequence, dialectologists started working separately from phonologists, syntacticians and semanticists, with dialectologists still searching for archaic indigenous features and using isoglosses to mark borders between differing realizations (cf. Martinet, 1954, p. 2; Weinreich, 1954, p. 388), while formal linguists investigated with increasing interest the synchrony of language (cf. Laks, 2002, p. 23).

2.1.3.2 Structuralism

In structuralism as well as in generativism, regional language variation was not a main interest, because in both paradigms, variation was considered less important than the underlying system. In both theoretical frameworks, propositions on how to integrate dialectological approaches existed,⁸ proposing that varieties should be seen as linguistic subsystems (e.g., Weinreich, 1954, p. 389), but they did not receive wide acclaim (Chambers & Trudgill, 2004, pp. 33–41). The structuralist interest was in homogeneous systems, or “an ideal speaker-listener in a completely homogeneous speech-community” (Chomsky, 1965, p. 3).

It was Weinreich, Labov and Herzog’s (1968) important paper on *empirical foundations for a theory of language change* as well as Labov’s studies in the 1960s and 1970s ([1966] 2006, 1972b, 1972a) that stressed the importance of investigating language variation once again. Their claim was that empirically describing relationships between linguistic features and extralinguistic factors would help to solve the *actuation problem*:

What factors can account for the actuation of changes? Why do changes in a structural feature take place in a particular language at a given time, but not in other languages with the same feature, or in the same language at other times? (Weinreich, Labov, & Herzog, 1968, p. 102)

2.1.3.3 Sociolinguistics

Although dialectologists had repeatedly questioned the classical dialectological approach of only investigating a certain category of speakers (see Chapter 2.2.2), it was not until the 1960s and 1970s that Labov developed a framework for systematically investigating

but these borders coincide only rarely with those of another feature or of several other features: they especially do not coincide with old or modern political borders as we would often imagine (it is sometimes different, at least to a certain extent, for natural borders, such as mountains, large rivers, uninhabited spaces). Consequently, all the work which was done to determine all the dialects and so-called 'sub-dialects' of French was almost entirely in vain.’ (Translation LJ).

⁸ Most importantly the works of Weinreich, 1954 and Martinet, 1956.

social variation. His work had a considerable influence on linguistics and led to an important paradigm shift. In his early works, Labov's definition of dialects and styles is still rather a structuralist one: His main focus was to find structure in heterogeneous data, and in his studies on the Black vernacular in New York City, he addressed the question of whether the vernacular under investigation should be seen as a system on its own or as a subsystem of standard English (cf. Labov, 1972a, xiv).

Labov's sociolinguistic approach was refined in several ways by new methods and interpretations strongly associated with Milroy (1987), Milroy and Milroy (1985; 1992) and Eckert (2004). These researchers examined diffusion of linguistic innovations, stressing the importance of ethnographic research and the construction of identity. However, the question of how to define dialects or varieties was not often addressed. The most common definition of *varieties* in this paradigm is that they are seen as linguistic constructs based on co-occurrences of linguistic features with extralinguistic factors (cf. Berruto, 2004, p. 189).

2.1.3.4 *Varietätenlinguistik*

While Labov was laying the foundations of sociolinguistics in Anglo-American linguistics, the priorities in Romance linguistics, as practiced in German-speaking countries, were different. They were greatly influenced by Coseriu's works (cf. Sinner, 2014, p. 63), which led to the development of the linguistic sub-discipline *Varietätenlinguistik* 'linguistics of varieties'. Linguistics of varieties is predominantly based on Coseriu's version of the *diasystem* (cf. Koch/Oesterreicher 2011: 15). Coseriu's model was constructed on the basis of Weinreich's (1954, pp. 390–399) proposals of a *diasystem* and on the categories coined by Flydal (1952), who introduced analogously to the diachronic dimension of variation the *diatopic* (regional), *diastratic* (social) and *diaphasic* (stylistic) dimensions. This concept is structuralist, since it was developed to make structural descriptions of different varieties possible (cf. Kabatek, 2013). Coseriu's model was modified by Koch and Oesterreicher ([1990] 2011), who added the dimension of proximity and distance.⁹ Today, their conception of the *diasystem* is generally accepted in Romance linguistics (cf. Sinner, 2014, p. 212).

⁹ For a critical discussion of this fourth category as part of the *diasystem*, see Krefeld and Pustka 2010a, p. 17.

Just like Labovian variationist linguistics, the main focus in Romance linguistics of varieties is on linguistic variation. However, while variationist linguistics is a strictly empirically based and mostly descriptive discipline, linguistics of varieties was developed with less emphasis on empirical methods and remained largely structuralist and theoretical for a long time. Today, empirical studies on large-scale corpora, such as Ueberwasser and Stark (2017) have enhanced the field. Yet the definition of the term *variety* in this tradition is still a structuralist one: a closed system determined by language-external factors (cf. Radtke, 2005, p. 53) and thus a sub-system of a *diasystem* in Weinreich's sense (cf. Berruto, 2004, p. 190).

2.1.3.5 *Perceptual dialectology*

A new trend in linguistics started roughly in the 1980s,¹⁰ with the framework of perceptual dialectology, created by Preston (1982, 1999a, 2013), playing a prominent role (see Chapter 2.3). This framework was strongly influenced by language attitude studies (e.g. Lambert, Hodgson, Gardner, & Fillenbaum, 1960) and cultural geography (e.g. Gould & White, 2002), and stressed the importance of investigating folk representations of language. However, Preston himself discusses neither the term *dialect* nor *variety* and it is only in the frameworks which follow or discuss the perceptual paradigm that the question of how to define a variety is addressed.¹¹ We find the most important discussions about the concept in the fields of perceptual linguistics of varieties (cf. Pustka, 2007; 2009b; Krefeld & Pustka, 2010a) and cognitive sociolinguistics (cf. Kristiansen, 2003; 2008; Kristiansen & Dirven, 2008).

2.1.3.6 *Perceptual linguistics of varieties and cognitive sociolinguistics*

These two theoretical frameworks stem from rather different traditions. The perceptual linguistics of varieties framework is based on the Romance tradition of modeling language variation as a *diasystem* (see above) but criticizes it sharply. It aims to combine theoretical modeling of varieties with empirical methods in which production data are combined with data that provide insight into the speakers' representations (cf. Krefeld & Pustka, 2010a, p. 21). Cognitive sociolinguistics, on the other hand, is a usage-based

¹⁰ Before that, first folk linguistic studies had already been conducted in the 1940s in the Netherlands, by Weijnen 1946 and Rensink 1955 (cf. Kristiansen, 2003, p. 83).

¹¹ Purschke 2011, p. 45 as well as Krefeld and Pustka, 2010a, p. 10 also criticize the overall lack of theoretical discussion in early Prestonian perceptual dialectology.

approach that was created to combine “empirically based investigation of sociolinguistic variation and cognition focused explanatory frameworks of linguistic processes” (Soukup, 2013, p. 72). Thus, while perceptual linguistics of varieties introduces empiricism into the Romance paradigm, cognitive sociolinguistics enhances sociolinguistics with theoretical modeling.

Still, both frameworks have independently proposed a very similar, yet fruitful, definition of varieties, albeit from a slightly different angle. They both define varieties as social cognitive constructs on the level of representations. This definition is a cognitive one that can also be found in Langacker’s work (cf. also Hambye & Simon, 2004, p. 399; Pustka, 2009b, p. 80; Schmidt & Herrgen, 2011, pp. 49–53):

Objectively, there is no single entity that can be [...] identified as languages. There are simply lots of people – hundreds of millions of them – who talk in roughly similar ways (sometimes very roughly indeed). Strictly speaking, each person has a distinct linguistic system (or ‘idiolect’). These individual systems do exhibit a strong family resemblance, however, and like the members of an extended family, some systems resemble one other quite closely, others more distantly. On this basis we can group them into “dialects” of various sizes and degrees of cohesiveness. Yet we can only do this by abstracting away from individual differences and imposing artificial boundaries. If thought of as a clearly delimited entity with definite boundaries, neither a dialect nor a language exists in the wild, but only as a mental construction – the product of idealization, reification, and metaphor. (Langacker, 2008, p. 217)

Langacker does not start his definition with a superimposed group of speakers but with the individual. This leads us to Paul ([1880] 1995) who, according to Weinreich, Labov and Herzog, perceived the true interest of linguistic research to be “the totality of manifestations of speech activity in all individuals in their mutual interaction” (Weinreich, Labov, & Herzog, 1968, p. 105),¹² and thus in idiolects. Langacker then moves on to Wittgenstein’s ([1953] 1989) concept of *family resemblance*, a concept which had immense influence on the development of cognitive semantics (cf. Rosch & Mervis, 1975), and proposes grouping the individual systems (*idiolects*) based on their family resemblance to a category without definite boundaries. The idea of a delimited entity with clear-cut borders is, according to Langacker, a mental or cognitive construction. On the one hand, we have individual systems¹³ that can differ continually

¹² The direct quote I am referring to here is „Das wahre Objekt für den Sprachforscher sind vielmehr sämtliche Ausserungen [sic!] der Sprechthätigkeit an sämtlichen Individuen in ihrer Wechselwirkung auf einander“ (Paul, [1880] 1995, p. 24).

¹³ It is also possible to avoid the notion of *system* by using the term *grammar* instead, as does Pustka 2007.

as long as we remain within a historical language,¹⁴ on the other hand, we have the social constructs of dialects which may even be clear-cut and homogeneous in the minds of the speakers.

A logical consequence of defining varieties as social constructs is that these social constructs cannot be defined solely by investigating production data. Instead, we must consider whether a certain variety is present as such in the representations of the speakers and thus has emic category status.¹⁵ If so, declaring Franco-Provençal or Rhaeto-Romance to be languages in their own right although they lack emic category status is questionable (Krefeld & Pustka, 2010a, p. 21). The idea of defining varieties in relation to emic category status is, however, not new. The observation that varietal categories do not exist as such in speech production but have an emic and attitudinal reality had already been made in the early 20th century (cf. Gauchat, 1905, p. 222):

In Wirklichkeit vertreten aber nicht zwei, sondern viele oder sehr viele Personen, deren Zahl von 2 bis 10 000 und darüber hinaus schwanken kann, denselben Dialekt. Und alle diese Personen tragen in denselben ihre wechselnden Auffassungen der Dinge hinein, ihr verschiedenes Temperament, sie variieren den Dialekt nach der Verschiedenartigkeit ihrer kulturellen Stellung. Trotzdem besitzen alle Angehörigen eines Dialektes etwas Gemeinschaftliches, an dem man sie erkennt, das in ihnen, wenn sie in der Fremde Zusammentreffen, ein freudiges Heimatgefühl weckt. (Gauchat, 1903, p. 396)¹⁶

It is striking that these observations made a century ago have a lot in common with recent trends in linguistics. As Krefeld and Pustka (2010a, pp. 19–20) and Pustka (2009b, pp. 79–80) argue, it is the ‘joyful sense of home’ described by Gauchat (1903, p. 396) that justifies the existence of varieties. And for Gauchat, it is not only the emic category status but the fact that varieties play an important role in perception and recognition. For some authors, emic category status is the only prerequisite for a variety to exist (e.g.

¹⁴ The term *historical language* was introduced by Coseriu in order to be able to differentiate between language and dialect. A historical language fulfils the criterion of being recognized by its own speakers as an autonomous language, such as German or English, due to its historical developments (Coseriu, 1980, p. 190).

¹⁵ Emic category status is described by Ghyselen and Vogelaer, 2018, p. 5 as follows: “the social group realizing a certain type of language use should also perceive that type of language use as a separate category”. Although Krefeld and Pustka 2010a, p. 21; cf. also Postlep, 2010, p. 61 criticize the terms *emic* and *etic* and instead use *Varietätenbewusstsein* ‘consciousness about varieties’, I will still use the terms *emic* and *etic*, because they are more concise.

¹⁶ ‘In reality, it is not only two people who represent the same dialect, but a large or a very large number between 2 and 10,000. And all these people add to the language their changing conceptions of things, their differing temperaments; they vary the dialect according to their own culture. Nevertheless, all members of a dialect community have something in common which makes them recognizable, which evokes in them a joyful sense of home when they meet in foreign parts.’ (Translation LJ).

Hambye & Simon, 2004).¹⁷ For others, a variety also needs to fulfil other criteria, such as “internal linguistic cohesion, clear system boundaries [...] [as well as] well-defined pragmatic functions” (Lenz, 2010, p. 296). Krefeld and Pustka, for their part, do not go as far as Lenz in demanding clear system boundaries and internal linguistic cohesion, but they stress that varieties need to have some correlate in production and perception from which they can be abstracted, in addition to having *emic* category status. If varieties exist in the speakers’ representations but have no correlate in production or perception data, such as the accent of Le Havre (cf. Hauchecorne & Ball, 1997), Krefeld and Pustka consider them to be accent myths (cf. 2010a, p. 15, see Chapter 2.3.2).

Cognitive sociolinguistics is not as overtly perception-oriented as perceptual linguistics of varieties.¹⁸ Yet, it still derives the notion of *varieties*¹⁹ from speakers’ receptive competence, which Kristiansen (2008) describes as follows:

Receptive competence [...] involves the ability to on the one hand categorize speech as such and on the other hand relate *lectal* categories to social categories. In more precise terms, it involves the step from a linguistic trigger to a social schema, activating stored encyclopaedic knowledge in the broad sense, including ideological aspects and psychological attributes associated with the group in question. (Kristiansen, 2008, p. 50)

Kristiansen’s description of how varieties are perceived by activating social schemas is thus thoroughly based in cognitive linguistics.

Most of the different conceptions of varieties and dialects discussed have one thing in common: They do not search for homogeneous categories in production data but instead place them on the level of representations. It was only in the 19th century, when the distinctions between *langue* and *parole* and between *representations* and *productions* had not yet been made, that the real-world data clashed with the theoretical constructs. As long as we differentiate between what is produced and the system or the underlying structure, no problem arises. The problem only emerges when we try to reconcile production data with folk linguistic attitudes. In this case, we need a model of language that leaves room for variation and takes the homogeneity claim of folk linguistic views

¹⁷ They state: “Although we refuse to associate speakers with varieties, we claim that these varieties are meaningful to the speakers [...]. We will restrict our usage of the term variety to designate shared social constructs, and not concrete linguistic practices.” 2004, p. 399.

¹⁸ It is not only that cognitive sociolinguistics lacks the notion of *perception* in its title, but also that a lot of research in cognitive sociolinguistics is methodologically more oriented towards the analysis of corpus data rather than towards perceptual approaches.

¹⁹ In this particular citation, Kristiansen does not use the term *variety* but the notion *lectal categories*. Throughout her work, she uses these two notions synonymously.

into consideration. A model of varieties that seems fitting for this is one based on prototype theory (see Chapter 2.2).

Using prototype theory for language variation on a phonological level has already been proposed by several authors, including cognitive sociolinguists as well as authors working in the framework of perceptual linguistics of varieties (cf. Christen, 1998; Kristiansen, 2003; 2008; Pustka, 2007; 2009b). The aim of this dissertation is to operationalize the prototype model of varieties, mainly with the help of perceptual methods. For this purpose, this model will be presented in the following chapter, together with an account on prototype theory.

2.2 A prototype model of varieties

Prototype theory was developed in the 1970s and is primarily associated with the works of the psychologist Rosch (1973a, 1975) and her famous bird example, as well as Labov (1973) with his study on cups. In a series of experiments, Rosch showed that human categorization is based on general categorization principles which help us perceive the world by providing “maximum information with the least cognitive effort” as well as structure in the perceived world (Rosch, 1978, p. 28). These principles prevent us from being overwhelmed by the limitless information we face. According to Rosch, these principles work on two axes: on a vertical axis (basic levels) and on a horizontal one (prototypes). The basic level refers to the fact that, within a taxonomy of objects, one level of abstraction is cognitively and linguistically more salient than the others (cf. Rosch, 1978, p. 30). The horizontal principle of categorization (the prototype principle) means that categories do not necessarily have clear-cut boundaries (see Chapter 2.2.1) and that not all members of a category have equal status (see Chapter 2.2.2), but that some of them are more typical than others (cf. Rosch, 1978, p. 36); for example, robins and sparrows being more typical birds than penguins (Rosch, 1975, p. 201).

This stands in clear contrast to the Aristotelian principle of categorization, in which categories are clear-cut and defined by binary features that every member of the category must possess. In this categorization principle, all members have equal status (cf. John Taylor, 2003, p. 21). Christen (1998, p. 52) argues that the Aristotelian principle has shaped all kinds of scientific approaches, whereas the principles discovered by Rosch are based on folk perceptions. Indeed, many linguistic approaches, such as structural phonology and semantics, are based on the Aristotelian principle (and Trubetzkoy, [1939]

1989; e.g. the works of Pottier, 1963). The categorization principles discovered by Rosch, for their part, seem to be natural.

Today, prototype theory is considered an important part of semantics. Other linguistic sub-disciplines have also adopted the concept. We can find adaptations in phonetics (cf. Kuhl, 1991; Johnson, Flemming, & Wright, 1993), grammar (cf. Koch, 1998; Goldberg, 2006), and sociolinguistics, especially in cognitive sociolinguistics and perceptual linguistics of varieties (cf. Christen, 1998; Kristiansen, 2008; Pustka, 2009b; Pickl, 2016; Ghyselen & Vogelaer, 2018). Christen's work is, to my knowledge, the first approach to integrate Rosch's theories into research on speech varieties. At the same time, it is the most extensive one. By analyzing 42 interviews with Swiss German participants on the level of production as well as representations, she integrated both the prototype-concept and the basic-level concept. Interestingly, neither Kristiansen (2008) nor Pustka (2007, 2009b) mention her in their programmatic papers. They do not mention each other, either. This shows that integrating prototype theory into sociolinguistic and dialectal or varietal approaches has been proposed by several linguists independently and that doing so must have been a logical consequence of the larger trend of investigating folk linguistic representations about varieties.

The following two chapters will discuss two aspects of prototype theory in relation to language variation: fuzzy boundaries (Chapter 2.2.1) and the center of the prototype (Chapter 2.2.2).

2.2.1 Clear-cut categories vs. fuzzy borders

As outlined in Chapter 2.1.1, due to the opposing forces which lead to language variation and change, there is no linguistic unity. Additionally, as mentioned in Chapter 2.1.3, language cannot be separated into clear-cut varieties at the production level. This has led to various theoretical discussions. For instance, 19th-century dialectologists vainly searching for homogeneous varieties with clear-cut borders, started questioning the existence of varieties (see Chapter 2.1.3). In turn, this questioning was criticized by Gauchat who pointed out that nobody questioned the habit of categorizing people as *young* or *old*, although opinions differ as to the question of whether somebody should be categorized as *old* or *young*, and that the same principle should be applied to varieties (cf. Gauchat, 1903, p. 397).

Due to the fact that there are no clear-cut borders in production data, linguists have employed the notion of continua, such as the “geographical dialect continuum” (Chambers & Trudgill, 2004, p. 6) and the continuum between orality and literacy (Koch & Oesterreicher, 2012, p. 444). Within these continua, determining or defining borders is usually not possible. Interestingly, continua are already present in Gauchat’s observations, made in 1903. When writing about regional variation, he describes this situation as follows:

Gesetzt, man bemalte die Gegend, welche eine Spracherscheinung bedeckt, mit einer Nuance, die anderen Ausbreitungsgebiete mit je anderen Nuancen, so würde im Zentrum eine charakteristische Mischfarbe entstehen und die Ausdehnung des Dialektkernes bezeichnen (— Kernlandschaft). Von einem Kern zum anderen würden mannigfache Übergänge führen. (Gauchat, 1903, p. 397)²⁰

The dialectometric works of Goebel (2003), using data from the ALF (Gillieron, 1902), closely resemble Gauchat’s propositions made in 1903. Additionally, fuzzy borders between varieties have also been shown by two recent studies: Pickl (2016), who used factor analysis to investigate regional variation in Southern Germany, and Ghyselen and Vogelaer (2018), who combined correspondence analysis and cluster analysis to investigate stylistic variation in Belgian Dutch.

To address the issue posed by categorizing items into categories without clear borders, prototype theory offers a ‘way out,’ by proposing a flexible approach, in which some categories, such as cups (cf. Labov, 1973), do not essentially have to be defined by strict boundaries. This flexibility may explain why various linguistic frameworks have independently adopted prototype models to describe varieties (see Chapter 2.2).

In folk linguistic categorization, varieties seem to have a rather homogeneous but not very concrete *gestalt*²¹ in the representations of the members of a society (see Chapter 2.1.3). Kristiansen’s explanation for this is as follows:

If we assume that *linguistic* continua (progressive accentual differences throughout the social and regional dimensions, or dialect continua) may undergo the same processes of accentuation as nonlinguistic continuous dimensions, the outcome is a series of *apparently* homogeneous and distinct linguistic categories, whose most salient features

²⁰ ‘If we colored the area of diffusion of one linguistic feature with one shade, and all the other areas of distribution of linguistic features with different ones, a distinctive mixed color would emerge at the center, marking the extent of the dialect core (- core region). Various transitions would lead from one core to another’. (translation LJ).

²¹ The concept of *gestalt* will be discussed in more detail in Chapter 2.3.1.

take the form of ‘popular and conscious but imprecise general characterizations of the speech forms of particular social groups.’ (Kristiansen, 2003, p. 90)

Thus, although language is inherently characterized by heterogeneity (see Chapter 2.1.1), varieties can seem homogeneous to non-linguists (and sometimes also to linguists). However, homogeneity is a matter of perspective. If we investigate a particular regional variety, ingroup members are typically aware of its internal differences, whereas outgroup members tend to perceive greater uniformity (cf. the notions of *auto-representations* and *hetero-representations* in Krefeld & Pustka, 2010a, p. 15). This is due to the *outgroup homogeneity effect*, which is observable in various social groups, including national, political and age groups. Consequently, this effect is considered to play a significant role in social stereotyping²² (cf. Rubin & Badea, 2007).

Therefore, the question of perspective must also be taken into account when working with varieties. It would be imprudent to assume that varieties have a thoroughly homogeneous form in the representations of the speakers. This is why prototype theory, with its inherent fuzziness, offers a valuable solution to this dilemma: The representation of a certain variety can be centered around most typical speakers or the most typical ways of speaking in the most typical situations. The fact that individual speakers accommodate in a particular communication situation and that not every speaker of a speech community exhibits the important and most salient traits of a variety does not pose a problem for a *gestalt*-like representation of a particular variety and its speakers (see Chapter 2.3.1).

Rosch herself stresses that, for her, prototypes are simply “the clearest cases of category membership defined operationally by people’s judgments of goodness of membership in the category” (1978, p. 36), and thus are neither specific category members nor mental representations, nor a model of how we perceive the world. However, today’s understanding of prototype theory is wider and does allow the modeling of a prototype as a group of members that cluster themselves around one or several specific members who are more typical than the others (cf. John Taylor, 2003, pp. 63–64). If we apply prototype theory to varieties, we can ask two questions: What is the most typical ‘way of speaking’ of a particular variety? And who are the members of a speech group that are more typical than others?

²² The difference between prototypes and stereotypes will be addressed in Chapter 2.2.3.

2.2.2 Prototypical speakers

According to Rosch and Mervis, the most typical members of a category are the ones that “bear the greatest family resemblance to other members of their own category and have the least overlap with other categories” (1975, p. 599). In their works, family resemblance is based on attributes that the members have in common, just as in the structuralist approach (see Chapter 2.2). The difference between this and the prototype approach is that it is not important that all members show the same attributes. Additionally, not all features have equal importance; some of them are more salient than others. Representatives of a category that exhibit a lot of salient features are thought to be closer to the center of the prototype (cf. Blank, 2001, p. 48).

Two additional factors have been proposed for the selection of certain representatives of a category as their prototypes: The first one is frequency. However, Rosch herself discards this idea by stressing that object frequency in the world cannot be operationalized as easily as word frequency in a corpus (cf. Rosch, 1973b, p. 143). The second one could be a ‘good old days effect’ (cf. John Taylor, 2003, p. 56). Unfortunately, this effect is not further elaborated and only mentioned in a footnote by Rosch, Simpson and Miller (1976, p. 502). However, it seems plausible that the prototypical representatives of some categories could indeed be out of date. For example, a lot of symbols are based on out-of-date exemplars, such as the WhatsApp logo, which shows a clearly out-of-date telephone receiver. The prototypical telephone could therefore be a rotary dial one.²³

This *good old days effect* seems to play an important role when it comes to regional varieties (cf. Jansen, 2019). In 19th-century dialectology (see Chapter 2.1.3), we can also observe a certain *good old days effect* because the speakers who were thought to be the ideal participants in dialectological studies were a specific group of speakers: NORMs, that is “nonmobile, older, rural males” (Chambers & Trudgill, 2004). They had to be nonmobile in order to perfectly reflect the local speech variety and they had to be older because the goal of dialectological research was to identify an older form of language. They had to be rural because cities provide too many opportunities for language contact. Finally, they had to be male “because women’s speech is considered to be more self-conscious and class-conscious than men’s” (Chambers & Trudgill, 2004, p. 30). Sociolinguists criticized this approach by stating that NORMs were not representative of

²³ A short Google images search for the word *telephone* showed exactly such a telephone.

a speech community. However, the fact that many different dialectologists targeted this particular social group seems to show that they must indeed have been considered the most typical speakers. Pustka (2009b, p. 78) therefore asks the question of whether NORMs should be considered prototypical speakers of regional varieties. This question is discussed further in this dissertation. Before this discussion, one important distinction needs to be made: the distinction between prototypes and stereotypes.

2.2.3 Prototypes vs. stereotypes

A concept closely linked to prototypes is the concept of stereotypes. Since both terms will play an important role in this dissertation, this chapter describes the differences between them. Indeed, stereotypes have a lot in common with prototypes and their distinction is not always clear-cut. The term *stereotype* was introduced by the journalist Walter Lippmann who explains it as follows:

In the great blooming, buzzing confusion of the outer world we pick out what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture. [...] There is economy in this. For the attempt to see all things freshly and in detail, rather than as types and generalities, is exhausting [...]. (Lippmann, [1922] 1998, pp. 81–88)

Thus, stereotypes have the same purpose as prototypes: They function as cognitive reference points and aid in the perception of the world by providing simplicity and structure (see Chapter 2.2). The major difference between both terms is that stereotypes are often perceived as distorted and closely linked to prejudices,²⁴ whereas prototypes are usually seen as basically the most typical instance of a category. Therefore “social stereotypes [...] have value-laden and emotional components that prototypes lack” (Kristiansen, 2003, p. 100). Another point is that the two terms are used in different areas. The concept of stereotypes is applied when social groups are discussed, whereas prototypes are used when it comes to natural objects and artefacts “where the visual perceptual system and basic attributes such as overall shape and *gestalt* perception are operative” (Kristiansen, 2003, p. 99). However, as Kristiansen herself points out, prototype theory has also been tested on non-visual categories. There is thus a fuzzy

²⁴ The difference between prejudices and stereotypes is that prejudices are usually negative judgements, while stereotypes primarily function as cognitive reference points and can therefore also be positive cf. Quasthoff, 1973.

distinction between the two terms and it does not help that Rosch does not discuss the term *stereotype* in her influential works.

In linguistics, the two terms have been used in different sub-disciplines. While *prototypes* are closely linked to cognitive linguistics, especially semantics, *stereotypes* have been observed in attitudinal research (e.g., Lambert et al., 1960; Lambert, 1967), in sociolinguistics (e.g., Labov, 1972a), and in perceptual linguistics (e.g., Kristiansen, 2010; Falkert, 2012). The most prominent example is Labov's description of stereotypes in language perception:

Many features of pronunciation, grammar, and lexicon are closely associated with black speakers [...]. The match between this speech pattern and membership in the black ethnic group is of course far from complete. Many black speakers have none—or almost none—of these features. Many northern whites, living in close proximity to blacks, have these features in their own speech. But this overlap does not prevent the features from being identified with black speech by most listeners: we are dealing with a stereotype which provides correct identification in the great majority of cases and that therefore has a firm base in social reality. Such stereotypes are the social basis of language perception. (Labov, 1972a, p. 7)

As mentioned in Chapter 2.1.1, there is no linguistic unity, not even in the smallest villages. This naturally also applies to social groups and styles. Yet, society ascribes linguistic features to particular groups which can also be found in the production data of non-members of these groups. Stereotype research provides a plausible explanation for this (see also the outgroup homogeneity effect in Chapter 2.2.1):

When a classification is correlated with a continuous dimension, there will be a tendency to exaggerate the differences on *that* dimension between items which fall into different classes, and to minimize these differences within each of the classes. (Tajfel, 1969, p. 83)

In this dissertation, the distinction between stereotypes and prototypes will be as follows: While stereotypes refer to non-linguistic attributes ascribed to a social group (e.g. the claim that Toulouse residents are more elegant than Marseille residents), prototypes refer to linguistic attributes ascribed to a speech group or to elements of speech (e.g. Southerners speak in a way characterized as *chantant* 'melodious'). The fact that some linguistic attributes can represent an out-of-date state of a certain variety, e.g. the apical /r/ in Toulouse (see Chapter 3.4.1) or a feature which is also shared with other speech groups, e.g. Labov's Black speech example (see above), will not make them stereotypes according to our definition. They are part of folk linguistic representations, just like the

‘real’ features of varieties. Together with these, they constitute a prototypical representation of a given variety.

2.3 The role of perception

Language is a tool of communication. As such, an utterance never stands on its own but is formulated in order to address somebody and thus to be perceived by a listener or reader (cf. Saussure, 1967; Bühler, [1934] 2011; Jakobson, 1987). Speaking and listening can therefore be seen as two sides of the same coin (Krefeld & Pustka, 2010a, p. 9), and production and perception are two inseparable parts of communication.

However, linguists have often neglected perception and focused on the production part of language (cf. Krefeld & Pustka, 2010a, p. 9). Yet, with the development of perceptual dialectology, perception has gained prominence, and several models of perception have been created and discussed. The model proposed by Pustka (2007, p. 10, see also Krefeld & Pustka, 2010a, p. 12) is particularly relevant to this dissertation and will therefore be presented in Chapter 2.3.2. It illustrates how perception relates to speakers’ knowledge about language.

Perception plays an important part in perceptual linguistics of varieties as well as in cognitive sociolinguistics (see Chapter 2.1.3). Kristiansen (2008) attests speakers’ “receptive competence” of varieties and Krefeld and Pustka (2010a) define varieties on the grounds of them having emic category status as well as correlates in production and perception (see Chapter 2.1.3). Perception is thus not only an inseparable part of communication but can also be used as a tool for investigating how language is stored in the representations of the speakers. Since this dissertation supports Krefeld and Pustka’s definition of varieties, in which varieties need to be identifiable in order to count as varieties, perceptual methods will play an important part. The following two chapters will therefore go into further detail on the perception of varieties. The first (2.3.1) is closely related to prototype theory. It addresses the role of *gestalt* and of salient features for the perception of varieties. The second (2.3.2) introduces the models of perception of varieties by Pustka (2007) and Krefeld and Pustka (2010a).

2.3.1 *Gestalt* and salience

Although Rosch does not stress it herself, prototype theory shares many similarities with the fundamental assumptions of *Gestaltpsychologie* (cf. Blank, 2001, p. 44) and has therefore often been associated with it. Both prototype theory and *Gestaltpsychologie* are concerned with how we perceive entities in the real world (see Chapter 2.2). *Gestaltpsychologie* was developed in the early 20th century, based on the observation that, when perceiving the world, we group phenomena into *gestalts*. When we hear a sequence of notes, for example, we group them together and perceive them as a melody. This is equally valid for visual cues (cf. Blank, 2001, p. 38). Consequently, linguists have investigated whether these principles are equally important when it comes to the perception of language.

The concept of *gestalt* has been addressed in linguistics from time to time. Krefeld (1999), for example, uses it in his model of language change, and a few studies have investigated the relationship between language and visual *gestalts* (e.g., Berthele, 2006; 2010b). Berthele's research showed that participants are somewhat consistent in associating different regional varieties to visual *gestalts* (see Chapter 3.7) and that the association of a visual *gestalt* with a particular variety is strongly influenced by the attitudes participants have towards the speakers of this variety (cf. Berthele, 2006, p. 171). Interestingly, we also find the concept of a *gestalt*-like perception in Trubetzkoy's *Grundzüge der Phonologie*:

Natürlich darf man nicht die Sache zu sehr vereinfachen. Man darf sich die Phoneme nicht etwa als Bausteine vorstellen, aus denen die einzelnen Wörter zusammengesetzt werden. Vielmehr ist jedes Wort eine lautliche Ganzheit, eine Gestalt, und wird auch von den Hörern als eine Gestalt erkannt, ebenso wie man etwa einen bekannten Menschen auf der Straße an seiner ganzen Gestalt erkennt. (Trubetzkoy, [1939] 1989, p. 34)²⁵

Given that language itself is postulated to be perceived as *gestalt*, we can question whether varieties are perceived as *gestalts* or whether our perception is primarily based on single salient features. On the one hand, it is highly possible that the overall *gestalt* of a certain variety plays an important role. This could be a reason for the fact that in accent identification tests, participants often have trouble naming the linguistic features that

²⁵ 'Of course, the matter should not be oversimplified. The phonemes should not be considered as building blocks out of which individual words are assembled. Rather, each word is a phonic entity, a *Gestalt*, and is also recognized as such by the hearer, just as an acquaintance is recognized on the street by his entire appearance.' Trubetzkoy, 1971, p. 35.

helped them identify the accent (cf. Pustka, 2010b, p. 134). On the other hand, this might be merely a question of awareness: Participants might just not be aware of the singular features (see Chapter 2.3.2). Evidence supporting the importance of single salient features is that some varieties are easily identified if they contain a single shibboleth (cf. Purschke, 2011, p. 150). Additionally, analyses of imitations of particular varieties show that salient features are over-represented, while others do not appear (cf. Pustka, 2007, p. 31). Overall, it appears that the perception of both *gestalt* and single features work together in the dynamics of how varieties are perceived, influenced by a complex interplay of bottom-up and top-down processes (cf. Purschke, 2011, pp. 45–88; also Samuel, 1981).

2.3.2 Perception of varieties

As stated above, this dissertation proposes a perceptual approach to varieties as prototype-like constructions in the minds of speakers. This is why this chapter examines the role of perception and its relationship to production and representations. The two processes of production and perception are the prerequisites of communication (see Chapter 2.3). They are closely linked to concrete speech acts, where one speaker produces realizations and an addressee perceives them.²⁶ Communication is possible due to what Saussure calls *langue* and Chomsky and others call *representations*.²⁷ According to Pustka (2007) and Krefeld and Pustka (2010a), these representations are part of the speaker's knowledge about language (see Figure 2.1). They argue that, in addition to the linguistic representations in the stricter sense – that is, the competence of a speaker to speak a language (cf. Chomsky, 1965) – there are also representations of languages (cf. Krefeld & Pustka, 2010a, pp. 10–11).

It is exactly in these representations that we can find varieties as categories. These varieties can be based on perception or on extralinguistic factors. According to Pustka (2007, p. 9) and Krefeld and Pustka (2010a, pp. 12–13), we must strictly differentiate between these two kinds of representations of varieties. Perception-based representations are representations that have a correlate in production data, whereas

²⁶ There have been numerous debates as to the non-passivity of the addressee (cf. Bublitz, 2009) and the creation of meaning (cf. Eckert, 2004), and the author is aware of the simplification of the highly complex processes that are at play during communication. Since the focus of this Chapter is the perception of varieties, a simplification is, however, necessary in order to focus on the important parts.

²⁷ There are major theoretical differences between these terms and concepts that will not be discussed here. What is important for this dissertation is the fact that we have to differentiate between the different parts of language when dealing with it.

purely society-based representations only rely on extralinguistic factors. Examples of the latter are, according to Krefeld and Pustka (2010a, p. 15), linguistic myths, such as the *accent du Havre* (cf. Hauchecorne & Ball, 1997).

While these distinctions between perception-based and purely society-based representations are important, they become less critical when working with the prototype approach. The prototypical members of a category do not necessarily have to have a very strong correlate in the real world (see Chapter 2.2.2), but can be old-fashioned or exaggerated (cf. John Taylor, 2003, pp. 56–57). Whether representations are grounded in linguistic or non-linguistic reality may be less relevant. However, the distinction becomes important when we want to investigate whether we can ascribe variety status to a variety. It is thus highly relevant for all questions of methodology, though less so for the representations of varieties in speakers' minds.

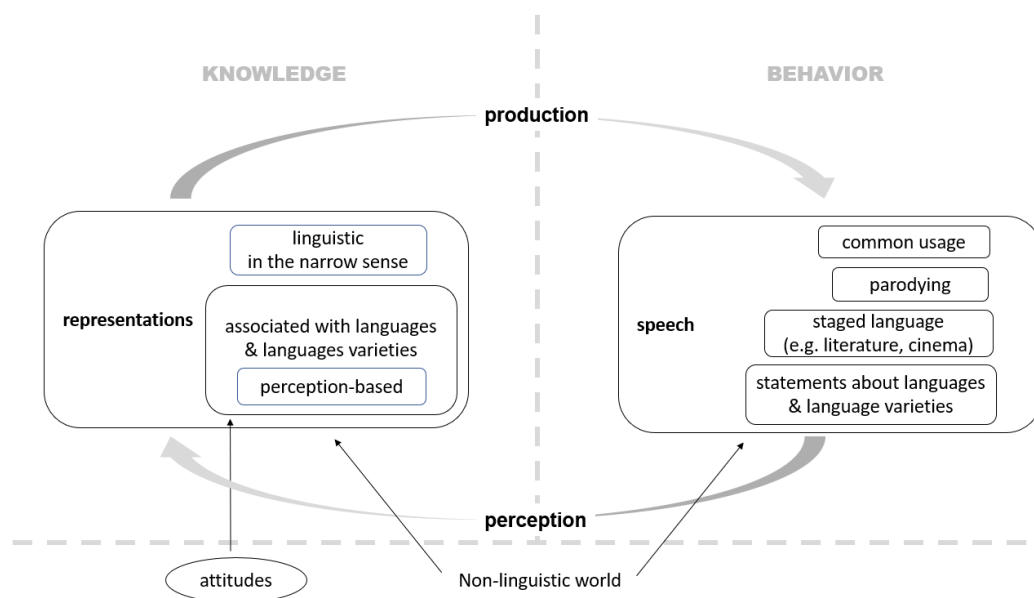


Figure 2.1: Pustka's model of linguistic knowledge and speech (Krefeld & Pustka, 2024).

Pustka's model (see Figure 2.1) illustrates the relationship between production, perception and representations, highlighting how these processes shape and are shaped by speakers' linguistic knowledge: When producing language, speakers create concrete realizations of language based on their representations. When they then perceive these concrete realizations, they do so by matching the realizations to their representations (the so-called top-down process²⁸), which helps them understand what has been said.

²⁸ Top-down processes work simultaneously with bottom-up processes (sensory input) cf. Goldstein and Brockmole, 2017, 324.

Additionally, during perception, the speech heard (i.e., the realizations) can affect speakers' representations, whether or not they are aware of this. Lastly, representations are not only shaped by speech realizations, but also by external factors, such as attitudes toward different varieties and their speakers. While representations are part of the *langue* and therefore the main focus of linguistic interest,²⁹ perception and production belong to concrete realizations of speech, and thus to the *parole*. Since it is impossible to investigate representations directly, we have to examine them indirectly through production and perception (Krefeld & Pustka, 2010a, p. 14).

The processes of production and perception are thus highly complex (cf. e.g., Purschke's 2011 theory of listener judgements), and we know that we do not only communicate by formulating words that our addressee decodes. There are various processes at work: Meaning is created (cf. Eckert, 2004), the emotions of the speaker are decoded (cf. Watzlawick, Bavelas, & Jackson, 1967) and, very often, the speaker's origin as well as their social background is identified (cf. Kristiansen, 2008). However, speakers are unaware of most of these processes.

Awareness is thus another key factor in perception studies because speakers are usually not aware of a multitude of facets of communication (see Chapter 2.3.1), especially when it comes to their first language (L1). Much of our knowledge of our L1 is implicit and not explicit (cf. N. Ellis, 2003, p. 1), and is thus procedural rather than declarative (cf. R. Ellis, 2009, p. 11). This is an important point when we want to investigate folk linguistic representations. Speakers might struggle to name the salient features of a particular variety while still being able to identify it.

Purschke (2011, p. 85, 2014) created the term *pertinence* for the process whereby the salient features of a variety become relevant for listeners. According to him, during the process of communication, the addressee usually perceives all salient features of the speaker's variety but does not have to be aware of them. It is only when he ascribes relevance to these features that they help in identifying the regional or social origin of the speaker.

Pertinence resembles Kristiansen's description of how varieties are socially diagnostic by triggering social schemata: Salient features of a particular variety trigger social schemata including ideological and psychological attributes, which leads to a

²⁹ Cf. Saussure's famous citation "On peut à la rigueur [...] parler d'une linguistique de la parole. Mais il ne faudra pas la confondre avec la linguistique proprement dite, celle dont la langue est l'unique objet." Saussure [1916] 1967, pp. 38–39.

recognition of a particular speaker's production as belonging to a particular variety (cf. Kristiansen, 2008, p. 50). Thus, if we want to determine whether a regional variety exists, we can use perceptual methods. When doing so, however, we must be aware of possible effects that might influence the results. One of them is the *cultural prominence effect* (cf. Montgomery, 2012; Leach, Watson, & Gnevsheva, 2016; Jansen, 2019). This effect can be observed in accent identification tests, where localities that are well known and thus culturally highly salient are more readily identified than others. Another possible effect is the *annexation effect* (cf. Boughton, 2006, p. 292), which leads listeners to judge speakers as originating from the same region as themselves when they perceive their speech to be similar to their own.

Lastly, it should also be mentioned that social stereotypes can influence accent identification performance. Boughton (2006, 2010) showed, in her study on the identification of the accents of Nancy and Rennes, that listeners identified the social class of her speakers from Nancy and located working-class speakers consistently further to the northeast than middle-class speakers. Social aspects were thus identified and reinterpreted socially.

With all this said, the perceptual reality of a variety is not the only prerequisite for its existence (see Chapter 2.1.3). In order for a variety to be considered a variety, it not only needs to be recognizable as such, which means that we find some characteristic features in production data and that listeners are able to recognize speakers as speakers of a particular variety, but it should also have emic category status. This is why this dissertation combines several methods ranging from interviews, questionnaire surveys, draw-a-map-tasks, *gestalt* tests and recorded production data to accent identification tests (see Chapter 4).

3 State of the art

Accounts of Southern French can be divided into three groups, based on the time periods during which they were created. The first accounts, normative studies about the mistakes committed by Southerners, were written in the 18th and 19th centuries. The best known of these are the *Gasconismes corrigés* by Desgrouais ([1766] 1801),³⁰ a long list of vocabulary, grammar and pronunciation features that were considered to be wrong. These *Gasconismes* led to a multitude of similar publications focusing on particular regions in the south, such as Villa (1802), Rolland (1810), Chabaud (1826), Reynier (1829) and Gabrielli (1836). Most of these authors were teachers of French and addressed their books especially to younger people. The different *Gasconismes corrigés* do not all contain prefaces, but those that do depict the author's motivation to prevent Southerners from being ridiculed by speakers from other areas, especially from Paris (e.g., Desgrouais, [1766] 1801, xviii; Chabaud, 1826, iv; Reynier, 1829, v).

In the beginning of the 20th century, the focus shifted from helping Southerners to express themselves better to giving a detailed description of the regional French spoken in southern France. The two most prominent accounts on Southern French are Brun's (1931) and Séguy's (1951) studies on the French spoken in Marseille and in Toulouse, focusing on phonology, morphology, syntax and vocabulary. Other shorter articles were published around the same time (e.g., Dauzat, 1933; Bec, 1952). Séguy's and Brun's studies can be regarded as the first linguistic analyses of southern regional French (cf. Pustka, 2007, p. 87). Just like their predecessors, Séguy and Brun were both schoolteachers. Although their principal aim was to give a detailed description of the regional French spoken in Marseille and Toulouse, a rather derogatory tone can be noted in their accounts. Brun often uses the terms *vieux* 'vicious', *idiotisme* 'idiocy' and *vulgarité* 'vulgarity' when describing the regional French of Marseille. While Séguy's account is mostly objective and is less derogatory, he states when writing about vulgarisms: "Ce sont surtout les péjoratifs divers qui rencontrent une grande fortune,

³⁰ Desgrouais' subtitle already indicates a strong normativism: "Ouvrage utile à toutes les personnes qui veulent parler et écrire correctement, et principalement aux jeunes gens dont l'éducation n'est point encore formée" 'Publication useful for all who want to speak and write correctly, and especially for young people whose education is not yet completed' (Translation LJ). In his preface, he indicates that Southern French is characterized by 'vicious and incorrect expressions and [...] irregular phrases' ("expressions vicieuses et incorrectes, et [...] tours de phrase irréguliers") Desgrouais [1766] [1766] 1801, vi.

grâce à la propension bien connue des Méridionaux à parler un langage brutal et truculent”³¹ (Séguy, 1951, p. 102).³²

From the end of the 20th century on, several sociolinguistic studies focused on phonology have been conducted in various Southern French communities such as Durand, Slater and Wise (1987) in Pézenas (Hérault), Taylor (1996b) in Aix-en-Provence (Bouches-du-Rhône), Armstrong and Unsworth (1999) in Carcassonne and Lézignan-Corbières (Aude), Binisti and Gasquet-Cyrus (2003) in Marseille (Bouches-du-Rhône), and Mooney (2018) in Gan, Nousty and Nay (Pyrénées-Atlantiques). One important group of studies comprises research affiliated with the PFC program (cf. Durand et al., 2002; 2009; Detey, Durand, Laks, & Lyche, 2016a), such as Durand and Tarrier (2003) in Douzens (Aude), Coquillon (2005) in the outskirts of Marseille, Pustka (2007) in Rodez and Salles-Curan (Aveyron), Lonnemann (2006) in Lacaune (Tarn) and Courdès-Murphy in Toulouse and Marseille (2018).

Most of these studies investigate Southern French spoken in one particular substrate region. Only Courdès-Murphy (2018) thoroughly compares the accents of two regions: Toulouse and Marseille. The present dissertation takes a similar perspective as Courdès-Murphy’s, by comparing the accents of Toulouse and Marseille. In contrast to Courdès-Murphy (2018), who examines the levelling of the Southern French accent at the production level, this dissertation focuses on perception. Additionally, it not only investigates the accents of Toulouse and Marseille but also takes into account the accents of two smaller municipalities: Salles-Curan (Aveyron) and Oraison (Alpes-de-Haute-Provence).

The following chapter first defines the term *Southern French* (3.1) and then describes its origin (3.2) and its current development (3.3). Chapter 3.4 gives an overview of Southern French production, Chapter 3.5 summarizes different studies investigating the speakers’ representations of Southern French, and Chapter 3.6 describes different accent identification tests conducted so far.

³¹ ‘It is above all the various swearwords who meet a great fortune, due to the well-known propensity of the Southerners to speak a brutal and truculent language.’ (Translation LJ).

³² Today, we also find this tenor in some popular scientific dictionaries e.g. Vavassori, 2004; Moreux and Razou, 2010 as well as in Patrik Bosso’s famous sketch about the function of swear words as discourse markers Pustka, 2010b.

3.1 Southern French – a definition

Southern (Regional) French is the term most widely used in the anglophone context to designate the regional variety of French spoken in southern France (e.g., by Durand et al., 1987; Jill Taylor, 1996b; Armstrong & Unsworth, 1999; Armstrong & Pooley, 2010; Mooney, 2018). In French, it is referred to as *français du Midi* or *accent du Midi*, *français méridional* or *accent méridional*, *français du Sud*, or *accent du Sud* or *français d'oc*. The first two terms are the most prevalent ones, both in scientific and non-scientific discourse, while *français méridional*, *accent méridional* and *français d'oc* are mainly found in scientific discourse. *Français du Sud* or *accent du Sud* are considered purely non-local folk linguistic designations (cf. Pustka, 2010b, p. 127). In most contexts, *accent* and *français* are used interchangeably, which is due to the fact that *français régionaux* are *tertiary dialects* (cf. Coseriu, 1980, p. 114), and mainly differ from standard French on the phonetic-phonological level (see Chapter 3.2).

While the terms *français du Midi* or *accent du Midi* can easily be put into their plural form, the term *Southern French* does not allow a plural and thus implies uniformity. It should therefore be noted that in this dissertation, *Southern French* refers to the various varieties spoken in southern France. Although some authors question the existence of different regional varieties in the South of France (e.g., Woehrling & Boula de Mareüil, 2006a), there is no doubt that for the Southerners themselves, these varieties do exist (cf. Pustka, 2010b, 139, see also the ingroup effect outlined in Chapter 2.2.1). The following section will provide a thorough description of the history of Southern French, from its origins to the present day.

3.2 Occitan origin and the role of orthography

As seen in Chapter 2.2.3, representations and perception of accents are strongly influenced by social and cultural stereotypes. The course of history as well as France's unique attitude towards its language have shaped these stereotypes considerably. For this reason, this chapter will provide an extensive account of the origin of Southern French, starting with the emergence of French and Occitan and then describing the introduction of French in the south, which profoundly shaped the production and representations of today's southern regional French.

France is usually split into three major dialect areas which are based on the Gallo-Roman dialects spoken in these areas: the *langue d'oïl* dialects in the north, the *langue d'oc* dialects in the south and the *Francoprovençal* dialects in the east (cf. Hawkins, 1993, p. 59). The *langue d'oïl* area expands to Belgium and Switzerland, the *langue d'oc* area to Italy and Spain, and the Francoprovençal area to Switzerland and Italy (see Figure 3.1 and Figure 3.2).



Figure 3.1: Gallo-Romance languages (Mooney, 2018, p. 9).



Figure 3.2: Gallo-Romance dialects and other regional languages (Mooney, 2018, p. 9).

The terms *langue d'oc* and *langue d'oïl* go back to the 13th century. They were employed by scribes and troubadours in the region of Montpellier and by Dante Alighieri in his *De vulgari eloquentia* and *La vita nuova* (cf. Blanchet, 1992, pp. 37–38). At that time, northern Gallo-Romans used the word *oïl* for 'yes' and Southerners used *oc*. In the 19th century, the dialectologist Ascoli discovered that the dialects spoken in eastern France, near the Swiss border, diverged considerably from *langue d'oïl* and *langue d'oc* dialects. They contained French and Provençal elements, which led him to call these dialects *Francoprovençal* (cf. Ascoli, 1877). Unlike the regions of *langue d'oïl* and *langue d'oc*, the Francoprovençal region has never had a collective identity (cf. Martinet, 1954, p. 9). Francoprovençal literature is considerably less important than *langue d'oïl* and *langue d'oc* literature (cf. Bec, [1963] 1995, p. 8), and there has never been a standardization process. In the 13th century, when the denominations *langue d'oïl* and *langue d'oc* surfaced, the three dialectal areas were far from homogeneous. Various dialects had developed from Vulgar Latin spoken in these regions, and northern dialects differed greatly from southern dialects.

The emergence of French, Francoprovençal and Occitan

The fact that the *oc* dialects were subsumed under three more or less distinct languages has several causes (cf. Bec, [1963] 1995, p. 19). First, the *oc* area is surrounded by natural borders, for instance, the Pyrenees, the Massif Central and the Alps. These mountains made mobility more difficult and thus led to a greater preservation of archaisms (cf. Bec, [1963] 1995, pp. 12–13).

Second, different substrates influenced the emerging Proto-Romance dialects spoken in these areas. While the *oïl* region is predominantly marked by Gaulish influences, the *oc* region shows influences of Iberian in the *Languedoc* area, Aquitanian (*Proto-Basque*) in the Pyrenees and close to the Atlantic Ocean, and Greek in Greek settlements on the Mediterranean Sea, notably Agde, Nice, Antibes and Marseille. These settlements date back to the seventh century BC. However, most of the substrate influences are only found at the lexical level (cf. Kremnitz, 1981, pp. 20–21; Felixberger, 2003, p. 594).

Third, the Latinization of Gaul seems to have contributed at large to the linguistic bipartition or tripartition (cf. Bec, [1963] 1995). North and South were latinized in different periods and in a different manner. Between 125 and 118 BC, southern Gaul (from the Alps to the Pyrenees) became part of the Roman Empire as *Gallia*

Narbonensis.³³ Various Latin-speaking settlers came and established Roman towns in this province and brought their culture and language with them. Northern Gaul was conquered much later by Julius Cesar between 58 and 52 BC. The Romanization and Latinization was considerably less intense in this area (cf. Lodge, 1993).

Lastly, the course of history after Latinization unfolded differently across today's French territory, with various Germanic tribes settling in different regions. This is thought to be the main reason that the Francoprovençal region differs so greatly from the *langue d'oïl* and *langue d'oc* areas (cf. Bec, [1963] 1995, p. 17; W. von Wartburg, 1956, pp. 134–136).

It is difficult to identify the exact date for the emergence of French and Occitan.³⁴ It is, however, certain that a diglossic situation (cf. Ferguson, 1959) was in place for several centuries, in which Latin functioned as the high variety and the different vernaculars as low varieties. This situation surfaced with the Council of Tours in 813, in which it was decided that sermons should be held in the rural Romance tongue or in German ('in rusticam Romanam linguam aut Thiosticam'). This decision shows that, at least in today's northern France, speakers were aware of the diglossic situation (cf. Koch, 1997, p. 232). The emergence of Old French is dated a little later, to the Strasbourg Oaths in 842 (cf. Lodge, 1993, p. 10), and first literary texts in the *langue d'oïl* appeared in the 12th century. In the south, the split from Latin as the literary language occurred earlier. The first literary Old Occitan texts appeared in the late 10th century and the most prosperous literary episode of Occitan began in the 12th century with Troubadour literature (cf. Kremnitz, 1981, p. 22).

The introduction of French in the South

The Albigensian Crusade at the beginning of the 13th century is often thought to mark the beginning of the downfall of the *langue d'oc* (cf. Kremnitz, 1981, pp. 22–23). As a consequence of this crusade, the Languedoc region was the first region to become part of the kingdom of France, and over the centuries, more and more southern territories

³³ The province was originally called *Gallia transalpina* or *Provincial Nostra*. Today's name *Provence* is derived of the latter.

³⁴ The term *Occitan* is problematic. It was frequently used in the late Middle Ages to denominate *langue d'oc* but fell into oblivion afterwards (cf. Kremnitz, 1981, p. 15). For centuries, speakers named their own vernaculars, e.g. *Gascon*, *Auvergnat*, *Provençal* or simply *patois*. When the term *Occitan* was rediscovered, it was predominantly used by the left-wing Occitanist movement. It implies a single distinct language spoken in the South of France and therefore does not depict the sociolinguistic situation of this area correctly (cf. Blanchet and Schiffman, 2004).

followed.³⁵ However, becoming part of the French kingdom did not automatically entail starting to speak French. In the Languedoc region, for example, the early political annexation did not impact the language used by the people. Latin remained the language of the church, jurisdiction and science. French was used alongside Latin and Occitan only in administration, but Occitan persisted. Although the Troubadours vanished as another consequence of the Albigensian Crusade in the 13th century, Occitan remained the literary language for centuries (cf. Brun, 1923, pp. 15–20). Brun concludes his detailed description of the linguistic situation in southern France up to the end of the Hundred Years War as follows:

[A]u delà [sic !] des papiers administratifs partis des chancelleries vers les sénéchaussées, au delà des familles de la haute noblesse, des personnages en rapport avec les fonctionnaires royaux, des notables qui siégeaient aux Etats, et de quelques cas isolés, entre 1250 et 1450, la langue du Nord n'intervient pas comme un élément nouveau dans la vie des peuples du Midi.³⁶ (Brun, 1923, p. 71)

The first really important step for the introduction of French in the south was the *Ordonnance de Villers-Cotterêts* in 1539 (cf. Brun, 1923, p. 89; Bec, [1963] 1995, p. 76). This edict determined that from that point on, all legal acts should be pronounced in French. The intention of the edict was to weaken the use of Latin but led to the introduction of French in the written domain in the South (cf. Lodge, 1993, p. 126). Although a small literary Occitan renaissance emerged in the following years (Bec, [1963] 1995, p. 83), more and more non-literary texts were written in French and a diglossic situation emerged (cf. Sauzet, 1989). However, only the literate portion of the population understood French and it is assumed that only a few upper class speakers were able to speak it (cf. Brun, 1923, 461; Kremnitz, 1981, p. 26).

Abbé Grégoire's famous survey at the time of the French Revolution revealed that, even in the 18th century, only a few citizens of France spoke or understood French (cf. Certeau, Julia, & Revel, 2002). The language policy of the revolutionaries followed his stance that all regional languages and dialects must be eradicated in order to put the revolutionary ideas of egalitarianism into practice:

³⁵ Dauphiné was annexed in the 14th, Guyenne and Provence in the 15th, Gascogne in the 16th, Béarn and Roussillon in the 17th and Corse in the 19th century. The last two territories to become part of France were Nice (1860) and Tende (1945) (cf. Christadler and Uterwedde, 1999, p. 575).

³⁶ 'Beyond the administrative papers sent from the chanceries to the bailiwicks, beyond the high noble families, the individuals connected with royal officials, the notables who sat in the Estates, and a few isolated cases, between 1250 and 1450, the language of the North did not emerge as a new element in the life of the peoples of the South.' (Translation LJ).

Une langue universelle est, dans son genre, ce que la pierre philosophale est en chimie. Mais au moins on peut uniformer le langage d’une grande nation, de manière que tous les citoyens qui la composent puissent sans obstacle se communiquer leurs pensées. Cette entreprise, qui ne fut pleinement exécutée chez aucun peuple, est digne du peuple français, qui centralise toutes les branches de l’organisation sociale et qui doit être jaloux de consacrer au plutôt, dans une République une et indivisible, l’usage unique et invariable de la langue de la liberté.³⁷ (Grégoire’s report, quoted from Certeau et al., 2002, p. 302)

This language policy, together with strong normative efforts during the 17th century, can be seen as a contributing factor to today’s linguistic insecurity in France (cf. Gueunier, Genouvrier, & Khomsi, see also Chapter 3.5.1). It established the conviction that French, as the language of the Enlightenment, should be pure and not influenced by any social or regional variation. Today, this opinion is still upheld by a majority of French people (cf. Lodge, 1993, p. 6).

However, the language policy of the French Revolution did not immediately affect the situation of the majority of Southerners in terms of starting to speak French. The diglossic situation in which French was used in the written domain and Occitan dialects in the spoken domain slowly started to shift and the interlanguage *francitan*³⁸ emerged (cf. Boyer, 1991, p. 152). This interlanguage was used in the written as well as the spoken domain and contained various phonological, semantic and morpho-syntactical interferences from Occitan (cf. Boyer, 1991, p. 145), and led to the publication of several *Gasconismes corrigés* (see Chapter 3). The introduction of compulsory schooling in the late 19th century, together with important changes in society caused by the industrial revolution, compulsory military service and the two world wars in the 20th century, as well as the spread of mass media led the great majority of Southerners to start speaking French in all domains (cf. Kremnitz, 1981, p. 31). When Southerners started to speak French as their L1 and French started to substitute Occitan in more and more domains (cf. Boyer, 1991, p. 153), most semantic and morpho-syntactic interferences from Occitan disappeared. With this, the *français regional du Midi* was born, a regional French strongly influenced by its Occitan substrate (cf. Pustka, 2007, p. 88; Durand, 2009a, p. 127; Lonnemann & Meisenburg, 2009, p. 286).

³⁷ ‘A universal language is like the philosopher’s stone. But at least, it is possible to standardize the language of a great nation, so that all its citizens can communicate their thoughts without obstacles. Such a standardization has never fully been executed, but it is worthy of the French who centralize all branches of social organization and who must be zealous and devoted to the rather unique and invariable use of the language of freedom, in a single and indivisible Republic.’ (Translation LJ).

³⁸ Also called *sabir franco-occitan* (cf. Ségué, 1951, p. 7) or *franco-provençal* (cf. Brun, 1923, p. 27).

It is, however, important to note that the characteristics of Southern French are not exclusively conditioned by the Occitan substrate (cf. Boyer, 1991, p. 150; Durand, 2009a, p. 127; Mooney, 2018, p. 89). Although some characteristics, such as prosody and some lexical items, can be directly traced back to language contact with Occitan (cf. Meisenburg, 2013; Sichel-Bazin, Buthke, & Meisenburg, 2015; Sichel-Bazin, 2016), other characteristics, such as the *loi de position* and frequent schwa realization (see Chapter 3.4.1), are partly due to other reasons (cf. Mazel, 1980, p. 140): Although the maintenance of final schwa may have been strongly influenced by Occitan prosody with its word accent and preservation of atonic vowels (cf. Pustka, 2007, p. 147; Meisenburg, 2013, p. 168, see Chapter 3.4.2), orthography may have been another important factor. The pronunciation of final schwa had already become out of date in northern France in the 18th century, and when Southerners learned French, they learned it predominantly through reading (cf. Brun, 1931, p. 22; Pustka, 2007, p. 147; Durand, 2009a, p. 126). The *loi de position* can be explained as a simplification of the vowel system due to language contact and the acquisition of French as an L2 (cf. Pustka, 2007, p. 132).³⁹ However, tracing back its emergence reveals a highly complex situation (cf. Mooney, 2018, p. 89).

3.3 Variation and change

Just like other varieties, Southern French is undergoing change. Several characteristic features are nearly lost (e.g. apical /r/, cf. Séguy, 1951, pp. 20–21; Pustka, 2010a, p. 157) and others are in the process of being lost (e.g., the realization of final schwa, cf. Armstrong & Unsworth, 1999), while others have remained relatively stable (e.g. the *loi de position*, c.f. Pustka, 2009b, p. 90; Mooney, 2018, p. 108).⁴⁰ The process of southern features being lost is usually referred to as *standardization* or *levelling* (cf. Pooley, 2007; Courdès-Murphy, 2018) and will be discussed in the following.

The terms *standard* and *standardization* have largely been criticized. While Haugen (1972) sees standardization merely as a historical process undergone by one variety which becomes the prestige variety of a language through selection, codification of form and elaboration of function, Milroy and Milroy (1985/2012, p. 6) state that

³⁹ There are some other explanations for the emergence of the *loi de position*. Eychenne (2014, p. 223), for instance, sees it as “the result of the interplay between substantive and symbolic constructions which emerge through usage.”

⁴⁰ As Mooney (2018) demonstrates, linguistic change in the South does not always follow the direction of northern French but can also be innovative.

standardization implies the “suppression of optional variability in language”. According to Milroy (1999, p. 18), standard languages are thus “fixed and uniform-state idealizations – not empirically verifiable realities”, and Armstrong and Mackenzie add that “standardization is the expression of a broader ideology, to do with a hierarchical, as opposed to an egalitarian, view of how society should be ordered” (2013, p. 6). It is thus argued that standard varieties do not exist. However, these views are closely linked to the concept of varieties themselves. The fact that we cannot observe any homogeneous and distinct variety in production data should not mean that they do not exist (see Chapter 2.1.3.1). Recent folk linguistic studies investigating standard varieties (e.g., Detey & Le Gac, 2010; Chalier, 2020) have presented a democratic model of a standard that takes the folk linguistic perceptions and representations into account and don’t incorporate the notion of oppression.

In order to avoid the ideologically motivated term *standardization*, the term *levelling* has been used instead (e.g. by Ann Williams & Kerswill, 1999; Armstrong & Pooley, 2010). *Levelling* designates “a process whereby differences between regional varieties are reduced, features which make varieties distinctive disappear, and new features emerge and are adopted by speakers over a wide geographical area” (Ann Williams & Kerswill, 1999, 149). While *standardization* thus refers to the vertical axis of language variation and means that speakers “abandon their local forms in preference for the standard” (Foulkes & Docherty, 1999, p. 13), *levelling* refers to the horizontal axis and leads to the development of supralocal varieties (Auer & Schmidt, 2009, p. 355). Although it is indeed difficult to determine a French standard, this dissertation will work with a rather wide definition of the French standard variety, namely the widely levelled form of French spoken in the *oïl*-region of France (cf. Armstrong & Boughton, 2009), also called supralocal French (cf. Armstrong, 2001, p. 2), which is very often termed standard or Reference French (cf. Lyche, 2010, pp. 145–146; Detey, Lyche, Racine, Schwab, & Le Gac David, 2016, p. 59). In this dissertation, the process of standardization is therefore understood as the process of Southerners losing their characteristic southern features in favor of features found in levelled Northern French, while levelling will be seen as the development of supra-regional Southern French varieties.

French is regarded as a language with an exceptionally normative and prescriptivist tradition (see Chapter 3.2). This tradition started in the first half of the 17th century with the creation of the *Académie Française* and Vaugelas’ *Remarques sur la langue Française* (cf. Lodge, 1993, 159–178). It is therefore not surprising that any

deviation from the standard has been strongly criticized. In the south, this led to various *Gasconismes corrigés* in the 18th and 19th century (see Chapter 3) and to a prevalent linguistic insecurity that still prevails today (cf. Courdès-Murphy, 2018, 419). Although Southerners undoubtedly attribute covert prestige to their own regional varieties and overt prestige at least to the accents of Toulouse or Provence⁴¹ (cf. Blanchet & Armstrong, 2006, p. 267; Pustka et al., 2019, pp. 44–45), a certain degree of conscience for not speaking ‘good’ French, caused by recurring discrimination, is still deeply ingrained (cf. Gasquet-Cyrus, 2004, p. 117; Blanchet, 2016, p. 135). This linguistic insecurity, alongside overt prestige and the fact that Southern French pronunciation is, in several aspects, closer to orthography than Northern French (which also gives Southerners a sense of linguistic security, see Chapter 3.5.1), has created a complex situation (cf. Pustka et al., 2019, p. 46). The ongoing language change in Southern French can be partly attributed to this situation, as well as to other contributing factors, such as internal migration driven by centralism and rural exodus.

Due to the processes of standardization and levelling, many authors differentiate between traditional Southern French, as described by Brun (1931) and Séguy (1951), and today’s Southern French (e.g., Pooley, 2007; Pustka, 2009b; Armstrong & Pooley, 2010; Courdès-Murphy, 2018). Consequently, speakers showing many features described by accounts of the Southern French of speakers born in the first half of the 20th century are classified as conservative and speakers showing fewer of these features are classified as innovative (e.g., Eychenne, 2009, p. 272; Courdès-Murphy, 2018, pp. 29–30). The starting point for the following account of the characteristics of Southern French will be the traditional situation. I will later enhance the account with the results of more recent studies.

3.4 Production

As stated above, the term *Southern French* refers to the different varieties spoken in southern France (see Chapter 3.1). According to the speakers, these varieties not only differ with regard to the regional dimension but also the social dimension (cf. Binisti & Gasquet-Cyrus, 2003; Blanchet & Armstrong, 2006; Durand, 2009a). In the 1980s,

⁴¹ These findings come from two different studies investigating attitudes towards Southern French. While Blanchet and Armstrong (2006) investigate the prestige of different regions (Provence, Languedoc etc.), Pustka et al. (2019) focus on the prestige of the two largest cities, Toulouse and Marseille. The urban/rural divide in Southern France therefore seems to be an important factor influencing prestige.

Walter (1982, p. 52) stressed that regional variation outweighs social variation (cf. also Armstrong & Pooley, 2010, p. 150): “Ce qu’il faut reconnaître, c’est que les différences sur le plan géographique l’emportent pour le moment, dans nos régions, sur les différences sociales.”⁴² Her notion *pour le moment* ‘at the moment’ is important. This account from 50 years ago does not seem to hold anymore. Our results, as well as the (roughly 20–25-year-old) results of Armstrong (2001), Boughton (2006) and Armstrong and Boughton (2009), indicate that today’s situation is different. There is, of course, a perceivable difference between Northern and Southern French (cf. Woehrling & Boula de Mareüil, 2006b, p. 1513; Pustka, 2010b, 143), but within these regions, important social differences outweigh regional ones. Armstrong and Pooley thus conclude that “French is more regionally than socially levelled” (Armstrong & Pooley, 2010, p. 153, see also Chapter 3.3).

3.4.1 Segmental features

Since there is no full account of the regional variation in Southern France (cf. Pustka, 2010b, p. 137), Table 3.1 displays a slightly simplified summary of the results of several studies investigating characteristics of today’s French spoken in the former *oc* region. It mainly refers to the vowel inventory of Southern French (labelled the *Dominant Southern Pattern*, DSP, cf. Pooley, 2007, p. 42), but also names some consonantal features described in various summaries. However, it should be kept in mind that there is no uniformity in any regional accent (see Chapter 2.1.1) and that social variation as well as levelling can be observed in all the features named, as is described in more detail in the following.

⁴² ‘For the moment, we have to recognize that geographical variation outweighs social variation.’ (Translation LJ).

Status	Feature	Example
Only in southern France	Nasal vowels: ⁴³ • V+N • V+$\tilde{V}$+N • $\tilde{V}$+N • $\tilde{V}$+N • V	bien • [bjɛŋ] • [bjɛ̃ŋ] • [bjɛ̃ŋ] • [bjɛ̃ŋ] • [bjɛ] instead of [bjɛ̃]
Only in southern France	Realization of schwa • in final position • in word-medial position after one consonant	• verre [vɛʁə] instead of [vɛʁ] • tellement [tɛlɛman] instead of [tɛlmɑ̃]
Also found in other regional French varieties	Final consonants • Realization of ‘standardly’ mute final consonants • Muting of ‘standardly’ pronounced final consonants	• avec [avɛ] instead of [avɛk]⁴⁴ • moins [mwɛ̃s] instead of [mwɛ̃]⁴⁵
Increasingly found in the rest of France	Mid vowels • <i>Loi de position</i> (complementary distribution of mid vowels)	• <i>c’est</i> [sɛ] instead of [sɛ] • <i>rose</i> [ʁɔzə] instead of [ʁɔz] • <i>coiffeuse</i> [kwafœzə] instead of [kwafœz]⁴⁶
Originally also found in the rest of France and in other French varieties	• Maintenance of the opposition /ɛ̃/: /œ̃/	• <i>brin</i> /bʁɛ̃/ vs. <i>brun</i> /bʁœ̃/ instead of <i>brin/brun</i> /bʁɛ̃/
Also found in the rest of France and in other regional French varieties	Consonant clusters • Reduction	• <i>expliquer</i> [ɛsplikɛ] instead of [ɛksplikɛ]

Table 3.1: Features of Southern French.⁴⁷

The realization of *nasal vowels* shows considerable variation (see Table 3.1), from the thoroughly standardized nasalized form $\tilde{V}$ (e.g. *bien* [bjɛ̃]) to the form with an oral vowel followed by a consonantal appendix V+N (e.g. *bien* [bjɛŋ]). Additionally, as Armstrong and Pooley (2010, p. 193) note, nasal vowels can have a different vowel quality, with /ɛ̃/

⁴³ V is the hypercorrect variant and $\tilde{V}$ +N the variant of the supralocal southern standard (cf. Jill Taylor, 1996b, 64; Pustka, 2007, p. 133).

⁴⁴ The final [k] of *avec* only disappears before consonant-initial words. Before a vowel, [k] is realized. *Avec* is thus one of the words (e.g. *Tarn*) with a liaison consonant, at least in some Southern French varieties (cf. Pustka, 2007, p. 136).

⁴⁵ This feature has, for instance, been observed in the Antilles (cf. Pustka 2011: 203, 205).

⁴⁶ The spread of *loi de liaison* in the rest of France is, however, only observable with the front mid vowels [e] and [ɛ]. The other mid vowels do not show such a tendency.

⁴⁷ This is a compilation of Southern French features (identified by Walter, 1982; Jill Taylor, 1996b; Coquillon, 2005; Pustka, 2007; Durand, 2009a; Armstrong and Pooley, 2010; Dufour, Nguyen, and Frauenfelder, May 2010; Pustka, 2010b; Courdès-Murphy, 2018).

and /œ/ being realized relatively close (/ẽ/ and /ẽ/), /ã/ relatively front (/ã/) and /õ/ as relatively open. They also state that there is a Marseille variant of /ã/ that is raised and fronted as in *mange* [mẽʒə].

Oral vowels followed by a consonantal appendix (V+N) is considered a shibboleth of Southern French (cf. Jill Taylor, 1996a; Pustka, 2007, p. 134).⁴⁸ The nasal appendix is, due to assimilation processes, usually homorganic with the following consonant (cf. Jill Taylor, 1996b, p. 50; Durand & Tarrier, 2003, p. 120). When the syllable in question is word-final and open, the appendix is in most cases velar [ŋ].⁴⁹ Taylor (1996b, p. 53) and Pustka (2007, p. 133) also observe the labial variant [m] and the alveolar [n] as consonantal appendices. While Pustka explains labial [m] with a tendency for the speakers in question to close their lips more than other speakers while speaking, thus creating the illusion of speaking with an *accent pointu* ('pointed,' meaning sharp or precise), Taylor sees it as the result of lip closure at the end of an utterance. Alveolar [n] is, according to Taylor, as marginal as [m], but is seen as a particularly rare alternative to [ŋ], realized where the following consonant is unknown. Taylor, working with Aix-en-Provence data, does not ascribe any linguistic value to this variation, but Pustka (2007, p. 134) stresses that the nasal appendix [n] used to be an intra-meridional regional marker of Aveyron, citing Séguy: "Il est de l'Aveyronn, où on lave le linge sans savon." (Séguy, 1951, p. 34)⁵⁰. However, she only finds this variant in the speech of her oldest speaker, while all other speakers realize [ŋ].

Whether a consonantal appendix is realized or not depends on several factors. The most important linguistic factor is syllable type due to assimilation processes: Nasal vowels in word-final open syllables are less favorable for nasal appendices than nasal vowels followed by consonants (cf. Mooney, 2018, p. 100), especially when they are followed by voiceless plosives or in accented syllables (cf. Detrich, 2010, p. 525). Additionally, the phoneme in question (/ẽ/, /ã/, /õ/ or /œ/) and the position in the word influence the presence of an appendix, with /ẽ/ and /œ/ as well as final word position favoring it (cf. Courdès-Murphy & Eychenne, 2021, p. 261). Finally, according to

⁴⁸ The volume *Asterix and the Banquet* 'Le Tour de Gaule d'Astérix', for example, alludes to this shibboleth several times, e.g. with the graphics <bieng> for *bien*, <Romaing> for *Romain* and <Lutécieng> for *Lutécien* cf. Goscinnny and Uderzo, 2011, pp. 30–31.

⁴⁹ The velarization of word-final /n/ is also common in some Spanish varieties, such as western and southern Spain Hualde, 2014, p. 176.

⁵⁰ The variants [n] and [m], together with [ŋ] and [ɲ], have also been attested for Béarnais (cf. Mooney, 2018, p. 28).

Courdès-Murphy and Eychenne (2021, p. 261), lexical frequency also plays a role: The more frequent a word is, the less often it is pronounced with an appendix.

Extralinguistic factors also play a role when it comes to the presence or absence of the nasal appendix. According to Courdès-Murphy and Eychenne (2021, pp. 259–260), who work with a PFC corpus containing different speech styles, appendices were more frequent in informal conversations than in read speech and formal guided interviews.

Another important extralinguistic factor influencing nasal vowels is age.⁵¹ However, the relationship between age and the realization of nasal appendices is rather complex. In general, Courdès-Murphy (2018, p. 385) and Mooney (2018, p. 105) both observe a correlation: the younger the speakers, the less likely they are to produce a consonantal appendix. However, if examined in greater detail, Courdès-Murphy's (2018, p. 333) Marseille speakers show a similar pattern to Taylor's (1996b, p. 147) Aix-en-Provence speakers: It is not the youngest group who realize the lowest number of nasal appendices, as would be expected in a situation of linguistic change, but the middle group. This is not the case for her Toulouse speakers.

More detailed statistical analyses, however, show that the factor age interacts with several other factors. Mooney's (2018, p. 106) study on Béarn French revealed an interaction between age and phoneme: All four nasal vowels behave differently in relation to age. Furthermore, the middle generation clearly contrasts with the young one (see Figure 3.3). At the same time, the four nasal vowels can be split into two different groups: the two front nasal vowels [ɛ̃] and [œ̃], which are more frequently realized as $\tilde{V}$ by the younger generation (and VN by the middle generation), versus the back nasal vowels, which are more frequently realized as VN by the younger generation (and $\tilde{V}$ by the middle generation).⁵²

⁵¹ Additionally, the urban – rural continuum may have had an impact, as a comparison between Mooney's (2018) and Courdès-Murphy's (2018) data suggests. However, there is no systematic investigation of this factor so far.

⁵² Mooney's explanation for this is that the (non-)realization of nasal appendices might signal membership of a particular age group (cf. Mooney, 2018, p. 106).

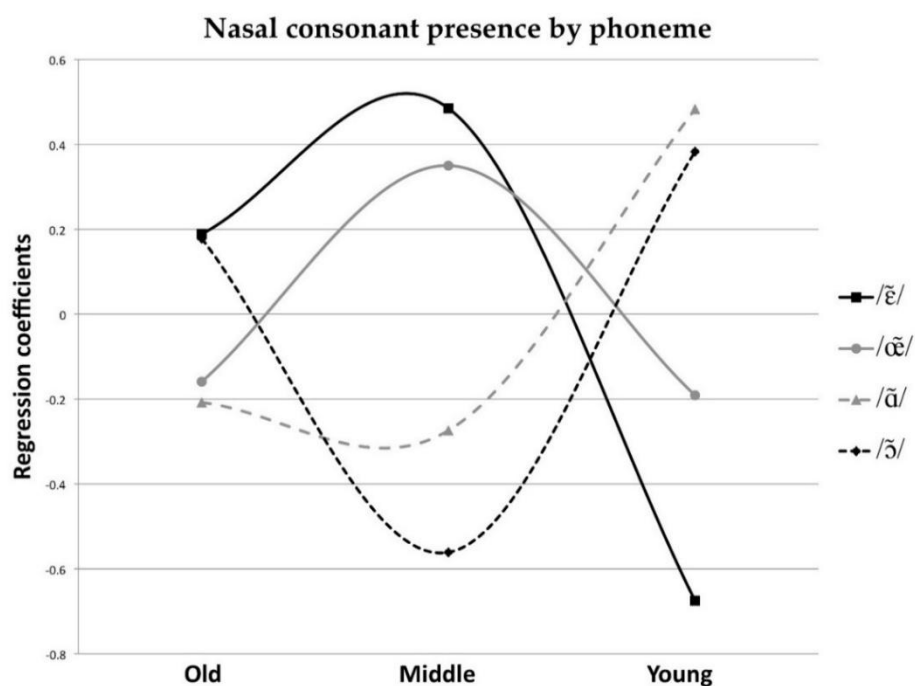


Figure 3.3: Nasal consonant presence/absence by phoneme in Mooney's Béarn study (2018, p. 106).

Courdès-Murphy and Eychenne (2021, pp. 259–260) observed a different interaction: the interaction between age and sex. While the factor age had a significant effect on its own, sex only became significant in an interaction with age: Younger male speakers realized fewer appendices than female speakers, but this difference decreased with age. By 55 years old, both sexes had similar appendix realization rates.

The *realization of schwa* is another important feature of Southern French and has been analyzed in various studies following the PFC protocol (e.g., Eychenne, 2006; Pustka, 2007; Courdès-Murphy, 2018) and outside of PFC (e.g., Jill Taylor, 1996b; Armstrong & Unsworth, 1999; Jansen, 2018). Just as in northern France, schwa realization depends on phonotactic and social factors. However, in Southern France, it is significantly more often realized across various contexts.

Two key linguistic factors influencing schwa realization are its position within the word and its surrounding context, which includes the number of consonants preceding the schwa and the nature of the segment that follows it (cf. Lyche, 2016, p. 353). For instance, in Southern French, schwa in final position in polysyllabic words is nearly always realized when followed by a consonant, which contrasts sharply with Northern French, where it is categorically mute (cf. Durand et al., 1987, p. 987; Durand, 2009b, p. 139). This stands in contrast to the context CCəC with obstruent-liquid clusters, in which schwa is never deleted, even in Northern French.

In other positions, schwa realization is not categorical, but schwas in monosyllabic words and in the first syllable of polysyllabic words are realized much more often in the South than in the North. Schwa realization rates in monosyllabic words preceded by a single consonant, for example, vary between 76.6% (519/677) in Biarritz and 95.1% (488/513) in Lacaune. In northern French varieties, the rates are decidedly lower, with rates ranging from 25.4% in Ogéviller (106/422) to 35.2% in Paris (239/680). Similar numbers can be observed in word-initial position of polysyllabic words with rates from 85% (102/120) in Biarritz to 95.4% (83/87) in Lacaune and 18.2% (18/99) in Treize-Vents and 37.25% (44/118) in Paris (cf. Lyche, 2016, pp. 358–359).⁵³

Additionally, lexical frequency seems to play a role in schwa realization. Durand and Tarrier, for example, observe that lower realization rates in first syllables of polysyllabic words are partly due to the very frequent words *p(e)tit* and *s(e)rait*, in which schwa is deleted more often than in other polysyllabic words (cf. Durand & Tarrier, 2003, p. 123). Such observations were also made by several other authors (e.g., Armstrong & Unsworth, 1999, pp. 139–140; Pustka, 2007, p. 166; Eychenne & Pustka, 2007, pp. 201–203) and it is possible that, as Eychenne and Pustka (2007, p. 202) write, schwa deletions in these cases might be the result of lexical borrowings from northern French.

Another important factor influencing schwa realization is age. In word-final position (e.g., *verr(e)*) and word-medial position after one consonant (e.g., *tell(e)ment*), several studies have observed a trend where younger speakers less frequently realize schwa compared to older speakers (e.g. Durand et al., 1987; Armstrong & Unsworth, 1999; Durand & Tarrier, 2003; Pustka, 2007; Lyche, 2016; Courdès-Murphy, 2018), as shown in Table 3.2, which presents results from Lyche (2016), the study with the largest dataset of Southern French speakers. Since orthographic <e> is usually mute in standard French and realized in conservative Southern French, this might be a process of standardization (see Chapter 3.3).

Age	Internal position VCeC Schwa present	Final position VCe#C Schwa present
<26	21.2% (17/80)	31.4% (115/366)
26-59	47.8% (180/376)	21.7% (189/871)
>59	66.9% (249/372)	78.7% (811/1030)

Table 3.2: Presence of schwa in relation to age in conversational data from five PFC survey points in southern France (Lyche, 2016, p. 361).

⁵³ For a detailed account on schwa realization in Toulouse and Marseille cf. Courdès-Murphy, 2018.

Phonotactics, lexical frequency and age are, however, not the only factors influencing schwa. Social class (cf. Jill Taylor, 1996b, p. 158), gender (cf. Armstrong & Unsworth, 1999, p. 150), local identity and mobility (cf. Courdès-Murphy, 2018, p. 390) also influence the realization of schwa in Southern French: Younger mobile female speakers with higher education are more likely to delete schwa.

The *Loi de position* refers to mid vowels. In standard French, their distribution is rather complex and the unrounded front mid vowels [e] and [ɛ] show signs of an ongoing neutralization (cf. Pustka, 2011b, 97–98). In most Southern French accents, *loi de position* is deemed categorical (cf. Durand, 2009a, p. 131).⁵⁴ According to this law, the close variants of mid vowels, i.e. [e], [ø] and [o] occur in open syllables (e.g. *mais* [me])⁵⁵ ‘but’), and their open variants [ɛ], [œ] and [ɔ] occur in closed syllables (e.g. *mer* [mɛʁ] ‘sea’). In pseudo-open syllables,⁵⁶ that is syllables followed by a final schwa, such as *mère* [mɛʁə] ‘mother’, the open variants always appear. The unrounded front mid vowels [e] and [ɛ] also behave differently to the other mid vowels in the South in terms of *loi de position*. In Béarn, their neutralization is not as thorough as the neutralizations between [o] and [ɔ], as well as [ø] and [œ] because, according to Moreux (2006, 314), this phonemic opposition also exists in Occitan (cf. also Mooney, 2018, 93). In Toulouse and Marseille, Courdès-Murphy (2018, p. 212) observes a continuum between [e] and [ɛ]. The other mid vowels in her corpus do not show any such tendency.

The *retention of the opposition /ɛ̃:/ɞ̃/* is another characteristic of Southern French (cf. Durand & Tarrier, 2003; Lonnemann & Meisenburg, 2009, p. 294; Coquillon & Durand, 2010) and of several other regional varieties, e.g. Canadian French (cf. Côté, 2012, p. 239) and Swiss French (cf. Andreassen, Maître, & Racine, 2010, p. 223). In Mooney’s (2018, p. 100) Béarn study, this phenomenon is maintained by all age groups. The retention can be explained by the fact that Southerners are not insecure about this

⁵⁴ According to Eychenne (2014: 236), there are, however, some exceptions to this law. *Autochtone* ‘autochthonous’ is pronounced [otɔktənə] instead of [otəktənə], *spectacle* ‘show’ pronounced [spɛktaklə] instead of [spɛktaklɔ], nouns and proper names ending in *-et*, such as *Bousquet* pronounced [buskɛt] instead of [buskɛt], as well as the adverbs *heureusement* ‘fortunately’ pronounced [œ̃œ̃zəma^N] instead of [ø̃œ̃zəma^N] and *malheureusement* ‘unfortunately’ pronounced [malœ̃œ̃zəma^N] instead of [malø̃œ̃zəma^N]. The *heureusement/malheureusement* exception may be due to vowel harmony and *autochtone* and *spectacle* are loanwords. Eychenne also shows that in some cases, *loi de position* does not stop at the word level. It applies to some fixed constructions such as *neuf heures* [nø̃vœ̃ʁə] ‘nine o’clock’ in contrast to *neuf enfants* [nœ̃fa^Nfa^N] ‘nine children’.

⁵⁵ There is, however, one exception: *ouais* ‘yes’ is never realized *[we] but always [wɛ], even if the *loi de position* is otherwise always applied (cf. Pustka, 2009a, p. 311).

⁵⁶ This term stems from Taylor (1996b, p. 55). See Eychenne (2014) for a thorough discussion of the interactions of schwa and *loi de position*.

characteristic: they are rather proud of a pronunciation which conforms more closely to orthography than that of Parisians (cf. Durand et al., 1987, p. 995; Pustka et al., 2019, p. 46, see also Chapter 3.3).

The *simplification of consonant clusters* is a phenomenon also observed in numerous other varieties spoken by speakers of lower social status (cf. Bauche, [1916] 1928). At least in Marseille, this phenomenon used to be classified as extremely frequent even in upper middle-class speech and was therefore not considered a social marker but a regional one (Brun, 1931, p. 43). Today, this has changed. In Southern French, it is mostly to be found in the speech of older people (cf. Durand & Tarrier, 2003, p. 121; Lonnemann & Meisenburg, 2009, p. 290) and can be interpreted as a social marker (cf. Pustka, 2007, p. 137).

As stated above, the listed characteristics usually refer to Southern French in general, with only minor intra-southern variation observed. Whether different regions possess their own characteristics is difficult to assess due to the lack of systematic analyses of southern features besides schwa, nasal vowels and *loi de position* (cf. Armstrong & Pooley, 2010, p. 194). As Woehrling and Boula de Mareuil (2006b, p. 1514) and Armstrong and Pooley (2010, p. 203) state, it is possible that some characteristics that were only found in parts of the South have already disappeared or are on the verge of disappearing. This seems to be the case with the features displayed in Table 3.3. The table is drawn from Armstrong and Pooley's (2010, p. 191) summary of accounts of the traditional situation (i.e. Brun, 1931; Séguy, 1951; Walter, 1982; Carton, 1983), and indicates possible differences between Toulouse and Marseille.

Feature	Example
Apical [r]	<i>la rose</i> [larɔzə] instead of [laʁɔz]
Palatal lateral [ʎ] (<i>l mouillé</i>)	<i>étriller</i> [etʁiʎe] instead of [etʁije]
Word final devoicing	<i>Antibes</i> [antip] instead of [ãtib]
Initial /h/	<i>haut</i> [ho] instead of [o]

Table 3.3: Characteristics of Toulouse not attested in Marseille (cf. Armstrong & Pooley, 2010, p. 191).

Existing studies do not mention initial /h/ nor the palatal lateral [ʎ]. Séguy (1951, pp. 19–21) had already reported initial [h], palatal [ʎ]⁵⁷ and apical [r] of Toulouse to be in a state of change towards the Northern French variant. In recent studies, the variant [r] is still

⁵⁷ According to Brun (1931, p. 40), the palatal [ʎ] was also used in Provence as well but disappeared very early.

observed in the speech of older participants in the rural Languedoc region (e.g. Durand & Tarrier, 2003, 121; Pustka, 2007, p. 135; Lonnemann & Meisenburg, 2009, p. 289). At the same time, recent studies investigating Provence French have not observed any apical [r] (cf. Durand, 2009a, p. 152). And while word-final devoicing of plosives and most fricatives also seems to have died out according to recent studies, devoicing of final [ʁ] seems to be productive in the whole Southern French region (cf. Durand et al., 1987, p. 988; Durand & Tarrier, 2003, p. 121; Binisti & Gasquet-Cyrus, 2003, p. 118; Pustka, 2007, p. 143). A feature described by Brun (1931, p. 34) but not mentioned by Séguy is diaeresis in words such as *viens* [vi̯ẽ(ɛ̃)] ‘come’ and *chien* [ʃi̯ẽ(ɛ̃)] ‘dog’. Still, this does not seem to be a characteristic exclusive to Marseille since Durand and Tarrier (2003, p. 120) and Lonnemann and Meisenburg (2009, p. 294) also observe diaereses in their rural Languedoc data and Brun (1931, p. 34) ascribes the feature not only to the Provence region but also to Gascony.

One characteristic of Marseille French that seems to have emerged rather recently and is predominantly found in the speech of younger speakers is *palatalization of /t/ and /d/*. This feature is common in the representations of the speakers and even expressed orthographically: *Tias* or *t'yas* for *tu as*. This phenomenon appears to have emerged relatively recently in the northern quarters of Marseille and subsequently spread to the rest of the city (cf. Binisti & Gasquet-Cyrus, 2003, p. 119). According to Binisti and Gasquet-Cyrus (2003, p. 121), it has become a general Marseille feature. This might be the only productive feature of the accent of Marseille that speakers do not associate with the accent of Toulouse. However, this characteristic is not only attributed to Marseille’s younger speakers, but to the speech of younger speakers in general. As Trimaille and Candea (2021, p. 41) note, palatalization of /t/ and /d/ is often named as a key characteristic of the *accent de banlieue* (‘suburban accent’), but is, in fact, also used by other linguistic communities. It is therefore possible that a more extensive study of the different accents in Toulouse would also reveal palatalization of /t/ and /d/ among young people living in disadvantaged neighborhoods.

Lastly, it should be kept in mind that the characteristics discussed not only differ with regard to their distribution in the rest of the French-speaking world, but also to their distribution in the south. Pustka’s (2007, 2009b) speakers from Aveyron show the following behavior: while all speakers living in southern France obey the *loi de position* pattern, low schwa deletion rates and the realization of otherwise mute final consonants are only found in the speech of some of her speakers. Apical [r] is only produced by the

oldest male speaker. In a perception experiment in the form of an accentedness judgement, this one speaker was judged to be one of the most typical Aveyron speakers (see Chapter 3.6.2). Small divergences aside, Pustka (2007, p. 239) observes an idealized implicational hierarchy (see Figure 3.4).

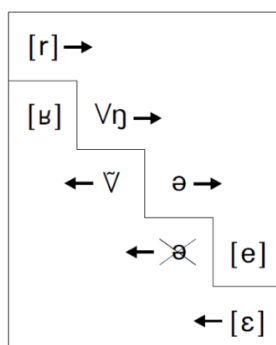


Figure 3.4: Implicational hierarchy of different Southern French characteristics in Aveyron (cf. Pustka, 2007, p. 239).

This hierarchy can be explained as follows:

- A speaker who produces apical [r] will also realize nasal appendices and final schwas as well as closed mid vowels in open syllables
- A speaker who realizes nasal appendices will also realize final schwas as well as closed mid vowels in open syllables
- A speaker who realizes final schwas will also produce closed mid vowels in open syllables

3.4.2 Prosody

For a long time, the prosody of Southern French was rather neglected (cf. Coquillon, 2005, p. 75), and only more recently have some studies explicitly focused on it (e.g. Coquillon, 2005; Lonnemann, 2006; Sichel-Bazin et al., 2015; Sichel-Bazin, 2016). Coquillon's (2005) study principally shows that the Marseille accent is identifiable solely on the basis of prosody when opposed to a Standard French accent, Lonnemann (2006) investigates rhythm in Lacaune (Tarn), and Sichel-Bazin (2016) as well as Sichel-Bazin, Buthke and Meisenburg (2015) are interested in the prosody which has emerged through language contact between Occitan and French.

The most prominent similarity between Southern French and Occitan prosody is rhythm, due to the frequent realization of schwa in Southern French (cf. Durand, 2009a,

p. 157, Chapter 3.4.1). And while Brun (1931, p. 28) still names several words with lexical stress on the penultimate syllable, e.g. *aiòli* and *còlis*, Sichel-Bazin, Buthke and Meisenburg (2015, pp. 93–94) only observe relicts of lexical stress in the speech of some rural Occitan L1 speakers speaking French. They additionally show that the language contact between Occitan and French has left certain traces in intonation: They observe Occitan pitch contours in *wh*-questions from speakers who have been in regular contact with Occitan, while people who do not speak Occitan only show standard French pitch contours in nuclear accents.

Another difference between Southern and standard French seems to be that Southern French, at least the French spoken in the region of Marseille, shows a wider tonal range (cf. Durand, 2009a, p. 158) and some unique melodic elements, such as the *chapeau mou* ‘flat hat’ pattern observed by Coquillon (2005, p. 246). Whether this also applies to the rest of Southern France cannot be answered, since there are no studies on this topic. Although most speakers are convinced that intra-southern differences mainly lie in prosody (see Chapter 3.5.2), these have not been analyzed so far.

3.5 Representations and attitudes

As stated above, varieties do not exist solely in production data but primarily in the speakers’ representations (see Chapter 2.1.3.6). These representations are what Krefeld and Pustka (Krefeld & Pustka, 2010a, 2024) call “representations associated with languages and language varieties” and which they distinguish from linguistic representations “in the narrow sense” – representations in the Chomskyan sense (Krefeld & Pustka, 2010a, p. 11). According to Krefeld and Pustka, these representations are distinct from attitudes towards varieties, since the latter belong to the non-linguistic world. However, Postlep (2010, p. 57) postulates an overlap between attitudes towards languages and varieties and representations associated with languages and language varieties. Since these categories are indeed interrelated and should not be strictly separated from one another, this chapter not only reports on representations but also on attitudes.

The chapter begins with the social dimension, by describing attitudes towards Southern French (Chapter 3.5.1). It then outlines two studies about the geographical extension of Southern French and intra-southern differences (Chapter 3.5.2) and then

gives an account of the salience of southern characteristics for Southerners (Chapter 3.5.3).

3.5.1 Attitudes towards Southern French

As explained in Chapter 2.3.2, attitudes are part of the social schemata triggered by linguistic production as well as by non-linguistic factors. In return, they influence production accordingly and can even lead to language change, whether this happens knowingly or unknowingly (cf. Labov, 1972b, 178). This chapter therefore describes how Southern French is seen in view of these two aspects.

Linguistic insecurity is an issue often addressed in sociolinguistic research. In the Anglophone context, it is strongly associated with Labov's work. When he observed that lower middle-class speakers behaved differently to others, he explained it with linguistic insecurity:

A great deal of evidence shows that lower middle class speakers have the greatest tendency towards linguistic insecurity, and therefore tend to adopt, even in middle age, the prestige forms used by the youngest members of the highest ranking class. This linguistic insecurity is shown by the very wide range of stylistic variation used by lower middle class speakers; by their great fluctuation within a given stylistic context; by their conscious striving for correctness; and by their strongly negative attitudes towards their native speech pattern (Labov, 1968, p. 248).

According to Labov ([1966] 2006, p. 318)), linguistic insecurity is empirically measurable and can be explained by the upward social aspirations of lower middle-class speakers. French sociolinguistics defines this term slightly differently:

L'insécurité linguistique est la prise de conscience, par les locuteurs, d'une distance entre ce qu'ils parlent et une langue (ou variété de langue) légitimée socialement parce qu'elle est celle des classes sociales dominantes, parce qu'elle est perçue comme "pure" (supposée sans interférences avec un autre idiome non légitime) ou encore parce qu'elle est perçue comme celle de locuteurs fictifs détenteurs de LA norme prescrite par l'institution scolaire (Blanchet, 2016, 85).⁵⁸

In Blanchet's definition, the aspect of a norm prescribed by the educational system holds an important position, in contrast to Labov's stance. This can be explained by the

⁵⁸ 'Linguistic insecurity is the speakers' awareness of a distance between what they speak and a socially legitimate language (or variety), due to this language being the language of the dominant social classes, due to it being perceived as "pure" (supposedly because it does not show interferences with another non-legitimate language) or due to it being perceived as the language of fictitious speakers speaking THE norm prescribed by formal education.' (Translation LJ).

exceptionally normativist view of the French regarding their own language, which can be traced back to the long tradition of viewing any kind of linguistic variation as impure and politically unwanted (see Chapter 3.2). As a consequence, linguistic discrimination or glottophobia is reported on quite frequently in French sociolinguistic literature (cf. e.g. Gasquet-Cyrus, 2013; Blanchet, 2016). Courdès-Murphy (2018) explicitly investigates the relation between linguistic insecurity and standardization. Her results show that speakers who suffer more from linguistic insecurity produce fewer southern features (cf. Courdès-Murphy, 2018, p. 419). However, as Courdès-Murphy also points out, the situation is more complex. This is due to the fact that Southern French has a rather ambivalent status in the speakers' representations and that different southern accents have different social value attributed to them (cf. also Pustka et al., 2019, p. 46). This is especially the case for the Marseille accent (cf. Gasquet-Cyrus & Planchenault, 2019, p. 122), which is perceived very positively and negatively at the same time (cf. Gasquet-Cyrus, 2016, p. 116). This makes it comparable to accents of other greater cities, such as Naples (cf. Matrisciano, 2020, p. 39).

To explore the prestige attributed to the Southern French accent(s), I will use Labov's (1966) and Trudgill's (1972) distinction between *covert* and *overt prestige*. According to them, varieties can have different forms of prestige: an *overt prestige* typically associated with standard varieties or varieties of important social standing, and a *covert prestige*, which consists of the "hidden values associated with non-standard speech" (Trudgill, 1972, p. 183). These two forms of prestige go hand in hand with the correctness and pleasantness attributes used in perceptual dialectology (cf. Preston, 1999b, xxxiv): Standard varieties usually have overt prestige and are felt to be correct, while vernaculars can have covert prestige and are perceived as pleasant (cf. Chambers & Trudgill, 2004, p. 85).

This distinction can be illustrated by two studies: Paltridge and Giles's (1984) verbal guise experiment as well as Kuiper's (1999, 2005) study following the perceptual dialectology framework. Paltridge and Gile's study was conducted to test social evaluations of four regional French accents (Alsace, Brittany, Provence and Paris). Participants listened to eight different speakers and judged them according to a wide range of attributes. These attributes were then clustered into five categories: *professional appeal*, *social appeal*, *steadiness*, *power* and *accentedness*.

The results show that Parisian-accented speakers were judged to have considerably more professional appeal, steadiness and power, while speaking with a

weaker accent than all the others and having less social appeal than speakers from Provence and Brittany. Provence speakers, on the other hand, were judged to have the strongest accent and to be a little less professional than Parisians. But most importantly, they scored the highest in terms of social appeal. Speakers from Alsace were usually attributed rather unpleasant characteristics and Brittany was generally positioned in between. The fact that Provence and Paris mostly occupy the extremes shows that those two accents seem to have the highest salience for French speakers (Paltridge & Giles, 1984, p. 77).

Kuiper's (1999, 2005) studies are methodologically different but produced similar results. Unlike Paltridge and Giles (1984), who worked with audio stimuli, Kuiper used perceptual mapping, questionnaires and qualitative interviews. While Paltridge and Giles (1984) asked their participants to judge stimuli on a wide range of attitudes, Kuiper only used the three attributes proposed by Preston (1999b, xxxiv): *degree of difference*, *correctness* and *pleasantness*. As a result, he was able to inquire about a larger number of accents. Overall, he selected 24 different regions, including Switzerland and Belgium. 76 respondents from Paris and 25 respondents from Provence were asked to judge the different regions. Once again, his results indicate that the Provence accent is highly salient. It was judged similarly to the other two southern accents in the study, Languedoc and Gascogne, but it always ranked more extreme than the two others, regardless of whether the evaluation was by Parisian or Provençal participants.

The Provence accent was considered the most pleasant accent by Provençal and Parisian participants and while Provençal respondents ranked surrounding southern areas just below Provence, the Parisians ranked Île-de-France second, Touraine third, and Languedoc only fourth (see Table 3.4). In Kuiper's (2005, p. 40) *correctness rating*, Provence did not score highly. By the Parisians, it was ranked 20 out of 24, followed by Lorraine, Alsace, Switzerland and Belgium. The *degree-of-difference rating* (cf. Kuiper, 2005, p. 38) displays nearly the same order at the bottom of the scale: Provence, Alsace, Belgium, Switzerland. Provençal respondents, on the other hand, rated their own accent seventeenth for *correctness*. Their bottom of the scale is, just like the Parisians': Alsace, Belgium, Switzerland. Interestingly, Provençal respondents judged the accents of Rhône-Alpes and Lyon to be less different from their own accent than Languedoc.

	<i>Degree of difference</i>		<i>Correctness</i>		<i>Pleasantness</i>	
	Paris	Provence	Paris	Provence	Paris	Provence
1.	Île de France (Paris)	Provence	Île de France (Paris)	Île de France (Paris)	Provence	Provence
2.	Touraine	Rhône-Alpes	Touraine	Lyonnais	Île de France (Paris)	Languedoc
3.	Champagne	Lyonnais	Lyonnais	Rhône-Alpes	Touraine	Rhône-Alpes
4.	Normandie	Languedoc	Champagne	Centre	Languedoc	Gascogne
5.	Poitou-Charentes	Touraine	Normandie	Touraine	Champagne	Lyonnais
6.	Lyonnais	Île de France	Centre	Champagne	Gascogne	Bretagne
...	...	...	...	...	...	...
15.	Nord	Picardie	Massif Central	Languedoc	Limousin	Auvergne
16.	Massif Central	Gascogne	Languedoc	Franche-Comté	Jura	Franche-Comté
17.	Auvergne	Bourgogne	Bretagne	Provence	Auvergne	Poitou-Charentes
...	...	...	...	...	...	...
19.	Languedoc	Franche-Comté	Nord	Lorraine	Picardie	Picardie
20.	Lorraine	Jura	Provence	Massif Central	Suisse	Nord
21.	Provence	Lorraine	Lorraine	Poitou-Charentes	Belgique	Lorraine
22.	Alsace	Alsace	Alsace	Alsace	Lorraine	Belgique
23.	Belgique	Suisse	Suisse	Suisse	Nord	Alsace
24.	Suisse	Belgique	Belgique	Belgique	Alsace	Suisse

Table 3.4: Rank order of Parisian and Provençal degree-of-difference, correctness and pleasantness ratings (Kuiper, 2005, pp. 38–42), Provence, Languedoc and Île de France highlighted in bold.

Kuiper’s results are important in two ways: they show that Southern French (and most importantly Provençal French) enjoys an important amount of covert prestige, while it is deemed not very correct, and its speakers suffer from linguistic insecurity. Secondly, they underline differences in the salience of the different Southern French accents: Provençal French is better known and thus more salient than Languedoc and Gascogne French. This can be explained by the important medial presence of Provence (cf. Pustka, 2010b, p. 139; Jansen, 2018, p. 377). Pustka’s (2010b, p. 138) and Kuiper’s (1999, p. 259) investigations both revealed that Southern French is, from a Parisian point of view, most closely linked to Provence and more specifically to Marseille than to the rest of France. This is possibly due to the cinematographic works of Marcel Pagnol, actors such as Fernandel and Raimu, brands like *L’Occitane* or *Le Petit Marseillais* and the fact that Provence is an important holiday destination, closely associated with sunny days, lavender fields and olive trees. Languedoc is simply less well known (cf. Pustka, 2010b, p. 137; Jansen, 2018, p. 377; Woehrling & Boula de Mareüil, 2006a, p. 47).

Still, Kuiper’s results seem to suggest that Languedoc, Gascogne and Provence are judged more or less similarly. This tendency is also observed in Woehrling and Boula de Mareüil’s (2006a) and Avanzi and Boula de Mareüil’s (2019) perceptual studies (see

Chapter 3.5.3). Accordingly, we can ask whether these regions should be subsumed under the umbrella of a single Southern French or whether different accents are distinguished in the representations of the speakers (see Chapter 3.5.2).

3.5.2 Regional variation

As stated above, representations of varieties not only refer to linguistic features, but also to the geographical dimension – simply put, where these varieties are spoken. This area is particularly affected by the outgroup homogeneity effect discussed in Chapter 2.2. While outsiders usually distinguish broader linguistic areas generally motivated by national boundaries (e.g., Canadian French or Swiss French), insiders usually make finer distinctions (e.g., Laurentian French vs. Acadian French or Geneva French vs. Vaudois). Accordingly, the perspective from which a variety is viewed plays a major role. Consequently, Pustka (2008), as well as Krefeld and Pustka (2010a, p. 15) differentiate between auto-representations (the speaker's representations of their own speech community) and hetero-representations (the speaker's representations of another speech community, see Chapter 2.2.1). The question of granularity (cf. Auer, 2010) – whether only one singular Southern French accent exists or whether there are several – thus depends on the perspective (auto vs. hetero-perspective) of the speakers. In Pustka's (2010b) study, Parisians who were asked to indicate the region where Southern French was spoken chose a much larger area than participants from Toulouse (see Figure 3.5). According to hetero-representations, Southern French is mostly spoken in the southern half of France. According to auto-representations, the area in which Southern French is spoken is much smaller. This tendency is reinforced by the fact that Southern France has never had linguistic and cultural unity (cf. Lonnemann & Meisenburg, 2009, p. 286, see also Chapter 3.2).

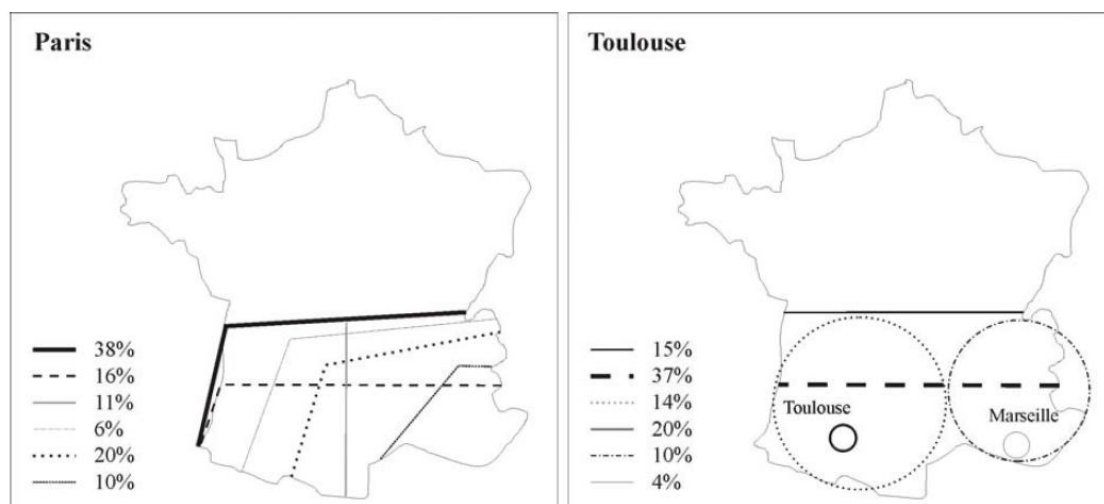


Figure 3.5: Results of Pustka's draw-a-map task in which Parisian and Toulousain participants were asked to indicate *l'Accent du midi* (cf. Pustka, 2010b, p. 130).

The fact that insiders are aware of more heterogeneity is stressed by Binisti and Gasquet-Cyrus' (2003) study about the accents of Marseille. In their study, they asked residents of Marseille about their accent and found that the majority of them distinguish three distinct accents: the 'real' one, the upper middle class ('bourgeoisie') one and the accent of the Northern neighborhoods ('quartiers Nord') (cf. Binisti & Gasquet-Cyrus, 2003, p. 111; Gasquet-Cyrus, 2004, p. 119). The *quartiers Nord* accent is the one attributed to speakers with a North African background. Although it plays an important role in the representations of the accents of Marseille, it is not the accent referred to as the 'real' one. The 'real' accent of Marseille is, according to the Marseillais, the one associated with Marcel Pagnol and the characters featured in his works. 'Real Marseillais' are therefore people who do not belong to the upper middle class, but instead are fishermen, *pétanque* players and, simply put, elderly people you might find in bars close to the Vieux-Port or Estaque (Binisti & Gasquet-Cyrus, 2003, p. 112).

One field in which differences between the southern regions can be observed in production and representations is lexis. For example, the word *chocolatine*, the southwestern equivalent for *pain au chocolat* functions as a strong identity marker, with numerous newspaper articles highlighting Southwesterners' advocacy for the word *chocolatine* (e.g., Baron, 2017; Aubert, 2023).

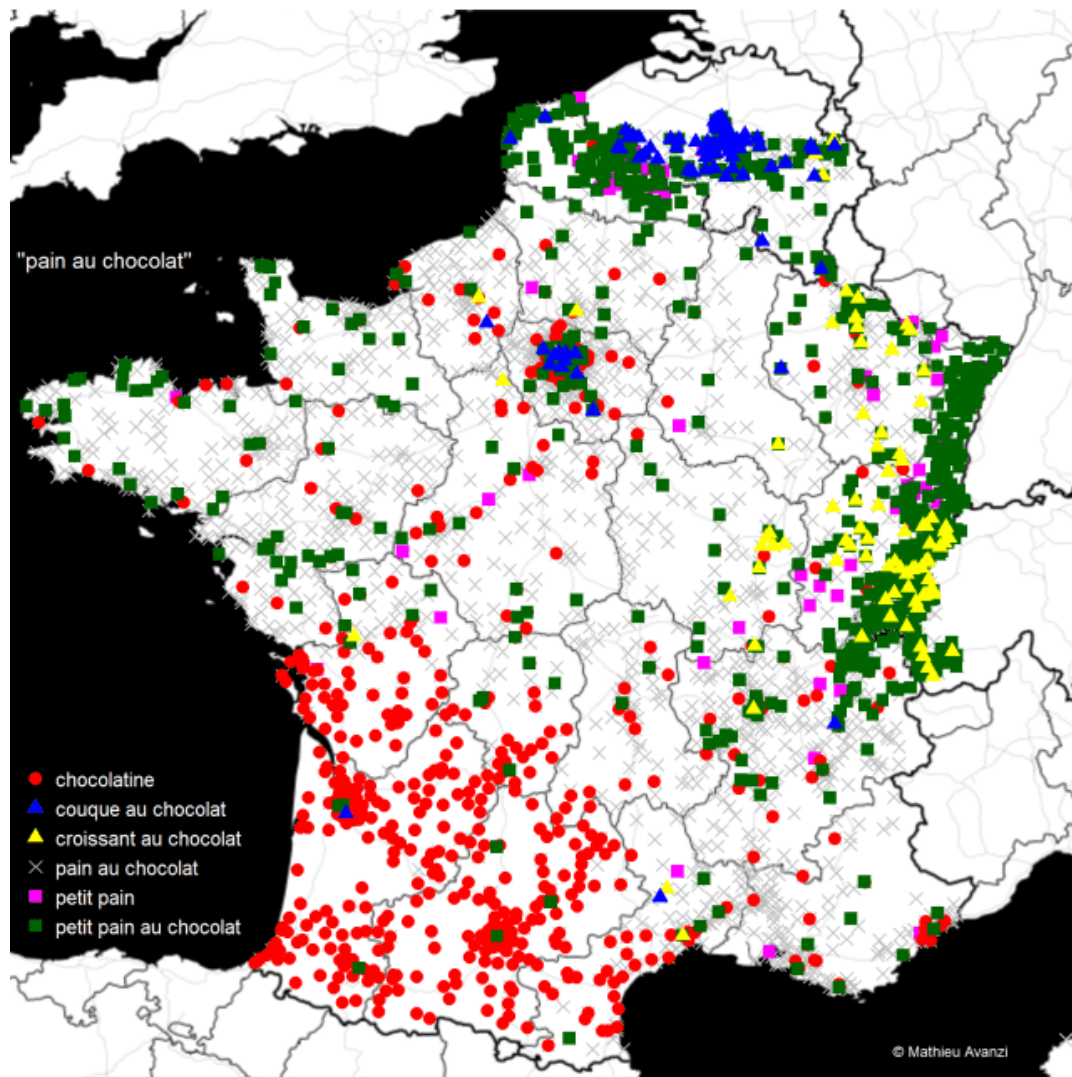


Figure 3.6: Different terms used for *pain au chocolat* (Avanzi, 2016).

City vs. countryside

Linguistic differences between urban and rural areas are largely influenced by language contact. As one of the primordial forces of language change (see Chapter 2.1.1), it significantly influences speech in large cities, which are characterized by high levels of mobility and language contact. This leads to levelling, standardization and the emergence of specific urban accents (cf. Calvet, 2011, p. 15). The PFC data from Douzens (Aude, cf. Durand & Tarrier, 2003, 2016; Eychenne, 2006) and Lacaune (Tarn, cf. Lonnemann, 2006; Meisenburg & Lonnemann, 2009), two smaller municipalities in rural areas, seem to confirm this: The speech under investigation is profoundly conservative, while data collected in the two urban centers Toulouse and Marseille (Courdès-Murphy, 2018) show strong signs of standardization. The results of Pustka's (2010b, p. 140) survey in

Toulouse show that speakers from Toulouse are aware of the variation between city and countryside. 57% of the participants affirmed that there were differences between the city of Toulouse and its rural surroundings.

Languedoc vs. Provence

In speakers' representations, regional varieties are closely linked to administrative divisions, such as Swiss cantons (cf. Christen, 1998, 259) or German states (cf. Lameli, Purschke, & Kehrein, 2008). In France, administrative divisions are often subject to change. In the French Revolution, for example, administrative divisions called *départements* were introduced in an attempt to reorganize the whole country based on new cartographic and geometric principles. Their size was determined by whether they could be crossed on horseback in one day (cf. Schlieben-Lange, 2010, p. 128). Consequently, the division of the country did not account for dialectal 'borders'. Therefore, the dialectal division of Occitan (see Figure 3.2) is not reflected in the departmental division. For instance, the 'border' between Languedoc and Provençal runs through the middle of the department Gard (see Figure 8.36). The departments were subsequently aggregated into larger administrative units called regions. Ever since, there have been several territorial reforms. The last one was implemented in 2016.

While Christen (1998) demonstrated that Swiss cantons have basic level status for the linguistic division of German-speaking Switzerland, no such studies exist for the linguistic division of France. Speakers seem to associate accents with specific cities (e.g., the accent of Le Havre, cf. Hauchecorne & Ball, 1997) or with broader regions, such as southwest and southeast. Pustka's (2011b) study shows that speakers from Toulouse are convinced of major differences between the accents of Toulouse and Marseille (see Figure 3.7). This suggests that there is at least an assumed difference between the Languedoc and the Provençal region.

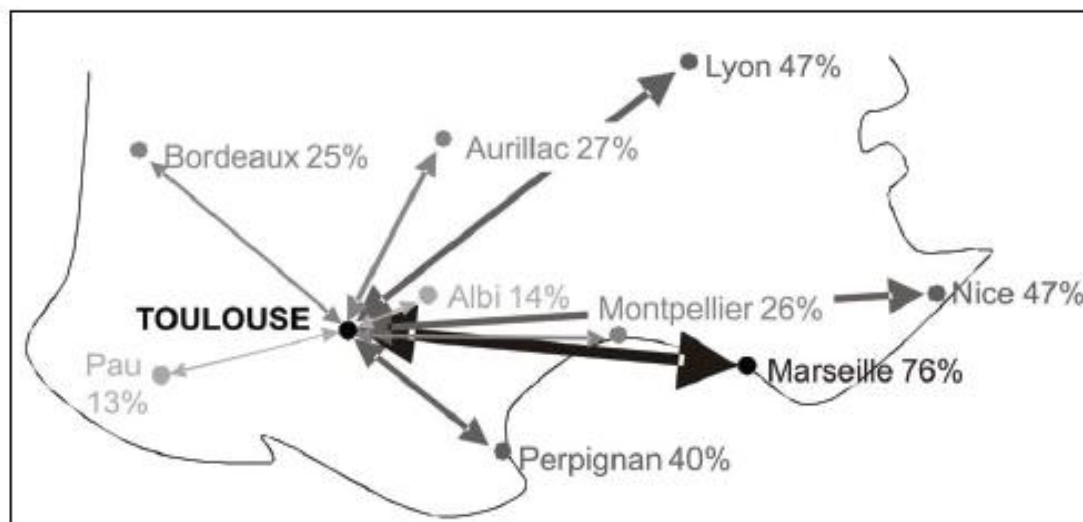


Figure 3.7: Major differences between the accents of Toulouse and Marseille according to speakers from Toulouse (Pustka, 2010b, p. 139)

3.5.3 Linguistic features

An important aspect of representations of varieties is the set of linguistic features that make up these varieties. These linguistic features were investigated in Pustka's (2010b) study. Her questionnaire survey that solely focused on representations and not on perception revealed slightly different auto- and hetero-representations. While nearly 90% of the Paris participants named prosody as one of the characteristics of Southern French, only 36% of the Toulouse participants did the same. Other features named by the participants were nasal appendices of nasal vowels, realization of schwa, *loi de position*, realization of otherwise mute consonants or syllables, and apical [r]. The latter was only marginally named by participants from Paris but by 10% of the participants from Toulouse (cf. Pustka, 2010b, p. 135). In Pustka's (2007) study, she asked students from Paris and Orléans the question "Comment reconnaissez-vous un Aveyronnais?".⁵⁹ The students' answers did not differ greatly from the answers in Pustka's 2010 study. They named nearly the same characteristics, with slight differences. Prosody ("accent chantant") was in second place, while the characteristic that was named most often was the realization of oral vowels with nasal appendices instead of nasal vowels. Some students also answered that people from Aveyron pronounced all the letters (cf. Pustka, 2007, p. 230).

⁵⁹ 'How do you recognize somebody from Aveyron?'

3.6 Perception

With perception being the main focus of this dissertation, perception experiments related to the regional variation of Southern French⁶⁰ will be presented in greater detail in the following chapters. These experiments can be grouped into three categories: tests aimed at identifying social and cultural representations (e.g. Paltridge & Giles, 1984, see Chapter 3.5.1), accent identification tests (e.g. Coquillon, 2005; Woehrling & Boula de Mareüil, 2006a; Pustka, 2010b; Avanzi & Boula de Mareüil, 2019, see Chapter 3.6.1) and one degree of accentedness test (e.g., Pustka, 2007, 2009b, see Chapter 3.6.2).

3.6.1 Accent identification tests

As stated in Chapter 2.3.2, accent identification tests can be used as a tool to find out whether regional or social accents can be distinguished and thus exist ‘in the real world’ (cf. Boughton, 2006). Roughly 70 years ago, Pierre Bec wrote the following about the perception of the Southern French accent:

La réalité de *l’accent* méridional tombe spontanément sous les sens, mais il est peu de gens qui sachent l’appréhender dans sa complexité et la définir à sa juste mesure. Rien n’est plus directement perceptible au Parisien que cet *accent* dont il détecte, avec un sourire, les moindres traces. Rien n’est plus sensible au Méridional que le moindre vestige d’une façon de parler qui n’est pas la sienne et pourtant ni l’un ni l’autre ne sont à l’aise quand on leur demande de dire avec précision ce qui les choque dans leur prononciation respective.⁶¹ (Bec, 1952, p. 22)

Today, French L1 speakers can still easily identify Southern French accents when they are paired with accents from the North (cf. Coquillon, 2005, p. 144; Pustka, 2010b, 143; Avanzi & Boula de Mareüil, 2019, 62). However, the question of whether they can distinguish between different southern accents cannot be answered as easily. Before now, different accent identification tests have been conducted with varying results (see Table 3.5).

⁶⁰ For perception experiments on cultural representations of French varieties see Chapter 3.5.1.

⁶¹ ‘The existence of a southern accent seems at first glance obvious, but only few people can grasp it in its complexity and define it to its true extent. To the Parisian, no accent is more perceptible than this one, of which he detects, with a smile, the slightest traces. Nothing is more sensitive to the Southerner than the smallest vestige of a way of speaking that is not his, and yet neither of them are comfortable when asked to say precisely what shocks them in their respective pronunciation.’ (Translation LJ).

	Speakers' origin (and number)	Stimuli	Listeners' origin (and number)	Results
Coquillon (2005)	Toulouse and surroundings (14) surroundings of Marseille (10) Σ 24	Semi-spontaneous speech	Southeast Southwest Σ 20	69% correct answers
Woehrling and Boula de Mareüil (2006a)	Vendee (6) Normandy (6) Switzerland (6) Basque region (6) Provence (6) Languedoc (6) Σ 36	Spontaneous speech and read speech	Paris (25) Aix-en-Provence (25) Σ 50	Paris: correct identification of Languedoc 29.3% and of Provence 28.7% Aix-en-Provence: correct identification of Languedoc 32.7% and of Provence 35.7%
Pustka (2010b)	Toulouse (5) Marseille (5) Paris (2) Σ 12	Spontaneous speech	Paris, Toulouse (87) Σ 87	65% correct answers (not counting missing answers)
Avanzi and Boula de Mareüil (2019)	Alsace (4) Belgium (4) Bretagne (4) Corsica (4) Nord (4) Southeast (4) Southwest (4) Switzerland (4) Σ 32	Spontaneous speech	Alsace (79) Belgium (118) Bretagne (145) Corsica (10) Nord (63) Southeast (107) Southwest (102) Switzerland (48) other (903) Σ 1575	Correct answers Southwest: 42.3%, Southeast: 38.4%

Table 3.5: Four different accent identification tests containing Southern French stimuli.

While Woehrling and Boula de Mareüil (2006) and Avanzi and Boula de Mareüil (2019) were interested in the identification of a larger number of accents, Coquillon (2005) and Pustka (2010a) focused on the difference between Toulouse and Marseille. The studies will now be presented in near-chronological order.

Coquillon's (2005) study produced the best results in terms of accent identification. Her primary goal was to give a prosodic characterization of the accent of the region of Marseille. One important part of her dissertation focused on final schwa. To determine whether final schwa in the Marseille region showed unique rhythmic and intonational patterns, she compared it with final schwa from another region. For this, she chose Toulouse. She used the accent identification test presented below to validate her corpus. For this corpus, she recorded 14 speakers from the outskirts of Toulouse and ten from the outskirts of Marseille. Although her primary focus was on Toulouse and Marseille, she avoided recording speakers from *intra muros* and selected them from within a radius of 50 km from each city. 20 participants were asked to listen to 22 different semi-spontaneous stimuli and to answer two questions: *Selon vous, le locuteur est originaire de quelle région?* ‘Which region region does this speaker come from?’ with

the possible answers *Sud-Est* ‘southeast’ and *Sud-Ouest* ‘southwest’, and *En êtes-vous...* ‘Are you...’ *tout à fait sûr* ‘very sure’ *plutôt sûr* ‘a bit sure’ or *pas du tout sûr* ‘not sure at all’ (cf. Coquillon, 2005, pp. 152–159).

Ranking	Speakers	Correct identification	Degree of certitude		
			Completely sure	Rather sure	Not sure at all
1	Mh_FA	95%	60%	35%	0%
2	Mh_DB	85%	50%	35%	0%
3	Mh_GL	85%	40%	30%	15%
4	Th_SC	80%	30%	40%	10%
5	Th_JS	75%	30%	40%	5%
6	Mh_JB	90%	45%	20%	25%
7	Th_CE	80%	30%	35%	15%
8	Th_EJ	75%	30%	30%	15%
9	Mh_AH	75%	25%	35%	15%
10	Tf_BC	70%	20%	40%	10%
11	Th_CL	70%	15%	45%	10%
12	Mf_SC	75%	30%	25%	20%
13	Mf_CP	60%	25%	30%	5%
14	Tf_MM	55%	25%	30%	0%
15	Th_RO	70%	15%	40%	15%
16	Th_MB	60%	40%	10%	10%
17	Mh_FD	70%	35%	10%	25%
18	Tf_MR	55%	25%	20%	10%
19	Th_LM	60%	20%	25%	15%
20	Th_FR	50%	10%	35%	5%
21	Th_LA	60%	10%	30%	20%
22	Th_CP	40%	10%	20%	10%

Table 3.6: Results of Coquillon’s accent identification test: Correct identification and degree of Certitude, N=20 (cf. Coquillon, 2005, p. 161).⁶²

⁶² The listeners do not seem to have given answers to all stimuli. This might be why the percentages of the degree of certitude rating do not add up to 100%. Additionally, it means that when no answer was given, the missing answer were counted as incorrect.

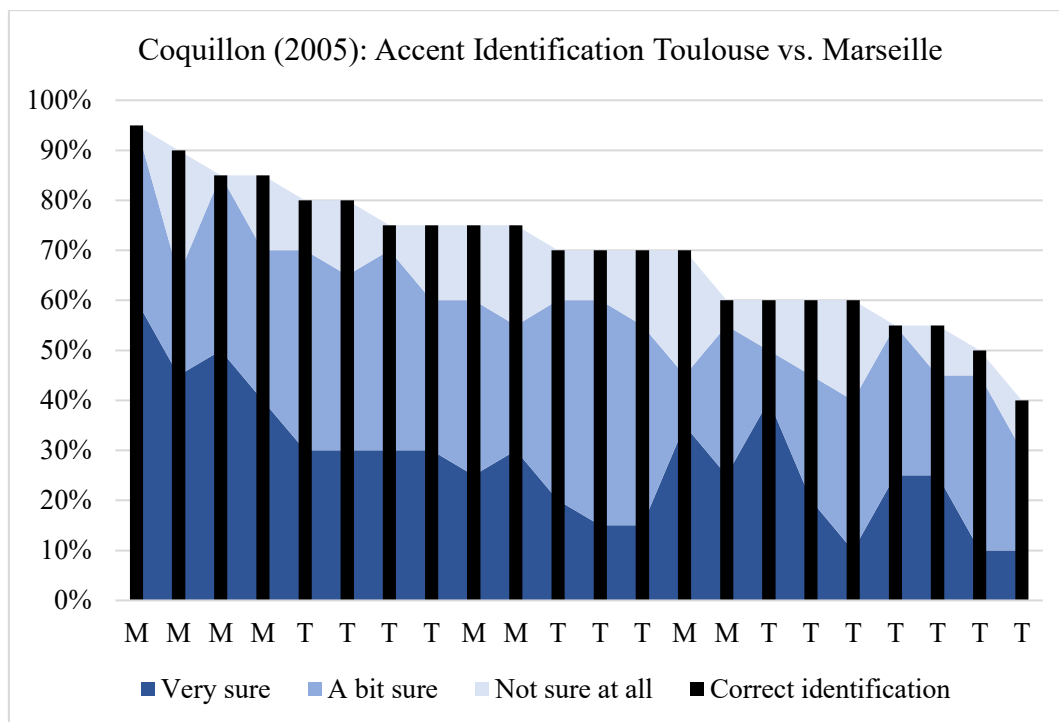


Figure 3.8: Simplified chart representing Coquillon's results: Correct identification and degree of Certitude (cf. Coquillon 2005: 161).

Table 3.6 shows the results of Coquillon's (2005) accent identification test. 20 out of 22 speakers (90%) were identified with identification rates above 50%, 14 of them with identification rates above 60%. These results suggest that Coquillon's listeners had no major difficulties identifying the accents of the regions of Marseille and Toulouse. Additionally, listeners showed a tendency to be more capable of classifying speakers from the outskirts of Marseille than speakers from the outskirts of Toulouse. This may be because the listeners from the southeast outnumbered the listeners from the southwest.

Pustka's (2010b) study aimed to investigate the perception of Southern French. She used stimuli of spontaneous speech of five speakers from Toulouse, five from Marseille and two from Paris and asked listeners to judge these stimuli as to where the speakers came from, their age and their level of education. Listeners from Toulouse and Paris had to indicate on maps where they thought the speakers came from.⁶³ The participants from Paris only gave answers in 59% of the cases and the participants from Toulouse in 77%. Out of the answers given by the participants from Paris, 61% of the

⁶³ The listeners were asked to indicate the provenance of the speakers on three different maps of France. The first map was split into two regions: northern France and southern France, the second into three regions: northern France, southwest and southeast, and the third did not contain any further marks. Listeners were asked to locate the speakers as closely as possible on this map. The results described refer to the second map.

answers correctly identified speakers. Out of the answers given by the participants from Toulouse, 67% were correct. These numbers are thus not directly comparable with Coquillon's (2005). While Coquillon counted missing values as incorrect and did not indicate their number, Pustka put the missing numbers aside and calculated her results on the basis of the given values. Accordingly, the differences in identification rates are larger between the two studies than the numbers suggest at first glance.

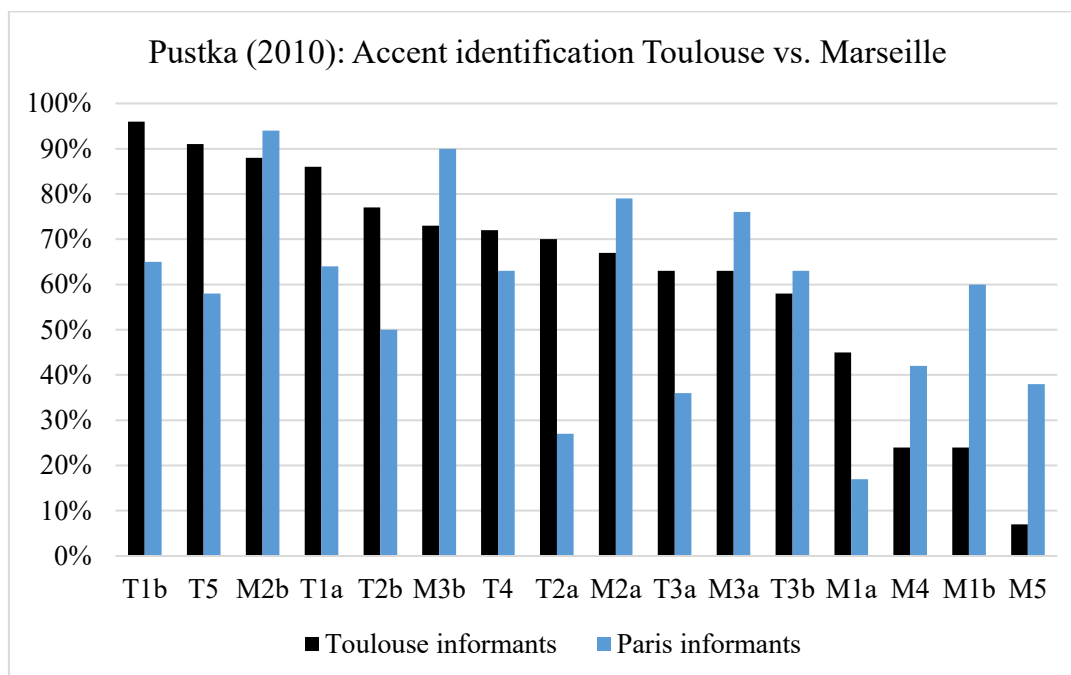


Figure 3.9: Accent identification of Toulouse and Marseille: Toulouse participants vs. Paris participants (Pustka 2010: 146).

Figure 3.9 shows the answers given per stimulus in Pustka's (2010b) study.⁶⁴ In total, we can observe a tendency in which listeners from Toulouse better identified Toulouse speakers, while listeners from Paris better identified Marseille speakers. This may be due to Marseille being the prototypical southern accent for Parisians (see Chapter 3.5.1). Toulouse listeners, for their part, were more likely to classify speakers as being from Toulouse, due to an *annexation effect* (see Chapter 2.3.2) in which, when little or no accent is recognized, listeners classify speakers as belonging to their own speech community (cf. Boughton, 2006, p. 300; Pustka, 2010b, p. 145).

⁶⁴ Some of the speakers provided several stimuli. When this was the case, their stimuli were given the additional code a or b.

Woehrling and Boula de Mareüil's (2006) accent identification test was designed with stimuli of 36 speakers from six different points of investigation of the PFC corpus.⁶⁵ Two of these are situated in northern France (Normandie and Vendée), one in Switzerland (Vaud) and three in southern France (Basque region, Languedoc and Provence). While the northern and Swiss points of investigation are all small municipalities, the southern points contain one small village (Douzens, Languedoc), one town with roughly 25,000 inhabitants (Biarritz, Basque region) and the second-largest city in France with approximately 850,000 inhabitants (Marseille, Provence). From each speaker, two stimuli were chosen; one of them contained read speech and the other spontaneous speech. Two groups of listeners, one from Paris (25) and one from Marseille (25), were asked to classify the speakers' origins from six possibilities: Brécey (Normandie), Treize-vents (Vendée), Vaud (Switzerland), Biarritz (Pays Basque), Douzens (Languedoc) and Marseille (Provence).

Table 3.7 and Table 3.8 show the results of the Woehrling and Boula de Mareüil (2006a) accent identification test. They clearly show that the Swiss accent was best identified by both groups, followed by the two northern French accents. Additionally, the listeners accurately identified Southerners as Southerners. However, many of the southern speakers were confounded within southern regions. Parisian listeners primarily thought Basque region speakers and Provence speakers were from Languedoc, while Languedoc speakers were most often mistakenly identified as Provence speakers. Listeners from Aix performed slightly better and identified Basque speakers 41% of the time, Languedoc speakers 33% of the time, and Provence speakers 36% of the time. Although they did not confound the regions as the Paris speakers did, these scores are still alarmingly lower than Coquillon's (2005) speakers. Interestingly, Woehrling and Boula de Mareüil also observed a correlation between the age of the speakers and identification: the older the speakers, the better they were identified. The difference between reading and spontaneous speech, on the other hand, did not influence identification accuracy. From these results, Woehrling and Boula de Mareüil (2006a) conclude that the accents of Provence and Languedoc have lost the distinctiveness they once had. An analysis of the influence of the observed specific phonetic or phonological characteristics on the perception of the speakers is, however, missing.

⁶⁵ Woehrling and Boula de Mareüil (2006) chose 6 speakers in each point of investigation, equally distributed according to age.

Perceived origin Origin	Vendée	Normandie	Switzerland	Basque region	Languedoc	Provence	Total
Vendée	37%	48%	5%	2%	7%	1%	300
Normandie	37%	51%	2%	3%	6%	1%	300
Switzerland	11%	15%	71%	1%	2%	1%	300
Basque region	7%	6%	1%	36%	38%	12%	300
Languedoc	6%	2%	0%	25%	29%	38%	300
Provence	12%	8%	2%	20%	30%	29%	300
Total	327	387	242	262	338	244	1800

Table 3.7: Answers given by the Paris participants of the Woehrling and Boula de Mareüil (2006) study.

Perceived origin Origin	Vendée	Normandie	Switzerland	Basque region	Languedoc	Provence	Total
Vendée	34%	47%	8%	5%	5%	1%	300
Normandie	38%	46%	3%	6%	6%	2%	300
Switzerland	13%	13%	73%	13%	0%	0%	300
Basque region	10%	5%	2%	41%	32%	10%	300
Languedoc	6%	5%	0%	28%	33%	29%	300
Provence	10%	13%	1%	13%	27%	36%	300
Total	331	388	262	281	308	230	1800

Table 3.8: Answers given by the Aix-en-Provence participants of the Woehrling and Boula de Mareüil (2006) study.

Avanzi and Boula de Mareüil's (2019) study has a similar design to the Woehrling and Boula de Mareüil (2006a) study. The principal aim of both accent identification tests was to find out whether different French accents could be identified. Avanzi and Boula de Mareüil's (2019) test, however, stands out from all others. With its 1,575 listeners, it surpasses the number of listeners in all the other tests put together. Avanzi and Boula de Mareüil (2019) worked with 32 stimuli from eight different points of investigation. In every point of investigation, they selected four speakers, all coming from different points (from smaller municipalities to bigger cities) within the respective area, as shown in Figure 3.10. Approximately 40% of their listeners came from the same regions as the

speakers, which made it possible to investigate whether every listener recognized their own accent best. In the test, listeners were asked to indicate the perceived origin of the speakers in question by clicking on one of the designated areas of the map shown in Figure 3.11.

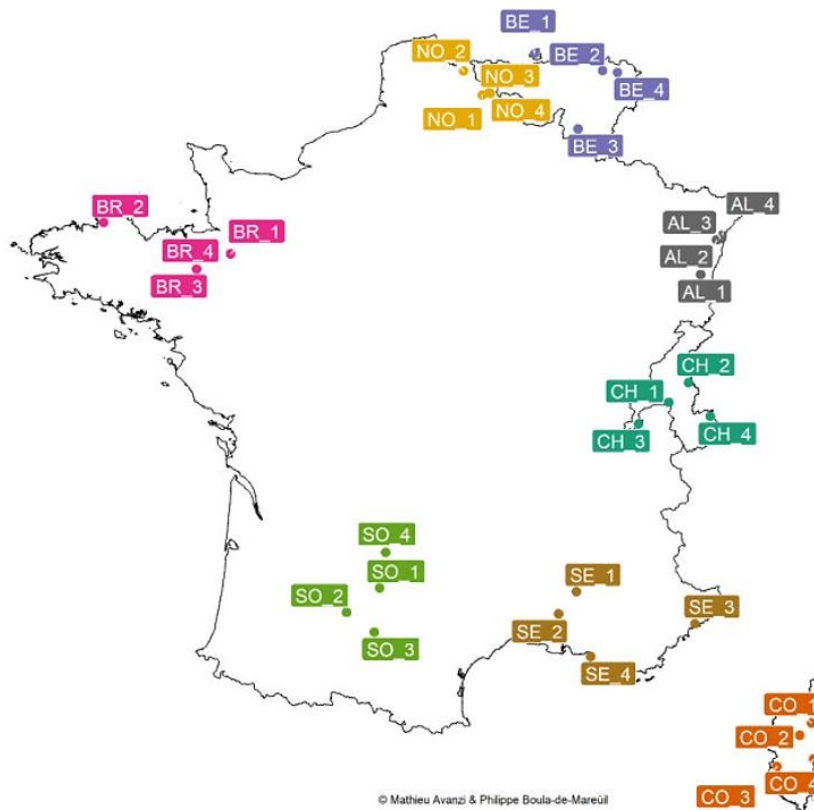


Figure 3.10: Origin of the speakers in the Avanzi and Boula de Mareuil (2019, p. 58) accent identification test.

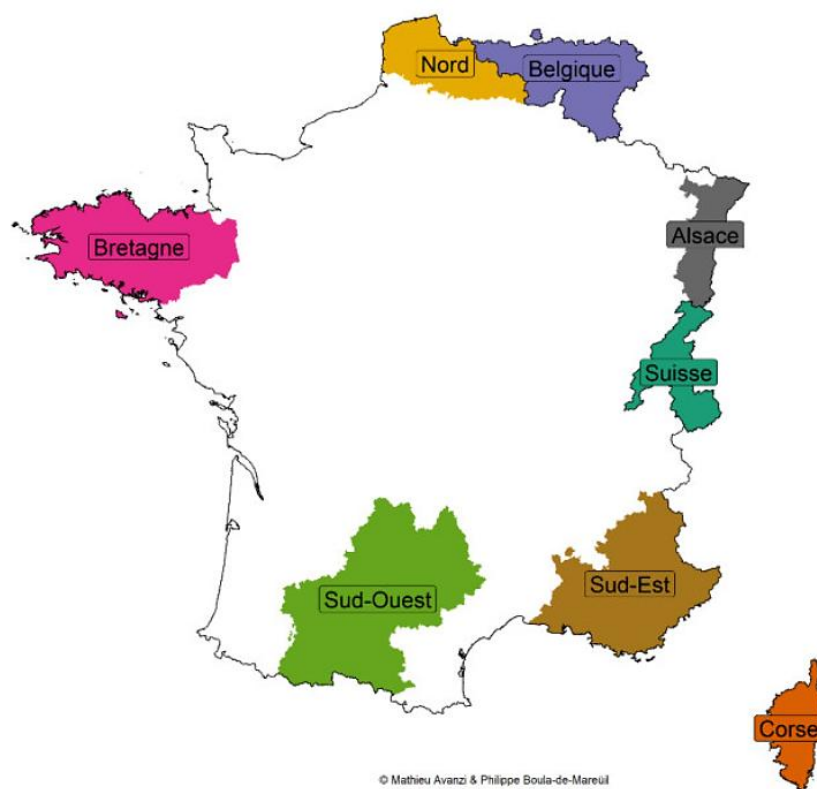


Figure 3.11: Map used in the accent identification test (Avanzi & Boula de Mareuil, 2019, p. 58).

Perceived origin	Alsace	Belgium	Bretagne	Corsica	North	Southeast	Southwest	Switzerland
Origin	Alsace	Belgium	Bretagne	Corsica	North	Southeast	Southwest	Switzerland
Alsace	40%	11%	10%	1%	9%	1%	1%	28%
Belgium	13%	39%	9%	3%	17%	2%	3%	14%
Bretagne	11%	6%	46%	3%	18%	3%	4%	9%
Corsica	7%	8%	10%	18%	7%	22%	21%	8%
North	11%	6%	37%	2%	29%	4%	3%	7%
Southeast	2%	1%	3%	12%	1%	38%	42%	1%
Southwest	2%	0%	4%	15%	1%	34%	42%	1%
Switzerland	11%	8%	15%	4%	14%	7%	7%	35%

Table 3.9: Results of Avanzi and Boula de Mareuil's (2019: 61) identification test.

Table 3.9 shows the overall results of Avanzi and Boula de Mareuil's (2019) test. While the Swiss accent produced the best results in the Woehrling and Boula de Mareuil (2006) study (with identification rates between 71% and 73%), this time, it is surpassed by the

Breton accent (with an identification rate of 46%),⁶⁶ followed by Southwest (42%) and Alsace (40%). These differences are rather striking and indicate that some changes in methodology can lead to significantly different outcomes. A similarity is, however, the fact that all Southern accents were once again perceived to be quite alike. Southeasterners and Southwesterners were both primarily thought to come from the Southwest (42%). However, when comparing the identification rates of the respective locals with those of the non-locals, the results are different (see Table 3.10). They show that locals generally perform significantly better when identifying their own accent. It is also possible that an annexation effect (cf. Chapter 2.3.2) has influenced these results. Avanzi and Boula de Mareüil also discuss the identification of the different southern accents in more detail and conclude once more that intra-southern accent differences seem to be vanishing.

	Alsace	Belgium	Brittany	Corsica	North	Southeast	Southwest	Switzerland
Locals	79%	75%	59%	93%	55%	51%	65%	54%
Non-locals	38%	36%	45%	17%	28%	37%	40%	34%

Table 3.10: Identifications by locals vs. non-locals (Avanzi & Boula de Mareüil, 2019, p. 66).

These different studies reveal several similarities and divergences, not only in their test designs but also in their results. In each test, some speakers were identified, but at the same time, several speakers were misidentified as coming from other regions. Yet, while most of Coquillon's (2005) speakers were identified, other studies have failed to replicate such results. These inconsistencies, along with the fact that most of these studies were conducted with relatively small groups of listeners, highlight the need for further research. This dissertation therefore aims to clarify whether speakers can be identified, who these speakers are, and what factors influence the perception of geographic origin. To address this, a series of four accent identification tests was conducted, exploring different methods for examining the perception of phonological variation in southern France (see Chapter 8).

⁶⁶ According to Avanzi and Boula de Mareüil (2019, p. 60), this surprising result could be due to the fact that Brittany (Bretagne) does not have any stereotypical representation in the speakers' minds. The frequent choice of Brittany could thus be a default answer, predominantly given when no accent was identified. However, it should be noted that Brittany is a tourism hotspot relatively close to Paris, which should at least lead to some familiarity with the local accent.

3.6.2 Degree of accentedness test

So far, only one degree of accentedness test has been carried out regarding Southern French. This was done by Pustka (2007, 2009b).⁶⁷ One of the aspects she investigated when analyzing language contact in Paris was to find out which of her speakers were deemed more prototypical than others, and which linguistic and extralinguistic features contributed to their prototypicality. For this, she chose 50 speakers from her corpus (speakers from Paris, Guadeloupe and Aveyron, as well as speakers from Guadeloupe and Aveyron living in Paris). Just like Woehrling and Boula de Mareüil (2006a), she selected a sentence of the PFC text read aloud, but a different one:

Jusqu'ici les seuls titres de gloire de Beaulieu étaient son vin blanc sec, ses chemises en soie, un champion local de course à pied (Louis Garret), quatrième aux jeux olympiques de Berlin en 1936, et plus récemment, son usine de pâtes italiennes.

She then asked 218⁶⁸ university students from Paris and Orléans to complete a questionnaire that included questions about representations. In this questionnaire, they were also asked to indicate to what degree the speakers they were listening to corresponded to the categories *speakers from Aveyron* or *speakers from Guadeloupe*. They were provided with a line marked with the poles 0% and 100%. The results were then calculated based on the mean scores attributed to the speakers.

⁶⁷ Since the 2009a article is an abbreviated version of the 2007 account of this degree of accentedness test, the following descriptions are based on the larger 2007 version.

⁶⁸ For the evaluation of the test, only listeners who were native speakers of French were considered. The number was thus reduced to 193.

Aveyron speakers living in Aveyron				Aveyron speakers living in Paris		
speaker	rural vs. urban	date of birth	degree of typicality	speaker	date of birth	degree of typicality
12bnf1	rural	1926	92%	75xar1	1983	67%
12blv1	rural	1938	92%	75xcm1	1978	60%
12atp1	urban	1933	85%	75xrg1	1924	58%
12bbr1	rural	1948	84%	75xsl1	1978	55%
12bma1	rural	1980	83%	75xjs1	1915	41%
12als1	urban	1973	77%	75xba1	1936	28%
12acr1	urban	1975	54%	75xlv1	1950	26%
12aja1	urban	1937	51%	75xad1	1926	11%
12bec1	rural	1982	41%	75xmb1	1959	6%
12brm1	rural	1985	39%	75xjo1	1979	6%

Table 3.11: Results of Pustka's (2007, p. 227) degree of accentedness test. Question: "To what degree (from 0% to 100%) would you say that this speaker is from Aveyron?"

The results in Table 3.11 only show the Aveyron speakers and indicate that speaker mobility as well as age have an important impact on the perceived typicality of accents. While the degrees of typicality attributed to the Aveyron speakers living in Aveyron range from 39% to 92%, Aveyron speakers living in Paris obtained mean scores between 6% and 67%. The most typical of the speakers living in Aveyron are the oldest speakers from a more rural area, while the most typical Aveyron speakers living in Paris were two younger speakers who had not yet spent a lot of time in Paris. If we only consider the non-mobile speakers, the extralinguistic factors *age* and a *town-village* divide influenced the degree of typicality the most. However, as Pustka (2007, p. 228) stresses, these factors did not influence the perceived degree of accentedness directly but rather correlated with particular linguistic features.

Degree of typicality	Speaker	Aveyron or Paris	[r] vs. [ʁ]	Appendices	Final schwa	Ending of <i>Garret</i>
92%	12bnf1	Aveyron	[r]	90%	80%	[e]
92%	12blv1	Aveyron	[ʁ]	90%	100%	[ɛt]
85%	12atp1	Aveyron	[ʁ]	90%	60%	[e]
84%	12bbr1	Aveyron	[ʁ]	100%	80%	[e]
83%	12bma1	Aveyron	[ʁ]	60%	80%	[e]
77%	12als1	Aveyron	[ʁ]	90%	60%	[e]
67%	75xar1	Paris	[ʁ]	30%	60%	[e]
60%	75xcm1	Paris	[ʁ]	60%	40%	[e]
58%	75xrg1	Paris	[ʁ]	30%	80%	[e]
55%	75xsl1	Paris	[ʁ]	20%	0%	[e]
54%	12acr1	Aveyron	[ʁ]	60%	80%	[e]
51%	12aja1	Aveyron	[ʁ]	50%	40%	[e]
41%	12bec1	Aveyron	[ʁ]	40%	60%	[e]
41%	75xjs1	Paris	[ʁ]	0%	40%	[ɛ]
39%	12brm1	Aveyron	[ʁ]	40%	80%	[e]
28%	75xba1	Paris	[ʁ]	10%	60%	[e]
26%	75xlv1	Paris	[ʁ]	0%	0%	[e]
11%	75xad1	Paris	[ʁ]	0%	60%	[e]
10%	75wcn2	Paris	[ʁ]	0%	60%	[ɛt]
6%	75xmb1	Paris	[ʁ]	0%	20%	[e]
6%	75xjo1	Paris	[ʁ]	0%	20%	[ɛ]
4%	75wnp1	Paris	[ʁ]	0%	0%	[ɛ]
2%	75wdf1	Paris	[ʁ]	0%	0%	[ɛ]
1%	75wsd1	Paris	[ʁ]	0%	0%	[ɛ]
1%	75wbv1	Paris	[ʁ]	0%	0%	[e]

Table 3.12: Results of Pustka's (2007, p. 238) degree of accentedness test in correlation with linguistic characteristics of the stimuli.

As can be seen quite clearly in Table 3.12, the characteristics of Southern French under investigation have an important impact on the perceived degree of typicality. The more southern characteristics a speaker exhibits, the more likely they are to be perceived as a typical Aveyron speaker, as exemplified by the strong correlation between the degree of typicality and nasal appendix rates (see Figure 3.12). However, the fact that the pronunciation of all letters is part of the representations of Southern French, as would have been the case with *Garret* pronounced with a final [t], does not seem to have played such an important role in the perception of prototypicality (cf. Pustka, 2007, p. 233).

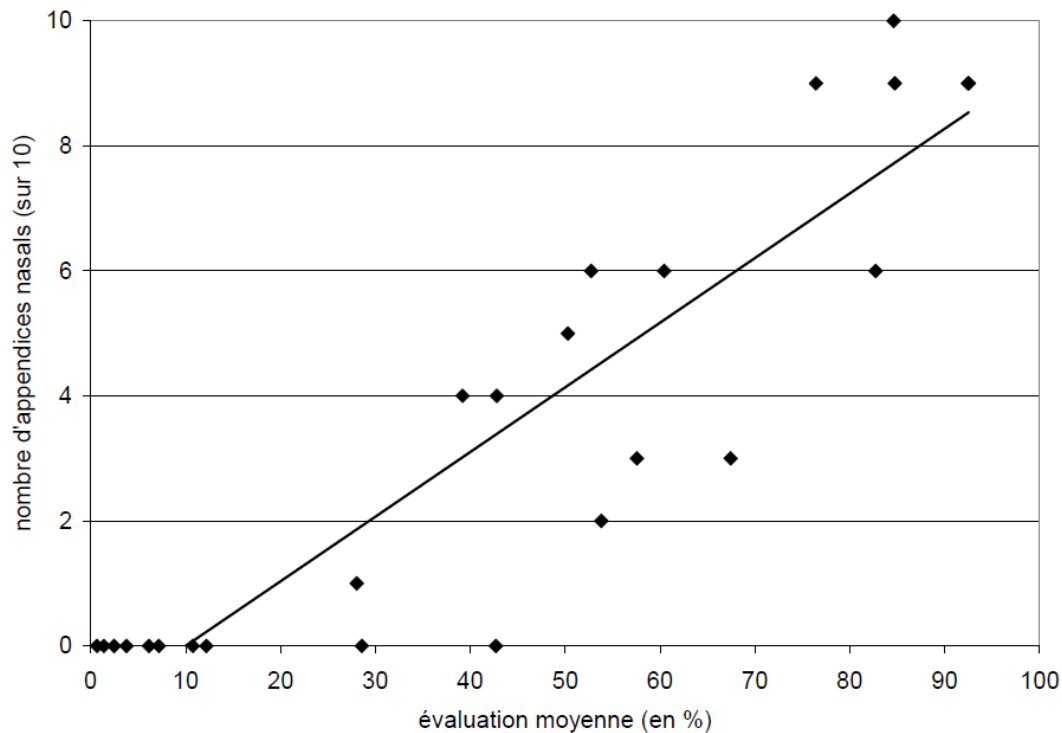


Figure 3.12: Correlation between degree of typicality (*évaluation moyenne*) and number of nasal appendices (Pustka, 2007, p. 232).

From her findings, Pustka (2007, pp. 239–240) additionally draws the following conclusions:

- The most typical of her speakers are indeed the ones that correspond to NORMs
- Speakers with strong regional loyalty produce more southern features (and are perceived more typical) than others
- Perceived differences are gradual
- Southern French characteristics correlate strongly with perceived typicality.

She uses this finding to create a prototype model of Southern French (see Figure 3.13), with the NORMs in the center and migrants closer to the outside. The question, however, remains as to the way in which these most typical Southern French speakers contribute to the division of southern France into different accent regions. In other words: What role do NORMs play in accent identification tests? This question plays an important role in this dissertation and will be discussed in greater detail in Chapter 8.

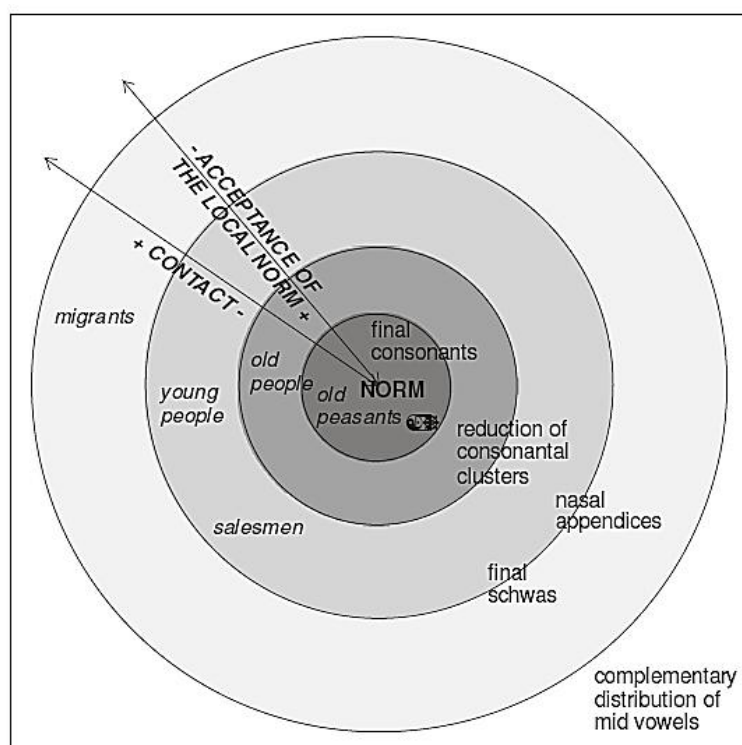


Figure 3.13: A prototype model of Southern French (Pustka, 2009b, p. 92).

3.7 Accent gestalt

As stated in Chapters 2.1.3.6 and 3.5.1, varieties exist in the minds of the speakers. It is striking that many nonlinguistic associations with these varieties are consistent in a certain community (e.g., the association of the ‘real accent of Marseille’ with fishermen and pétanque players, cf. Binisti & Gasquet-Cyrus, 2003, p. 112). An interesting way to explore such associations is through the mapping of visual *gestalts* to linguistic varieties.

A study concerned with this was conducted by Berthele (2006, 2010b, 2010a), who carried out a ‘bubble task’ experiment which is closely linked to and based on Ramachandran and Hubbard’s *kiki* and *bouba* experiment (2001), which, in turn, was inspired by the works of Köhler (1929) and Werner (1934) who had asked participants to associate certain sounds (*takete* and *maluma*) to specific visual objects (see Figure 3.14). All experiments that used visual *gestalts* led to consistent answers: More than 90% of the participants associated *bouba* or *maluma* with the round object and *kiki* or *rakete* with the sharply edged one.

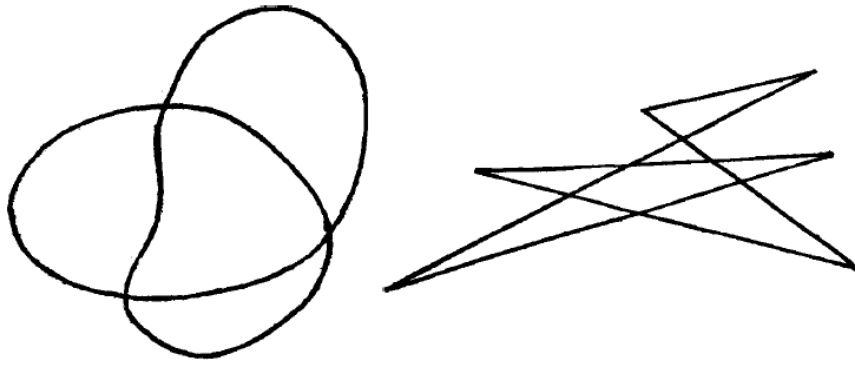


Figure 3.14: Köhler's *maluma* and *takete* stimuli (1929, p. 225).

Berthele's experiment went further than the testing of associations of nonsense words with visual *gestalts*. He asked participants from the German part of Switzerland in face-to-face interviews whether they could assign any varieties, dialects or languages to visual *gestalts*. These visual *gestalts* were abstract drawings in speech bubbles by the artist Andreas Gerber (see Figure 3.15).

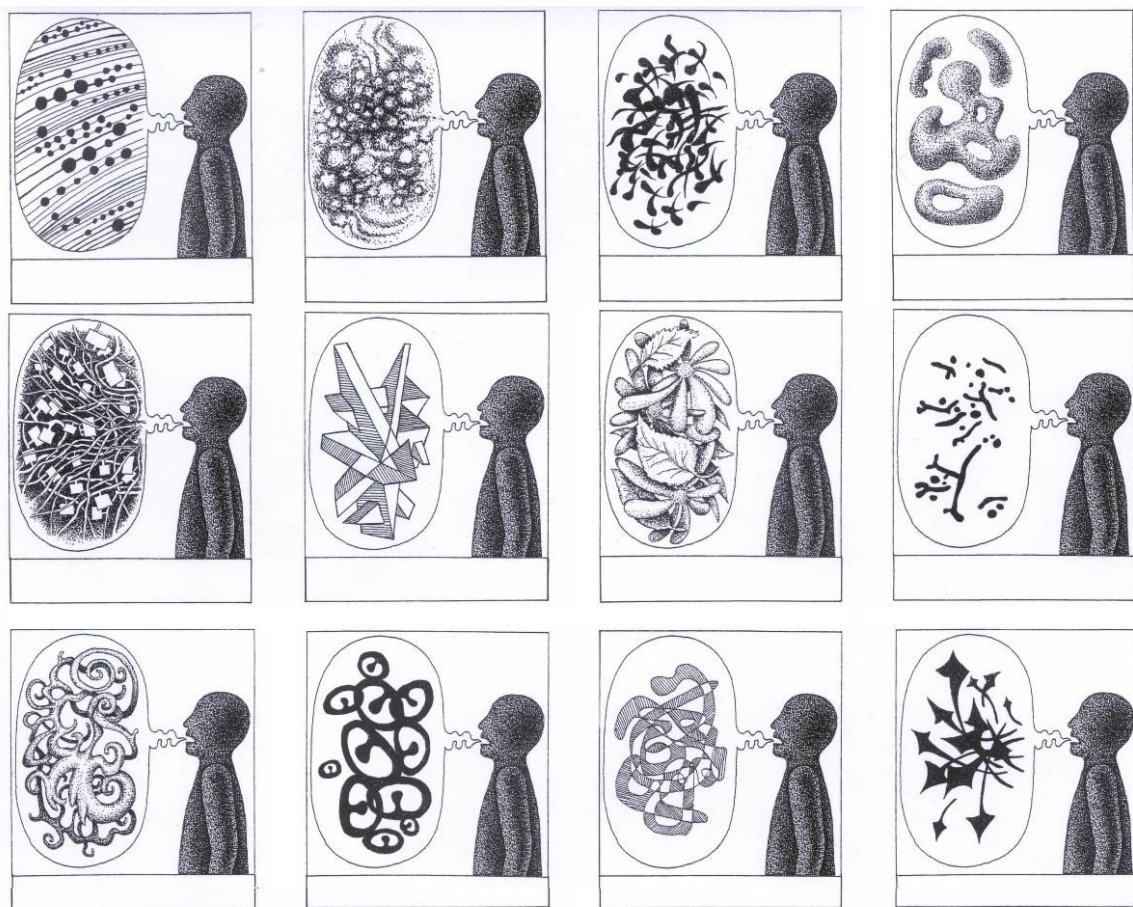


Figure 3.15: Speech bubbles drawn by Andreas Gerber used as visual stimuli for Berthele's (2006) study.

Although this task provided a lot of choice for the participants, with some of the drawings resembling each other more or less, it is notable that there were some consistencies in the answers. Standard High German was, for instance, mostly attributed to sharp and edgy *gestalts*, while the local Bern dialect was associated with flowery and soft contours (cf. Berthele, 2010a, p. 272). This underlines that speaker groups share some specific associations with certain linguistic varieties, i.e. sharpness and correctness with the standard variety that enjoys overt prestige and flowery and soft contours with regional varieties enjoying covert prestige, and that these can be visualized with the help of such *gestalts*. To my knowledge, no such test has been conducted about French regional varieties.

Although Southern French is an important variety of regional French, inter-southern differences have scarcely been subject to linguistic investigation. In the auto-representations of the Southerners, there seem to be differences, but accent identification tests have left the question of discernable accents unclear. Additionally, Pustka's (2007, 2009b) prototype approach merits further development. This dissertation therefore aims to identify discernable prototypical Southern French varieties on the levels of perception and representations, using questionnaire surveys (online and offline), interviews, and accent identification tests that are sometimes paired with additional correctness, pleasantness, and prototypicality ratings.

4 Methodology

As stated in Chapter 0, this dissertation aims to investigate regional variation in Southern France and considers varieties as cognitive representations in the minds of speakers that cannot be directly observed in the real world. Instead, they must be abstracted from production and perception data (cf. Pustka, 2009b, p. 82). There are various methods to choose from, such as interviews, questionnaires, hand drawn maps, perception tests or experiments possibly using a matched guise technique, as well as physiological and neurological measurements (cf. Preston, 1999b, xxxiv; Krefeld & Pustka, 2010a, pp. 15–16, 2024, xxx). None of these methods should be used exclusively. Just like in other disciplines, the best approach in perceptual dialectology is a triangulation of methods (cf. Krefeld & Pustka, 2010a, p. 16; Purschke, 2011, pp. 150–151; Albert & Marx, 2017, p. 21).

The first methodological decision of this research project involved choosing identification tests as the core method. Additionally, several other decisions had to be made. First, it was important to decide which methods should be combined with the core method. Secondly, it was necessary to decide on the types of stimuli (speech style and speakers) that should be used in the accent identification tests. Lastly, it was important to determine how the tests should be designed and conducted, as well as how the results should be interpreted. The research process was split into six different phases (see Figure 4.1).

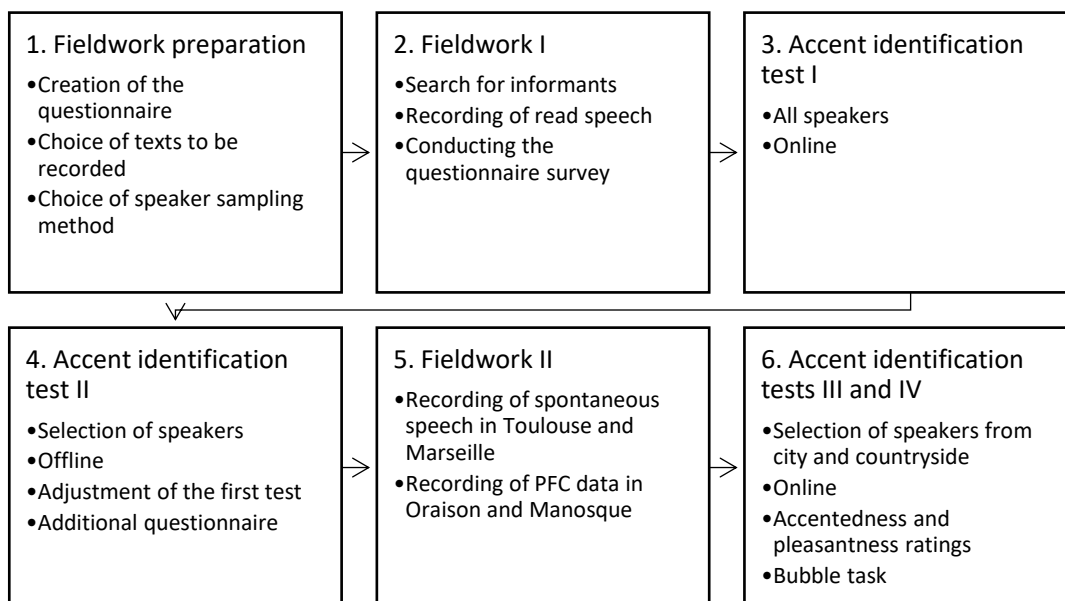


Figure 4.1: Different phases of the research process.

Since the different phases of research were sometimes based on rather repetitive methodology, this chapter is not structured according to the different phases but according to the methods employed. Chapter 4.1 addresses overall questions and challenges and Chapter 4.2 gives an overview of the overall design of the research project. Chapter 4.3 is concerned with production data: I first describe how the speakers were selected (Chapter 4.3.1) and then how they were recorded in Toulouse and Marseille (Chapter 4.3.2.1) and in the rural area of Oraison/Manosque (4.3.2.2). Chapter 4.3.3 describes how the recorded data was treated. Chapter 4.4 clarifies the different methods applied to gather the data on representations and attitudes, while Chapter 4.5 outlines the four different accent identification tests conducted to investigate the perception of Southern French accents. The latter is the focus of this dissertation and will therefore be discussed in greater detail in Chapter 8. The last chapter of this section, Chapter 4.6, describes the statistical analysis of the data.

4.1 Questions and challenges

The most important challenge of this dissertation is the question of how to determine prototypical representations of accents. While Prototype Theory stems from the field of psychology (Rosch, 1973a; 1973b, 1975; Rosch et al., 1976), and was developed and tested in experimental studies, in cognitive linguistics empirical methods were for a long time relatively scarce (cf. Gibbs, 2007). So far, only Pustka (2009b) and Altendorf (2017) have explicitly conducted experimental studies in order to discover prototypical representations of certain varieties (see Chapter 3.6.2): Pustka (2009b) relies on a slightly modified goodness-of-example approach inspired by the works of Rosch (1975), while Altendorf, working with Estuary English, (2017) uses an accent identification test to approach the prototype. Her study can, however, only be considered preliminary, due to the low number of stimuli tested (three stimuli in total).

The selection of speakers is an equally challenging aspect that entails various questions: Which speakers should be chosen for a particular region? How many speakers are enough? How can a certain representativeness be achieved (cf. Chambers & Trudgill, 2004)? Can a stratified sample defined by the classical sociolinguistic categories such as age, gender and level of education (cf. Chaliar, 2020, pp. 101–102) represent the speakers of a particular city instead of a randomized sample? What classifies a speaker as a ‘good’ speaker for research on regional variation? Is it even justifiable in a world characterized

by increasing globalization and mobility to search for deeply rooted speakers who have spent most of their time in one particular place and whose parents have ideally done the same?

The same applies for the choice of listeners in accent identification tests: Who should be asked to participate in such tests? Can we assume that Southerners would be able to distinguish between southern accents more easily than northerners? What conclusion should be drawn from such a hypothesis? Is it more methodologically justifiable to select only speakers of Southern dialects as participants for the accent identification tasks? Does choosing not to do the tests online exclude a large part of the population? Few of the older Toulouse and Marseille speakers use the internet regularly, which means that online surveys cannot be fully representative of the populations of Toulouse and Marseille.

All of these questions and many more were constantly considered during the whole research process. Since perceptual dialectology (cf. Preston, 1999a), Cognitive Sociolinguistics (cf. Kristiansen & Dirven, 2008) and perceptual linguistics of varieties (Krefeld & Pustka, 2010b) are rather young theories, there is not much research on which to rely. Consequently, different methods were applied during the process and some of these led to a modification of the original design. The aim of the following chapter is therefore not only to fully describe the approach that led to the results discussed in Chapters 5 to 8, but also to highlight some problems that I encountered during the research process. These problems can help to advance the methods of perceptual dialectology, perceptual linguistics of varieties and cognitive sociolinguistics.

4.2 Design overview

This dissertation aims to investigate regional variation in Southern France, with the key question being a methodological one: How can we compare different regional varieties? Accordingly, the design of the study was based on different methods to investigate production, perception and representations (see Figure 4.2).

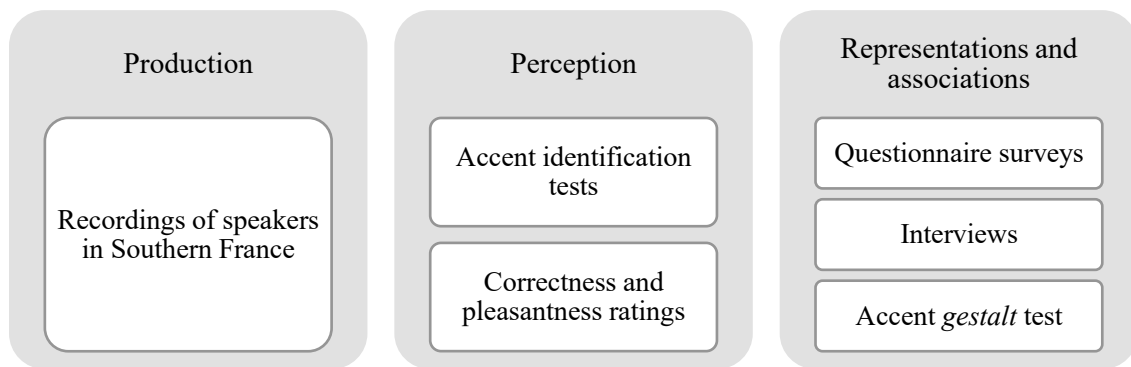


Figure 4.2: Design overview.

These methods were primarily drawn from the methods proposed by the programmatic papers of Preston (1999b) and Krefeld and Pustka (2010a) (see Chapters 2.1.3.5 and 2.1.3.6). These papers are, *inter alia*, concerned with proposing methods for investigating folk linguistic representations. Krefeld and Pustka (2010a, pp. 15–16) propose rather general methods for examining representations such as: observation, surveys and interviews and the analysis of imitations and caricatures.

For examining perception in the strict sense, Krefeld and Pustka propose using perception tests.⁶⁹ Preston, on the other hand, is mostly interested in *language regards*, a more general term that he uses instead of *language attitudes* to highlight that there are also non-evaluative beliefs about language (cf. Preston, 2010, pp. 100–102). Accordingly, he lists several rather detailed methods that can be employed to investigate folk linguistic beliefs about language (1999b, xxxiv):

- mental maps tasks⁷⁰
- degree of difference ratings
- correctness and pleasantness ratings
- accent⁷¹ identification tests
- qualitative data⁷²

⁶⁹ For perception tests, Krefeld and Pustka (2010a, p. 16) use the term *Perzeptionsexperimente* ‘perception experiments’. Since *experiments* are, strictly speaking, a very controlled kind of data collection that require strict randomization (cf. Auwärter, 2005), I use the term *test* rather than *experiment*.

⁷⁰ In a mental maps task, participants are usually asked to draw different dialectal regions on a map, in order to investigate folk linguistic representations of dialect areas, (e.g. Kuiper, 1999; 2005 for French).

⁷¹ Preston (1999b, xxxiv) uses the term *dialect* instead of *accent*. Since my study is concerned with accents rather than dialects (see Chapter 2.1.2), I use *accent* instead.

⁷² Qualitative data is, in this case, data gathered in conversations or interviews about the tasks carried out by the informants and about the language varieties in question with all their different aspects (Preston, 1999b, xxxiv).

Most of these methods are drawn from other disciplines, such as cultural geography (cf. Gould & White, 2002) and language attitude studies (cf. Paltridge & Giles, 1984). With a focus on Southern French, some of these methods have already been applied: Mental map tasks and interviews have so far been carried out by Kuiper (1999, 2005) and Pustka (2010b), and dialect identification tests by Coquillon (2005), Woehrling and Boula de Mareüil (2005), Pustka (2010b), and Avanzi and Boula de Mareüil (2019) (see Chapters 3.5 and 3.6).

In my research, I decided against using observation and degree of difference ratings. The latter were not applied because my focus was primarily on accent identification of two cities without the aim of covering the whole territory. Observation was discarded because, in the ethnographical sense, it has several disadvantages. First, we can only observe social practices and interactions. This does not directly lead us to the speakers' cognates. Additionally, observation is rather subjective, making the results of observational studies difficult to compare (cf. Schramm & Schwab, 2016, p. 141). Also, the observer can influence the field by their presence. On the other hand, when observations are made secretly, the observer might face ethical challenges (cf. Diekmann, 2012, p. 565). Lastly, observation is very time-consuming. This was the main reason why I decided against it.

The core method of my study, accent identification tests, is evaluated differently by Krefeld and Pustka (2010a) and Preston (1999b). While Preston (1999c, p. 369) emphasizes that the studies by Coupland, Williams and Garret (1999) and Williams, Garret and Coupland (1999) show that “there is little or no difference in evaluations when the stimulus is a category name or an actual speech sample”, several authors (Hoenigswald, 1966, p. 20; Boughton, 2006, p. 279; Krefeld & Pustka, 2010a, p. 16) stress that the distinction between representations and perception should be strictly maintained (see Chapter 2.3.2). Of course, representations and perception go hand in hand. On the one hand, representations are mostly based on perceptions and are constantly modified accordingly, and, on the other hand, perception is filtered by existing representations. Therefore, the methodological approaches should be kept apart, and it can be particularly interesting to contrast what people think they know about different varieties with what they actually perceive, as has been pointed out by Boughton, who concluded the following after examining perception and representations of northern French varieties:

What emerges from this comparison is some evidence for a significant and interesting ‘gap’ between what native speakers *believe* about variation in French, and what they actually *know* about it when asked to judge authentic voice samples.” (Boughton, 2006, p. 279)

To find out whether such a gap also exists in Southern French, I not only conducted accent identification tests, but also administered questionnaire surveys and interviews that included numerous questions about Southern French accents (see Chapter 4.3.2.2), just as Krefeld and Pustka (2010a, p. 16) propose. The first step of my investigation was, however, to find speakers whose productions would serve as the basis for my study.

4.3 Production

4.3.1 Speakers

When investigating regional variation, it is important to have a sufficiently large and well-selected basis of production data. In this dissertation, the production data was gathered in the field. It would have been possible to work with existing corpora, especially with sub-corpora of the PFC project (Durand et al., 2002). However, PFC did not provide recordings of enough speakers from Marseille. Furthermore, if the fieldworker is held constant throughout, the collected data is more comparable.⁷³ Lastly, interpretation of results is largely facilitated when the researcher knows every speaker and all the circumstances of an interview well. However, since recording data is, of course, very time- and cost-intensive, I was very grateful when my supervisor offered to provide me with some of her data that I could also use as a sub-corpus once I had realized that I had to include some rural data too.

The following chapters present the decisions that had to be made about the sampling method (Chapter 4.3.1.1), the number of speakers (Chapter 4.3.1.2) and the criteria by which speakers were selected (Chapter 4.3.1.3).

4.3.1.1 Sampling method

As seen in Chapter 2.2.2, the traditional dialectological approach of selecting NORMs has been strongly criticized (cf. Chambers & Trudgill, 2004, p. 29; L. Milroy & Gordon,

⁷³ In the PFC corpus, one fieldworker is usually responsible for one or several PFC surveys that comprise the recordings of approximately 12 speakers, which may lead to differences between the different surveys.

2008, p. 24), and ever since Labov ([1966] 2006), studies have opted to select more representative samples of speakers. In social sciences, samples have to be chosen randomly from the total population, in order to achieve full representativeness in the strict sense of the term (cf. Diekmann, 2012, pp. 430–432). In such a random sample, all the individuals of a particular total population have an equal chance of being selected. There are, however, only a few sociolinguistic studies that work with random samples, e.g., Labov’s Lower East Side study ([1966] 2006), since they are very time consuming and cost-intensive.

The traditional sociolinguistic approach is therefore to work with a stratified sample with extralinguistic variables, such as sex, age and socio-economic background (cf. L. Milroy & Gordon, 2008, pp. 28–30; Feagin, 2013, p. 28). Compared to only analyzing the speech of NORMs, this sampling method leads to a speaker sample that is more representative of a certain site of investigation. This is why most research projects use it, e.g., the PFC project (Durand et al., 2002, 2009; cf. Detey et al., 2016a). This dissertation does the same, with the categories chosen for stratification being age (18-30, 31-65, 66-98 years old), sex (male, female)⁷⁴ and level of education (with *baccalauréat*,⁷⁵ without *baccalauréat*) (see Table 1).

4.3.1.2 Sample size

Another factor that is important for representativeness is sample size. In social sciences, it is common to investigate hundreds of individuals belonging to the population in question. In linguistic research, this is highly uncommon, in particular because treatment of the data is very time-consuming and expensive. As Milroy and Gordon (2008, p. 28) point out, even the most ambitious linguistic surveys are not able to record enough speakers to accurately represent the regional variety in question. Only larger research programs, such as the PFC project (Durand et al., 2002; 2009; Detey, Durand, Laks, & Lyche, 2016b) with its numerous collaborators and its uniform type of data collection can collect larger amounts of data. However, even in this program, most of the sub-corpora only consist of the data of a few speakers per location. In the majority of cases, there are 12 speakers per location. Courdès-Murphy’s (2018) thesis, however, examines the speech

⁷⁴ At the time this fieldwork was conducted, it was a usual approach to treat the gender variable as a binary one. Today, additional categories, such as *non-binary* or *other* would have been added.

⁷⁵ *Baccalauréat* is the French equivalent of the English A-levels.

of 45 speakers and Mooney (2018) bases his analyses on 10 speakers in his language contact study and 30 speakers in his dialect contact study.

Random sampling of an enormous subset of a population is thus nearly impossible for individual PhD students working on varieties spoken far from their universities, with limited time and money for fieldwork. This is why, at the cost of a possible generalization of the entire population, I chose to record a stratified sample without random selection. The categories for sampling were sex, level of education (with *baccalauréat*, without *baccalauréat*) and three age groups (18-30, 31-65, 66-98). While other studies, e.g. studies adopting the PFC protocol, record a sample of 12 people roughly divided into these categories (cf. Detey et al., 2016a, p. 14), I decided to fill every cell in Table 4.1 with three speakers, for both Toulouse and Marseille, which makes a total of 72 participants. In some of the cells (see Table 4.1 below), it was not possible to find enough speakers and sometimes I had to exclude the recordings due to bad sound quality (see below for the search for speakers). In total, I therefore worked with 64 speakers who were anonymized and are indicated using codes⁷⁶ (see Table 4.1).

age	Toulouse				Marseille			
	female		male		female		male	
	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>
18-29	T10_w_27	T9_w_25	T15_m_19	T7_m_25	M17_w_19	M32_w_19	M1_m_25	M5_m_25
	T16_w_20	T23_w_18	T18_m_23	T22_m_19	M18_w_19	M33_w_19	M6_m_19	
		T25_w_18	T35_m_19	T24_m_18			M10_m_25	M34_m_19
30-64	T2_w_48	T28_w_30	T1_m_38	T27_m_34	M12_w_52	M39_w_30	M2_m_54	M8_m_37
	T31_w_58	T39_w_33	T11_m_39	T30_m_32	M13_w_45	M16_w_37	M27_m_45	M11_m_58
			T19_m_52		M41_w_33		M31_m_31	M7_m_61
65+	T6_w_84	T8_w_69	T3_m_79	T4_m_89	M22_w_67	M15_w_83	M21_m_69	M9_m_65
	T17_w_67	T12_w_79	T37_m_68	T5_m_79	M36_w_76	M23_w_71	M29_m_84	M3_m_77
	T26_w_83	T14_w_79			M38_w_86	M24_w_76	M42_m_92	M14_m_76
	T29_w_92	T21_w_98						
Σ 32 speakers				Σ 32 speakers				

Table 4.1: Speakers of Toulouse and Marseille, divided into categories of the stratified sample.

⁷⁶ The codes consist of the following: The first letter indicates the city the person is from (T for Toulouse, M for Marseille), the second one or two digits indicate the order of the recordings (T2_m_38) therefore is the second speaker in Toulouse to be recorded). The next letter indicates whether the person is female (w) or male (m) and the next two digits indicate their age at the time of the recording.

The choice of a larger number of speakers was based on the desire to find a sample that would come as close to representativeness as it could, while taking into account the limited amount of time and money of one PhD student and the fact that other identification tests of Southern French accents had only used smaller sample sizes of speakers (e.g., Coquillon, 2005; Woehrling & Boula de Mareüil, 2005; Pustka, 2007, see Chapter 3.6.1). Their results had shown that only some speakers were clearly identified as being from Toulouse or Marseille. With a larger number, I wanted to increase the number of speakers who were clearly identified in order to have sufficient data that can be analyzed to approximate the prototypical accent (see Chapter 4.3.3).

4.3.1.3 Criteria for the selection of the speakers

As in other studies investigating regional variation, the speakers had to fulfil several criteria of ‘localness’. They had to be born in Toulouse or Marseille, at least one of their parents had to come from the southwest or southeast of France and they could not have spent more than four years away from their respective city. Other studies (e.g. Mooney, 2018) have stricter categories. They select, for example, only speakers who have spent their entire life in their place of birth and this applies even to their parents and grandparents.

However, Toulouse and Marseille are both cities with a rich history of immigration. Marseille, with its big port, has always attracted considerable numbers of immigrants starting in the French colonization period. The most important groups of immigrants before the Industrial Revolution were Turks, Greeks, Catalans and Italians. In the 19th century, most immigrants came from Italy, while in the first half of the 20th century people came from Armenia, Corsica and Spain and in the second half from North Africa (cf. Gasquet-Cyrus, 2004, p. 108). Toulouse, despite having no port, has also become home for many immigrants: Many Spaniards came to Toulouse during the first half of the 20th century and, just like in Marseille, people from the North-African diaspora came to Toulouse in the second half of the century (cf. Brutel, 2016).

As the numbers of a survey by the National Institute of Statistics and Economic Research (‘Institut national de la statistique et des études économiques’, INSEE) show, the proportion of foreigners (that is, people with a nationality other than French) in both cities is approximately 10% and Toulouse has a slightly higher percentage of foreigners than Marseille (see Table 4.2).

	Toulouse	Occitanie (Region)	Marseille	Provence (Region)
French	421789 (89%)	5450796 (94%)	781518 (91%)	4656019 (93%)
Foreigners	50152 (11%)	323389 (6%)	80117 (9%)	351958 (7%)

Table 4.2: Overview of nationalities in Toulouse and Marseille as opposed to their respective regions (cf. INSEE, RP2015 principal survey 01/01/2017).

These numbers only indicate nationalities and not migratory background, let alone within-France migratory background. However, they still show that selecting speakers who have spent their entire life in Marseille and Toulouse in order to compare the accents of these two cities could be considered unrealistic, since life without migration only applies for some of the speakers living in Toulouse and Marseille.

Yet, as we know from Binisti and Gasquet-Cyrus' study (2003), the 'real accent of Marseille' is an accent associated with speakers without a migratory background (see Chapter 3.5.2). Since my goal was to search for the prototypical accent of Marseille, I decided to focus on the group of people labeled by the Marseillais themselves as 'the real people' of Marseille (Gasquet-Cyrus, 2004, p. 119), specifically those with a predominantly Provençal background. Although no comparable study has been conducted about the Toulousian perceptions of the accent(s) of Toulouse, in order to maintain consistent conditions I applied the same criteria for speakers in Toulouse.

4.3.1.4 Fieldwork

In total, I had six weeks in the spring of 2015 to find my 64 speakers in the two cities. I had already completed fieldwork for my *Zulassungsarbeit* (the equivalent of a master's thesis) in Marseille and Toulouse in 2013. I therefore already knew of approximately six speakers who would be willing to be recorded once again. Many sociolinguistic studies apply the snowball principle for finding speakers. In my case, the snowball principle did not lead to enough speakers, because my time was so limited. Consequently, the ethnographic aspects of fieldwork, such as increased familiarity with the target population via longer periods of observation, were not possible. I had to use other methods.

In my quest for younger speakers (ages 18-30), I went to *Lycées*⁷⁷ at 1 pm and talked to students standing in front of their schools. This worked very well, and I had soon found

⁷⁷ *Lycées* are secondary schools in France in which students are aged between 15 and 18.

enough speakers old enough (18 years or older) to participate in my study.⁷⁸ The category of 31-65-year-old speakers was the most difficult to find, due to the fact that they were all working. In this category, it was mostly the snowball method that worked, as well as the attendance of couchsurfer meetings and asking sales assistants or people working at the *Goethe Institut*⁷⁹ in Toulouse.

In order to find older speakers, I spent a lot of days walking around in the two cities, targeting especially *terrains de pétanque*, retirement homes and assisted living facilities, clubs for senior citizens, *l'Université du temps libre*,⁸⁰ and places where people would be interested in local accents, such as the *Toulousains de Toulouse*, which is an association which manages the *Musée du Vieux-Toulouse*. A real help in my search for senior Toulousains was the booklet *Guide pratique Séniors*, distributed by the City of Toulouse. It contained lists of associations, retirement homes and clubs for senior citizens (cf. Mairie de Toulouse, 2015).

Interestingly, fieldwork in these two cities was very different. While the best places to find older speakers in Marseille were the *terrains de pétanque* and the *Université du temps libre*, the best places in Toulouse were the retirement homes and clubs for senior citizens. Finding older male speakers in Toulouse proved to be very difficult. Despite my constant endeavors, I could not find enough older male speakers who had spent their entire lives in Toulouse. To compensate for the lower number of male speakers, I recorded more female speakers.

4.3.2 Recordings

Since previous studies had shown that many speakers from Toulouse and Marseille cannot be identified as such in accent identification tests (see Chapter 3.6.1), the original plan was as follows:

1. Record read speech (text and word list of the PFC program, cf. Durand et al., 2002, see Chapter 4.3.2.3) of a wide sample of speakers in both cities

⁷⁸ The recording of students younger than 18 years of age is much more problematic. Although all participants were anonymized, recordings of voices might still be recognized. The collected data therefore has to be thoroughly protected, and minors need their parents' consent to participate.

⁷⁹ The Goethe-Institut is a cultural association with seats in many different countries in the world that promotes the study of the German language.

⁸⁰ *Universités du temps libre* (called 'Universities of the Third Age' in English) are places where people can attend courses or lectures about science, literature, history, sociology and arts etc.

2. Conduct an accent identification test in order to find out whose accent would be worth examining in greater detail (the prototypical speakers)
3. Contact these speakers again and record spontaneous speech
4. Conduct another accent identification test with spontaneous speech to single out the salient features of the prototypical accents

This approach seemed to have several advantages: First of all, asking people on the street whether they would read aloud a text and a word list has a smaller barrier than asking them whether they would be willing to be interviewed. Secondly, the speech of different speakers can be more easily compared when the speech situation as well as the content and choice of words are held completely constant. This is achieved when different speakers read the same text aloud. Thirdly, choosing the text and word list of the PFC program would ensure that my recordings could be compared to the PFC corpus. And lastly, soliciting longer recordings of read speech and spontaneous speech with more than 30 speakers per city would have been very difficult in just three weeks. A pre-selection process via an accent identification test (see Chapter 4.5) seemed to be a good idea.

4.3.2.1 Toulouse and Marseille

In Toulouse and Marseille, speakers were recorded nearly everywhere: at their homes, at their workplaces or schools, even on the street. This is why some of the recordings had to be removed afterwards, due to bad sound quality (cf. Chapter 4.3.1.2). The sound quality of the majority of the sound files was, however, sufficient. I recorded them as .wav files in stereo, 44.1kHz/16 Bit, with a H4n Zoom audio-recorder. In particularly noisy surroundings, a Sennheiser headset microphone was used in addition to the recorder. Afterwards, the stereo files were transformed into mono and normalized. Before being recorded, all speakers filled out a declaration of consent that contained not only a description of the study and of what could be done with their recordings, but also my contact information, so that any speaker who wished to withdraw their participation would be able to reach me.

However, the original plan had to be modified. The accent identification test did not lead to the expected results but was instead influenced by social stereotypes that were re-interpreted as regional ones: NORMs were localized in Marseille, and younger

speakers in Toulouse (see Chapter 8.1).⁸¹ This is why I contacted all of my speakers again in order to conduct interviews with them. In some cases, this worked well, in other cases, especially with the younger speakers who had already left the two cities, it was not possible to gather spontaneous speech. Table 4.3 shows all the speakers, with the ones who were also interviewed indicated in bold. Once again, due to limited time, it was not possible to record larger amounts of speech.

age	Toulouse				Marseille			
	female		Male		female		male	
	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>
18-29	T10_w_27	T9_w_25	T15_m_19	T7_m_25	M17_w_19	M32_w_19	M1_m_25	M5_m_25
	T16_w_20	T23_w_18	T18_m_23	T22_m_19	M18_w_19	M33_w_19	M6_m_19	M34_m_19
		T25_w_18	T35_m_19	T24_m_18			M10_m_25	
30-64	T2_w_48	T28_w_30	T1_m_38	T27_m_34	M12_w_52	M39_w_30	M2_m_54	M8_m_37
	T31_w_58	T39_w_33	T11_m_39	T30_m_32	M13_w_45	M16_w_37	M27_m_45	M11_m_58
			T19_m_52		M41_w_33		M31_m_31	M7_m_61
65+	T6_w_84	T8_w_69	T3_m_79	T4_m_89	M22_w_67	M15_w_83	M21_m_69	M9_m_65
	T17_w_67	T12_w_79	T37_m_68	T5_m_79	M36_w_76	M23_w_71	M29_m_84	M3_m_77
	T26_w_83	T14_w_79			M38_w_86	M24_w_76	M42_m_92	M14_m_76
	T29_w_92	T21_w_98			M40_w_82			
Σ 32 speakers				Σ 32 speakers				

Table 4.3: All speakers recorded in Toulouse and Marseille, all speakers for whom spontaneous speech was also recorded in bold.

Having a lot of speakers proved to be quite a challenge later in the process too, because participants in accent identification tests cannot listen to enormous amounts of stimuli (see Chapter 4.3.4). Given the main goal of this dissertation, creating accent identification tests with the spontaneous speech of only a few speakers was not problematic.

4.3.2.2 Adding rural data

Another major impact of the first two accent identification tests' results was the decision to enlarge the speaker sample by including speakers from rural areas. The results suggested that the *NORM* concept played an important role for the decisions of the listeners (see Chapter 2.2.2). My supervisor, Elissa Pustka, provided me with some of her

⁸¹ This study is not the only perceptual study that showed the influence of social stereotypes on language perception. Boughton showed even more clearly that her working-class speakers were quite differently located in the Northern French regions than her middle-class speakers (see Chapter 2.3.2).

Aveyron data (cf. Pustka, 2007; 2009b, 2011a). This data was collected in the village Salles-Curan, following the PFC protocol (cf. Detey et al., 2016b). It thus comprises the speech of twelve speakers from Salles-Curan speaking spontaneously and reading aloud. The documents which were read aloud were the PFC word list and the PFC text *Le premier-ministre, ira-t-il à Beaulieu*. The spontaneous speech of every speaker consists of twenty minutes of conversation and a twenty-minute interview. The data is fully transcribed and can be downloaded from the website www.projet-pfc.net or via <https://www.ortolang.fr/market/corpora/pfc/>. Salles-Curan is a commune with around 1,000 inhabitants, located in the Aveyron department about two hours outside of Toulouse. It is part of the Languedoc substrate region (cf. Boissier de Sauvages, 1785).

Consequently, a comparable point of investigation had to be found. Since a colleague's parents who live in Oraison, a commune with 5,000 inhabitants in the Alpes-de-Haute-Provence department, had offered their help, the decision to do fieldwork in Oraison and the next larger town Manosque was very quickly made. Oraison and Manosque belong to the Provençal substrate region and both towns are located about an hour outside of Marseille. These two towns are thus comparable to Salles-Curan.

I spent one week in the autumn of 2015 in Oraison, where I recorded twelve speakers following the PFC protocol (see above). This was made possible with the substantial help of my colleague's parents, who devoted significant effort to finding speakers who were deeply connected to the region and had spent their entire lives in Oraison or Manosque. Table 4.4 shows all speakers with their anonymous codes created using the PFC conventions⁸² and their age at the time of the recording.

Age	Female	Male
18-29	04acfl (27)	04aaml (25)
	04aswl (25)	04aggl (21)
30-64	04aav1 (46)	04acr1 (53)
	04avfl (36)	04aajfl (63)
65+	04adt1 (71)	04aaa1 (72)
	04asa1 (72)	04alb1 (80)

Table 4.4: Speakers recorded in Oraison/Manosque and their age.

⁸² PFC conventions prescribe six digits. The first two indicate the department where the study was conducted via its official code. Oraison is in the department Alpes-de-Haute-Provence with the department number 04. The third element specifies the exact point of investigation in case several studies are conducted in the same department. In this case, it was the first one and therefore got the letter a. The other three elements stand for the speaker him- or herself. They consist of the two initials of surname and name and one more digit in case several speakers have the same initials.

Age	Female	Male
18-29	12bsj1 (22)	12brm1 (19)
	12bma1 (24)	12bec1 (22)
30-64	12bor1 (64)	12bcc1 (52)
		12bbr1 (56)
65+	12blv1 (66)	12bjv1 (66)
	12bmvl (70)	12bnf1 (78)
	12bmb1 (83)	

Table 4.5: Speakers recorded by Elissa Pustka in Salles-Curan and their age (cf. Pustka 2007: 250-251).

All recordings were made in stereo, 44.1kHz/16 Bit, with a H4n Zoom audio-recorder. Only the recording of 04agg1 was made in the outskirts of Manosque, the other speakers, whether living in Oraison or in Manosque, came to Oraison for their interviews. The decision to record a full *enquête PFC* simultaneously was inspired by the fact that these recordings could later be easily integrated into the PFC corpus. Furthermore, they would be more comparable to the Salles-Curan data. With the speakers in Salles-Curan, Toulouse and Marseille, I had the PFC word list and the PFC text (see Appendix) of 90 speakers and spontaneous speech of 51 speakers, which made the corpus sufficiently large to investigate phonological variation in southern France and to suggest who the prototypical speakers would be.

4.3.2.3 Read speech

As already mentioned, the speakers were asked to read aloud two elements of the PFC protocol (Durand, Lyche, & Laks, 2008): the word list and the text *Le Premier Ministre, ira-t-il à Beaulieu?* (see below). This made these recordings comparable to those of the PFC corpus. I added ten more words to the word list that seemed interesting to investigate based on a pre-test: four words containing nasal vowels (*commande*, *content*, *il mange* and *pain*), three words that have a distinct southern pronunciation (*pneu* [pənø], *Aïoli* [a'jɔ:li] and *moins* [mwēs]), another possible context for *loi de position* (*pleurait*) and two typical dishes of the region (*bouillabaisse* and *cassoulet*).

Word list

1. roc	36. socialisme	71. meurtre
2. rat	37. relier	72. vous prendriez
3. jeune	38. aspect	73. botté
4. mal	39. niais	74. patte
5. ras	40. épais	75. étriller
6. fou à lier	41. des genêts	76. faites
7. des jeunets	42. blond	77. feutre
8. intact	43. creux	78. quatrième
9. nous prendrions	44. reliure	79. muette
10. fêtard	45. piqué	80. piquais
11. nièce	46. malle	81. trouer
12. pâte	47. gnôle	82. piquer
13. piquet	48. bouleverser	83. creuse
14. épée	49. million	84. beauté
15. compagnie	50. explosion	85. patte
16. fête	51. influence	86. pâte
17. islamique	52. mâle	87. épais
18. agneau	53. ex-mari	88. épée
19. pêcheur	54. pomme	89. jeune
20. médecin	55. étrier	90. jeûne
21. paume	56. chemise	91. beauté
22. infect	57. brin	92. botté
23. dégeler	58. lierre	93. brun
24. bêttement	59. blanc	94. brin
25. épier	60. petit	95. <i>commande</i>
26. millionnaire	61. jeûne	96. <i>content</i>
27. brun	62. rhinocéros	97. <i>il mange</i>
28. scier	63. miette	98. <i>pneu</i>
29. fêter	64. slip	99. <i>Aïoli</i>
30. mouette	65. compagne	100. <i>pleurait</i>
31. déjeuner	66. peuple	101. <i>cassoulet</i>
32. ex-femme	67. rauque	102. <i>Bouillabaisse</i>
33. liège	68. cinquième	103. <i>pain</i>
34. baignoire	69. nier	104. <i>moins</i>
35. pêcheur	70. extraordinaire	

Le Premier Ministre ira-t-il à Beaulieu ?

Le village de Beaulieu est en grand émoi. Le Premier Ministre a en effet décidé de faire étape dans cette commune au cours de sa tournée de la région en fin d'année. Jusqu'ici les seuls titres de gloire de Beaulieu étaient son vin blanc sec, ses chemises en soie, un champion local de course à pied (Louis Garret), quatrième aux jeux olympiques de Berlin en 1936, et plus récemment, son usine de pâtes italiennes. Qu'est-ce qui a donc valu à Beaulieu ce grand honneur ? Le hasard, tout bêttement, car le Premier Ministre, lassé des circuits habituels qui tournaient toujours autour des mêmes villes, veut découvrir ce qu'il appelle « la campagne profonde ».

Le maire de Beaulieu - Marc Blanc - est en revanche très inquiet. La cote du Premier Ministre ne cesse de baisser depuis les élections. Comment, en plus, éviter les manifestations qui ont eu tendance à se multiplier lors des visites officielles ? La côte escarpée du Mont Saint-Pierre qui mène au village connaît des barrages chaque fois que les opposants de tous les bords manifestent leur colère. D'un autre côté, à chaque voyage du Premier Ministre, le gouvernement prend contact avec la préfecture la plus proche et s'assure que tout est fait pour le protéger. Or, un gros détachement de police, comme on en a vu à Jonquières, et des vérifications d'identité risquent de provoquer une explosion. Un jeune membre de l'opposition aurait déclaré : « Dans le coin, on est jaloux de notre liberté. S'il faut montrer patte blanche pour circuler, nous ne répondons pas de la réaction des gens du pays. Nous avons le soutien du village entier. » De plus, quelques articles parus dans La Dépêche du Centre, L'Express, Ouest Liberté et Le Nouvel Observateur indiqueraient que des activistes des communes voisines préparent une journée chaude au Premier Ministre. Quelques fanatiques auraient même entamé un jeûne prolongé dans l'église de Saint Martinville.

Le sympathique maire de Beaulieu ne sait plus à quel saint se vouer. Il a le sentiment de se trouver dans une impasse stupide. Il s'est, en désespoir de cause, décidé à écrire au Premier Ministre pour vérifier si son village était vraiment une étape nécessaire dans la tournée prévue. Beaulieu préfère être inconnue et tranquille plutôt que de se trouver au centre d'une bataille politique dont, par la télévision, seraient témoins des millions d'électeurs.

4.3.2.4 Spontaneous speech

The interviews I conducted in Toulouse, Marseille and Oraison (cf. the chapters 4.3.2.1 and 4.3.2.2) served two purposes: I recorded spontaneous speech that I could later analyze and use as stimuli for my accent identification tests, and that I could use to further investigate the representations of the different accents. I therefore decided on several themes that I would explore with my speakers in semi-structured interviews (see Table 4.6).

Introductory questions	
<i>Dans quel quartier de Toulouse avez-vous grandi ? Est-ce que vous y habitez toujours ?</i>	'In which neighborhood of Toulouse did you grow up? Do you still live there?'
<i>Est-ce qu'il vous est déjà arrivé qu'on vous ait reconnu comme Toulousain quand vous étiez ailleurs ?</i>	'Have you ever been recognized as a Toulousain when you were elsewhere?'
Prototype	
<i>Où est-ce qu'on trouve les « vrais Toulousains » ?</i>	'Where can I find 'real Toulousains'?
<i>Qui, d'après vous, parle le « vrai toulousain » ? (hommes/femmes, jeunes/âgées, personnes éduquées/moins éduquées) et dans quelles situations ?</i>	'Who speaks the 'real Toulouse accent' (men/women, young/old, educated/less educated) and in which situations?'
<i>Est-ce que vous trouvez que les jeunes ont moins d'accent que les personnes âgées ?</i>	'Do you think that younger people speak with less accent than older people?'

<i>Pensez-vous que les personnes qui ne sont pas nées à Toulouse commencent à parler avec l'accent toulousain ?</i>	'Do you think that people who were born elsewhere start speaking with a Toulouse accent when they move there?'
<i>Est-ce qu'il y a une différence entre les immigrés et les Français du Nord ?</i>	'Is there a difference between immigrants and Northern French people?'
Features	
<i>Quels sont les traits caractéristiques de l'accent de Toulouse ? Comment est-ce qu'on le reconnaît ?</i>	'What are the characteristic features of the Toulouse accent? How is it recognized?'
<i>Est-ce que vous connaissez des Toulousains qui roulent le r ?</i>	'Do you know any Toulousains who pronounce /r/ [r]?'
Attitudes towards Toulouse	
<i>Pensez-vous qu'il y a des Toulousains qui essayent de parler avec moins d'accent quand ils vont à Paris ? ... Pourquoi ?</i>	'Do you think there are Toulousains who try to speak with less of an accent when they go to Paris? Why?'
<i>Est-ce qu'il y a des situations où vous faites un effort de parler avec un accent moins prononcé ?</i>	'Are there situations where you try to speak with less of an accent?'
<i>D'après vous, avec quel accent devraient parler les professeurs et les présentateurs de télé ? Sans accent ? Ou avec un accent neutre ?</i>	'In your opinion, what kind of accents should teachers and TV presenters have? No accent? A neutral accent?'
Attitudes towards Marseille	
<i>Est-ce que vous êtes déjà allé à Marseille ? Combien de fois ? Quel âge aviez-vous ?</i>	'Have you ever been to Marseille? How many times? How old were you?'
<i>Est-ce que vous aimez bien l'accent de Marseille ? Est-ce que vous le trouvez plus ou moins sympathique que l'accent toulousain ?</i>	'Do you like the accent of Marseille? Do you like it more or less than the accent of Toulouse?'
<i>Comment décririez-vous un « vrai Marseillais » ? Qui parle le vrai Marseillais ?</i>	'How would you describe a "real Marseillais"? Who speaks the real accent of Marseille?'
<i>Quelles sont les différences entre l'accent de Toulouse et celui de Marseille ?</i>	'What are the differences between the accents of Toulouse and Marseille?'
<i>Est-ce que vous pouvez imiter l'accent marseillais ?</i>	'Can you imitate the accent of Marseille?'
City vs. Countryside	
<i>Les gens aux environs de Toulouse, comment parlent-ils par rapport aux gens de Toulouse ?</i>	'Do people at the outskirts of Toulouse speak differently than people in Toulouse?'
<i>Si vous alliez dans un village à 100 km de Toulouse, est-ce que vous croyez qu'on vous prendrait pour un Toulousain ou même pour quelqu'un du Nord ?</i>	'If you went to a village 100 km away from Toulouse, do you think they would take you for a Toulousain or even for someone from the North?'

Table 4.6: Interview questions Toulouse.⁸³

As the interviews were semi-structured, I never asked all of these questions in one interview. Since I was aiming to record spontaneous speech that should not be too formal, I wanted the interviewees to feel largely at ease and let them naturally guide the

⁸³ The questions for Marseille and Oraison only differed slightly from those for Toulouse. In order to avoid redundancy, only the latter are presented here. The interviews from Salles-Curan also focus on language attitudes. Their overall interest was, however, within-France migration between Aveyron and Paris (cf. Pustka, 2007).

conversation. Interestingly, speakers from Toulouse and Oraison usually started speaking about Marseille without being prompted, whereas Marseillais participants rarely mentioned Toulouse (let alone Oraison) on their own. This shows, once again, the significant role Marseille plays in the context of Southern French (see Chapter 3.5.1). Sometimes, a speaker would not be that aware of their own accent, so I would run out of questions to ask. In these situations, I tried to find themes they would be passionate about. Some of my interviews therefore end with conversations about football, local cuisine or hunting.

In Toulouse and in Marseille, I also played two stimuli from my first accent identification test (one from a Marseille speaker and one from a Toulouse speaker) to every interviewee and asked them where these speakers came from and how they had recognized them. I wanted to hear about salient features of the accents of Toulouse and Marseille, but once again, this was not possible. Once more, people stressed that one particular way of speaking was more melodious, but the naming of actual salient features only happened very rarely. This is an argument in favor of perception happening through the perception of *gestalt* and not of single segmental entities (see Chapter 2.3.1). For this reason, I decided to apply one more method in a questionnaire survey that particularly aimed at the *gestalt* of these accents: the bubble task (see Chapter 4.4.4).

4.3.3 Treatment of recorded data

The .wav files were edited and aligned using the program Praat (Boersma & Weenink, 2016). This open-source software is very commonly used in phonetics and phonology and can not only be used for speech analysis such as spectral analysis, pitch analysis, formant analysis etc., but also for several other endeavors, such as speech synthesis, labelling, segmentation and speech manipulation etc. This program has been used for nearly all PFC research so far (cf. Durand et al., 2002, 2009; Detey et al., 2016a)

All recordings of the read aloud texts and word lists were transcribed by aligning the existing text files with the sound files using Praat.⁸⁴ TextGrid files were created with the orthographic transcription of what was being said in the sound files, in accordance with the PFC protocol. These TextGrid files could then be converted back into text files

⁸⁴ Special thanks to Léonore Troehler, Elisabeth Heiszenberger and Isabel Ecker for their help with transcribing and aligning the Oraison data!

or analyzed using the Dolmen tool⁸⁵ (cf. Eychenne & Paternostro, 2016). Dolmen is particularly useful to analyze TextGrid files coded for schwa and liaison, as is usually done with PFC data. Since liaison is not relevant for regional variation in the South of France, I only included schwa coding in the Toulouse/Marseille data and forwent the liaison coding. The other features analyzed in the stimuli, such as the nasal vowels and the *loi de position* in *était*, for example, were also coded in Praat, using simple codes. The spontaneous speech stimuli were all analyzed for schwa realization. The other features examined in the read stimuli were not examined, since they differed too greatly in their use of words.

The Oraison/Manosque data were all treated according to PFC conventions, with schwa and liaison codings (cf. Detey et al., 2016b). Figure 4.3 shows an example of a transcribed word list in Praat.

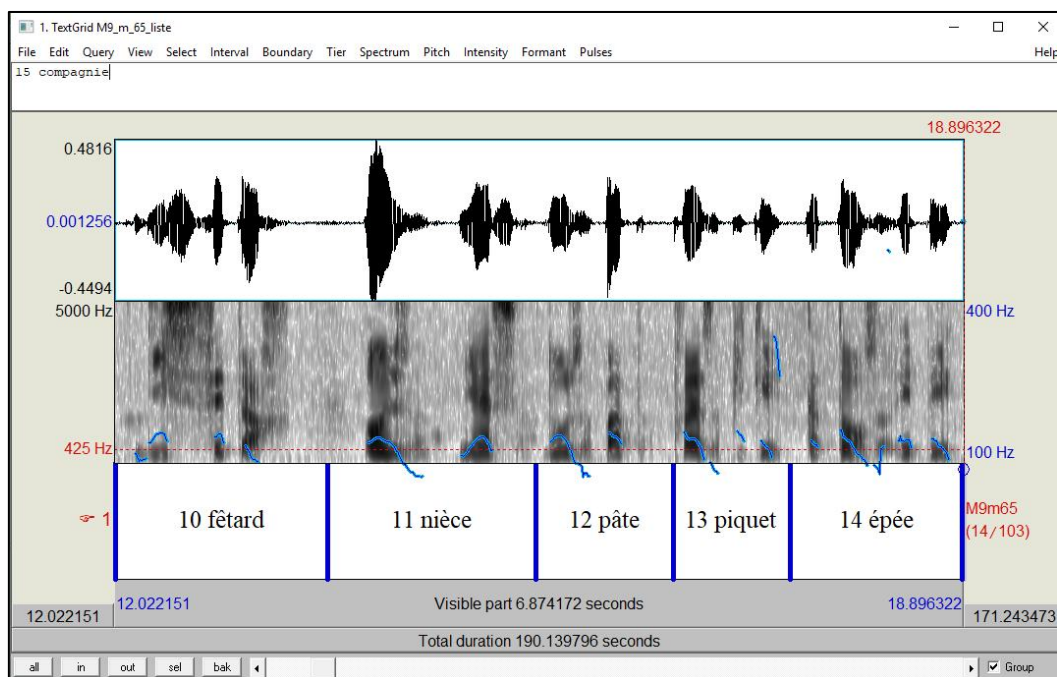


Figure 4.3: Example of a transcribed word list in Praat.

4.3.4 Selection of the stimuli

In the four accent identification tests, different stimuli were used. The first two tests only presented stimuli of read speech, while tests 3 and 4 also included spontaneous speech. Although the stimuli that were used differed from test to test, one stimulus type was held

⁸⁵ Dolmen has since been replaced by the tool Phonometrica (Eychenne and Courdès-Murphy, 2019).

constant: the reading aloud of the following sentence of the PFC text *Le premier ministre ira-t-il à Beaulieu?*

Jusq'ici, les seuls titres de gloire de Beaulieu étaient son vin blanc sec, ses chemises en soie, un champion local de course à pied, Louis Garret, quatrième aux jeux olympiques de berlin en mille neuf cents trente-six et plus récemment, son usine de pattes italiennes.⁸⁶

I chose this sentence because it not only contains schwas and nasal vowels but also some Southern French characteristics that can be of interest (cf. Pustka, 2007, pp. 232–234).⁸⁷ The *loi de position* can be observed in *était* if pronounced [ete] instead of [etɛ] and the realization of otherwise mute final consonants in *Garret* pronounced [gaxɛt] instead of [gaxɛ] or [gaxɛ]. It is furthermore possible to observe apical /ɾ/. All of these traits are characteristic of Southern French (see Chapter 3.4.1). A possible trait primarily ascribed to the Marseille accent that could also have been of interest are palatalizations of [t] in *titres* and *pattes italiennes* (see Chapter 3.4.1). However, in order to analyze this trait carefully in the spectrogram, excellent sound quality is needed. The sound quality of some of the stimuli in question was not good enough, so I excluded this trait from further analysis.

For the first accent identification test, I not only used the *jusqu'ici*-stimuli, but also two stimuli per speaker of one single word each. These two single words were taken from the recordings of the PFC word list that all speakers had read aloud. I wanted them to contain schwa and nasal vowels, so I chose the words *miette* and *content*.⁸⁸

The stimuli that consisted of spontaneous speech were taken from the interview data. They were snippets in which the speakers in question would speak a little longer without being interrupted. Their length varied between 16 and 20 seconds and in these snippets, the speakers were talking about a neutral subject that would not reveal their origin.

⁸⁶ Possible schwas are underlined and possible nasal vowels bold.

⁸⁷ Another advantage of this sentence is its comparability with Pustka's studies (2007; 2009b) which use the same sentence for a degree of accentedness test.

⁸⁸ These two stimuli were then used as fillers, see Chapter 8.1.1.

4.4 Representations and attitudes

Since the aim of this study was to find a way to approximate the folk linguistic representations of the accents of Southern France, I not only relied on accent identification tests, but also on several questionnaires and interviews. In these, I mainly focused on the difference between Toulouse and Marseille, on the question of whether and how the two accents could be distinguished, and on attitudinal aspects. I collected data on these questions using two different questionnaires in Toulouse and Marseille. Additionally, I included several related questions and a ‘bubble task’ (cf. Berthele, 2010a, see Chapter 3.7) in my online accent identification tests.

While designing the questionnaires, I followed the guidelines on research in social sciences by Diekmann (2012, pp. 514–519). The questionnaires were designed in such a way that it would not take the participants longer than twenty minutes to answer. The questions on the socio-demographic background of the speakers were asked at the end and the questionnaires started with easier questions that would make the participants feel at ease. I mixed open questions with closed ones. Pilot studies on both questionnaires were run with French native speakers, so that any kind of possible misunderstanding would be avoided.

4.4.1 The first offline questionnaire

Before being recorded, all speakers filled out a questionnaire, so the questionnaire survey and the recordings were conducted at the same time, in the spring of 2015. In this way, the participants of this questionnaire survey were as representative of Toulouse and Marseille as my speaker sample (see Chapter 4.3.1.1). The questionnaire was five pages long. When I created it, I was particularly interested in discovering how the accents of Toulouse and Marseille were stored in the representations of the speakers. I therefore asked questions that focused on the following aspects: associations with the two cities, differences between the accents of the two cities, the question of whether these two accents would be distinguishable and two small questions regarding their local patriotism.

The first two pages of the questionnaire contained questions which were inspired by perceptual dialectology and included two draw-a-map tasks (cf. Chapter 4.2). Participants were given a map of France that only contained its contours and were asked

to draw different accent regions on it.⁸⁹ The questions that followed these two tasks aimed to elicit associations with the two cities:

- *Pouvez vous indiquer...* (‘Can you indicate...’)
 - ... *un plat typique de Marseille/Toulouse ?* (‘a typical dish’)
 - ... *un sport typique de Marseille/Toulouse ?* (‘a typical sport’)
 - ... *un comique de Marseille/Toulouse ?* (‘a comedian’)
- *Qu’est-ce que vous associez d’autre avec Marseille/Toulouse ?* (‘What else do you associate with Marseille/Toulouse?’)

These questions were chosen in order to make the participants feel at ease because they were usually able to give answers very freely. The only question which could not always be answered by the residents of Marseille was the one about a comedian from Toulouse. This already hints at the fact that the Marseille accent is much more present in the media and thus in everyday life than the Toulouse one (see Chapter 3.5.1).

The questions about accent differences were asked in the form of closed and open questions. They directly focused on accent differences, the borders between them and on the question of whether these borders could be perceived auditorily. Interestingly, the vast majority of the participants thought that recognizing different southern accents, especially the accents of Toulouse and Marseille, would be possible to do (see Chapter 6.2.2):

- *Y a-t-il une différence entre l’accent marseillais et l’accent toulousain ?*
(‘Is there a difference between the accents of Marseille and Toulouse?’)

☐ *oui*
(‘yes’)

☐ *non*
(‘no’)

☐ *je ne sais pas*
(‘I don’t know’)
- *Qui, d’après vous, peut distinguer l’accent de Marseille et l’accent de Toulouse ?*
(‘Who, in your opinion, can distinguish between the accents of Marseille and Toulouse?’)

☐ *tous*
(‘everybody’)

☐ *tous les Français du Midi*
(‘all Southerners’)

☐ *les Toulousains*

☐ *les Marseillais*

☐ *tous les Français*
(‘all French’)

☐ *personne* (‘nobody’)

⁸⁹ The two questions asked were *Quels accents est-ce qu’on parle en France? Merci d’indiquer les endroits où ils sont parlés sur la carte ci-dessous.* (‘What accents are spoken in France? Please indicate the places where they are spoken on the map below.’) and *Où parle-t-on l’accent du Midi?* (‘Where is the Southern French accent spoken?’). Unfortunately, the analysis of such draw-a-map tasks is very time-consuming. This is why none of the results from these two tasks are featured in this dissertation.

- *Pensez-vous pouvoir distinguer vous-même entre ces accents ?*
(‘Do you think that you can distinguish between these accents?’)

☐ *oui*
(‘yes’)

☐ *non*
(‘no’)

☐ *peut-être*
(‘maybe’)

- *Notez-vous une différence entre votre accent et celui d’une personne de... ?*
(‘Is there a difference between your accent and the accent of a person from...?’)

☐ *Albi*

☐ *Pau*

☐ *Perpignan*

☐ *Aix-en Provence*

☐ *Aurillac*

☐ *Montpellier*

☐ *Bordeaux*

☐ *Toulon*

☐ *Marseille*

☐ *Lyon*

☐ *Nice*

☐ *Avignon*

- *Pourriez-vous nommer les différences de prononciation entre l’accent de Marseille et celui de Toulouse ?*⁹⁰
- *Pourriez-vous nommer les différences de grammaire entre l’accent de Toulouse et celui de Marseille ?*⁹¹
- *Pourriez-vous nommer des expressions ou des mots qu’on n’utilise qu’à Marseille ou Toulouse ?*⁹²

Before the questions on socio-demographic data started, local patriotism was tested with the questions *Pourriez-vous imaginer déménager à Marseille?* ‘Could you imagine moving to Marseille?’⁹³ and *Quel journal quotidien lisez-vous?* ‘What daily paper do you read?’ If respondents named local newspapers instead of the national ones, their local patriotism was estimated to be stronger.⁹⁴

4.4.2 The second offline questionnaire

The second questionnaire survey was conducted together with the second accent identification test, in spring 2016. Questions investigating the participants’

⁹⁰ ‘Can you name pronunciation differences between the accents of Marseille and Toulouse?’

⁹¹ ‘Can you name grammatical differences between the accents of Toulouse and Marseille?’

⁹² ‘Can you name expressions or words that are only used in Marseille or Toulouse?’

⁹³ I of course used two different questionnaires in Toulouse and in Marseille. The Marseillais were asked whether they would move to Toulouse and vice-versa.

⁹⁴ In a next step, it could be interesting to turn the answers to these questions into a LOCAL PATRIOTISM factor and test possible correlations between ACCENTEDNESS and LOCAL PATRIOTISM. This would follow the direction of Courdès-Murphy’s (2018) works, which, however, focused more substantially on local patriotism in the interviews.

representations of the accents of Marseille and Toulouse were asked before and after the accent identification part. This time, participants were not selected as a stratified sample. I targeted older people and younger ones, in order to include both ends of the age strata (see Chapter 8.2.3). Since this questionnaire was part of an accent identification test, I wanted to keep the time that people would need to answer all the questions as short as possible. I therefore decided to only ask two open questions, in all other questions, answer categories were given.

The questionnaire started with the ice breaker question *Quels accents de français connaissez-vous?* ‘Which French accents do you know?’. This was followed by two questions which aimed to elicit the participants’ attitudes. The first of them was: *Les accents suivants vous plaisent-ils?* (‘Do you like the following accents?’) with answer categories on a five-point Likert scale. The accents in question are displayed in Table 4.7.⁹⁵

	<i>non, pas du tout</i> (‘not at all’)				<i>oui, absolument</i> (yes, absolutely’)	
<i>L’accent parisien</i>	☐	☐	☐	☐	☐	☐
<i>L’accent chti</i>	☐	☐	☐	☐	☐	☐
<i>L’accent alsacien</i>	☐	☐	☐	☐	☐	☐
<i>L’accent corse</i>	☐	☐	☐	☐	☐	☐
<i>L’accent provençal</i>	☐	☐	☐	☐	☐	☐
<i>L’accent du sud-ouest</i>	☐	☐	☐	☐	☐	☐

Table 4.7: Categories for the question *Les accents suivants vous plaisent-ils?* (‘Do you like the following accents?’).⁹⁶

The second question comprised several statements, such as *Les accents régionaux me donnent un sentiment de chaleur.* (‘Regional accents give me a feeling of warmth’) or *Pour avoir du succès professionnel, il faut parler sans accent régional.* (‘To be professionally successful, you have to speak without a regional accent.’) that were once again followed by a five-point Likert scale.

These questions were followed by the accent identification test (see Chapter 8.2.2), which was in turn followed by a question focused on pronunciation differences between Marseille and Toulouse. The first questionnaire (see Chapter 4.4.1) had not given me as many answers as I had hoped about the differences between Toulouse and

⁹⁵ This question has already been used in several other studies on attitudes towards French accents (e.g. Pustka et al., 2019) and therefore has the advantage that the results can be compared with them.

⁹⁶ Engl. ‘Parisian accent’, ‘Chti accent’, ‘Alsatian accent’, ‘Corsican accent’, ‘Provençal accent,’ and ‘Southwestern accent.’

Marseille, so I was still keen to find some distinguishing factors in a more quantifiable way. I therefore used the answers of the first questionnaire, such as *À Marseille, on chante plus*⁹⁷ ‘They speak more melodiously in Marseille’) to generate answer categories (see Table 4.8): *Quelles sont les différences entre l’accent de Marseille et celui de Toulouse?*⁹⁸

<i>On chante plus...</i> (‘They speak more melodiously...’)	☐ à Marseille	☐ à Toulouse	☐ dans aucune des deux villes (‘in neither of these two cities’)
<i>On parle plus lentement...</i> (‘They speak slower...’)	☐ à Marseille	☐ à Toulouse	☐ dans aucune des deux villes
<i>On prononce plus de e...</i> (‘They pronounce e more often...’)	☐ à Marseille	☐ à Toulouse	☐ dans aucune des deux villes
<i>On roule les r plutôt...</i> (‘They pronounce /r/ as [r]...’)	☐ à Marseille	☐ à Toulouse	☐ dans aucune des deux villes
<i>On accentue les fins de phrases plutôt...</i> (‘They accentuate the ends of phrases more...’)	☐ à Marseille	☐ à Toulouse	☐ dans aucune des deux villes
<i>On prononce « le pain » plutôt comme « le paing »</i> (‘They pronounce [ləpɛ̃] more like [ləpɛŋ]’)	☐ à Marseille	☐ à Toulouse	☐ ni l’un, ni l’autre (‘neither’)
<i>On prononce « le lait » plutôt comme « le lé »</i> (‘They pronounce [ləle] more like [ləle]’)	☐ à Marseille	☐ à Toulouse	☐ ni l’un, ni l’autre

Table 4.8: Closed questions about differences between Toulouse and Marseille in terms of accent.

After this, an open question followed, in which participants were asked to add any other differences they could think of. The last question was, once again, about attitudinal aspects (see Table 4.9): *Lequel des deux accents est pour vous...* (‘Which one of these two accents is for you...’)

⁹⁷ This particular answer is common when informants are asked about characteristics of French accents. It seems to be a widely acknowledged characteristic of Southern French (cf. Coquillon, 2005, p. 21). When my informants were asked about the differences between the southern accents, they attributed “chantant” to both the Provençal and the Languedoc accent. Pustka (2010b, p. 147) observes the same answer in her questions about Southern French, too. This is why this particular question figures so prominently in my list of closed questions about the differences between the accents of Toulouse and Marseille.

⁹⁸ ‘What are the differences between the accents of Marseille and Toulouse?’

... <i>le plus marqué ?</i> (‘... the strongest?’)	☐ <i>l’accent marseillais</i>	☐ <i>l’accent toulousain</i>	☐ <i>ni l’un, ni l’autre</i> (‘neither’)
... <i>le plus joli ?</i> (‘...the prettiest?’)	☐ <i>l’accent marseillais</i>	☐ <i>l’accent toulousain</i>	☐ <i>ni l’un, ni l’autre</i>
... <i>le plus authentique ?</i> (‘... the most authentic?’)	☐ <i>l’accent marseillais</i>	☐ <i>l’accent toulousain</i>	☐ <i>ni l’un, ni l’autre</i>
... <i>le plus sympathique ?</i> (‘... the most pleasant?’)	☐ <i>l’accent marseillais</i>	☐ <i>l’accent toulousain</i>	☐ <i>ni l’un, ni l’autre</i>
... <i>le plus correct ?</i> (‘the most correct?’)	☐ <i>l’accent marseillais</i>	☐ <i>l’accent toulousain</i>	☐ <i>ni l’un, ni l’autre</i>

Table 4.9: Questions about attitudes towards accents in Marseille and Toulouse.

The final part of this questionnaire comprised socio-demographic questions.

4.4.3 Questions accompanying the online accent identification tests

The accent identification tests (see chapter 4.5) were always embedded within sets of questions about representations.⁹⁹ They resembled the questions asked in the offline questionnaires and also functioned as ice breaker questions.

For example, the online questionnaire of the first test (see Chapter 8.1) started with the open questions¹⁰⁰ *Quand vous entendez quelqu’un qui parle avec un accent toulousain, à quoi est-ce que cela vous fait penser?* and *Quand vous entendez quelqu’un qui parle avec un accent marseillais, à quoi est-ce que cela vous fait penser?*¹⁰¹ At the end of the questionnaire, participants were also asked to indicate what the differences between the accents of Toulouse and Marseille were (*D’après vous, quelles sont les différences entre l’accent de Marseille et celui de Toulouse?*).

4.4.4 The accent *gestalt* test (‘bubble task’)

As presented in Chapter 3.7, Berthele demonstrated that the German standard variety and less standard-like varieties were associated with different abstract drawings (2006, 2010b, 2010a). Since it was highly possible that such standard–local dialect relations could be

⁹⁹ For a description of the participants of these tests, see Chapter 8.

¹⁰⁰ The order of these two questions changed to avoid positioning and recency effects.

¹⁰¹ ‘What comes to your mind when you hear somebody with a Toulouse accent?’ ‘What comes to your mind when you hear somebody with a Marseille accent?’

replicated in a study about French varieties, and that a direct comparison between Toulouse and Marseille would be particularly interesting, I decided to include this innovative and explicit method into my final accent identification test¹⁰² (see Chapter 8.4) as the last task for participants to complete.

I could not ask the participants in open-ended questions in an interview setting as Berthele did, so I slightly modified the method by creating three pages in the online questionnaire in which I directly asked *Est-ce que l'un de ces dessins vous fait penser à l'accent toulousain? Si oui, veuillez cliquer dessus*. ('Does one of these drawings make you think of the accent of Toulouse? If yes, please click on it.') and presented them with the same abstract drawings of speech bubbles Berthele had used (see Figure 3.15). The follow-up question was *Pourquoi avez-vous choisi ce dessin?* ('Why have you chosen this drawing?'). I presented this question twice, once for the accent of Marseille and once for Toulouse. These three pages in the questionnaire were presented in different orders to avoid possible positioning and recency effects. As we will see in Chapter 5.3, the answers from the participants were surprisingly consistent and the visual stimuli inspired them to use more metaphors while describing the different accents than other questions such as *Quand vous entendez quelqu'un qui parle avec un accent toulousain, à quoi est-ce que cela vous fait penser?* 'What do you think of when you hear somebody speaking with an accent from Toulouse?' as asked in my first online accent identification test as an ice-breaker question (see Chapter 5.2).

All in all, I applied a lot of different methods to approach the folk linguistic representations of different accents, with special focus on Toulouse and Marseille. I investigated the associations and attitudes of the speakers towards Marseille and Toulouse in many different ways; I asked for salient features that people would use to differentiate between the accents again and again and I directly asked who the typical speakers were. All these approaches aimed to come closer to the speakers' representations. However, such methods only tell us half of what we want to know, because these representations can be heavily influenced by social and cultural stereotypes (see Chapter 2.3.2). This is why I decided to focus on perceptual methodologies to be able to paint a fuller picture.

¹⁰² With the consent of Raphael Berthele, of course, who also very kindly sent me a high-quality version of the visual stimuli.

4.5 Perception

The aim of this dissertation was to conduct several perceptual studies to explore folk linguistic representations of intra-Southern differences from a perceptual point of view. Although perception has always been important in linguistics (see Chapter 2.3), it has only recently become ‘easier’ to adopt a perceptual approach, largely due to the internet. Now, platforms such as Soscysurvey (Leiner, 2024) provide a lot of help in conducting online surveys that include perceptual tasks, making perceptual approaches increasingly common. In French linguistics, impressive crowd sourcing projects with thousands of participants have been undertaken (e.g., Avanzi & Boula de Mareüil, 2017; Avanzi & Stark, 2018).

As mentioned above, the original plan for this dissertation was to approach the phonological variation in Southern France and its folk linguistic representations via the recording of a more or less representative sample of speakers in the two major cities, Toulouse and Marseille. With these speakers, an accent identification test would be conducted, so that the speakers who would be easily identified could be singled out. The easily identified speakers would then be recorded once more, and more accent identification tests would be conducted with stimuli taken from their speech, so that the most typical speech could then be analyzed. This plan had to be modified because accent identification of Southern French accents is far from easy and no matter what methods of elicitation are being used, social and cultural stereotypes strongly influence the outcomes of accent identification tests (see Chapter 8).

All in all, I conducted four tests that differed from each other to varying degrees. Since these tests are the heart of this dissertation, they will be discussed in greater detail in the following chapters. That way, their methodology, analysis and results can be better discussed together. I will therefore only briefly outline them here, with the focus on the core methods which were applied as shown in Table 4.10.

When creating an accent identification test, it must be kept in mind that asking a large number of questions about a large number of stimuli should be avoided because participants might be unwilling to spend too much time on such tests. Diekmann (2012, p. 70) advises against designing surveys that take longer than twenty minutes, but based on my personal experience, online tests should be much shorter. Therefore, I either cut down the questions about the stimuli (as was done in the first test) or reduced the number of stimuli (as was done in the third and fourth tests).

Additionally, just as the selection of the speakers has to be done carefully, the selection of the listeners as well as the choice of modality (online tests vs. offline tests) also requires caution. Online tests allow for more stimuli to be tested due to rotation and randomization techniques than would be possible in a simple offline test conducted in classrooms or clubs for senior citizens. On the other hand, offline tests provide the person conducting them more control over the test situation (cf. Pustka, Chalier, & Jansen, 2024, pp. 161–162). This is particularly important concerning questions about whether people were distracted or whether the sound quality of the stimuli they were listening to was adequate. Another advantage of offline tests on location is that some particular groups of people can be targeted that would fall under the radar in online surveys (see Chapter 4.3). However, one major benefit in conducting such perception tests online is that the recruitment of participants is much easier and the whole project is considerably less expensive than an offline experiment where a researcher has to go in person to the region in question and to find places to conduct such a test (cf. Pustka et al., 2024). However, to ensure that the picture I drew with my accent identification tests was not too one-dimensional, I chose to use both methods.

	1 st test	2 nd test	3 rd test	4 th test
Origin of the speakers (southwest)	Toulouse (city)	Toulouse (city)	Toulouse (city) Salles-Curan (country)	Toulouse (city) Salles-Curan (country)
Origin of the speakers (southeast)	Marseille (city)	Marseille (city)	Marseille (city) Oraison (country)	Marseille (city) Oraison (country)
Number of speakers	64	24	12	16
Selection of speakers	12 categories (age, sex, education) 2 or 3 speakers per category per city	12 categories (age, sex, education) 1 speaker per category per city	2 older speakers and one younger speaker per point of investigation	Only male speakers (3 or 4 speakers per point of investigation, based on age and education)
Stimuli	3 stimuli per speaker (three times read speech)	1 stimulus per speaker (read speech)	2 stimuli per speaker (1 read speech, 1 spontaneous speech)	2 stimuli per speaker (1 read speech, 1 spontaneous speech)
Modality	online	offline	online	online
Answer categories ¹⁰³	<i>Toulouse, maybe Toulouse, Marseille, maybe Marseille, I don't know</i>	<i>Toulouse, maybe Toulouse, Marseille, maybe Marseille, I don't know</i>	<i>Southeast, southwest, additional question: slider: rural/urban, pleasant correct</i>	No categories, but positioning of the speakers on a map, additional questions: <i>how typical?, how well educated?</i>
Order of the stimuli presented	Rotation and randomization	Same order for all participants	Partly rotated and randomized	Partly rotated and randomized
Participants	177 (139 from the south)	138 from Toulouse and Marseille	100 (65 of them from substrate region)	130 (90 of them from substrate region)

Table 4.10: Overview of the different accent identification tests.

Another important aspect to be considered is which speech style or speech mode¹⁰⁴ should be used as a stimulus in accent identification tests (see Chapter 4.3.2.1). Read speech has

¹⁰³ The original questions and answer categories are displayed in Chapters 8.1.3, 8.2.2, 8.3.3, and 8.4.3.

¹⁰⁴ While the term *speech style* is usually used in the anglophone context for all kinds of speech (e.g. read speech, conversation etc., cf. e.g. Labov [1966] 2006, p. 393, in Romance linguistics, finer distinctions are usually made by distinguishing between *modality* (spoken vs. written language) and proximity vs. distance

the great advantage that it is much easier to compare because emotional content, word choice and speaking situation are held constant (cf. Pustka et al., 2024, p. 172). However, in areas where accents are disappearing due to strong norms implemented at school (see Chapter 3.3) and where people have been trained to lose their accent while reading (in my sample of speakers, this particularly applies to speakers M42_m_92 and T21_w_98, see Chapter 7.1), read speech can lead to validity issues: When an accent is only to be found in spontaneous speech but accent identification tests are conducted with read speech, it is possible that the test is not testing what it should. Once again, my decision in light of these important questions was to try out different methods in four different tests.

4.6 Analysis of perception and representations

4.6.1 Dealing with open questions

Open questions in the questionnaires were made quantifiable by reducing them to keywords. For the visualization of these keywords, a word cloud generator (<https://www.wordclouds.com/>) was used. Table 4.11 shows the reduction process exemplified with some of the answers to the question *Quand vous entendez quelqu'un qui parle avec un accent marseillais, à quoi est-ce que cela vous fait penser?* ('What comes to your mind when you hear somebody speaking with an accent of Marseille?'), which was asked before the first online accent identification test (see Chapter 4.4.3).

(informal style vs. formal style), (cf. Koch and Oesterreicher [1990] [1990] 2011; 2012). Nevertheless, this dissertation uses the term *speech style* to designate the difference between spontaneous and read speech.

Answers given by the participants (some examples)	Keywords deduced from these answers
a la mer	mer
Notre dame de la Garde	notre dame de la garde
Le port	port
une cagole	cagole
Au soleil	soleil
la mer	mer
Cela me fait penser aux vacances	vacances
les cigales	cigales
ville de Marseille	Marseille
la provence	provence
A mes voisins	voisins
à Pagnol, la pétanque et le pastis	Pagnol, pétanque, pastis
le film intitulé « les collègues »	collègues
à un fort accent, au numéro 13, à l'OM, au bord de la mer méditerranée, le poisson, trafics de stupéfiants, ville qui craint un peu	fort accent, 13, OM, mer méditerranée, poisson, stupéfiants, craint un peu

Table 4.11: Treatment of the data (reduction of answers to the open questions to keywords).

4.6.2 Statistical analysis

All statistical analysis was conducted with the program R (cf. R core team, 2008). This section briefly describes the main tests and functions used in this dissertation. Most of the variables I worked with were binary categorical variables, (e.g., SPEAKER ORIGIN (*Toulouse* vs. *Marseille*), SEX (*male* vs. *female*), CORRECTLY IDENTIFIED? (*identified* vs. *not identified*), etc.). Only a few other variables were continuous (e.g., STIMULUS DURATION and DISTANCE BETWEEN SPEAKER ORIGIN AND PERCEIVED ORIGIN in perception test four, see Chapter 8.4.3). For better comparability with other studies, some categorical variables were transformed into continuous ones. For example, I transformed the variable SCHWA REALIZATION VS. DELETION into schwa realization rates.¹⁰⁵ At the same time, due to the sampling method I had used (see Chapter 4.3.1.1), some continuous variables were divided into different categories and thus became categorical. This was the case with AGE: Speakers (and sometimes listeners) were split into three or two age groups.

The statistical tests used in this dissertation were correlation and significance tests (see Chapter 4.6.2.1), logistic and linear regression (see Chapter 4.6.2.2) and recursive binary splitting in the form of conditional inference trees (see Chapter 4.6.2.3). After

¹⁰⁵ I calculated these rates by dividing the number of realized schwas by the number of possible schwas per stimulus and for this variable, I only worked with schwas in final syllables.

some trial mixed-effects model fittings, I decided against the inclusion of random effects into my models. I did this despite the fact that my perception test data would have had all the requirements for the introduction of the individual speaker and the individual listener as random effects, and that current works in linguistics prefer working with mixed-effects models rather than with regression models (e.g., Courdès-Murphy, 2018; Mooney, 2018; Avanzi & Boula de Mareüil, 2019).

The problem that kept me from using mixed-effects models was the insufficient amount of data, paired with the fact that overall identification was close to chance level. Additionally, the task of identifying the origin of my speakers was so difficult that it led to identification rates close to chance level, resulting in them being nearly unidentifiable. It should therefore be kept in mind that the models fitted in this dissertation only indicate tendencies that might prove important if the amount of data had been larger. However, my analyses are comparable to a large amount of slightly older research, since, for a long time, sociolinguistic research has worked with logistic regressions in the VARBRUL program (cf. Baayen, 2008, p. 165).

4.6.2.1 Correlation and significance testing

For correlations, I used the function `cor.test()`, which is part of the base system in R, and Pearson's correlation coefficients, which are calculated by dividing the covariance (the averaged sum of combined deviations) of two variables by their standard deviation:

$$r = \frac{cov_{xy}}{s_x s_y}$$

The function I used in R was thus: `cor.test(x, y, method = "pearson")` (cf. Field, Miles, & Field, 2013, 208–217). Since most of the data was categorical, this test was only used marginally. In order to assess whether there was a high probability that a certain categorical independent variable influenced a dependent one, I used Pearson's χ^2 test. The χ^2 test compares the observed frequencies to the frequencies one would get by chance:

$$\chi^2 = \sum \frac{(observed_{ij} - model_{ij})^2}{model_{ij}}$$

When the observed frequencies differ to a greater extent from normality (i.e. the frequencies one would get by chance), a low p-value is given. A low p-value means that the probability of obtaining the observed results in the case of no relation between the two variables (i.e. H_0) is very low. In this case, H_0 (which says that there is no relation between two variables) is rejected and we assume that differences are significant (cf. Field

et al., 2013, pp. 814–818). For the χ^2 test, I used the `chisq.test()` function of the base system of R. When occurrences were too marginal for the χ^2 test, I used Fisher’s exact test (using the function `fisher.test()` of the base system of R). This test computes the exact probability of observing one particular arrangement of the data, based on a 2x2 contingency table. It is, however, only used when sample sizes are too low (cf. Field et al., 2013, p. 816).

When working with continuous outcome variables, I applied independent t-tests, using the `t.test()` function in R. These tests were used to determine whether the means of two groups were significantly different (cf. Field et al., 2013, 368). This was done by calculating the difference between the sample means and then dividing it by the standard error:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_p^2}{n_1} + \frac{s_p^2}{n_2}}}$$

s_p^2 represents the pooled variance. The formula assumes that the variances of the two groups are equal. If the calculated t-value is greater than the critical value from the t-distribution (based on the degrees of freedom and the chosen significance level), we can conclude that there is a significant effect of the independent variable (cf. Field et al., 2013, p. 375).

4.6.2.2 Logistic and linear regression

To analyze the influence of various predictor variables on a single outcome variable, I used logistic and linear regression analysis. Linear regression models are models that predict an outcome in the form of a straight line, based on observed data. This straight line is calculated using the method of least squares and is defined by the intercept (b_1) and the slope (b_0), where the slope indicates the change in the outcome for a one-unit increase in the predictor variable:

$$Y_i = (b_0 + b_1X_i) + \varepsilon_i$$

(cf. Field et al., 2013, pp. 246–253). For the linear regression models fitted in this dissertation, I applied the `lm()` function of the *lme4* package in R (Bates, Mächler, Bolker, & Walker, 2015).

Logistic regression models, in contrast, are used with categorical data. These cannot be treated the same way as continuous data. One of the reasons for this is that the

outcome of a binary variable cannot be represented with a straight line. Models therefore have to use logarithmic transformation and do not predict a possible outcome straightforwardly, but the probability of a possible outcome:

$$P(Y) = \frac{1}{1 + e^{-(b_0 + b_1 X_{1i} + b_2 X_{2i} + \dots + b_n X_{ni})}}$$

(cf. Baayen, 2008, pp. 195–196; Field et al., 2013, p. 314). Logistic regression models were fitted with the `glm()` function which is also part of the *lme4* package in R.

The models were initially fitted by including all possible predictor variables and interactions. Following this, variables or interactions that were not deemed significant were removed in a stepwise manner, and the new model was tested to see if it represented a significant improvement over the previous one. Visualizations of these models were created with the `visreg()` function of the *visreg* package (Breheny & Burchett, 2017). This function displays the results of a model by visualizing how a predictor variable is estimated to affect the outcome variable. The plots created with this function display confidence bands, prediction lines, and partial residuals (cf. <https://pbreheny.github.io/visreg/>).

4.6.2.3 Recursive binary splitting: conditional inference trees

Another statistical tool used in this dissertation is conditional inference trees (c-trees). These trees split data into different subsets, based on a series of binary questions and recursive testing on the different predictor variables. For all predictors, tests of independence between the predictor and the response are carried out. If a predictor is judged useful, it is kept, and the p-value of the test is reported. The data in the obtained subsets are then once again split into different subsets according to different predictors determined by the same tests, until increasingly homogeneous subsets are found. Predictors are hierarchically organized, according to the strength of the association between them and the response (cf. Tagliamonte & Baayen, 2012, pp. 159–160). Conditional inference trees are thus a practical tool for detecting and visualizing the interaction and hierarchy of different predictors. I used the `ctree()` function of the *party* package in R (Hothorn, Hornik, & Zeileis, 2006; Zeileis, Hothorn, & Hornik, 2008).

Conditional inference trees have the disadvantage that they sometimes have difficulty detecting complex interactions. In these cases, random forests are a better tool. However, they also require a lot of data. Although they are possible to carry out with less

data than generalized linear mixed models (cf. Tagliamonte & Baayen, 2012, pp. 163–165), they were unfortunately not applicable to my data.

5 Results I: Attitudes, Associations and *Gestalt* of Southern French

As described in Chapter 2.1.3.6, a regional variety is found in the speakers' representations and is, as such, closely tied to the attitudes and associations of its speakers. These factors thus have an important influence on the varieties in question and examining them can lead us to a fuller understanding of them. This chapter therefore presents the results of the questionnaire questions hinting at attitudes (Chapter 5.1) and associations (Chapter 5.2), as well as of the accent *gestalt* test (Chapter 5.3).

5.1 Attitudes

Attitudes towards Southern French varieties were examined using two different approaches: first, through questionnaires and interviews (see Chapter 4.4), where French speakers were asked directly and indirectly about their thoughts on the accents; and second, through perception tests (see Chapter 8), where French speakers evaluated stimuli in terms of pleasantness and correctness. This chapter focusses on the first approach. The results of the pleasantness and correctness ratings are presented in Chapters 8.3.5.3 and 8.3.5.4.

Table 5.1 shows the answers to a question in which participants from Toulouse and Marseille were asked to indicate which of the two accents they found the nicest (*le plus joli*), the most pleasant (*le plus sympathique*) and the most correct (*le plus correct*). The answers show clearly that every group found their own accent most pleasant, while Toulouse was deemed the nicer one (*le plus joli*) by both groups and the Marseille accent considerably less correct. This shows that the Toulouse accent has more overt prestige than the accent from Marseille (see also Pustka et al., 2019).

	...le plus joli 'the nicest'	...le plus sympathique 'the most pleasant'	...le plus correct 'the most correct'
Participants from Marseille			
<i>l'accent marseillais</i>	38%	56%	13%
<i>l'accent toulousain</i>	47%	28%	72%
<i>ni l'un ni l'autre</i> 'neither'	34%	22%	56%
no answer	16%	16%	16%
n	43	39	50
Participants from Toulouse			
<i>l'accent marseillais</i>	17%	35%	4%
<i>l'accent toulousain</i>	54%	52%	40%
<i>ni l'un ni l'autre</i> 'neither'	20%	16%	48%
no answer	12%	10%	11%
n	86	93	85

Table 5.1: Answers to the question *Lequel des deux accents est pour vous... ?* ('Which of these two accents is for you...?')

While the data displayed in Table 5.1 aim to identify possible differences between the two accents, Table 5.2 shows the answers to the question *Les accents suivants vous plaisent-ils?* ('Do you like the following accents?'). This question is roughly comparable to Kuiper's pleasantness rating (see chapter 3.5.1) and supports her findings. It confirms the positive attitudes of Southerners towards their own accent and shows that especially the Marseillais seem to be very favorable towards their own accent, with 53% of the Marseillais participants having answered *oui, absolument* ('yes, absolutely') to the question of whether they liked the Provençal accent, while northern French accents, such as Parisian, Alsatian and especially Chtimi enjoy considerably less prestige. Numbers are similar among answers from Toulouse, only with fewer extremes (see also Pustka et al., 2019).

	no answer	<i>non, pas du tout</i> 'not at all'	<i>non, pas trop</i> 'not so much'	<i>peut-être</i> 'maybe'	<i>oui, un peu</i> 'yes, a bit'	<i>oui, absolument</i> 'yes, absolutely'
Participants from Marseille (n=32)						
<i>parisien</i>	16%	16%	6%	28%	22%	13%
<i>chti</i>	19%	53%	3%	13%	9%	3%
<i>alsacien</i>	13%	28%	22%	22%	9%	6%
<i>corse</i>	22%	13%	9%	19%	16%	22%
<i>provençal</i>	9%	3%	16%	3%	16%	53%
<i>sud-ouest</i>	9%	16%	3%	6%	31%	34%
Participants from Toulouse (n = 83)						
<i>parisien</i>	7%	14%	14%	22%	20%	22%
<i>chti</i>	13%	35%	19%	19%	7%	6%
<i>alsacien</i>	13%	17%	17%	41%	4%	8%
<i>corse</i>	16%	1%	10%	36%	17%	20%
<i>provençal</i>	10%	1%	10%	20%	23%	36%
<i>sud-ouest</i>	5%	1%	6%	22%	18%	48%

Table 5.2: Answers to the question *Les accents suivants vous plaisent-ils?* ('Do you find the following accents pleasant?')

All in all, these findings show that auto-representations are very positive in the South of France and that although southeast and southwest have their similarities, there are still differences in terms of associations and prestige.

5.2 Associations

During this research project, various speakers were asked about their associations with the accents of Toulouse and Marseille. The question presented here is, *Quand vous entendez quelqu'un qui parle avec un accent toulousain, à quoi est-ce que cela vous fait penser?* ('What comes to your mind when you hear somebody with an accent from Toulouse?'), followed by the same question regarding Marseille (see Chapter 4.4.3). The responses were shortened to their core message, represented by a few keywords (see Chapter 4.6.1 for an example of this approach). Table 5.3 lists the keywords that came up most often, while Figure 5.1 and Figure 5.2 illustrate these keywords as word clouds.¹⁰⁶

¹⁰⁶ It has to be kept in mind that informants from the southwest heavily outnumbered informants from the southeast (see Chapter 8.1.4). We are therefore dealing with a higher number of hetero-representations in Marseille than in Toulouse.

Toulouse		Marseille	
sud	26	soleil	40
soleil	20	sud	40
rugby	16	mer	38
sud-ouest	11	Pastis	26
Toulouse	9	Marseille	22
moi	7	Pagnol	20
Nougaro	6	cigales	18
vacances	5	pétanque	14
chantant	4	vieux-port	12
maison	4	méditerrané	10
bonne humeur	3	Provence	10
Cabrel	3	cagole	8
cassoulet	3	maison	8
chaleur	3	moi	8
convivialité	3	vacances	8
famille	3	bouillabaisse	6
joie de vivre	3	exagération	6
saucisse	3	Marius	6

Table 5.3: Most frequently named associations with the accents of Toulouse and Marseille.

A comparison of these keywords leads to the following observation: First of all, the associations with Marseille were by far more numerous. This is most probably due to the cultural prominence of this accent (see Chapter 2.3.2). And secondly, while the words *sud* ‘south’, *soleil* ‘sun’ and *vacances* ‘vacation’ appear very often in both word clouds, the other associations with the two accents differ more greatly.

Important keywords linked to the Marseille accent are *la mer* ‘the sea’, *le vieux-port* ‘the old port’, and *la pétanque* (a sport typically played in Provence), the phrase *tu tires ou tu pointes* (a famous phrase that refers to two different tactics in *pétanque*), as well as the culinary elements *bouillabaisse* (a fish soup) and *pastis* (an anise-flavored spirit). *Marius* refers to the works of Marcel Pagnol, whose name also features prominently in the answers relating to Marseille (see Figure 5.1).



Figure 5.1: Word cloud of the associations with the accent of Marseille.



Figure 5.2: Word cloud of the associations with the accent of Toulouse.

The accent of Toulouse, on the other hand (see Figure 5.2), was associated with several musicians (Claude Nougaro, Cabrel and Zebda) and with food the southwest is known for, such as *cassoulet* (a slow-cooked casserole), *saucisses* ‘sausages’, *foie gras* (duck or goose liver). Nearly all associations with Toulouse were very positive, with keywords such as *beau/belle* ‘beautiful’, *joie* ‘joy’, *humour* ‘humor’ and *convivialité* ‘warmth’. It is

also notable that a lot of associations stressed the fact that participants associated the accent with their home: *moi* ‘me’, *famille* ‘family’, *voisin* ‘neighbor’. This is due to the fact that a lot of participants (85 in total) originated in Toulouse and its surroundings, while only 54 were from the southeast and 38 from regions other than the south.

All in all, the keywords suggest that both accents are often associated with the same positive elements, such as sun, south and holidays. However, apart from these elements, they differ in terms of more local and specific associations. This shows that these accents do have their similarities but also their differences in the representations of the speakers. The positive attitude towards Southern accents can not only be observed in these open-ended questions, but also in the answers to the closed questions asked during the second offline questionnaire.

5.3 Gestalt

As has been stated in Chapter 4.4.4, visual *gestalt* plays an important role when it comes to the way different accents are stored in the speakers’ representations. Confronting speakers with certain visual stimuli and asking them to associate them with different accents can therefore yield interesting results, as has been shown by Berthele (2010a, see Chapter 3.7). Table 5.4 shows the answers given by the participants to the question *Est-ce que l’un de ces dessins vous fait penser à l’accent marseillais/toulousain/parisien? Si oui, veuillez cliquer dessus*. (‘Does one of these drawings remind you of the Marseille/Toulouse/Parisian accent? If yes, please click on it.’) This question was asked during the last accent identification test (see Chapter 4.4.4). A third of the participants did not complete the bubble task, which is why the number of participants is lower than for the rest of the accent identification test. For more details about the participants, see Chapter 8.4.4.

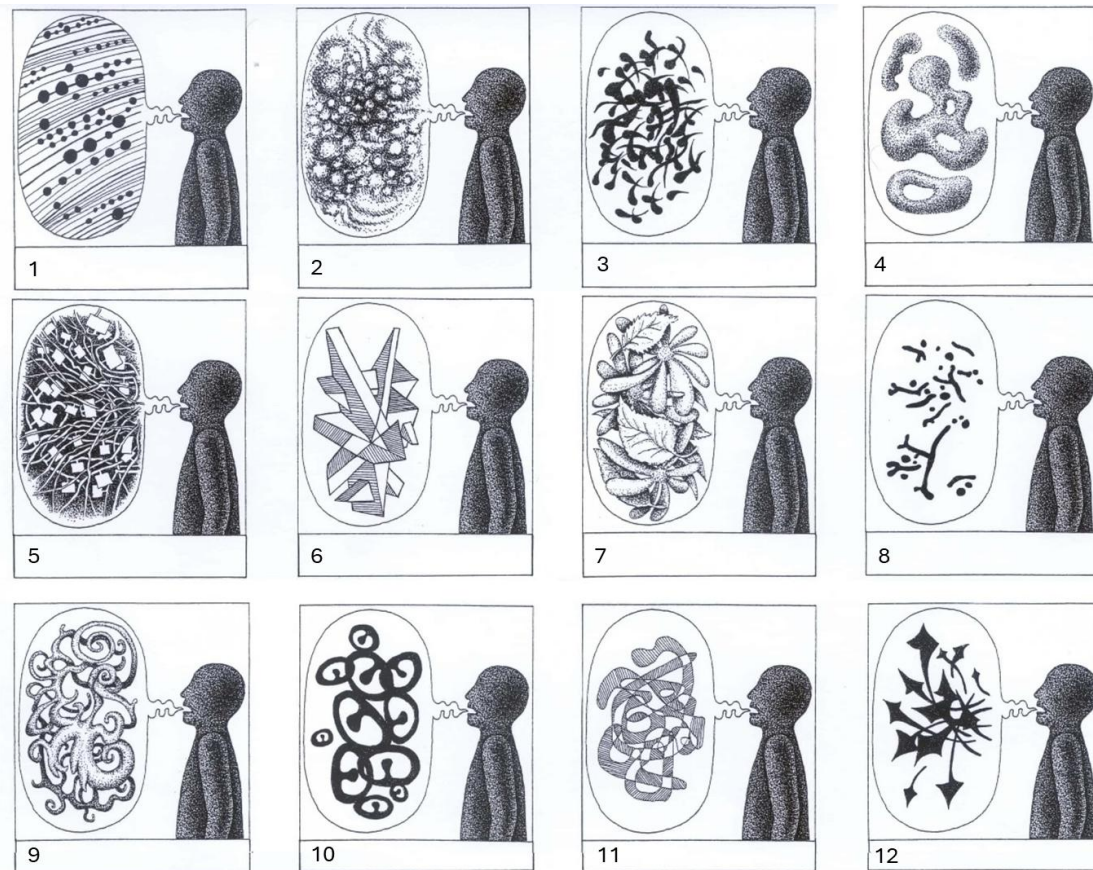


Figure 5.3: Visual *gestalts* presented to the participants during the ‘bubble task.’¹⁰⁷

As can be seen in Table 5.4, most of the images were chosen at a similar rate (between 3 and 6%), but some percentages stand out. It can be stated that the Paris accent was more often associated with *gestalt* No. 6, with its many rectangles, while the two southern accents were instead associated with round objects, such as circles (No. 1), flowers (No. 7) and tentacles (No. 9). The only *gestalt* quite often associated with Marseille with a less round appearance is speech bubble No. 12, which displays curved arrows.¹⁰⁸

¹⁰⁷ This drawing is a modified version of Figure 3.15, in which numbers were added to facilitate the interpretation of the results. Participants did not see them during the test.

¹⁰⁸ Interestingly, the two southern accents were linked to the same bubbles the standard high German accent was linked to in Berthele’s (2010a) results, see Chapter 3.7.

Picture N°	Toulouse	Marseille	Paris	N
01	17.7%	9.0%	15.4%	27
02	0.0%	9.0%	6.2%	10
03	11.3%	6.0%	4.6%	14
04	4.8%	4.5%	3.1%	8
05	3.2%	4.5%	7.7%	10
06	4.8%	4.5%	29.2%	25
07	16.1%	11.9%	0.0%	18
08	3.2%	1.5%	9.2%	9
09	12.9%	20.9%	3.1%	24
10	9.7%	4.5%	0.0%	9
11	3.2%	6.0%	7.7%	11
12	12.9%	17.9%	13.8%	29
N	62	67	65	194

Table 5.4: Results of the ‘bubble task’: percentages of answers given per accent per picture.

Participants not only had to choose the picture that they felt visualized the accent in question, but they were also asked to give their reasons for choosing said picture.¹⁰⁹ A lot of their answers made use of metaphors, such as *rondeur* (‘roundness’) or *feux d’artifice* (‘fireworks’). Some of them referred to similar aspects. To facilitate comparability, all answers were reduced to one or two keywords that are displayed in Table 5.5 and Table 5.6 as well as in Figure 5.4 and Figure 5.5. These figures, once again word clouds based on the most important keywords (see Chapter 4.6.1 for the approach), show that when choosing the respective bubble, the impression of both southern accents being *chantant* ‘melodious’ played an important role.

This can be observed in several answers regarding the accent of Marseille: “Car ils sont toujours de bonne humeur et ont l’accent chantant” (‘Because they are always good-humored and have a melodious accent’) and “L’accent marseillais est plutôt chantant et le dessin me fait penser à des partitions de musique et des notes” (‘The Marseille accent is rather melodious and the drawing reminds me of sheet music’). Another aspect often mentioned in regard to the Marseille accent was the accentuation of certain syllables which made several participants choose No. 12: “Dessin relativement chargé et formes en éclat, comme des feux d’artifices... pourrait rendre compte des syllabes particulièrement accentuées” (‘A relatively busy drawing with burst-like shapes,

¹⁰⁹ The exact questions were “Est-ce que l’un de ces dessins vous fait penser à l’accent marseillais? Si oui, veuillez cliquer dessus.” (‘Do any of these drawings remind you of the Marseille accent? If so, please click on it.’) and “Pourquoi avez-vous choisi ce dessin?” (‘Why did you choose this drawing?’) These questions were similarly modified for the cities Toulouse and Paris, replacing ‘Marseille accent’ with ‘Toulouse accent’ and ‘Paris accent,’ respectively.

resembling fireworks... could account for the particularly accented syllables’) and “Car l’accent marseillais appuie beaucoup à la fin des mots, comme les flèches sur le dessin” (‘Because the Marseille accent emphasizes heavily at the end of words, like the arrows in the drawing’).



Figure 5.4: Keywords generated from reasons given for choosing a particular visual *gestalt* for the accent of Marseille – word cloud.

13 chantant	1 continu	1 mélange
4 rond	1 dadasse	1 mélodieux
3 rondeur	1 difficile à comprendre	1 nature
2 appuie	1 différence de volume	1 nébuleuse
1 accentué	1 distinctement	1 onctueux
1 agressif	1 dynamique	1 oscillation
1 aléatoire	1 désordre	1 patrimoine
1 appuyant	1 emberlificoté	1 peuchère
1 arêtes	1 festif	1 pointu
1 bonne humeur	1 feux d'artifices	1 poulpe
1 bouge	1 fleuri	1 printanier
1 bourrin	1 fortement	1 provençal
1 calanques	1 gestes	1 sardine
1 caricature	1 grotesque	1 soleil
1 casse les oreilles	1 hauts et bas	1 tonalité
1 chanté	1 ils crient	1 tous les sens
1 chaud	1 insistance en fin de mot	1 tranchant
1 circularité	1 intonation haute	1 vague
1 cohérent	1 liant	1 voix forte
1 comme toulousain	1 léger	1 vulgaire
1 complexe à comprendre	1 musique	

Table 5.5: Keywords generated from reasons given for choosing a particular visual *gestalt* for the accent of Marseille and their frequencies.

The biggest difference between the answers regarding Marseille and Toulouse was that Toulouse was more often associated with music. This can be observed in comments such as “Parce que cela fait penser que c’est une partition de musique” (‘Because it makes me think of sheet music’). Additionally, the sun is mentioned: “C’est un accent qui fait penser au soleil et par association aux fleurs” (‘It’s an accent that evokes thoughts of the sun and, by association, flowers’) and “Le côté nature, le soleil. C’est un accent qui apporte de la couleur aux mots.” (‘The natural side, the sun. It’s an accent that brings color to words.’) Although one linguistic feature that is typically mentioned when asked about differences between Toulouse and Marseille is cited, i.e. its apical /r/, “les ronds et les r roulés” (‘The rounded sounds and rolled Rs’) there are also answers which hint at the similarity with the Marseille accent “Comme pour Marseille” (‘Like with Marseille’).



Figure 5.5: Keywords generated from reasons given for choosing a particular visual *gestalt* for the accent of Toulouse – word cloud.

11 chantant	1 couleur	1 mélangé
7 musique	1 douce	1 nature
4 rond	1 dynamique	1 notes de musique
3 soleil	1 débit	1 partition
2 fleuri	1 enroulé	1 pastorale
2 r-roulé	1 facile à comprendre	1 pointu
1 abondance	1 festif	1 prononcé
1 abrupte	1 feu de bois	1 rocaille
1 accentuation de consonnes	1 fins de phrase prononcées	1 rondeurs
1 accentuations	1 fleurs	1 roule
1 accentués	1 fluide	1 rébondit
1 arrondit	1 fluidité	1 saccadé
1 boucles	1 fort	1 sardine
1 briques rouges	1 harmonique	1 sud
1 cassoulet	1 hein	1 suffixe
1 chaleur	1 intonation	1 tonalité
1 chaud	1 intonations	1 tonique
1 clair	1 irrégulier	1 uniforme
1 comme marseille	1 marqué	1 végétation

Table 5.6: Keywords generated from reasons given for choosing a particular visual *gestalt* for the accent of Toulouse and their frequencies.

As expected, the comments given when choosing the bubble representing the Paris accent did not bear any resemblance to those for the Southern accents (see Figure 5.4 and Figure 5.5). As is usual when talking about the standard variety of a language (see Chapter 3.5.1), the words used were less positive, for example in comments such as “parce qu’il y a des pointes agressives dans cet accent, ce n’est pas neutre” (‘Because there are some aggressive spikes in this accent, it’s not neutral’) and “aucun charme” (‘no charm’).

Parisian accent thus strongly oppose those of the southern accents. This seems to be the reason why nearly a third of the participants chose bubble No. 6, as explained by the following comment: “L’accent parisien paraît linéaire sans mélodie, et donc on pourrait le comparer à des formes géométriques qui sont linéaires tels que le triangle, le rectangle, etc.” (‘The accent of Paris seems linear, without melody, so you could compare it to linear geometrical forms, such as triangles, rectangles etc.’) While a slightly higher number of participants saw music notes in bubble No. 1 and therefore attributed this *gestalt* to Toulouse, an important number of participants saw it as a rather linear *gestalt* and therefore associated it with the Parisian accent: “L’accent est plus linéaire que d’autres.” (‘The accent is more linear than others.’)

Although the association of a particular accent with a visual *gestalt* is a largely subjective endeavor, the explanations provided by the participants demonstrate that this *gestalt* test has brought to light specific associations that a question like *What do you associate with Toulouse/Marseille?* would not necessarily reveal, due to its largely abstract nature. The results of this test show clear tendencies: Once again, we can observe that Southern accents bear remarkable resemblances, especially when opposed to the northern standard. However, in detail, there are indeed visible differences. These differences may largely be due to the fact that we are mostly dealing with auto-representations of Southerners, since many of the participants were from the south. Whether these differences are important enough to enable speakers, and especially Southerners themselves, to identify different accents in the South of France, is a matter that is dealt with in the following chapter.

6 Results II: Representations of Southern French varieties

As has been stated above, various questions were asked to approach the speakers' representations of Southern French accents. Since some of them were asked several times, their results will be grouped together, split up into *lexical differences*¹¹⁰ (6.1) and *pronunciation differences* (6.2).

6.1 Lexical differences

Differences between the two accents in the representations of the speakers can be observed when it comes to lexis. When asked about typical words used in either of the two cities (*Pourriez-vous nommer des expressions ou des mots qu'on n'utilise qu'à Marseille ou Toulouse?* 'Could you name expressions or words that are only used in Marseille or Toulouse?'),¹¹¹ some words were mentioned significantly more frequently than others.

Toulouse		Marseille	
chocolatine	15	peuchère	21
boudu con	11	dégun	11
putain con	10	tarpin	5
macarel	6	vé	5
poche	5	bonne mère	4
boudu	4	cagole	3
con	4	fada	3

Table 6.1 Most frequently named words only used in Toulouse or Marseille, according to the participants.¹¹²

Despite an equal number of participants from Toulouse and Marseille, responses related to Marseille were more frequent. As Table 6.1 and Figure 6.1 show, important words associated with the Toulouse accent include *chocolatine*, which is the southwestern equivalent for *pain au chocolat* and the two expressions made up of two swear words *putain con* and *boudu con* (< Oc. *Bon Dieu* 'Good God'). It is not surprising that the term *chocolatine* features prominently here. For over a decade, numerous newspaper articles have been published about the contentious debate between *chocolatine* and *pain au*

¹¹⁰ A preliminary test had also included questions on grammatical differences, but had not yielded any results worth mentioning, since most of the participants chose not to answer these questions.

¹¹¹ This question was part of the offline questionnaire completed by the speakers recorded in Toulouse and Marseille (see Chapter 4.4.1).

¹¹² See appendix for a full list.

outgroup effect, Chapter 2.2.1). Additionally, the question of who is able to discern the different accents should be addressed. The following chapter summarizes the answers given to different questions that all went in the same direction: Do differences in pronunciation exist in the South and if they do, what characteristics make them up?

6.2.1 Existence of differences

Pustka (2010b) investigated representations of the speakers in terms of perceived differences of accents in the South of France and showed that, from a Toulousian point of view, the Marseille accent was thought of as being very different from one's own (see Chapter 3.5.2). Figure 6.3 and Figure 6.4 show the results of a similar question asked during the first questionnaire survey conducted in Toulouse and Marseille¹¹⁴ (see chapter 4.4.1). Participants were asked whether they perceived differences between the accent of their own city and the ones displayed in the figures (*Notez-vous une différence entre votre accent et celui de...?*). In addition to the percentage of affirmative answers, Figure 6.3 and Figure 6.4 indicate the substrate region of each town, as well as the distance between the respective cities according to a Google maps search on the shortest path between them. The substrate regions Gascon, Languedocien, Provençal and Auvergnat can be classified as Occitan dialects, while Francoprovençal and Catalan are widely recognized as distinct languages. This is why the bars of the two cities outside the Occitan substrate region – Lyon (Francoprovençal) and Perpignan (Catalan) – are colored in grey.

All in all, the results show one important tendency: Apart from some outliers, the further away the places were, the more often they were declared to have an accent that differed from the respective place. It is therefore not surprising that for most of the Toulouse participants, there are no differences between their own accent and that of Albi (see Figure 6.3). The towns are not far apart and belong to the same substrate region (i.e., Languedocien), with Toulouse being at the border with Gascon. The results were a bit different for the towns Aurillac, Pau, Montpellier and Bordeaux, which are all within approx. 200 to 250 km from Toulouse. While the accents of the first three towns were perceived to be different by only 25 to 39% of the participants, Bordeaux with its Gascon substrate, being situated at the border to the *Oil* region, was at a similar level as the Provençal towns Avignon, Toulon and Nice and the Catalan town Perpignan (between

¹¹⁴ Informants were 72 'real' Toulousains and Marseillais.

59% and 69%). The fact that the Marseille accent was perceived to be different by even more participants than the number of participants who noted a difference between Toulouse and Lyon can be explained by its important media presence (see chapter 3.5.1).

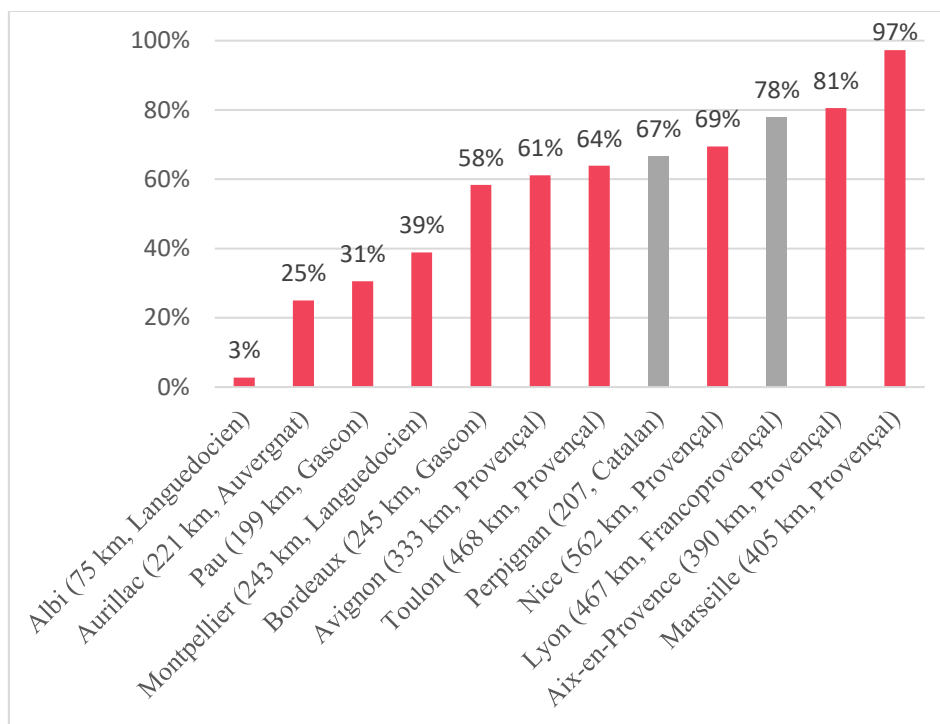


Figure 6.3: Affirmative answers given by Toulouse participants to the question *Notez-vous une différence entre votre accent et celui d'une personne de...?* ('Do you notice a difference between your accent and that of a person from...?'), N= 38.

Figure 6.4 shows the responses of the Marseillais and paints a similar picture. The most remarkable difference is, however, the rather large percentage of participants who perceived a difference between the accents of Marseille and Aix-en-Provence. Although these two places are close to one another (30km apart) and have very strong ties (they are the two main cities of the largest metropolitan area of France and share amongst other things a university), a quarter of the participants indicated noticing differences. This may be due to the traditional social divide between the two cities, with Aix-en-Provence being perceived as the cultural center of the region and thus as *bourgeois* and Marseille being associated with its big port and its melting pot qualities.

For the Marseille participants, Toulouse had a similar percentage to Perpignan, while the Lyon accent had the highest number of affirmative answers. The towns Aurillac and Pau, which both belong to a different substrate area, ranked surprisingly low. This could be explained by the relative unfamiliarity with these accents. Bordeaux's score,

however, is difficult to explain, since it is a well-known city in the southwest at a significant distance from Marseille. It is possible that this city's accent may not be as present as the Toulouse one in the representations of the speakers.

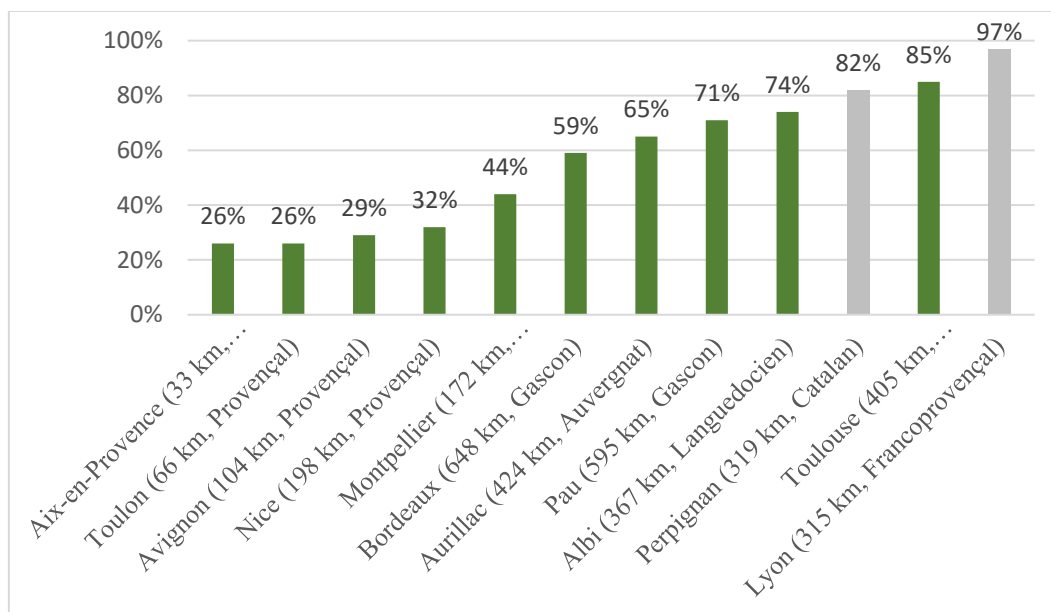


Figure 6.4 Affirmative answers given by Marseillais participants to the question *Notez-vous une différence entre votre accent et celui d'une personne de...?* ('Do you notice a difference between your accent and that of a person from...?'), N= 34.

All in all, the answers displayed by the two figures support Gauchat's (1903) and Pickl's (2016) claim that accents do not have clear-cut boundaries but fuzzy borders between them (see Chapter 2.2.1), and that the two cities Toulouse and Marseille play an important role in the speakers' representations about accent differences in the south. This is supported by the affirmative answers given by participants, who were asked whether they could distinguish between the accents of Toulouse and Marseille. In the first questionnaire survey, e.g., only one person out of 72 declared that there was no difference.¹¹⁵ However, when participants were asked whether they themselves would be able to recognize speakers from different parts of the south, their answers were less optimistic.

¹¹⁵ The question they were asked was *Y a-t-il une différence entre l'accent marseillais et l'accent toulousain?* 'Is there a difference between the accents of Marseille and Toulouse?'

6.2.2 Identifiability of accents

As stated above, although speakers are sure that regional differences exist, not all of them think that they will be able to identify them.

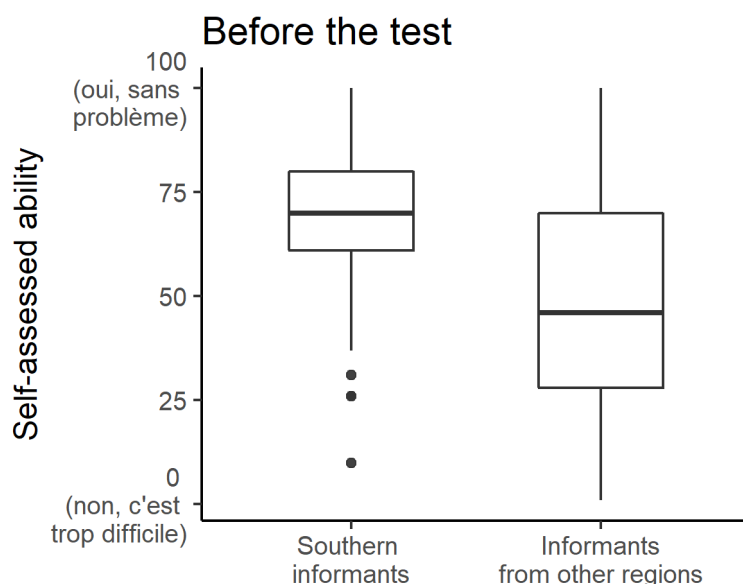


Figure 6.5: Answers to the question *Pensez-vous que vous pouvez facilement reconnaître les différents accents du Midi?* ('Do you think you can easily identify the different accents in the South?').

Figure 6.5 shows the answers given to the question whether participants thought they were able to recognize different accents in the south. This question was asked during the online questionnaire of the third accent identification test, just before the accent identification test started. Participants had to indicate their answers on a slider that ranged between *non, c'est trop difficile* 'no, that's too difficult' *oui, sans problème* 'yes, no problem.' Their answers were then transformed to a scale from 0 to 100.

We can see very clearly that current place of residence¹¹⁶ influenced the participants' answers considerably. On average, Southern participants were more optimistic about being able to identify different Southern accents ($M = 67.92$) than participants living in other regions ($M = 49.24$). According to a t-test, this difference was highly significant $t(1005.8) = 12.774$ and $p > .01$.

¹¹⁶ All informants were, amongst other things (see Chapter 8.3.3), asked to specify the *départements* in which they were born and in which they were currently living. These departments were then sorted into *Occitan substrate regions* and *Non-Occitan substrate regions*. *Southern informants* are those informants who were living in departments that were classified as *Occitan substrate regions*.

Although participants had been quite optimistic about being able to recognize different regional accents before the accent identification test, they stated that they found it very difficult after completing the test. This can be seen in Figure 6.6, which displays their answers to the question of how difficult they found the test, which was again answered using a slider.

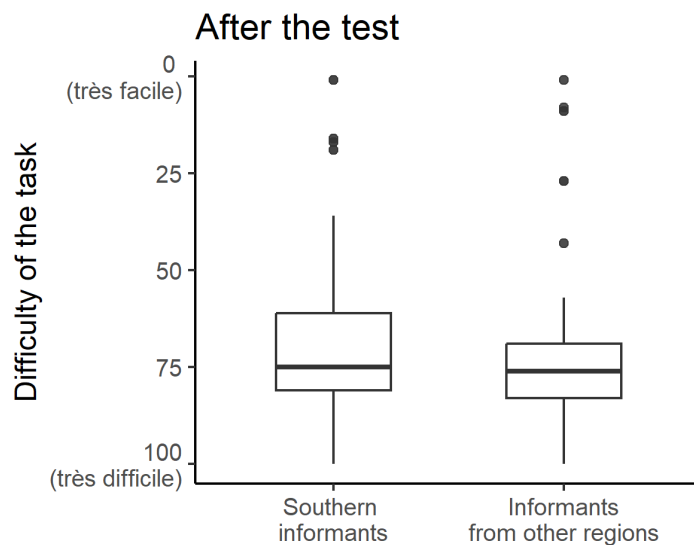


Figure 6.6: Answers to the question *Comment avez-vous trouvé cet exercice?* ('How did you find this task?').¹¹⁷

Two very similar questions were asked before and after the fourth online accent identification test (see Chapter 8.4). Figure 6.7 contrasts all answers to the two questions in the third and fourth test and shows that the latter was found to be even more difficult.

¹¹⁷ The inconsistency in the scales of Figure 6.6 and Figure 6.7 is due to an inconsistency in the original test design on SoSci Survey, where the assessment of the task as 'easy' was positioned at the right side of the slider in the pre-test question and at the left side of the slider in the post-test question.

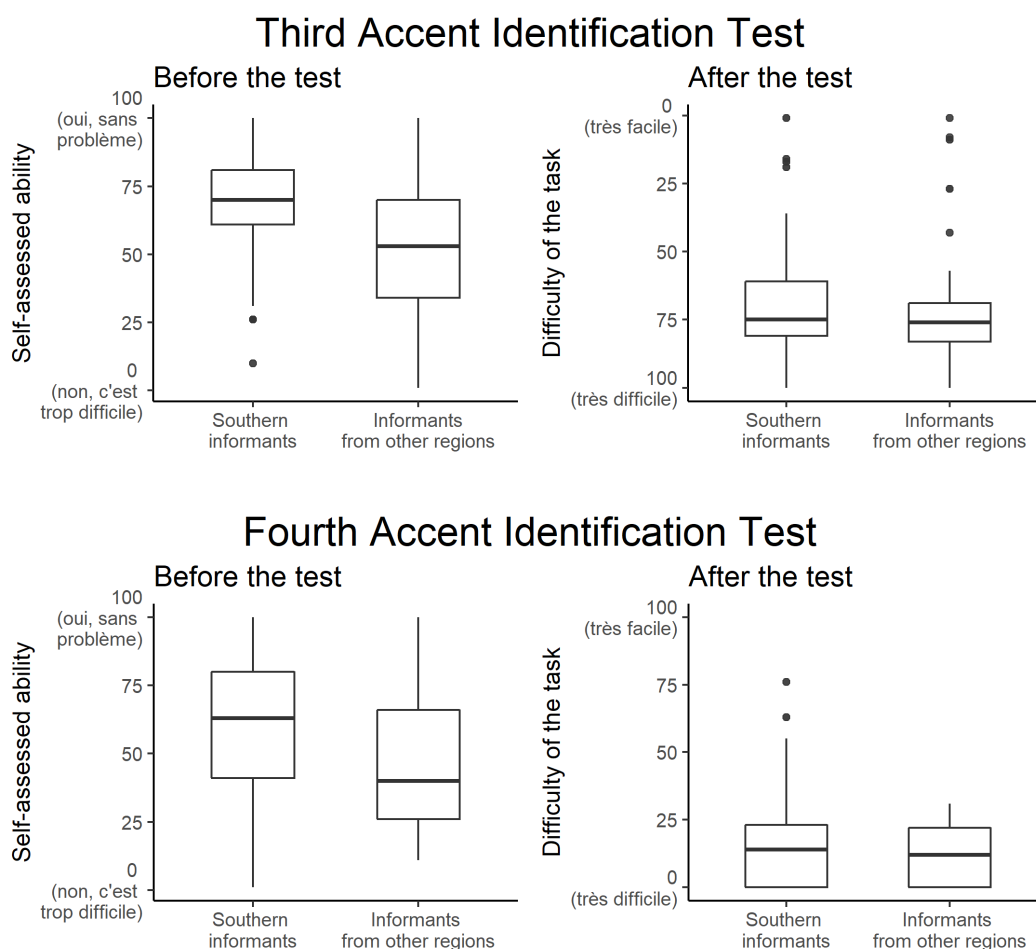


Figure 6.7: Self-assessed ability to recognize different Southern accents before and after identification tests 3 and 4.¹¹⁸

The important difference between the self-assessed ability to recognize accents and the declared difficulty of the accent identification test is probably due to the design of the test, which made the recognition of the regional accents considerably more difficult than the previous one, with the extracts being quite short and the regional lexis excluded. However, it still shows that identification is far from easy.

Another aspect that seemed to be difficult for the participants was naming intra-southern pronunciation differences. Table 6.2 displays the answers given by the participants of the first accent identification test. After completing the test, they were asked: *D'après vous, quelles sont les différences entre l'accent de Marseille et celui de Toulouse?* ('What are the differences between the accents of Marseille and Toulouse?', see Chapter 8.1.3). Table 6.2 shows that the one characteristic which was named most

¹¹⁸ The question asked before the test was: *Pensez-vous que vous pouvez facilement reconnaître les différents accents du Midi?* and the one after the test: *Comment avez-vous trouvé cet exercice?*

often was an accentuation of certain syllables, associated with Marseille (“plus d’accent sur certaines syllabes (surtout finales)”). In addition, participants deemed the accent of Marseille to be stronger (“plus prononcé”) and more melodious (“plus chantant”) than the Toulouse accent. At the same time, the Toulouse accent was also deemed stronger and more melodious than the Marseille accent, but by a lower number of people. The same can be said about the pronunciation of consonants that would be mute in northern French (“la prononciation de toutes les lettres”), but this characteristic was only scarcely named.

		Provenance of the participants			
		Languedoc	Provence	Others	N
Marseille	plus d’accent sur certaines syllabes (surtout finales)	23	13	2	37
	plus prononcé	18	12	1	31
	plus chantant	13	8	2	23
	toutes les lettres	5	1	1	7
	plus chaleureux, plus rieur	1	1	0	2
	‘tch’	0	2	0	2
Toulouse	plus prononcé	1	3	1	5
	plus chantant	3	5	0	8
	voyelles nasales particuliers	6	0	1	7
	toutes les lettres	2	1	1	4
	ton plus grave/fermé/plat	2	2	1	5
	plus rapide ou saccadé	3	0	1	4
	plus lent	0	2	1	3
	plus nasalisé	1	1	0	2
	plus rustique/campagnard	0	2	0	2
	plus accentué	1	0	0	1
	plus raffiné	1	0	0	1
très similaire/différence faible		5	10	1	16
autre		20	11	1	34

Table 6.2: Declared differences between Toulouse and Marseille according to the participants in the first accent identification test.

Interestingly, while the Marseille accent was mentioned much more often by the participants, the attributes it was given were slightly more uniform than those given to Toulouse, which was, amongst other things, described as deeper (“plus grave”), faster (“plus rapide”), but at the same time slower (“plus lent”) and whose nasal vowels were thought to be just ‘different’ (“voyelles nasales particuliers [sic!]”). The associations of the Toulouse accent being more rustic (“plus rustique/campagnard”) and more sophisticated (“plus raffiné”) contradict each other at first sight but go the same direction

as in the interviews, in which the Languedoc accent was described as more rustic than the Provence accent, while the urban Toulouse accent was deemed more sophisticated than the urban Marseille accent. The association of the Marseille accent with being warmer (“plus chaleureux”) and more cheerful (“plus rieur”) might be due to its association the sun, holidays and with the Pagnol movies that might have created a good-old-days image of life in the south.

In this particular setting, the provenance of the participants did not considerably influence the answers given. Participants from Languedoc were the largest group and the fact that some of the answers were given mostly by this group of participants is thus not surprising. Those aspects mentioned by more Provence participants than those from Languedoc are too scarce in number to require special attention.

However, when participants were asked to give their opinion about the differences between Toulouse and Marseille in closed questions, provenance did play a role. This becomes clear when looking at the results displayed in Figure 6.8 and Table 6.3.

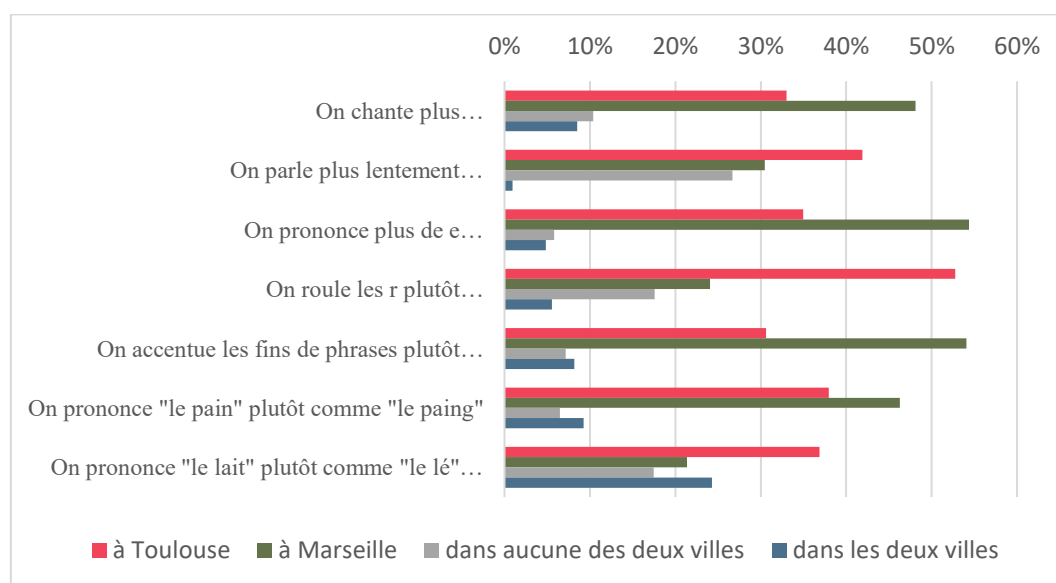


Figure 6.8: Answers to the closed questions asked in the second offline questionnaire (see Chapter 4.4.2), N=106.

The results of Figure 6.8 show that closed questions did not lead to a clear picture either. Solely apical *r* (*On roule les r plutôt...*) seems to be a rather Toulousian characteristic,¹¹⁹ and the stress on final syllables (*On accentue les fins de phrases plutôt...*) seems to be

¹¹⁹ Apical /r/ being associated with the Toulouse accent is striking, given that Séguy (1951, pp. 19–21) stressed more than half a century ago that apical /r/ was becoming increasingly rare in Toulouse, and today, it is mostly associated with rural varieties (cf. Pustka, 2007, p. 196).

Marseillais. Schwa realization (*On pronounce plus de e...*) was more commonly associated with Marseille, too. The other features are more or less balanced in the representations of the speakers, and when we look at Table 6.3, we can see that the characteristic *On chante plus...* was more often ascribed to the respective other group, while *On pronounce "le pain" plutôt comme "le paing"* and *On pronounce "le lait" plutôt comme "le lé"* was more often associated to the speakers' own group. It is possible that "chanter" was judged differently because it is more subjective than specific pronunciations.

	<i>On chante plus...</i>		<i>On parle plus lentement...</i>		<i>On pronounce plus de e...</i>		<i>On roule les r plutôt...</i>		<i>On accentue les fins de phrases plutôt...</i>		<i>On pronounce "le pain" plutôt comme "le paing" ...</i>		<i>On pronounce "le lait" plutôt comme "le lé" ...</i>	
	T	M	T	M	T	M	T	M	T	M	T	M	T	M
<i>à Toulouse</i>	28%	46%	39%	50%	35%	36%	42%	80%	30%	31%	45%	19%	40%	29%
<i>à Marseille</i>	54%	32%	32%	27%	52%	61%	31%	7%	52%	59%	39%	65%	12%	46%
<i>dans aucune des deux villes</i>	10%	11%	28%	23%	7%	4%	19%	13%	7%	7%	4%	13%	17%	18%
<i>à Toulouse et à Marseille</i>	8%	11%	1%	0%	7%	0%	8%	0%	10%	3%	12%	3%	31%	7%
N	78	28	78	28	78	28	78	28	78	28	78	28	78	28

Table 6.3: Answers to the closed questions asked in the second offline questionnaire (see chapter 4.4.2), N=106.

In total, these results show that the differences between southern accents do not seem to be enormous. Although they have their differences in the non-linguistic domain and in lexis, their linguistic *gestalt* is perceived as quite similar, and the characteristics that distinguish linguistically are not easily described and lead to contradicting answers. Still, French speakers are convinced of existing differences. To explore these differences, four accent identification tests were conducted.

7 Results III: Production data

This chapter does not present an in-depth analysis of a large corpus of Southern French, as can be found in Courdès-Murphy (2018), Eychenne (2006), Mooney (2018) or Pustka (2007). It instead presents an analysis of the stimuli used in the accent identification tests. This analysis aimed to identify linguistic and non-linguistic influences on the internal variation of the stimuli, which were then combined with the results of the accent identification tests. Section 7.1 presents the analysis of the stimuli of the first two accent identification tests that only included data from Toulouse and Marseille. Section 7.2 gives an overview of the characteristics of stimuli used in the third and fourth test, also including data from the Oraison/Manosque and Salles-Curan sample.

7.1 Stimuli of the first two accent identification tests

As mentioned in chapter 4.3.4, the stimuli all consisted of the following sentence of the PFC text (Detey, Durand, Laks, & Lyche, 2010):

Jusqu’ici, les seuls titres de gloire de Beaulieu étaient son vin blanc sec, ses chemises en soie, un champion local de course à pied, Louis Garret, quatrième aux jeux olympiques de Berlin en mille neuf cent trente-six, et, tout récemment, son usine de pâtes italiennes.

The choice of features analyzed in the stimuli is influenced by prior research on Southern French, especially Pustka (2009b), who correlated a number of features with a perception test which aimed to find a Southern French prototype (see Chapter 3.4.1). It thus focuses on the following segmental features:

- Pronunciation of final consonants
- *Loi de position*
- Schwa
- Nasal vowels

Since participants often mentioned speed as a distinguishing feature (e.g., “On parle plus lentement [à Toulouse]” ‘We speak more slowly [in Toulouse]’), see Chapter 6.2.2), the duration of the stimuli was equally examined.

I coded all stimuli according to the features examined, relying on an auditory analysis, and extracted the duration of the stimuli. The features were then analyzed, taking into account whether differences between the two cities Toulouse and Marseille can be observed or whether the socio-demographic factors age, sex and level of education

outweigh the speakers' regional origins. To address this, I used correlations, χ^2 test and Fisher's exact tests, logistic and linear regressions, as well as c-trees (see Chapter 4.6).

Realization of final consonants

The realization of final consonants is one of the features described by Pustka's (2007) participants as being a typical southern feature. Yet, Pustka showed that this feature was not directly linked to the perception of typicality of the accent (see Chapter 3.6.2). The context used to investigate the realization of final consonants in my data is the FINAL [T] (in *Garret*), which is present in 9 out of the 64 stimuli used in the test. Table 7.1 shows that the speakers pronouncing final [t] (the ones in black) tend to share some extralinguistic characteristics: Most of them are from Marseille, male and with a low level of education. This phenomenon is too marginal for any statistical analysis, though, so none of these factors proved to be significant in Fisher's exact tests.

age	Toulouse				Marseille			
	female		male		female		male	
	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>
18-29	T10_w_27	T9_w_25	T15_m_19	T7_m_25	M17_w_19	M32_w_19	M1_m_25	M5_m_25
	T16_w_20	T23_w_18	T18_m_23	T22_m_19	M18_w_19	M33_w_19	M6_m_19	M34_m_19
		T25_w_18	T35_m_19	T24_m_18			M10_m_25	
30-64	T2_w_48	T28_w_30	T1_m_38	T27_m_34	M12_w_52	M39_w_30	M2_m_54	M8_m_37
	T31_w_58	T39_w_33	T11_m_39	T30_m_32	M13_w_45	M16_w_37	M27_m_45	M11_m_58
			T19_m_52		M41_w_33		M31_m_31	M7_m_61
65+	T6_w_84	T8_w_69	T3_m_79	T4_m_89	M22_w_67	M15_w_83	M21_m_69	M9_m_65
	T17_w_67	T12_w_79	T37_m_68	T5_m_79	M36_w_76	M23_w_71	M29_m_84	M3_m_77
	T26_w_83	T14_w_79			M38_w_86	M24_w_76	M42_m_92	M14_m_76
	T29_w_92	T21_w_98			M40_w_82			

Table 7.1: Speakers who pronounce the final [t] in *Garret* (in black).

However, a c-tree (see Figure 7.1) with the three predictors SPEAKER ORIGIN, SEX and LEVEL OF EDUCATION based on the whole dataset confirms the importance of these variables on final [t] realization.¹²⁰ Figure 7.1 suggests that the most important predictor is the one that divides speakers into a group with *bac* and a group without. Among the

¹²⁰ Yet, his c-tree should be interpreted with caution. The model is based on the whole dataset (all observations from the accent identification test, where the number of stimuli observations was multiplied by the number of participants) rather than a dataset containing only the data of the stimuli. The latter, with just 64 observations, would have been insufficient for any kind of statistical analysis. The c-tree in Figure 7.1 therefore only reflects slight tendencies and nothing more.

speakers who do have *bac*, only those who belong to the oldest age group (65+) are likely to pronounce final [t] of *Garret*. Out of these speakers, only 20% would pronounce it. Among those who do not have *bac*, the middle-aged group is, with slightly over 40%, the group that pronounces the most final [t]. Among the youngest and the oldest of the speakers without *bac*, those from Toulouse never pronounce it, while those from Marseille do it at a rate close to 30%. However, in total, the phenomenon of the realization of otherwise mute final consonants seems to be rather rare in the South and it is possible that we are dealing with a change in progress (see Chapter 3.3).

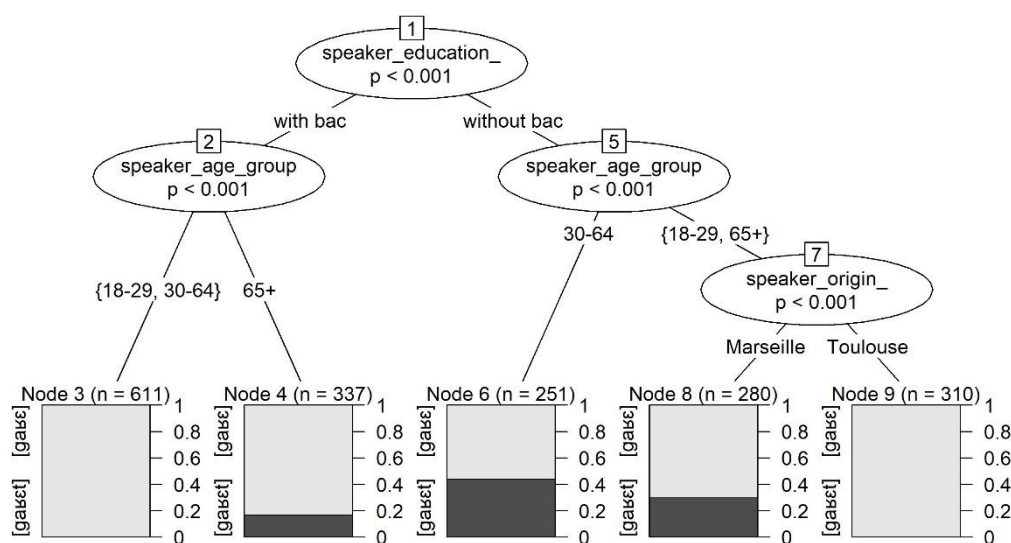


Figure 7.1: C-tree with the outcome variable PRESENCE OF FINAL [T] and the predictor variables SPEAKER_ORIGIN, SPEAKER_AGE_GROUP, SPEAKER_EDUCATION.

Loi de position

A very common southern feature is the *loi de position* (see Chapter 3.4.1). The only four speakers who did not follow this law but pronounced [ɛ] in the final syllables of *était* according to an auditory analysis are T21_w_98, M6_m_19, M10_m_25 and M42_m_92. It is remarkable that the four speakers who do pronounce [ɛ] can be split into two groups: two well educated young men from Marseille (M6_m_19 and M10_m_25) and the two oldest speakers of the corpus (T21_w_98 and M42_m_92), who were also well educated. M42_m_92 is a former chief of surgery in a hospital in Marseille who speaks a very particular French when reading out loud that made many listeners place him in the north of France rather than in the South in the fourth accent identification test (see Chapter 8.4.6). He also pronounces nasal vowels with full nasalization. T21_w_98, a woman from Toulouse, on the other hand, has a more southern accent, with various final schwas and

oral vowels instead of nasal vowels. T21_w_98 pronouncing *était* [etɛ] instead of [ete] might be due to formal education. She seems to have incorporated a normative view on the distinction of /e/ vs. /ɛ/. After having read the word list (see Chapter 4.3.2.3, where she also made the distinction between *piqué* and *piquais*, I asked her about the distinction between /e/ and /ɛ/:

- E: Euh il n'y a pas beaucoup de personnes qui disent *piquais* [pike]. Ils disent tous euh *piquais* [pike].
- T21_w_98: Ben oui, parce que il y a, il y a, ça s'écrit pas pareil. Voilà, c'est la prononciation. Il faut, c'est justement, c'est que autrefois, peut-être, ils euh, on déformait. On déformait les mots, on le, on les prononçait pas bien.¹²¹

Nasal vowels

The realization of oral vowels followed by a nasal appendix instead of fully nasalized nasal vowels is another typical feature of Southern French. There is, however, considerable variation in the realization of nasal vowels, considering the vowel (ranging from fully nasalized over partially nasalized to fully oral) and the appendix (being absent, slightly present or fully present), as presented in Chapter 3.4.1. For the totality of the nasal vowels in the stimuli, only the factor PRESENCE OF APPENDIX will be examined. In a second step, the nasal vowel in the word *récemment* is going to be further analyzed, considering vowel quality as well.¹²²

In Southern French, nasal appendices are notably less constant than the *loi de position*. Additionally, other than in the case of schwa, where AGE seems to play a crucial role and we can sometimes observe a nearly linear language change in word-final syllables (see Table 3.1), the presence of nasal appendices seems to depend on more factors (see Chapter 3.4.1). This can be observed in my data, too.

¹²¹ E: There aren't many people who say *piquais* [pike]. They all say *piquais* [pike]. T21_w_98: Well yes, because it's not written the same way. There you go, it's the pronunciation. You have to – it's just that, in the pas, maybe, they uh, distorted things. They distorted the words, they didn't pronounce them properly. (Translation LJ).

¹²² For a more detailed and extensive study of nasal vowels produced in Toulouse and Marseille, see Courdès-Murphy (2018).

		%	N	<i>P</i>
NASAL VOWEL	/œ̃/	08	64	< .01
	/ɔ̃/	28	126	
	/ɑ̃/	51	447	
	/ɛ̃/	63	192	
RIGHT CONTEXT	nasal (e.g. <i>en mille</i>)	05	56	< .01
	labial (e.g. <i>champion local</i>)	19	62	
	fricative (e.g. <i>un champion</i>)	25	255	
	- (pause)	38	128	
	plosive (e.g. <i>champion</i>)	81	328	
POSITION WITHIN THE WORD	Monosyllabic (e.g. <i>vin</i>)	27	384	< .01
	Word-initial (e.g. <i>champion</i>)	84	64	
	Word-medial (e.g. <i>olympique</i>)	90	191	
	Word-final (e.g. <i>récemment</i>)	31	190	
POSITION WITHIN THE PHRASE	Non-final	49	701	< .01
	Final	37	128	
WORD	<i>un</i>	08	64	< .01
	<i>en</i>	18	128	
	<i>-pion</i>	19	62	
	<i>récemment</i>	30	64	
	<i>blanc</i>	34	64	
	<i>son</i>	36	64	
	<i>Berlin</i>	45	64	
	<i>vin</i>	.53	64	
	<i>cent</i>	.84	63	
	<i>cham-</i>	.84	64	
	<i>olym-</i>	.91	64	
	<i>trente-</i>	.94	64	

Table 7.2: Presence of nasal appendix according to different linguistic variables.

The stimuli were analyzed according to the different NASAL VOWELS /ɛ̃/, /œ̃/, /ɑ̃/, and /ɔ̃/, their placement within the word (i.e., in which syllable they occurred) and their right context. Lastly, the words in which they were found were also treated as a category on their own. All of these were found to be statistically significant through χ^2 test and Fisher exact tests. Table 7.2 gives an overview of the different factors influencing the presence of nasal appendices. It is based on an auditory analysis and shows that while appendices were realized in only five out of 64 possible instances featuring the nasal vowel /œ̃/, they were present in less than a third of the cases with /ɔ̃/, in half of the cases with /ɑ̃/ and in nearly two thirds of the cases with /ɛ̃/, making the nasal vowel itself an important factor influencing the presence of nasal appendices. These numbers partly contradict the findings of Courdès-Murphy (2018) and Courdès-Murphy and Eychenne (2021), who observed nasal appendices less often with the vowels /ɑ̃/ and /ɔ̃/ and more often with /œ̃/ and /ɛ̃/ (see Chapter 3.4.1). It is possible that these diverging numbers are due to this corpus only consisting of the same sentence read by 64 speakers. In this sentence, out of the six possible /ɑ̃/ vowels, three are followed by a plosive (*trente*, *champion*, *olympiques*). When followed by a plosive, nasal appendices are very frequent and can

even occur in northern French due to coarticulation (see Chapter 3.4.1). In these cases, nasal appendices figure in between 84 and 94% of the occurrences (see Table 7.2).

Another statistically significant factor is the RIGHT CONTEXT of the nasal vowel. While /m/ (in *en mille neuf-cent trente-six*) only led to 3 out of 57 instances of nasal appendices, /t/ (in *mille neuf-cent trente-six*) led to 114 out of 130. A similar picture can be observed when examining the position of the nasal vowel WITHIN THE WORD: While nasal vowels in monosyllabic and word-final syllables were followed by appendices in less than a third of the cases and thus notably less often than in the data of Courdès-Murphy (2018, p. 337), who observed appendices in between 70 and 74% of the cases in these contexts, appendices were present in 84 and 90% of the cases in word-medial and word-final syllables. These numbers are again much higher than the numbers reported by Courdès-Murphy (2018, p. 337) who observed appendix rates between 67.5 and 75% in Toulouse and Marseille. It is, however, possible that the high percentages in word-medial and word-final position are due to the fact that nasal vowels in these instances were always followed by plosives. The position WITHIN THE ACCENT PHRASE seems to lead to less striking results: Nasal vowels in the final syllables of an accent phrase were followed by an appendix in 35% of the cases, while appendices appeared in 49% of the non-final syllables.

These results show that the influence of phonotactic surroundings on the presence of a nasal appendix is very high. Given the composition of the corpus, which only consists of the same sentence read aloud by 64 speakers, it seems to be better to focus on the single words influencing the presence of the appendix. The four words that largely favored a nasal appendix are *trente-six*, *olympique*, *champion* (in the first syllable) and *cent* (in the context *dix-neuf-cent-trente-six*). In all of them, the nasal vowel is followed by a plosive. The words *en*, *un* and *son*, on the other hand, show much lower appendix realization rates. A reason for this could be that they are very frequent and unstressed. However, possible non-linguistic influences on the presence of nasal appendices were still analyzed based on the whole dataset, with the data in question being highly comparable because all speakers read the same sentence aloud and all linguistic variables were held constant.

CITY	Toulouse		Marseille		<i>p</i>
	%	N	%	N	
	48	415	47	414	.80
EDUCATION	With <i>bac</i>		Without <i>bac</i>		<i>p</i>
	%	N	%	N	
	41	428	53	401	<.001
SEX	Male speakers		Female speakers		<i>p</i>
	%	N	%	N	
	48	414	46	415	.652
AGE GROUP	18-29		30-64		<i>p</i>
	%	N	%	N	
	33	260	48	259	<.001

Table 7.3: Presence of nasal appendix according to non-linguistic variables.

Influences of non-linguistic variables on the presence of nasal appendices are shown in Table 7.3. In this table, we can see that EDUCATION and AGE seem to influence the presence of nasal appendices significantly: The older the speakers are, the more often they realize nasal appendices. At the same time, speakers with a higher level of education realize fewer of them. SEX and SPEAKER ORIGIN do not seem to influence nasal appendix presence. However, although the percentages are nearly the same in Toulouse and Marseille, some differences can be observed between the two cities.

Toulouse				Marseille			
female		male		female		male	
with bac	without bac	with bac	without bac	with bac	without bac	with bac	without bac
18-29	T10_w_27	T9_w_25	T15_m_19	T7_m_25	M17_w_19	M32_w_19	M1_m_25
	T16_w_20	T23_w_18	T18_m_23	T22_m_19	M18_w_19	M33_w_19	M6_m_19
		T25_w_18	T35_m_19	T24_m_18			M10_m_25
30-64	T2_w_48	T28_w_30	T1_m_38	T27_m_34	M12_w_52	M39_w_30	M2_m_54
	T31_w_58	T39_w_33	T11_m_39	T30_m_32	M13_w_45	M16_w_37	M27_m_45
			T19_m_52		M41_w_33		M31_m_31
65+	T6_w_84	T8_w_69	T3_m_79	T4_m_89	M22_w_67	M15_w_83	M21_m_69
	T17_w_67	T12_w_79	T37_m_68	T5_m_79	M36_w_76	M23_w_71	M29_m_84
	T26_w_83	T14_w_79			M38_w_86	M24_w_76	M42_m_92
	T29_w_92	T21_w_98			M40_w_82		

Table 7.4: Nasal appendix rates indicated by colors (white = no appendix, dark blue = 100% appendices).¹²³

¹²³ For a table containing all realization rates, see annex 0.

Table 7.4 once again displays all speakers, with appendix rates being indicated by color: The darker the blue, the more often appendices were realized. In total, there is considerable inter-speaker variability. While Toulousains behave a bit more homogeneously, all the speakers at the extremes are from Marseille (see Table 7.4): Some speakers (e.g. M9_m65 and M15_w_83) realize 12 out of 13 possible nasal appendices, one speaker (M3_m_77) all of them, and some do not realize any (e.g. M6_m_19, M10_m_25 and M42_m_92). In Toulouse, realizations rank from 3 (T15_m_19 and T29_w_92) to 12 (T6_w_84). The highest rates of appendices can be seen in one particular group: older, less educated speakers from Marseille. The three speakers who do not realize any nasal appendices do not follow the *loi de position* either (see supra).

Based on these preliminary analyses, a logistic regression model was fitted with the outcome variable PRESENCE OF NASAL APPENDIX, including the extralinguistic variables AGE, CITY, EDUCATION and SEX as well as the linguistic variables WORD, RIGHT CONTEXT and PLOSIVE.¹²⁴ Its coefficients are displayed in Table 7.5.

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	-1.7082	0.3498	-4.88	1.04e-06	***
without <i>bac</i>	0.8795	0.1886	4.66	3.11e-06	***
Age group 2	1.0883	0.2483	4.38	1.17e-05	***
Age group 3	1.7277	0.2435	7.09	1.30e-12	***
<i>blanc</i>	-0.5286	0.3906	-1.35	0.17597	
<i>cent</i>	2.1412	0.4563	4.69	2.69e-06	***
<i>cham-</i>	2.1464	0.4558	4.71	2.49e-06	***
<i>en</i>	-1.5184	0.3644	-4.17	3.09e-05	***
<i>olym-</i>	2.7763	0.5246	5.29	1.21e-07	***
<i>-pion</i>	-1.3570	0.4326	-3.14	0.00171	**
<i> récemment</i>	-1.0393	0.4088	-2.54	0.01101	*
<i>son</i>	-0.4502	0.3888	-1.16	0.24691	
<i>trente-</i>	3.2398	0.5993	5.41	6.43e-08	***
<i>un</i>	-2.5132	0.5499	-4.57	4.87e-06	***
<i>vin</i>	0.3646	0.3827	0.95	0.34084	
Toulouse	0.1338	0.1847	0.72	0.46903	

Table 7.5: Logistic regression model for presence of nasal appendix with the outcome variable WORD, Nagelkerke pseudo- $R^2 = .524$.

¹²⁴ In order to avoid overlaps between RIGHT CONTEXT, WORD and PLOSIVE, these variables were not included at once but in turns. Both models indicated that AGE and EDUCATION were the only extralinguistic variables to play a role. All models were better without the variable SEX.

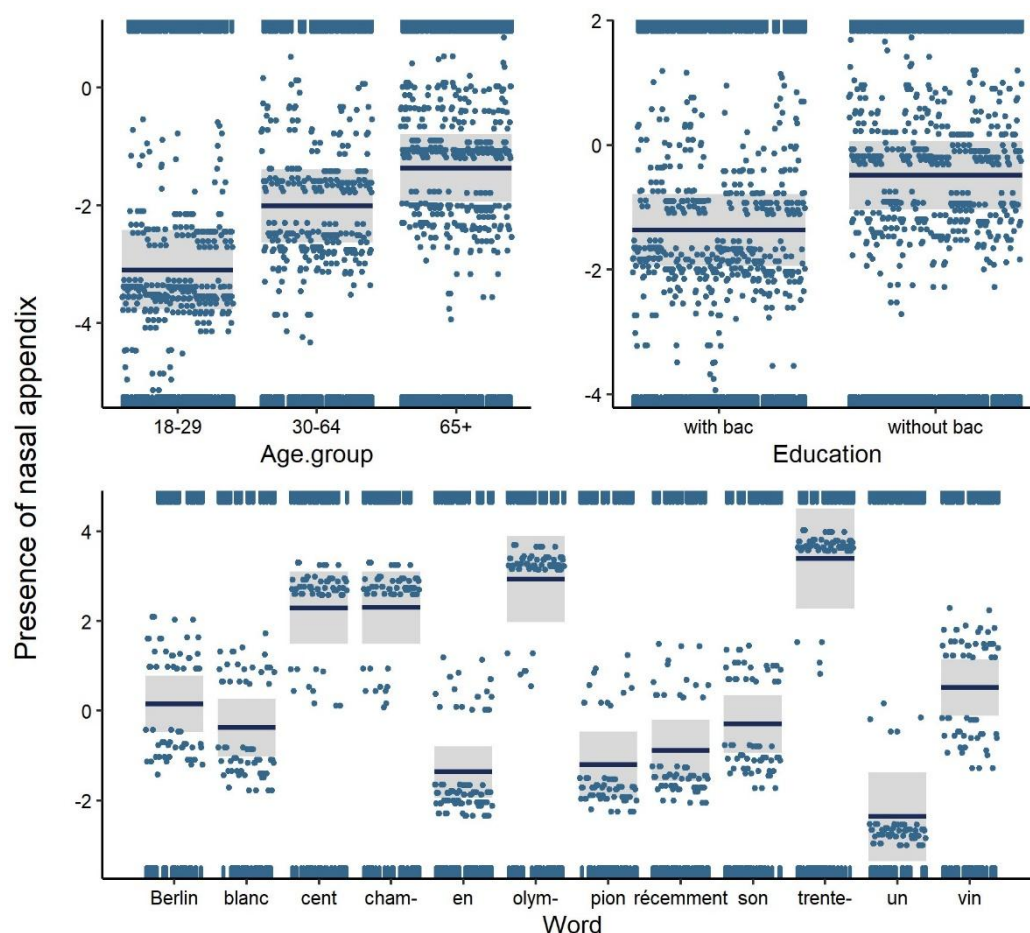


Figure 7.2: Factors possibly influencing presence of nasal appendix.

Figure 7.2 shows the predictions made by the model concerning the variables EDUCATION, AGE GROUP and WORD. They confirm the tests of significance displayed in Table 7.2 and Table 7.3. Speakers without *bac* and older speakers are more likely to produce nasal appendices. The most important factor is, however, the single word and thus the nasal vowel itself, together with its phonotactic surroundings.

It should be kept in mind that these analyses are based on an auditory analysis by one single listener. It can be very difficult to discern some of the nasal appendices, especially when it is possible that coarticulation is at play. For the analyses of the results of the accent identification tests, only one of the contexts was chosen as a variable: the nasal vowel in *récemmment* . It is one of the two words that are at the end of an accent phrase and is therefore void of coarticulation.

To go into more detail, *récemmment* was coded again, this time not only indicating whether an appendix was present, but also whether the vowel quality was different from a fully nasalized vowel. As Taylor (1996b, p. 45) states, when a nasal vowel is denasalized, its vowel quality is affected. [ã] thus becomes [aŋ]. In this corpus, some

speakers who did not pronounce a nasal appendix in *récemment* still pronounced *récemment* with a different vowel quality, e.g. [ɛ̃] or [a]. These instances were coded 1, while the fully denasalized [aŋ] was coded 2 and the nasalized variant [ã] 0. This three-level categorical variable was later used to analyze the data of the first accent identification test (see Chapter 8.1.5).

		[ã] %	[ɛ̃] or [a] %	[aŋ] %	N
ORIGIN	Toulouse speakers	39	32	29	31
	Marseille speakers	63	16	21	32
SEX	Female speakers	39	29	32	31
	Male speakers	62	19	19	32
EDUCATION	With <i>bac</i>	66	18	15	33
	Without <i>bac</i>	33	30	36	30
AGE	18-29	74	10	16	19
	30-64	55	30	15	20
	65+	29	29	41	24

Table 7.6: Realization of the nasal vowel in *récemment* grouped by non-linguistic factors.

When comparing the data in Table 7.6 (for a visualization see Figure 7.3), it can be observed that, although Toulouse and Marseille do not differ greatly in terms of the presence of the nasal appendix (29% vs. 21%), the percentage of Toulouse speakers pronouncing a modified vowel is twice as high as the percentage of Marseille speakers. Yet, overall, the factor SPEAKER ORIGIN is not statistically significant. The factor SEX shows interesting results. Just like final schwa, nasal vowels seem to be subject to language change in southern France. With women usually considered the frontrunners of language change (cf. Labov, 2006, p. 274), it is noteworthy that men are the ones who pronounce [ã] more often. A similar tendency was observed by Courdès-Murphy (2018, p. 344) and Courdès-Murphy and Eychenne (2021, pp. 259–260). The latter observed an interaction of SEX and AGE, with SEX being important in the younger age group. In this study, the factor SEX was not judged significant by a χ^2 test. The factors EDUCATION and AGE, on the other hand, do seem to have influenced the realization of /ã/ ($p > 0.05$), with speakers with *bac* and younger speakers producing more [ã] than all other groups and older speakers producing the highest number of nasal appendices.

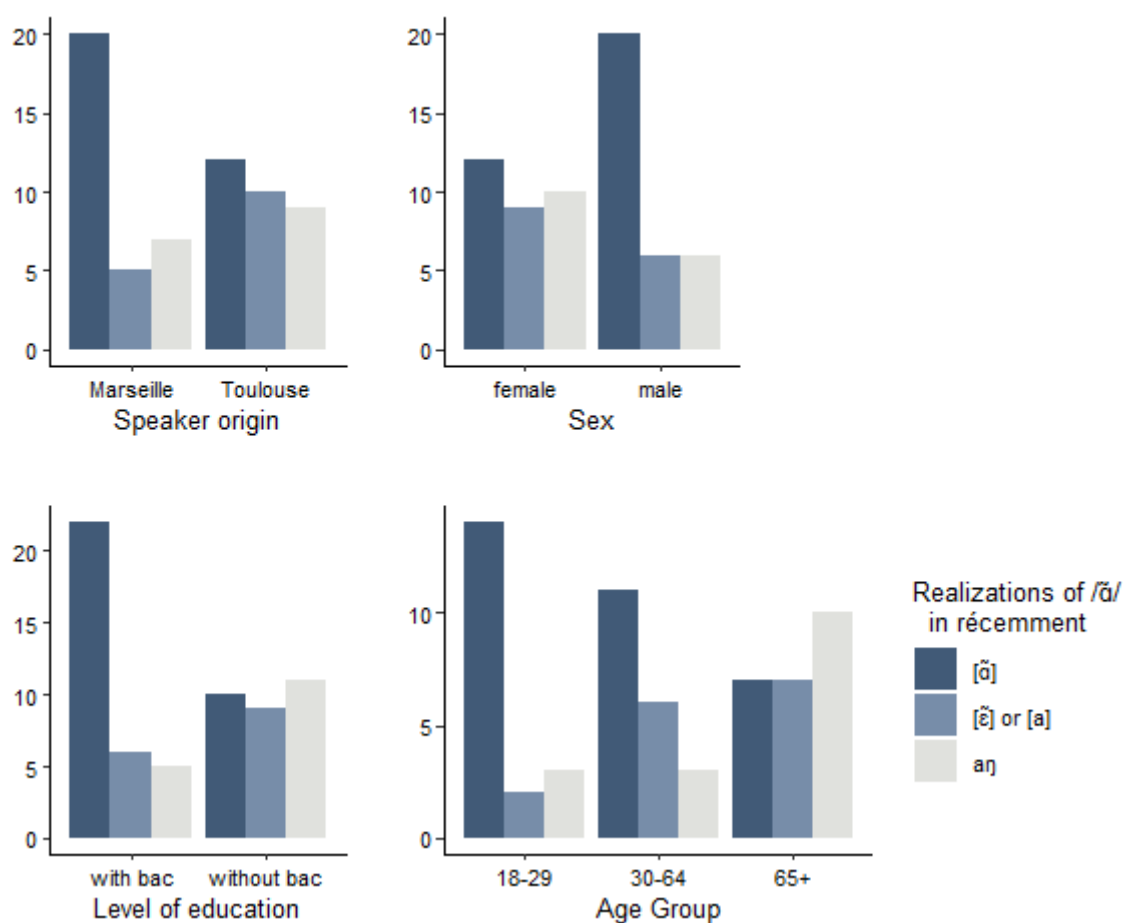


Figure 7.3: Three levels of /ã/ in the stimuli, according to extralinguistic variables.

Schwa realization

Presence of final schwa behaves slightly differently to presence of nasal appendix. As has been shown repeatedly (e.g. by Pustka, 2007, p. 152; Lyche, 2016, p. 361; Courdès-Murphy, 2018, p. 260), AGE plays a crucial role in the realization of final schwa (see Chapter 3.4.1). In the stimuli under investigation, AGE is an important factor ($p < .01$), according to a χ^2 test. And although we can observe slight differences between Toulouse and Marseille (see Table 7.7), these differences did not prove to be significant. EDUCATION and SEX seem to influence final schwa even less than SPEAKER ORIGIN.

CITY	Toulouse		Marseille		<i>p</i>
	%	N	%	N	
	41	225	50	225	.072
EDUCATION	With <i>bac</i>		Without <i>bac</i>		<i>p</i>
	%	N	%	N	
	43	230	48	230	.365
SEX	Male speakers		Female speakers		<i>p</i>
	%	N	%	N	
	46	252	44	198	.683
AGE GROUP	18-29		30-64		<i>p</i>
	%	N	%	N	
	31	141	50	139	<.001

Table 7.7: Schwa presence according to non-linguistic variables.

At the same time, all linguistic variables examined were judged significant by a χ^2 test. The right context of schwa (consonant or pause)¹²⁵ as well as the left context (one or two consonants) influence schwa realization (see Table 7.8). The high percentage of schwa presence following two consonants (CCə) is not surprising, given the fact that all stimuli only contain one word with final schwa following two consonants (CCə), i.e. *titre*. Phonotactic constraints prescribe that schwa in this context cannot be deleted because it is preceded by an obstruent-liquid cluster and followed by a consonant-initial word (see Chapter 3.4.1).

LEFT CONTEXT	VCə (e.g. <i>olympiqu(e) de</i>)		CCə (<i>titr(e) de</i>)		<i>p</i>
	%	N	%	N	
	37	386	97	64	< 2.2e-16
RIGHT CONTEXT	əC (e.g. <i>usin(e) de</i>)		ə# (e.g. <i>italienn(e)s.</i>)		<i>p</i>
	%	N	%	N	
	43	388	59	62	0.026

Table 7.8: Schwa presence according to linguistic variables.

A logistic regression model was fitted to analyze all the variables at once. Here again, the non-linguistic variables CITY, AGE, SEX, EDUCATION as well as the linguistic variables LEFT CONTEXT and RIGHT CONTEXT were entered as predictors. A model containing an

¹²⁵ Schwas followed by vowel-initial words are not usually realized, even in southern France (cf. Durand, 2009a, p. 140). They are therefore not part of this analysis.

interaction between AGE GROUP and EDUCATION was the best fit for the data. This model is displayed in Table 7.9.

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	4.4317	0.8586	5.16	2.45e-07	***
Marseille	0.3987	0.2290	1.74	0.08166	.
Age group 2	0.2567	0.4024	0.64	0.52342	
Age group 3	0.6436	0.3830	1.68	0.09286	.
Without <i>bac</i>	-0.9428	0.4766	-1.98	0.04793	*
Male	0.0304	0.2301	0.13	0.89484	
Left context VC	-4.5913	0.7560	-6.07	1.26e-09	***
Right context C	-1.2813	0.3069	-4.18	2.97e-05	***
Age.group 2 * without <i>bac</i>	1.8615	0.6168	3.02	0.00254	**
Age.group3 * without <i>bac</i>	1.4728	0.5880	2.50	0.01225	*

Table 7.9: Logistic regression model for presence of final schwa, Nagelkerke pseudo- $R^2 = .378$.

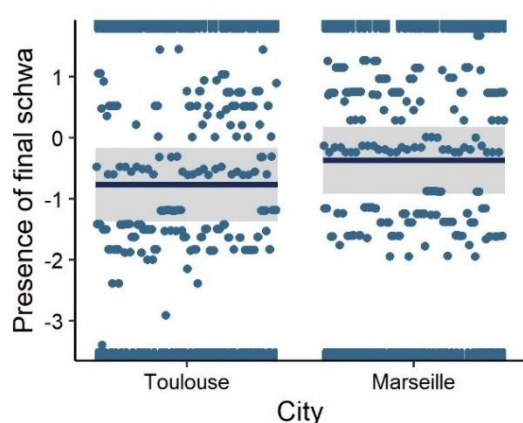


Figure 7.4: Predicted influence of speaker origin on presence of final schwa.

As visualized in Figure 7.4, the model predicts small differences between Toulouse and Marseille. The odds of realizing final schwa are 1.50 for speakers from Marseille as opposed to speakers from Toulouse. This means that Marseille speakers are 1.50 times more likely to realize schwa than Toulouse speakers. Still, the difference was not found to be significant (see Table 7.9).

Figure 7.5 shows all factors influencing the presence of final schwa, according to the model. The interaction between EDUCATION and AGE is as follows: Older people are more likely to realize final schwa, especially when they are less educated. However, the variables that influence the presence of final schwa the most are linguistic ones. LEFT CONTEXT does so more strongly than RIGHT CONTEXT: Schwas following two consonants will most likely be realized, while schwas following only one consonant are less likely to

be realized. At the same time, schwa followed by a pause is more likely to be pronounced than when it is followed by a consonant.

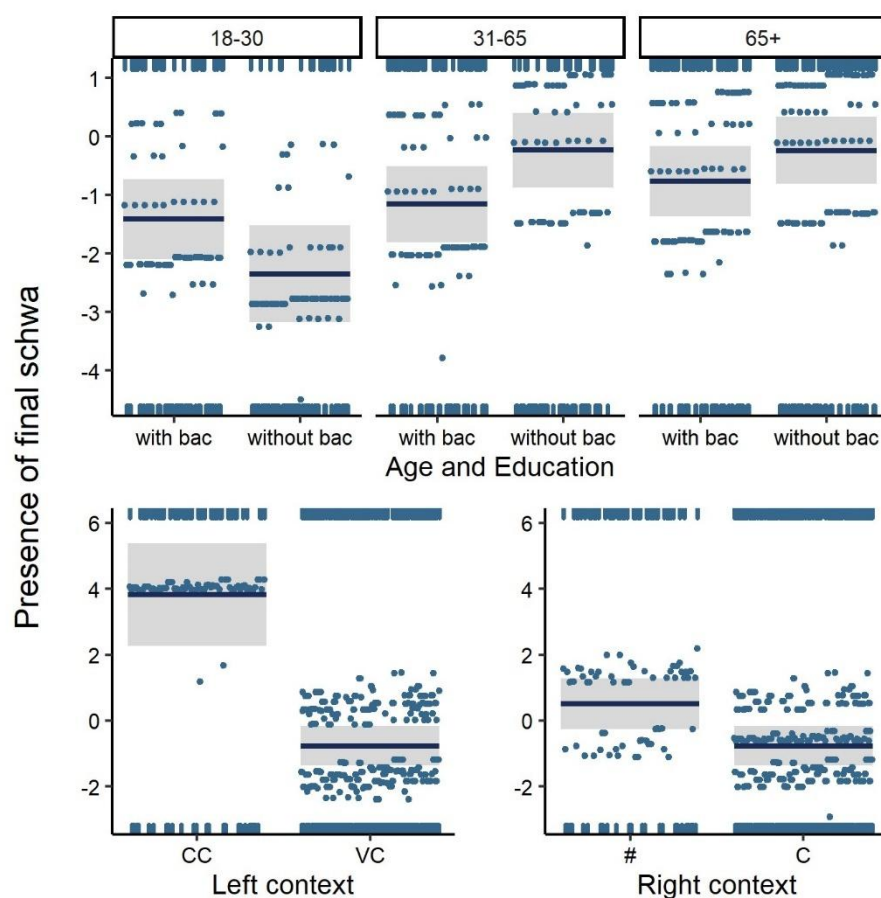


Figure 7.5: All factors influencing the presence of final schwa, according to the logistic regression model.

Duration

Although duration had been named several times as a distinguishing factor between Toulouse and Marseille (see Chapter 6.2), no significant differences between the two cities could be observed. Instead, as could be expected, a notable positive relationship between age and duration was evident ($r = .69$, $p < .001$, see Figure 7.6). This figure also indicates a slightly higher increase in Toulouse, yet the overall trend of older speakers requiring more time to read a sentence than younger speakers remained consistent across both cities. The mean duration of the stimuli was 16.18 seconds.

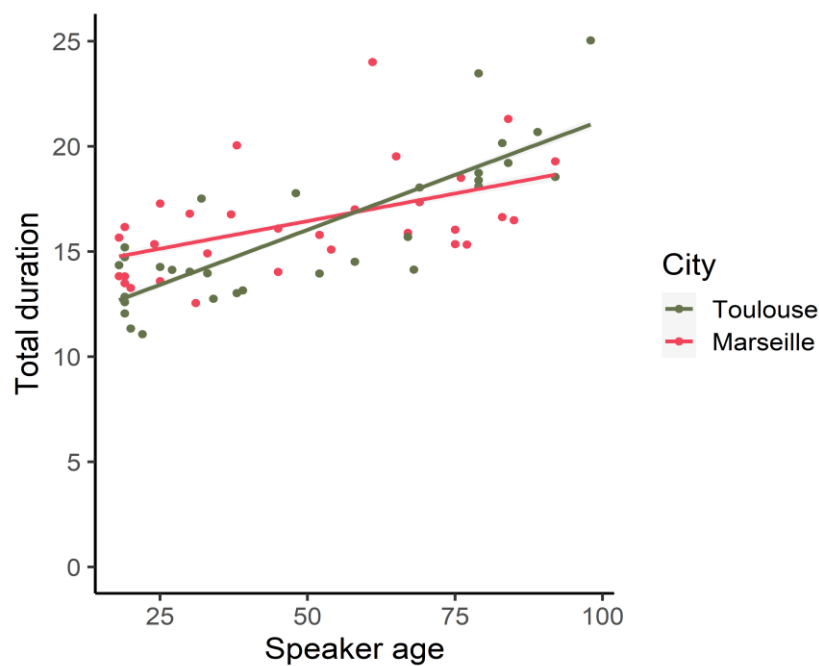


Figure 7.6: Correlations between the duration of the stimuli and speaker age.

The analysis of the stimuli thus reveals several interesting findings: Characteristics of Southern French are prevalent in nearly all stimuli, and the tendencies observed in the stimuli are consistent with patterns detected in other studies on Southern French. This suggests a change in progress, particularly in regard to schwa, nasal vowels and the realization of otherwise mute consonants. However, *loi de position* seems to be constant, except among a few well-educated speakers. Regarding schwa and nasal vowels, linguistic variables outweigh the non-linguistic ones, but AGE and EDUCATION still seem to slightly influence the presence of schwas and nasal appendices. These socio-demographic factors thus seem to affect the accents of the speakers more than the speakers' origin. Based on the analysis of these Southern French characteristics in the stimuli, no significant difference can be found between Toulouse and Marseille. The reason for the ability to identify speakers as Toulousains or Marseillais seems to depend on the overall *gestalt* rather than the individual Southern French features analyzed above.

7.2 Stimuli of the third and fourth accent identification tests

Table 7.10 shows all features examined in the stimuli used in the two accent identification tests, together with several social characteristics of the speakers, i.e., origin, sex and age group. To avoid repetition, the table combines all data of the third and fourth test, also indicating the test in which they were used, since some of the stimuli figure in both tests.

				Read speech (<i>jusqu'ici...</i>)					Spontaneous speech	Test
	Speaker	Sex	Age group	<i> récem-ment</i>	Apical /r/	<i>Garret</i> [t]	<i>était</i> [e]	schwa real. in %	schwa real. in %	
Oraison	04asa1	♀	old	[aŋ]	-	-	+	80	89	3 rd
	04aam1	♂	young	[ã]	-	-	+	25	0	3 rd
	04agg1	♂	young	[ẽ]	-	-	+	14	00	4 th
	04aaa1	♂	old	[aŋ]	-	-	+	83	67	4 th
	04ajf1	♂	old	[ẽ]	-	-	+	71	67	3 rd
	04alb1	♂	old	[ẽ]	-	-	+	57	75	4 th
Marseille	M38 w 85	♀	old	[ẽ]	-	+	+	67	100	3 rd
	M1 m 25	♂	young	[ã]	-	-	+	67	55	4 th
	M8 m 37	♂	young	[ã]	-	+	+	71	71	3 rd , 4 th
	M11 m 58	♂	old	[ẽ]	-	-	+	83	100	3 rd
	M3 m 77	♂	old	[ẽ]	-	-	+	71	75	4 th
	M42 m 92	♂	old	[ã]	-	-	-	29	50	4 th
Salles-Curan	12bLV1	♀	old	[aŋ]	-	+	-	57	100	3 rd
	12bEC1	♂	young	[ã]	-	+	-	63	100	3 rd , 4 th
	12bCCC1	♂	old	[aŋ]	-	-	+	80	100	4 th
	12bNF1	♂	old	[an]	+	-	-	88	100	3 rd , 4 th
Toulouse	T14 w 79	♀	old	[an]	-	-	+	67	75	3 rd
	T1 m 38	♂	young	[ã]	-	-	+	14	0	4 th
	T30 m 32	♂	young	[ã]	-	+	+	38	83	3 rd , 4 th
	T4 m 89	♂	old	[ẽ]	+	-	+	71	100	4 th
	T5 m 79	♂	old	[an]	-	-	+	43	88	3 rd , 4 th

Table 7.10: Southern French characteristics tested in the third and fourth accent identification tests.

As can be seen in Table 7.10, the two characteristics *loi de position* and the realization of final schwa are the two most common features in this speaker sample. Apical /r/, on the other hand, is very rare and can only be found in the stimuli of one older male speaker from Salles-Curan and one older male speaker from Toulouse. The pronunciation of the final consonant in *Garret* is slightly more common. There is no indication that this feature is influenced by social factors.

The nasal vowel in *récem-ment* shows noticeable variation across localities. In Marseille and Toulouse, the northern variant [ã] appears more often than in the rural sites Oraison and Salles-Curan. None of the Marseille speakers pronounce a nasal appendix in *récem-ment*, while nasal appendices are quite common in Salles-Curan. In Oraison, speakers predominantly use the partly denasalized and thus fronted variant [ẽ].

Final schwas appear more often in read speech compared to spontaneous speech, as has already been observed in numerous studies (e.g., Courdès-Murphy, 2018, p. 258). In this sample, realization rates differ considerably, ranging between 0% and 100%. Notably, the two younger speakers 04aam1 (from Oraison) and T1_m_38 (from Toulouse) almost never pronounce any final schwa. One particularly interesting case is speaker 04agg1, who has a schwa pronunciation rate of only 14% while reading and 100% while speaking spontaneously. In general, it can, however, once again be observed that younger speakers tend to pronounce fewer final schwa (see also Chapters 3.4.1 and 7.1).

Gender differences cannot be observed in this data. The female speakers do not show significant deviation from the male speakers, but they are also too few in number to make general statements about the impact of gender. This is different when it comes to the factor AGE: Younger speakers are more likely to pronounce the northern variants of nasal vowels. The only older speaker pronouncing [ã] in *récemment* is the former chief surgeon from Marseille. This suggests that a change might be in progress towards Northern variants (see also Chapter 3.3), but also that awareness of nasal vowels being pronounced more in line with standard French among highly educated speakers is not new.

8 Results IV: Perception of Southern French

As stated in the preceding chapters, the four accent identification tests aimed to identify the most typical speakers of Toulouse and Marseille. Their primary objective was to ascertain the existence of distinct accents in the South and to analyze differences between them. However, it became evident early in the research process that the tests were influenced by strong cultural stereotypes and that comparing the accents of two cities should be enhanced with data from rural areas. Consequently, in total, four different accent identification tests were carried out. These tests will be more thoroughly described in the following.

8.1 First accent identification test: Toulouse vs. Marseille

The first accent identification test ran online from November 2015 until August 2016 on the platform Percy (cf. <http://webapp.phonetik.uni-muenchen.de/WebExperiment/>, Draxler, 2011).¹²⁶ Its main interest was to find out which of the speakers would be considered more typical of their region than others. Since the previous studies (most notably Coquillon, 2005, Pustka, 2010b and Woehrling & Boula de Mareüil, 2005) had only worked with a small number of speakers and had obtained mixed results (see Chapter 3.6.1), a larger number of speakers was selected. This way, the speaker sample was slightly more representative than the samples of most of the former tests. The number of stimuli to be tested was quite high, so they had to be randomized (see Chapter 8.1.2). A total of 177 listeners participated (see Chapter 8.1.4).

8.1.1 Stimuli

I worked with three stimuli per person (64 speakers, see Table 4.1). This led to a total of 192 stimuli. Two of them were single words (*miette* and *content*) and one of them was the following sentence:

Jusqu'ici, les seuls titres de Beaulieu étaient son vin blanc sec, ses chemises en soie, un champion local de course à pied (Louis Garret), quatrième aux jeux olympiques de Berlin en 1936, et plus récemment, son usine de pâtes italiennes.

¹²⁶ I would like to thank Christoph Draxler (of the Institute of Phonetics and Speech Processing LMU Munich) once again for the immense help he provided with my accent identification test.

Miette (‘crumb’) was chosen because of the diphthong that seemed to have a Marseille-specific stress in pre-tests. *Content* (‘pleased’), on the other hand, included two nasal vowels, an important Southern French feature (see Chapter 3.4.1).¹²⁷ The longer sentence also contained numerous nasal vowels. I must admit that the choice of testing single words was rather poor, as they were too short to make judgement possible. As a consequence, I decided to treat them as fillers, only focusing on the long sentence when analyzing the data of the accent identification tests. However, as fillers, they did not fulfil the function they should have, because they did not distract from the ‘real stimuli’, nor did they add any diversion. They only increased the number of stimuli to be tested. In the other accent identification tests, I did not include single words again.

8.1.2 Randomization

Randomization is used in order to avoid question order bias and to ensure validity of tests (cf. Auwärter, 2005). This is especially necessary when the same questions are asked several times, as was the case in my accent identification test. Repetition of the same question can lead to fatigue effects, and since the number of stimuli was very high, randomization was even more important. It would have been very difficult to ask every listener to listen to 192 stimuli. I therefore divided speakers into six different groups, so that every listener would listen to twelve different speakers per stimulus. These speakers were selected on the criteria *city* (Toulouse, Marseille) + *age group* (18-29, 30-64, 65+) and *sex* (male, female). For every group, I chose one speaker from each category. Every group was then tested in one online questionnaire. Every listener who completed a questionnaire therefore listened to 36 stimuli (12 x *miette*, 12 x *content*, 12 x the long sentence). Additionally, all stimuli rotated freely within a questionnaire. In total, every stimulus was judged approximately 30 times by the 177 participants.

8.1.3 Design

The accent identification test was embedded into an online questionnaire. The overall structure of this questionnaire differed slightly from the offline questionnaires (see Chapter 4.3.4): Participants were asked to give socio-demographic information about themselves at the very beginning of the questionnaire because the risk of them not

¹²⁷ For the use of single words vs. longer sentences in perception tests, see Chalier 2020, pp. 452–453.

completing it was too high. The stimuli rotated freely (see Chapter 8.1.2). Uncompleted questionnaires therefore did not lead to greater imbalance, and I was able to include all answers in my analyses, even those given by listeners who did not complete the whole task. They indicated age, sex, place of birth, place of residence, profession, subject of studies, level of education as well as the places of birth and professions of both parents.

After two ice breaker questions (see Chapter 4.4.3), the accent identification test started. Listeners were asked to click on a button to hear a stimulus. They could listen to the same stimulus twice. The design of the test was strongly influenced by the accent identification tests of Coquillon (2005) and Pustka (2010b) (see Chapter 3.6.1). It thus focused on Toulouse and Marseille and asked basically the same question as Coquillon (2005, p. 159): “Ce locuteur, vient-il de Toulouse ou de Marseille?”¹²⁸ with the answer categories “Toulouse, peut-être Toulouse, Marseille, peut-être Marseille, je ne sais pas”.¹²⁹ The *I don’t know* answer category was chosen because previous research had shown the difficulties listeners encounter when identifying different southern accents. The fact that numerous stimuli had to be tested (see Chapter 8.1.1) conditioned the choice of the question considerably: It was the only question asked per stimulus and it was a closed question in order to obtain easily quantifiable results. I also chose not to include distracting answer categories such as *Paris* or *North of France* as had been done by Pustka (2010b). This would have had to entail the inclusion of actual speakers from other regions to prevent the results from being skewed. With the inclusion of other speakers, the number of stimuli would have been even higher, though.

At the end of the online questionnaire, one last open question was asked: *D’après vous, quelles sont les différences entre l’accent de Marseille et celui de Toulouse?*¹³⁰ This question was placed at the end, so that it would not influence the answers of the perception test. In total, participants needed approximately 10 minutes to fill out the questionnaire, including listening to 36 stimuli (see Chapters 8.1.1 and 8.1.2).

8.1.4 Participants

Previous studies have revealed that locals were better at identifying accents than participants from other regions (see Chapter 3.6.1). The provenance of the listeners was

¹²⁸ ‘Does this speaker come from Toulouse or from Marseille?’

¹²⁹ ‘Toulouse, maybe Toulouse, Marseille, maybe Marseille, I don’t know’

¹³⁰ ‘What are the differences between the accents of Marseille and Toulouse?’; for the results, see Chapter 6.2.2.

therefore a highly important factor. However, to maximize the number of participants, all native French speakers living in France could participate in the test, and I included LOCALNESS as a factor into the analysis, while especially targeting participants living in the former *oc* region.

I recruited participants through various channels, including several Facebook groups, couch surfing groups, and by distributing flyers at the universities of Marseille and Toulouse. The flyers contained a brief description of my project as well as a link and a QR code that led directly to the online questionnaire.¹³¹ In the initial section of the questionnaire, participants were, among other things, required to specify both their birthplace and their current place of residence (see Chapter 8.1.3). All these answers were categorized based on the different substrate regions in southern France (see Figure 8.1).

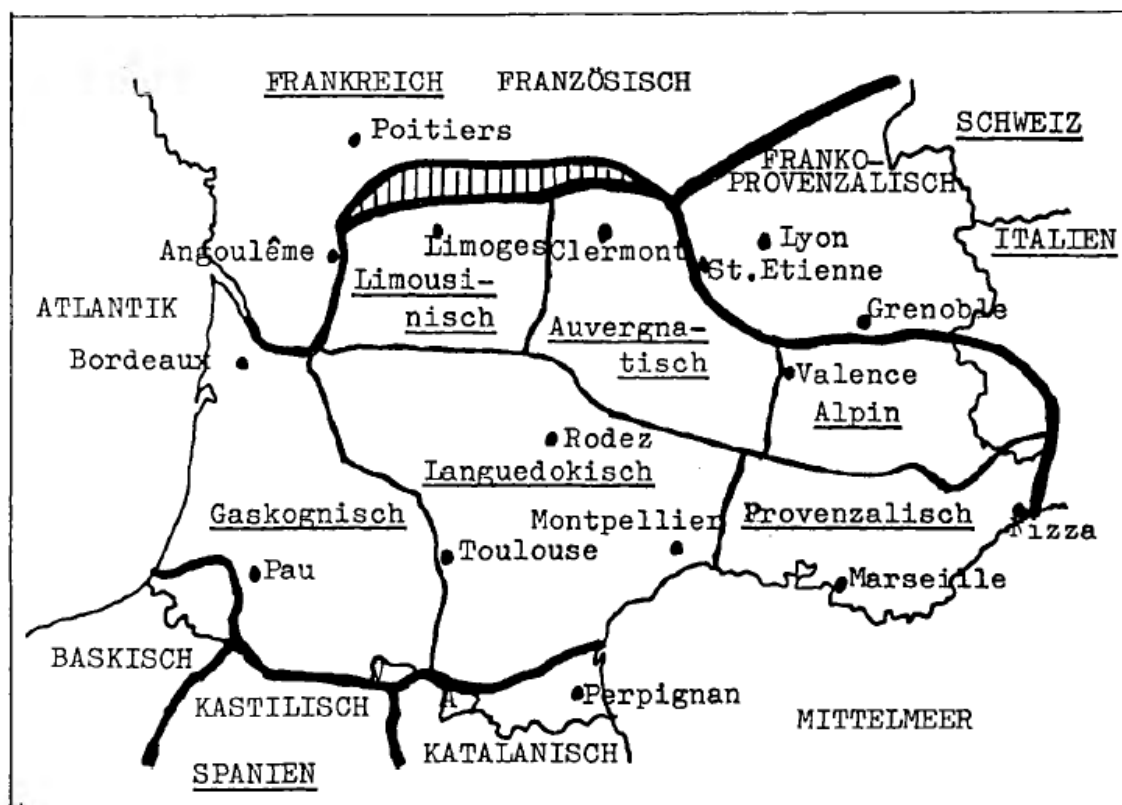


Figure 8.1: Occitan dialect areas (Kremnitz, 1981, p. 12).¹³²

Of the 177 participants, 96 were living in the Languedoc region, 63 in Provence, 1 in Auvergne, 1 in Gascogne and 16 in former *oïl* regions. A great majority of the listeners

¹³¹ One of the major reasons for choosing Percy over other platforms for the accent identification test was that this test runs easily on several browsers and mobile phones.

¹³² This map is very old and seems outdated. However, newer maps often do not contain dialect borders. It was therefore the most useful one for the purpose of this dissertation.

was thus very familiar with at least one Southern French accent. There were 59 male and 118 female participants in the study.

8.1.5 Results and discussion

In total, 5,316 responses were given in the accent identification test. Of these, 2,568 answers were correct and 2,229 wrong. 519 times, listeners answered *I don't know*. If we calculate percentages on the basis of all answers, the identification rate is 48%. If we take out the *I don't know* answers, then the correct answers make up 53% (2,568/4,797). If we only consider the stimuli we were interested in and not the single words, we are left with 1,817 answers, and the percentages of correct answers are only slightly better: 53% (894/1,674 without the *I don't know* answers) and 49% (894/1,817 with them). Table 8.1 shows that there is no greater difference in identification between the longer sentence and the single words, apart from the *miette* stimuli being even more often incorrectly identified than the others.

	<i>miette</i> ('crumb')		<i>content</i> ('pleased')		<i>Jusqu'ici, les seuls...</i>		p
	%	N	%	N	%	N	
Correct identification	46	1,741	49	1,758	49	1,817	>.05

Table 8.1: Correct identifications per stimulus type (*miette* and *content* included).

All in all, identification rates were not as good as those reported by Coquillon (2005) and Pustka (2010b), who achieved correct answer rates of 69% and 65%, respectively. However, the results were comparable to the findings of Woehrling and Boula de Mareüil (2005) and Avanzi and Boula de Mareüil (2019), who observed identification rates at chance level (see Chapter 3.6.1). The following analyses are based solely on the long sentence and exclude the single words.

Figure 8.2 displays all answers given per stimulus. The stimuli were arranged according to *age*, starting with the youngest speaker on the left. Although all identification rates taken together are at chance level, we can see some differences between the speakers' identifications. If we add the *maybe* answers to the *certain* answers, they range from 14% correct identification (M32_w_18) to 79% (T7_m_25). Additionally, it is striking that the *I don't know* answers are rather infrequent. This is surprising, considering the low overall identification rate. Only five speakers (M32_w_18, T24_m_19, T16_w_20, T9_w_25 and T1_m_39) received more than 25% of *I don't know* answers.

Four of them are from Toulouse and the two with the highest numbers (39% and 46%) are young women.

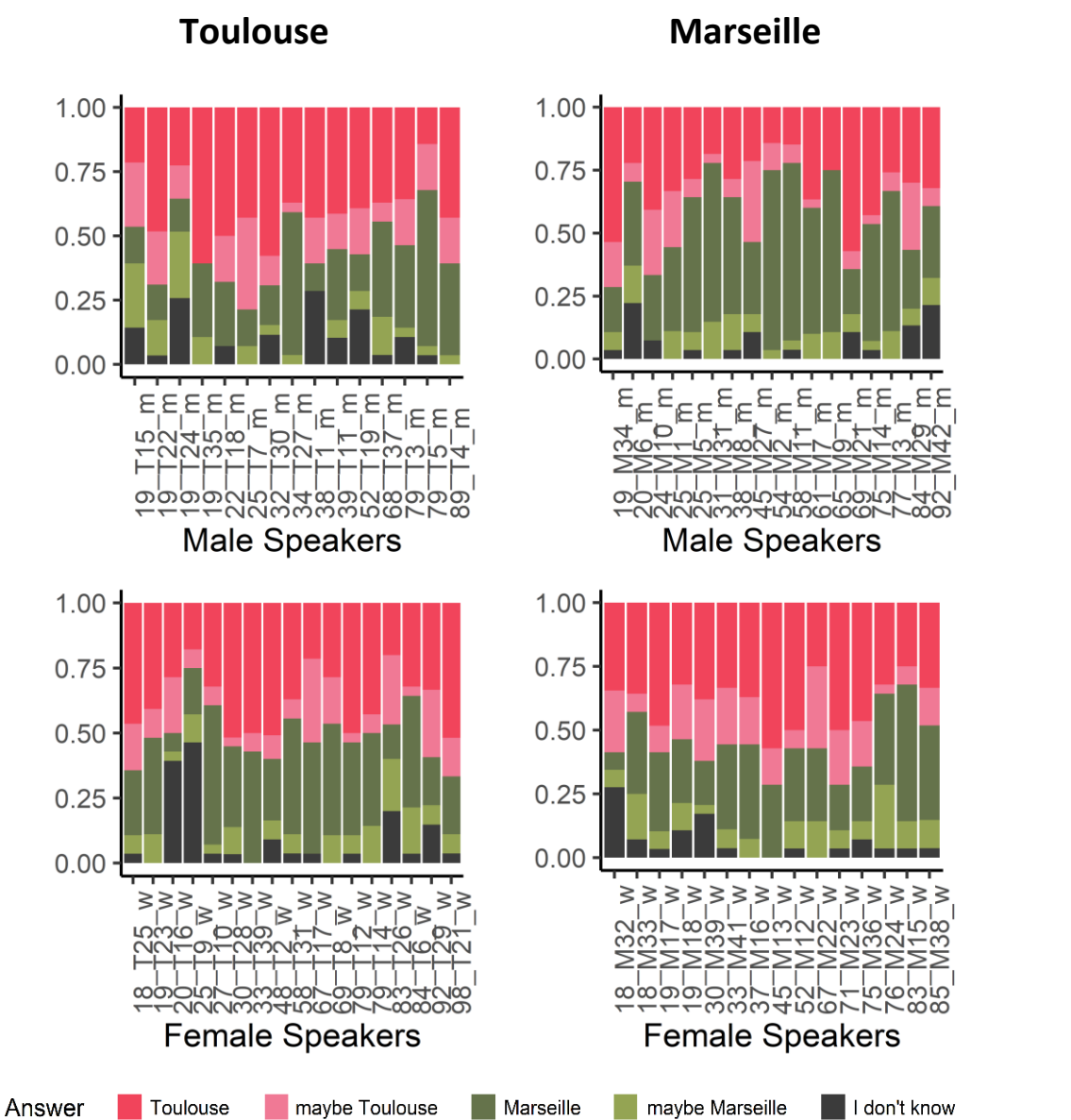


Figure 8.2: Percentages of answers given per speaker in the accent identification test.

Answer	Toulouse		Marseille	
	Male speakers	Female speakers	Male speakers	Female speakers
<i>Toulouse</i>	39%	38%	31%	39%
<i>maybe Toulouse</i>	16%	13%	12%	16%
<i>Marseille</i>	26%	31%	43%	29%
<i>maybe Marseille</i>	9%	9%	8%	10%
<i>I don't know</i>	10%	9%	6%	6%
N	421	502	474	420

Table 8.2: Percentages of answers given per speaker group in the accent identification test.

Table 8.2 displays the percentages of the answers given per group. When comparing these different groups, no notable differences can be found between Toulouse and Marseille or

between men and women, apart from the fact that male Marseille speakers were more often thought to originate from Marseille than all other speakers. However, dividing the answers into these groups does not present the complete picture. I therefore created a c-tree, incorporating the variable EDUCATION (see Figure 8.3).

The c-tree splits the stimuli into four distinct groups. The first split occurs based on the LEVEL OF EDUCATION of the speaker, creating two groups: speakers with a higher level of education and those with a lower education level. The second split can be found amid the speakers with a lower level of education and is based on AGE. The split occurs between younger speakers (18–29) and older speakers (30–64 and 65+). Lastly, for the older speakers with a lower education level, SEX becomes a significant factor as well. This c-tree thus suggests that speaker EDUCATION is the most influential factor in this analysis. Interestingly, SPEAKER ORIGIN does not appear in this c-tree. AGE, EDUCATION and SEX of the speakers thus seem to have influenced the answers of the listeners in the accent identification test more than the actual origin of the speakers.

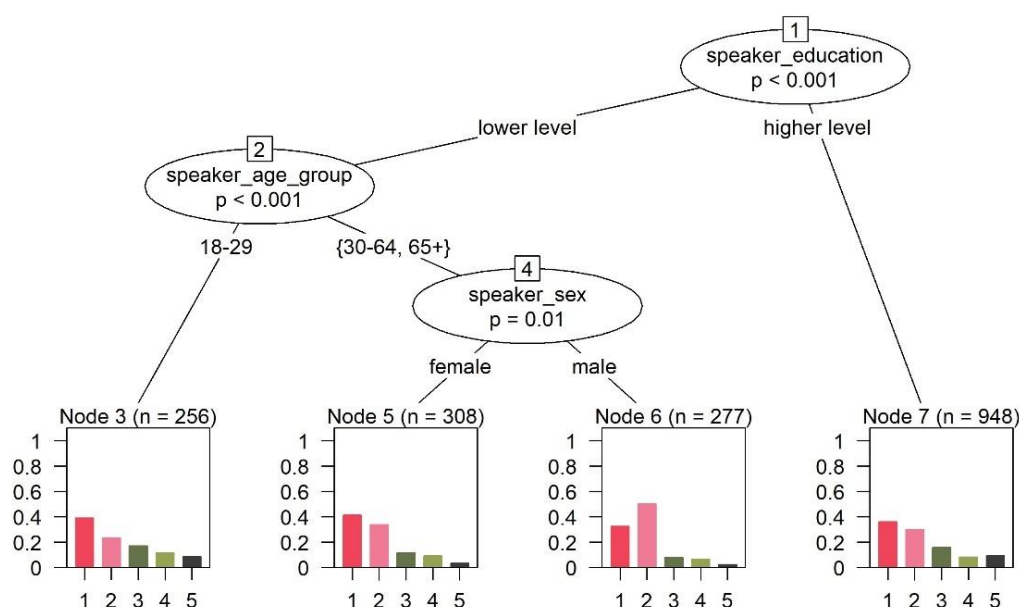


Figure 8.3: Conditional inference tree on the answer *Marseille* or *maybe Marseille* and the predictor variables SEX, AGE_GROUP, EDUCATION and SPEAKER_ORIGIN.

Figure 8.4 shows all percentages of answers again, this time without the *I don't know* answers. Here, we can see more clearly the way in which the male speakers from Marseille differ from the others. Additionally, outliers can be spotted more easily. In every group, there are some speakers who were clearly wrongly identified, especially in Marseille. Among the men, M34_m_19, M10_m_24 and M21_m_69 were thought to

come from Toulouse in more than 70% of cases and among the women, M32_w_18, M39_w_30, M13_w_45 and M23_w_71 were wrongly identified. Among the speakers from Toulouse, outliers are not as extreme. Only one male speaker (T5_m_79) was thought to be from Marseille in 67% of cases and one female speaker (T6_w_84) in 63%. These outliers do not behave homogeneously in terms of their Southern French characteristics, but the tendency can be observed that the two speakers from Toulouse who were frequently misidentified as speakers from Marseille show a considerably higher incidence of nasal appendices compared to the misidentified speakers from Marseille (see Chapter 8.1.1).

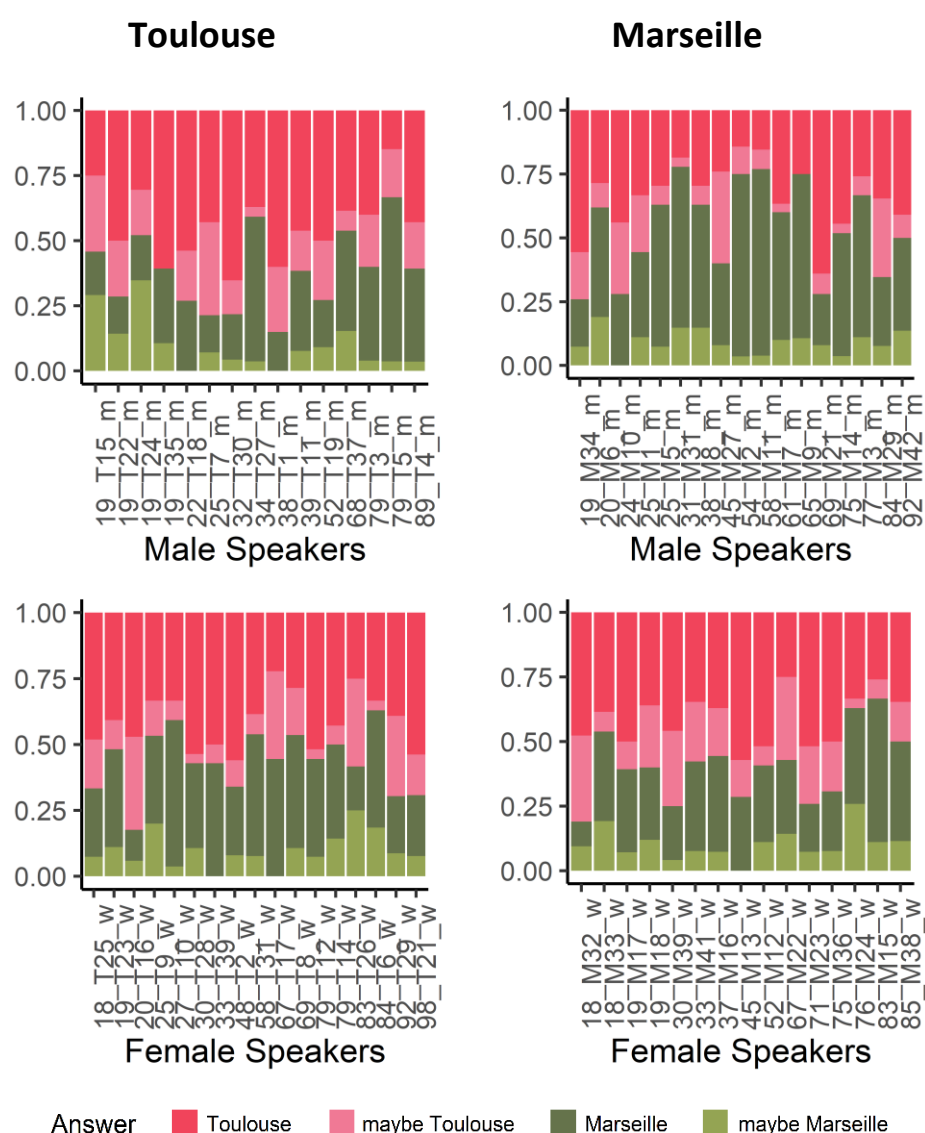


Figure 8.4: Percentage of all answers in the accent identification test per stimulus without the *I don't know* answers.

The speakers who were best identified (with identification rates of more than 65%) are predominantly men (see Table 8.3). Additionally, more speakers from Toulouse were correctly identified than from Marseille, and we can observe a slight trend in which more of the Toulouse speakers on the list have *bac* than the Marseille speakers. The most striking difference, however, is the rate of appendix realization: The Marseille speakers on the list clearly exhibit more nasal appendices than the Toulouse speakers.

	speaker	sex	<i>bac</i>	appendix realization rate %	identification rate %
Toulouse	T22_m_19	male	without	38	71
	T16_w_20	female	with	31	82
	T18_m_22	male	with	31	73
	T7_m_25	male	without	46	79
	T30_m_32	male	without	31	78
	T1_m_38	male	with	38	85
	T2_w_48	female	with	46	66
	T19_m_52	male	with	31	73
	T29_w_92	female	with	23	70
	T21_w_98	female	without	46	69
Marseille	M31_m_31	male	with	85	78
	M2_m_54	male	with	77	75
	M11_m_58	male	without	77	77
	M9_m_65	male	without	92	75
	M3_m_77	male	without	92	67
	M15_m_83	female	without	92	67

Table 8.3: List of all speakers whose stimuli were correctly identified in more than 65% of cases.

The following results are based on a reduced dataset that does not contain the *I don't know* answers and combines the *maybe* answers with the *certain* ones.¹³³ The analysis is structured as follows: First, all categorical variables and their possible influence on accent (mis-)identification are presented on their own, then a logistic regression model is introduced. Since the focus of the analysis is on the differences between Toulouse and Marseille, the outcome variable is not the variable CORRECTLY IDENTIFIED? but the variable ANSWER. The following analyses will therefore be based on the question: Which factors led to a stimulus being localized in Marseille?

Table 8.4 shows that, taken by themselves, all non-linguistic factors seem to influence the answers, except the variable EDUCATION. Although the speakers without *bac* were thought to be from Marseille in 47% of the answers as opposed to 42% for people with *bac*, this difference was not judged significant by a χ^2 test. In total, speakers were

¹³³ When combining these answers, a second variable was introduced: certainty.

more often localized in Marseille when they were older, male, and from Marseille, thus suggesting that nonmobile older males (NOMs) were perceived and localized differently to the other speakers in this accent identification test.

CITY	Toulouse		Marseille		<i>p</i>
	%	N	%	N	
	41	838	48	836	<.01
EDUCATION	With <i>bac</i>		Without <i>bac</i>		<i>p</i>
	%	N	%	N	
	42	858	47	818	>.05
SEX	Male speakers		Female speakers		<i>p</i>
	%	N	%	N	
	47	826	43	848	<.05
AGE GROUP	18-29		30-64		<i>p</i>
	%	N	%	N	
	40	497	46	545	<.05

Table 8.4: Factors possibly influencing accent identification in the first test (Answer “Marseille” or “maybe Marseille”), results of several χ^2 tests.

Several logistic regression models were fitted, and interactions were tested. As predictor variables, I used DURATION of the stimuli, PRESENCE OF FINAL [T] in *Garret*, SCHWA REALIZATION rate, NASAL VOWEL in *récemment*,¹³⁴ SEX, EDUCATION, AGE GROUP and SPEAKER ORIGIN, as well as LISTENER RESIDENCE. Table 8.5 shows the model that fitted the data best, and all predictions about the significant factors are visualized in Figure 8.5. The model does not contain DURATION nor PRESENCE OF FINAL [T], but the inclusion of all other variables led to the best model, judged from the Nagelkerke pseudo R^2 (.078). However, the pseudo R^2 suggests that the explanatory power of this model is extremely low, since it only accounts for less than 10 percent of the variation.

The intercept of the model consists of the values *male speakers, age group 1, with bac, from Toulouse, listeners from Languedoc* and the pronunciation *était* [ete]. However, few variables seem to have a significant influence: SEX, SPEAKER ORIGIN, LISTENER ORIGIN (only the listeners from Provence and from the North) and REALIZATION OF RÉCEMMENT.

¹³⁴ A similar model was fitted with the variable NASAL APPENDIX rate, but using REALIZATION OF RÉCEMMENT made the model slightly better.

	Estimate	Std.Error	z value	Pr(> z)	
(Intercept)	-1.06	.24	-4,34	1.42E-05	***
Female speakers	-.36	.11	-3,33	.001	***
Age 30-64	.12	.14	.91	.36	
Age 65+	.03	.14	.25	.80	
Speakers without <i>bac</i>	-.02	.11	-.15	.88	
Speaker from Marseille	.47	.11	4,31	1.62E-05	***
Listeners from Provence	.60	.11	5,50	3.76E-08	***
Listeners from Auvergne	-1.01	.80	-1,26	.21	
Listeners from Gascogne	.79	.68	1,15	.25	
Listeners from non-Occitan area	.61	.18	3,31	.00	***
<i> récemment</i> [ɛ̃] or [a]	.64	.14	4,45	8.59E-06	***
<i> récemment</i> [aŋ]	.93	.15	6,29	3.15E-10	***
<i> était</i> [ɛ]	.06	.23	.28	.78	

Table 8.5: Logistic regression model on the outcome *Marseille* or *maybe Marseille* of the first accent identification test (Nagelkerke pseudo $R^2 = .08$).

Unlike the c-tree in Figure 8.3, this logistic regression model identifies SPEAKER ORIGIN as significant. The odds that speakers from Marseille are localized in Marseille are slightly higher, and although this difference is only marginal, it remains statistically significant ($p < 0.01$). The same holds true for SEX: Male speakers are more likely to be localized in Marseille.

LISTENER RESIDENCE is equally important: The odds that listeners from Languedoc estimate a speaker to be from Marseille are smaller than the odds of listeners from Provence and from the North doing the same. The wide confidence bands of the two other groups in Figure 8.5 already indicate that no good predictions can be made with these two categories. The reason for this is simple: Listeners residing in these regions were too few in number. The plot might also suggest that speakers from the North were even better at identifying speakers from Marseille than speakers from Toulouse. However, it is possible that non-Southerners were more inclined to guess that the speakers were Marseillais due to the cultural prominence effect (see Chapter 2.3.2). Meanwhile, listeners from Provence and Languedoc might have been influenced by the annexation effect (see Chapter 3.6.1).

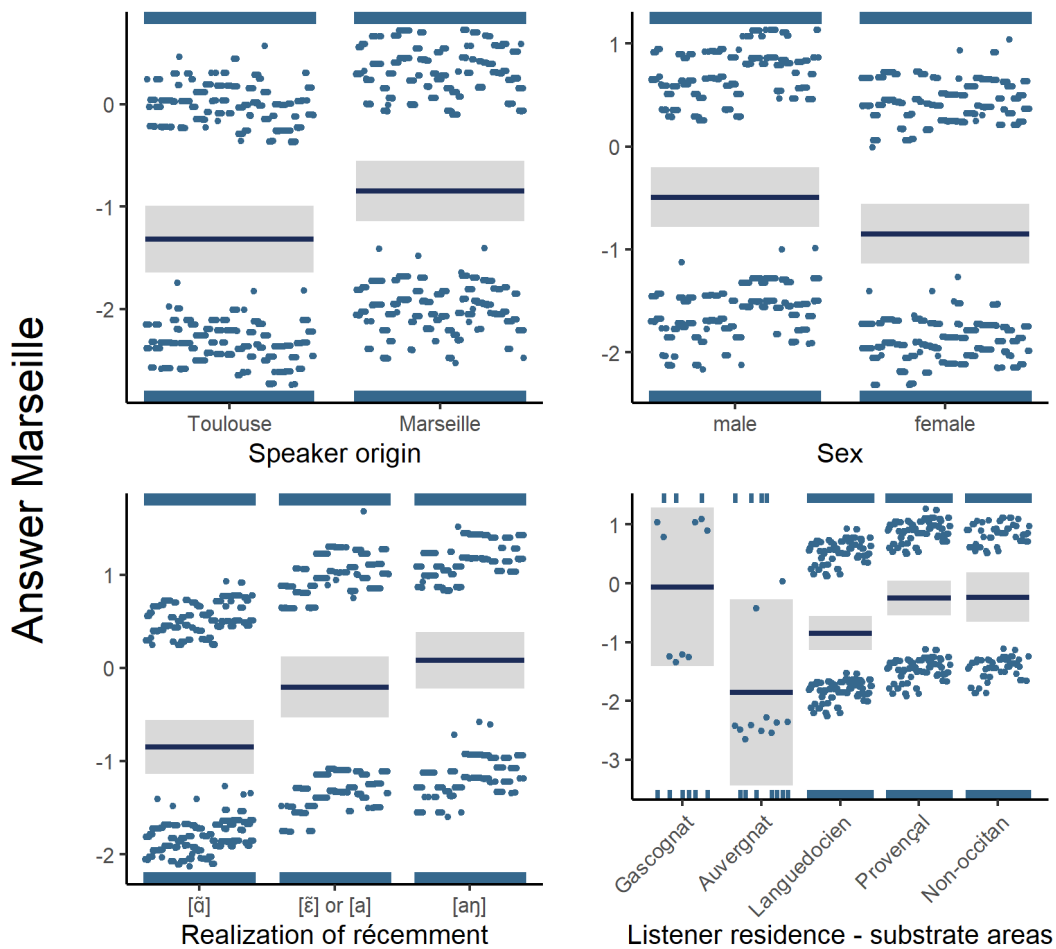


Figure 8.5: All factors significantly influencing the answer *Marseille* or *maybe Marseille* in the first accent identification test.

Lastly, Figure 8.5 also shows the predictions of the only linguistic factor that seems to have influenced the answers in the accent identification test, according to the logistic regression model: REALIZATION OF RÉCEMMENT. The more ‘southern’ the realization, the more likely that a speaker was thought to come from Marseille. A similar model containing the variable APPENDIX REALIZATION showed the same tendency: The odds of speakers being thought to come from Marseille significantly increased with the increase of nasal appendix rates.¹³⁵

The importance of the nasal vowels is supported by the conditional inference tree in Figure 8.6. Realizing / $\tilde{a}$ / in *récement* with the northern variant [$\tilde{a}$] led more often to the answers *Toulouse* or *maybe Toulouse*, particularly among listeners from the southwest and when the listeners themselves were from Toulouse. Among speakers who did not

¹³⁵ It should, however, be kept in mind that schwa realization and nasal vowels are correlated. Consequently, when replacing the factor RÉCEMMENT with SCHWA REALIZATION, the latter becomes significant.

realize /*ã*/ in the standard way, male speakers were more often localized in Marseille. The group most frequently identified as being from Marseille, however, consists of male speakers from Toulouse, judged by listeners from the southwest. However, this group makes up a very small portion of the data.

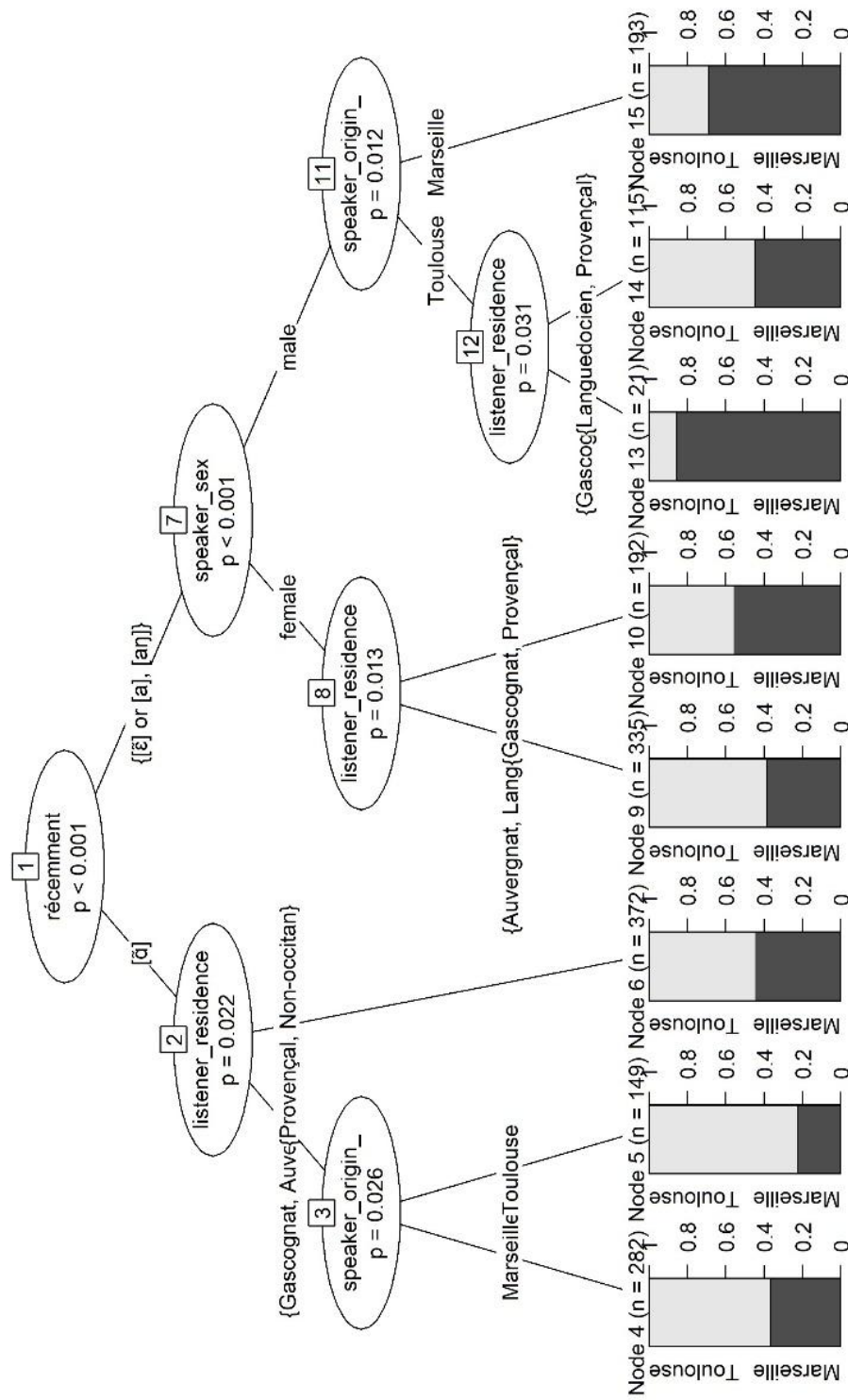


Figure 8.6: C-tree showing the hierarchy of different factors influencing the answers in the accent identification test.

The results of the accent identification test show that distinguishing between the accents of Marseille and Toulouse is indeed very difficult. The mean identification rate of all stimuli is close to chance level. However, identification rates for single stimuli differ greatly. Rates at chance level (between 44 and 54%) only appear in 16 out of the 64 cases. While some of the origins of the speakers were clearly identified, some speakers were attributed to the wrong city.

The ones who were thought to come from Marseille are the ones with the highest rates of nasal appendices. The fact that nasal appendices appear to play an important role in identification or misidentification can be interpreted as follows: Nasal appendices strongly influence the perceived degree of accentedness. Since Marseille is the city that is more strongly associated with the typical southern accent (see Chapter 3.5.1), speakers with ‘stronger accents’ were thought to come from Marseille. One argument supporting this is the listener groups: The listeners who were most unfamiliar with the accents most frequently believed that speakers originated from Marseille.

Additionally, the presence of nasal appendices and of final schwas is influenced by the social factors AGE and LEVEL OF EDUCATION. The older and less educated the speakers, the more likely they are to produce nasal appendices and final schwas (see Chapter 3.4.1). These factors are thus also at play in the complex situation of accent perception.

8.1.6 Methodological implications

All in all, this accent identification test led to interesting results. It had, however, several weak points, such as the lack of representativeness of the participants and the problem that I could not be sure that participants were all participating in a suitable setting and were not distracted when listening to the stimuli. Additionally, the degree of familiarity with the accents seemed to be an important aspect. It therefore seemed important to control the provenance of the listeners more thoroughly when conducting another accent identification test. Another problem was the choice of single words. They did not serve their purpose well and only increased the number of stimuli the participants had to listen to. And lastly, due to the large number of stimuli, every stimulus was only listened to by a few people, which made the analysis fairly difficult. Due to these weak points, I conducted a second accent identification test that was similar in its overall design, but the manner in which it was conducted differed considerably from the first test.

8.2 Second accent identification test: Toulouse vs. Marseille, offline

The second accent identification test was conducted offline in February 2016 in Toulouse and Marseille. In December 2016, I conducted the same test with a control group in Paris. The primary purpose of this second test was to even out some weak points in the first accent identification test and, by doing so, to find out whether some methodological changes would lead to clearer results.

8.2.1 Stimuli

For this accent identification test, I decreased the number of stimuli that every participant had to listen to. Randomization (see Chapter 8.2.2) was not possible in this setting. I therefore excluded the fillers and continued to work with a subset of speakers. The subset was chosen as follows: From each speaker category (based on age, gender and education), I selected the speaker who had the highest number of correct identifications in the first accent identification test (see Table 8.6).¹³⁶

age	Toulouse				Marseille			
	female		Male		female		male	
	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>	with <i>bac</i>	without <i>bac</i>
18-29	T10_w_27	T9_w_25	T15_m_19	T7_m_25	M17_w_19	M32_w_19	M1_m_25	M5_m_25
	T16_w_20	T23_w_18	T18_m_23	T22_m_19	M18_w_19	M33_w_19	M6_m_19	M34_m_19
		T25_w_18	T35_m_19	T24_m_18			M10_m_25	
30-64	T2_w_48	T28_w_30	T1_m_38	T27_m_34	M12_w_52	M39_w_30	M2_m_54	M8_m_37
	T31_w_58	T39_w_33	T11_m_39	T30_m_32	M13_w_45	M16_w_37	M27_m_45	M11_m_58
			T19_m_52		M41_w_33		M31_m_31	M7_m_61
65+	T6_w_84	T8_w_69	T3_m_79	T4_m_89	M22_w_67	M15_w_83	M21_m_69	M9_m_65
	T17_w_67	T12_w_79	T37_m_68	T5_m_79	M36_w_76	M23_w_71	M29_m_84	M3_m_77
	T26_w_83	T14_w_79			M38_w_86	M24_w_76	M42_m_92	M14_m_76
	T29_w_92	T21_w_98			M40_w_82			
Σ 32 speakers				Σ 32 speakers				

Table 8.6: Speakers in black and bold figuring in the offline accent identification test.

In total, all 138 participants listened to 24 stimuli that consisted of the same sentence and that had already been used as stimuli in the first accent identification test.

¹³⁶ At that time, the online accent identification test was still running. This is why not all of these speakers were the best identified ones when the online test was finished.

8.2.2 Design

The test was designed similarly to the first one. Participants were asked to listen to and localize the speakers they heard to either Toulouse or Marseille, using the same response options as in the first test. This test was conducted offline and in a non-digital format. Participants were handed a printed questionnaire, which they filled out using a pen (see Figure 8.7). Stimuli were presented to them via a high-quality portable loudspeaker (Bose SoundLink II), and each stimulus was presented once, in order to keep the overall duration of the test as short as possible.

Example N°	<i>Marseille</i>	<i>peut-être Marseille</i>	<i>Toulouse</i>	<i>peut-être Toulouse</i>	<i>je ne sais pas</i>
1.	☐	☐	☐	☐	☐
2.	☐	☐	☐	☐	☐
3.	☐	☐	☐	☐	☐

Figure 8.7: Questionnaire design of the offline test.

Since several participants listened to the stimuli at the same time, no randomization was applied. It is therefore possible that positioning effects influenced the participants' answers. The order of the stimuli to be listened to was established using a random number generator. A possible positioning effect might have especially influenced the answers to the long list of Marseillais stimuli from 3 to 7 (see Table 8.7).

1.	T29w92	13.	T18m22
2.	T30m32	14.	M22w67
3.	M3m77	15.	M39w30
4.	M5m25	16.	T19m52
5.	M1m25	17.	M24w76
6.	M13w45	18.	m11m58
7.	M18w19	19.	T23w19
8.	T4m89	20.	T21w98
9.	M9m65	21.	T39w33
10.	T3m79	22.	T2w48
11.	M2m54	23.	M33w18
12.	T7m25	24.	T16w20

Table 8.7: Order of stimuli in the second accent identification test.¹³⁷

¹³⁷ In this test, a reduced set of stimuli was used to prevent the test from taking too long. For the selection of the reduced set see Chapter 8.2.1.

The questionnaire that the participants filled out contained several other questions about the accents of Toulouse and Marseille that were asked before and after the accent identification test, as well as some questions about the participants' socio-economic backgrounds. In order not to create any bias among the listeners when completing the accent identification test, questions about possible differences between the two accents were only asked after the test (see Chapter 4.4.2), as had been done in the first accent identification test (see Chapter 8.1.3). It took participants roughly 20 minutes to complete the whole questionnaire.

8.2.3 Participants

As stated above, one of the major problems with online surveys is the relative non-representativeness of the participants. People who participate need access to the internet and free time. This is why the participants in such online experiments are usually rather young. In order to level this out, I conducted an offline experiment, in which I especially searched for senior and younger citizens. This way, the two extremes of the strata were targeted. I recruited them at schools, at university, at clubs for senior citizens in Toulouse, at the university of the Third Age in Marseille and at one senior ballroom dancing event in Toulouse. Additionally, I collected data with a control group of 22 high school students in Paris.¹³⁸ In total, 138 people participated (see Table 8.8).

Unfortunately, there was a significant imbalance in the group sizes. While I was able to recruit 83 participants in Toulouse (51 students and 32 seniors), only 32 participants (12 students and 20 seniors) took part in Marseille. One reason for this is that I started my survey in Toulouse. By the time I arrived in Marseille, the exam period had already started in the schools, so I could only find one German teaching assistant in a *Lycée* in Marseille who let me conduct the survey in her classroom. However, the number of students she was teaching was not very high (see Table 8.8).

¹³⁸ The decision to only work with a control group of young people was, once again, predominantly ecological in nature: I had previously worked as a German assistant at a Parisian school and still had connections there, which made conducting an accent identification test in a classroom relatively easy. Searching for older participants would have been much more time-consuming.

Participants (total)			N 138
Toulouse	51 students	32 seniors	N 83
Marseille	12 students	20 seniors	N 32
Paris	22 students		N 22

Table 8.8: Participants of the second accent identification test.

8.2.4 Results and discussion

The results produced by the second accent identification test differ in several ways from those of the first test. A total of 3,044 answers were recorded, with 1,294 being correct, 1,218 incorrect, and 532 instances where participants indicated uncertainty by selecting *I don't know*.¹³⁹ In the first accent identification test, the identification rate is 48%, here it is 42%. This number is considerably lower. If the *I don't know* answers are taken out, the identification rate rises to 51.1%, which is also lower than in the first test (53%). However, without the *I don't know* answers, the gap between the two tests narrows. Table 8.9 displays all answers given in the test. It shows that speakers were considerably more often localized in Toulouse.

<i>Toulouse or maybe Toulouse</i>		<i>Marseille or maybe Marseille</i>		<i>I don't know</i>	
%	N	%	N	%	N
46	1387	37	1125	17	532

Table 8.9: Total number of answers given in the second accent identification test.

However, the imbalance of answers is possibly due to an annexation effect (see Chapter 2.3.2). Table 8.10 shows that while listeners from Paris localized speakers equally in Toulouse and Marseille, listeners from Toulouse and Marseille localized approximately 50% of the speakers in their own city and approximately 35% in the other one. The imbalance displayed in Table 8.9 can therefore be explained by the imbalance of the three listener groups with Toulouse listeners outnumbering the other listeners overall (see Table 8.8).

¹³⁹ Sometimes, listeners did not fill out an answer. This explains the discrepancy of 268 between the total number of answers and the total number of answers that would have been given if all 138 participants had filled out the questionnaire completely.

	<i>Toulouse or maybe Toulouse</i> %	<i>Marseille or maybe Marseille</i> %	<i>I don't know</i> %	N
Toulousain listeners	50	33	17	1928
Marseillais listeners	35	48	17	594
Parisian listeners	42	40	17	522

Table 8.10: Answers given per listener group in the second accent identification test.

Table 8.11 presents the answers given for each speaker group (Toulouse speakers and Marseille speakers), revealing that Toulouse speakers were identified more accurately compared to Marseille speakers (48% vs. 37%). This difference is statistically significant, as indicated by a χ^2 test ($\chi^2 = 12.10$, $p < .05$). However, these results should be interpreted with caution, considering the annexation effect observable in Table 8.10.

	<i>Toulouse or maybe Toulouse</i> %	<i>Marseille or maybe Marseille</i> %	<i>I don't know</i> %	N
Toulouse speakers	48	37	15	1531
Marseille speakers	43	37	20	1513

Table 8.11: Answers given to each speaker group in the second accent identification test.

Although this data might suggest that identification was at chance level, only about a third of the speakers had identification rates close to 50%.¹⁴⁰ To facilitate comparison, Figure 8.8 presents the percentages of all answers given per stimulus. Just like in Figure 8.2, stimuli were arranged according to age, starting with the youngest speakers in each category.¹⁴¹ Correct identification rates range from 5.65% (M18_w_19) to 72.22% (M3_m_77), as opposed to rates between 14 and 79% in the first accent identification test. This indicates that identification accuracy was lower in the second test than in the first one.

At first glance, the percentages of answers given in the second accent identification test resemble those of the first test. There is, however, one big difference: In the first test, answers of *I don't know* had been given in 10% of the cases (see Chapter 8.1.5). These answers were much more numerous in the second accent identification test and make up 17% of the answers. Figure 8.8 shows that they were given especially often when listeners were asked to localize female speakers from Marseille.¹⁴² Among these

¹⁴⁰ Eight speakers had identification rates between 45 and 55%.

¹⁴¹ For this, the codes of the speakers were slightly modified (T18_m_22 became 22_T18_m etc.).

¹⁴² *I don't know* answers make up 14% of the answers given when listening to the stimuli of female Marseille speakers, 8% of those of male Toulouse speakers, 7% of those of female Toulouse speakers and only 5% of those of male Marseille speakers.

speakers, we can discern two outliers: M18_w_19, who had *I don't know* answers in 50% of the cases, followed by M22_w_67 with 41%. In the first accent identification test, they had much lower scores of *I don't know* answers: 10% for M18_w_19 and even 0% for M22_w_67. Both stimuli were neither at the beginning nor at the end of the test. This shows that some changes in methodology can lead to drastically differing results.

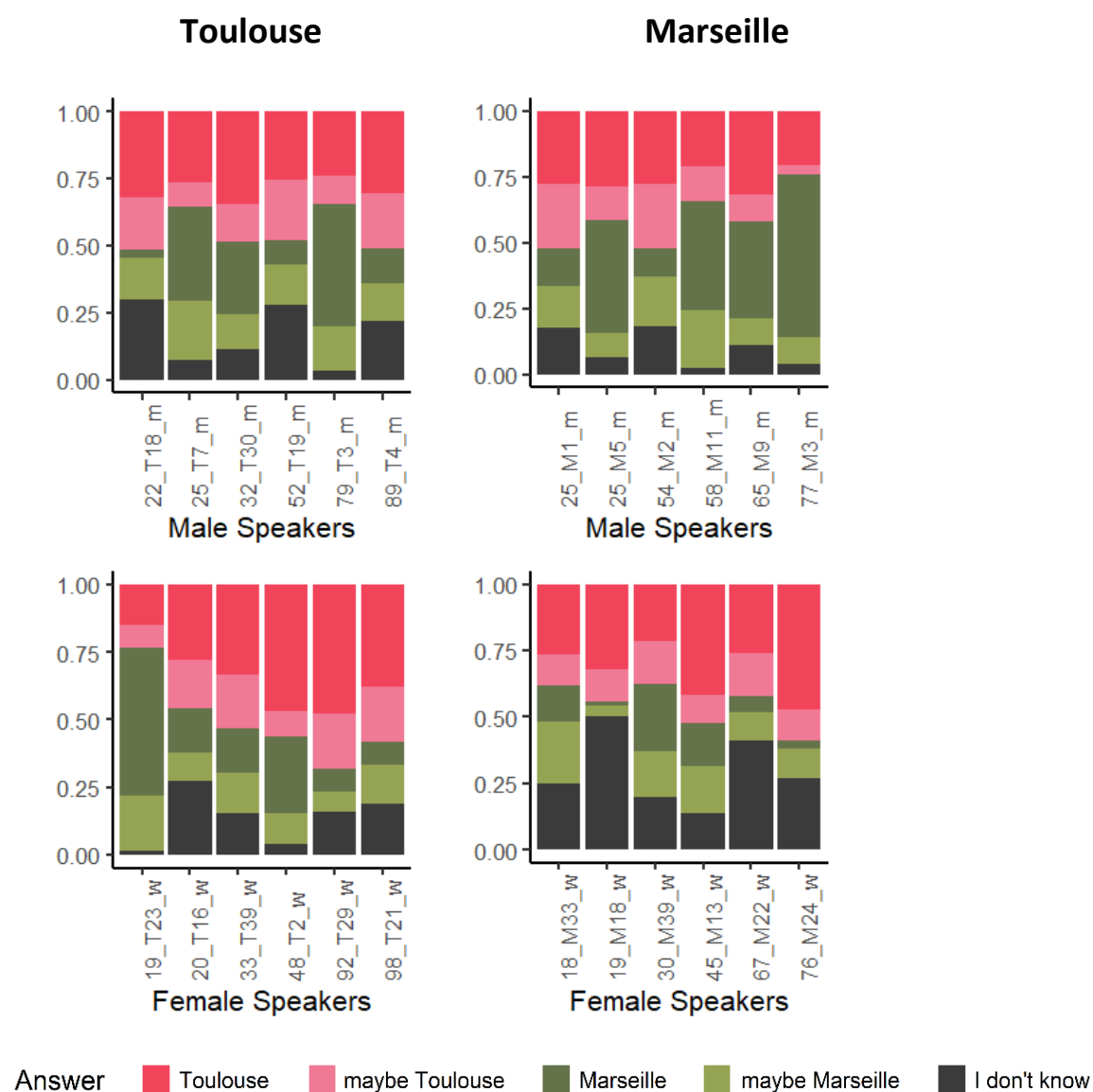


Figure 8.8: Percentages of answers given per speaker during the second accent identification test.

To facilitate comparison with the results of test 1, Figure 8.9 shows all answers given to each stimulus without the *I don't know* answers. In this reduced dataset, identification rates range from 11 to 81%. In the first test, 16 out of 64 speakers had identification rates of more than 65% (see Table 8.3). It can therefore be said that good identification was

observed for 25% of the speakers. In the second test, the percentage of well identified speakers stayed the same: 6 out of 24 speakers had identification rates of more than 65%. Nearly all of them had been well identified in the first test, too. The only speaker who had not figured among the well identified speakers in the first test was a male speaker without *bac* from Toulouse (T4_m_89). Still, his identification rates were 60% (in the first test) and 65% (in the second) and are thus quite similar (see Table 8.12). Only one speaker from Marseille ranks among the group of well identified speakers. This suggests that speakers from Toulouse were particularly well identified during the second accent identification test. This is most probably due to the strong annexation effect (see above).



Figure 8.9: Percentages of answers given during the second accent identification test without *I don't know* answers.

In the first accent identification test, speakers with considerably higher appendix realization rates were located more often in Marseille and speakers with considerably lower rates were located more often in Toulouse. A similar tendency can be observed here (see Table 8.12).

Speaker	Sex	<i>Bac</i>	Appendix realization rate %	Test 1 identification rate %	Test 2 identification rate %
T18_m_22	male	with	31	73	73
T19_m_52	male	with	31	73	67
T29_w_92	female	with	23	70	81
T21_w_98	female	without	46	69	71
T4_m_89	male	without	66	60	65
M3_m_77	male	without	92	67	75

Table 8.12: Speakers with identification rates of more than 64% in the second accent identification test.

Table 8.13 shows a comparison of the identification rates of tests 1 and 2. We can see that a large number of speakers was much better identified in the first test (with discrepancies between 12% and 44%) than in the second one. Only three speakers were better identified in the second test (with discrepancies between 11% and 28%). The reasons for these differences are difficult to explain. It is possible that positioning effects were at play with the speaker M18_w_19, who was the last of a series of five Marseille stimuli during the test (see Table 8.7). The last stimulus in the test (T16_w_20) might also have been less well identified due to its late position, but the penultimate stimulus (M33_w_18) is among those stimuli whose identification rates were rather constant. A fatigue effect may therefore not have had such an important impact.

Speaker	<i>Bac</i>	Test 1 identification rate %	Test 2 identification rate %	Discrepancy between the tests %
T7_m_25	without	79	38	-40
T23_w_19	without	52	24	-28
T3_m_79	with	60	36	-24
T30_m_32	without	78	55	-24
T16_w_20	with	82	63	-19
T2_w_48	with	66	58	-8
T19_m_52	with	73	67	-6
T18_m_22	with	73	73	0
T21_w_98	without	69	71	2
T4_m_89	without	61	65	5
T39_w_33	without	57	63	6
T29_w_92	with	70	81	11
M24_w_76	without	63	19	-44
M2_m_54	with	75	37	-38
M18_w_19	with	40	11	-29
M9_m_65	without	75	53	-22
M22_w_67	with	43	28	-14
M11_m_58	without	77	65	-12
M1_m_25	with	44	37	-8
M5_m_25	without	63	56	-7
M33_w_18	without	54	49	-4
M3_m_77	without	67	75	9
M13_w_45	with	29	39	11
M39_w_30	without	25	53	28

Table 8.13: Comparison of identification rates of tests 1 and 2 (without the *I don't know* answers).

All in all, performance in the second accent identification test showed a lower accuracy rate than in the first test and thus considerably lower rates than in Coquillon's (2007) and Pustka's (2007) research (see Chapter 3.6.1). This might be due to the strong annexation effect at play and the imbalance in the sample of listeners. However, other factors might also have been at play. This is why the following sections of this chapter explore the potential influence of other factors on the responses obtained during the second accent identification test. As with the data of the first test, the following analyses are based on a reduced dataset that does not comprise the *I don't know* answers and aim to answer the question *Which factors led to speakers being thought to originate from Marseille?*

SPEAKER ORIGIN	Toulouse		Marseille		<i>p</i>
	%	N	%	N	
	44	1218	45	1141	> .05
EDUCATION	With <i>bac</i>		Without <i>bac</i>		<i>p</i>
	%	N	%	N	
	36	1011	51	1348	< .01
SEX	Male speakers		Female speakers		<i>p</i>
	%	N	%	N	
	51	1233	38	1126	< .01
AGE GROUP	18-29		30-64		<i>p</i>
	%	N	%	N	
	48	750	44	817	< .05
LISTENER RESIDENCE	Toulouse		Marseille		<i>p</i>
	%	N	%	N	
	39	1489	58	440	< .01

Table 8.14: Answer “Marseille” or “maybe Marseille” given during the second accent identification test. Results of several χ^2 tests, results without “I don’t know” answers.

Table 8.14 shows each external factor which had a possible influence on listeners locating a stimulus to Marseille. As opposed to the first accent identification test, in which no significant difference had been observed between *with or without bac*, EDUCATION seems to have played an important role in this test. At the same time, SPEAKER ORIGIN did not seem to influence the answers greatly. LISTENER RESIDENCE, on the other hand, significantly influenced the results, just as expected due to Table 8.10. Thus, younger male speakers without *bac* were more often thought to be from Marseille. This is illustrated by Figure 8.10, which displays a conditional inference tree that visualizes the interplay between the different external factors (without LISTENER RESIDENCE). According to this tree, LEVEL OF EDUCATION of the speakers was the factor that most influenced the answers, followed by their SEX and AGE.

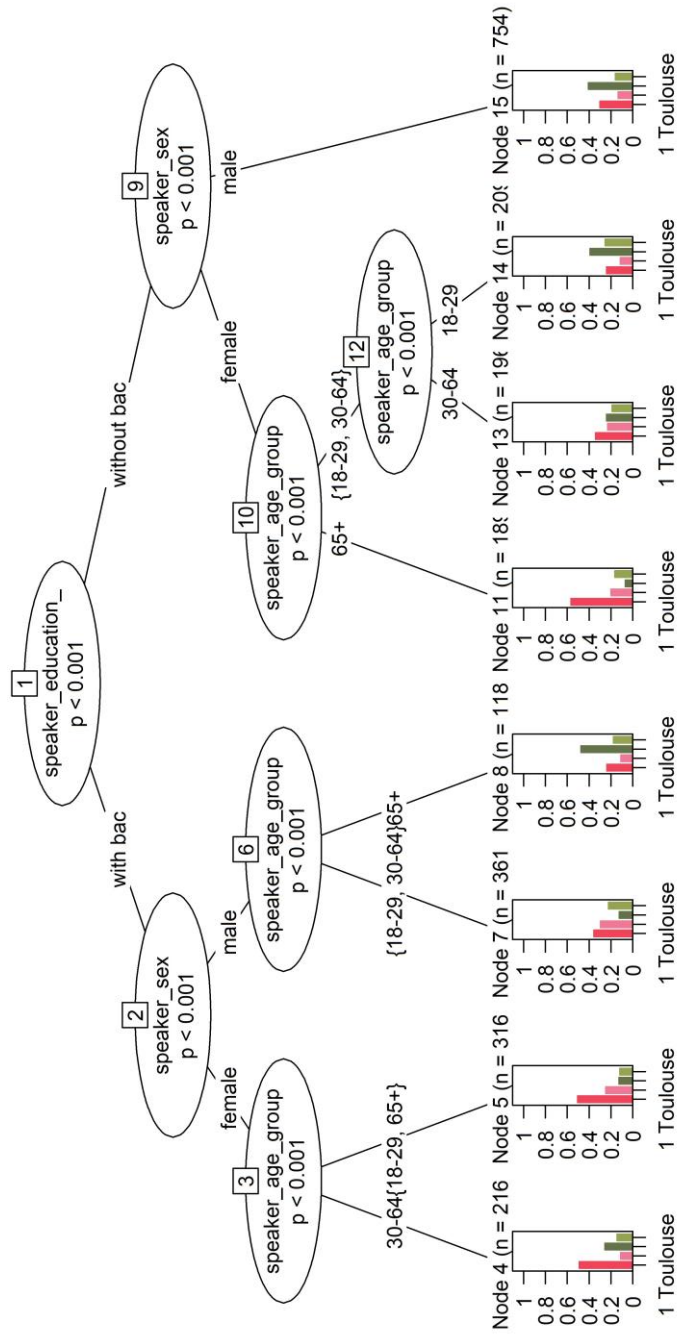


Figure 8.10: Conditional inference tree on the answer *Marseille* or *maybe Marseille* and the predictor variables SEX, AGE GROUP and EDUCATION.

Internal factors, that is final SCHWA REALIZATION, LOI DE POSITION (/e/ in *Garret*), APPENDIX REALIZATION (in the word *récemm*)¹⁴³ and realization of APICAL /R/ did not exert any possible influence on the answer *Marseille*, according to several χ^2 tests.

¹⁴³ *R récemm* was coded with three levels: 0 = [ʁesamã], 1 = [ʁesama] or [ʁesamã] and 2 = [ʁesamaɲ].

Again, several logistic regression models were fitted with the variable ANSWER (Toulouse or Marseille) and again, the models did not have much explanatory power (Nagelkerke pseudo $R^2 = .10$). Table 8.15 shows the regression model that seems to explain the data best. Its intercept consists of the following values: *male speakers, with bac, from Toulouse, listeners from Toulouse, Garret pronounced [gaʁε]* and *certain*.¹⁴⁴

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	-0.14	0.14	-0.97	0.33	
Female speakers	-0.56	0.09	-6.34	2.26e-10	***
Without <i>bac</i>	0.77	0.10	7.76	8.83e-15	***
Marseille speakers	-0.05	0.09	-0.52	0.60	
Listeners from Marseille	0.35	0.16	2.18	0.03	*
Listeners from Paris	0.27	0.12	2.21	0.03	*
Older listeners	-0.35	0.12	-2.98	0.003	**
Speaker age ¹⁴⁵	-0.01	0.00	-4.02	5.87e-05	***
<i>Garret</i> [t]	-0.41	0.12	-3.35	0.00	***
Uncertain	0.27	0.09	3.01	0.00	**
Listener from Marseille: older listeners	0.87	0.23	3.73	0.00	***
Listener from Paris: older listeners	NA	NA	NA	NA	

Table 8.15: Logistic regression model with the outcome *Marseille* or *maybe Marseille* of the second accent identification test (Nagelkerke pseudo $R^2 = .10$).

The coefficients of the logistic regression model are displayed in Table 8.15 and support the results of several χ^2 tests presented in Table 8.14. If we compare them to the coefficients of the model of the first accent identification test displayed in Table 8.5, we can state that the second test shows a broader array of factors affecting the responses. This is possibly due to the larger dataset this test is based on, with every stimulus being listened to by more than 100 listeners.

According to the model, SEX, EDUCATION, SPEAKER AGE, LISTENER ORIGIN, LISTENER AGE, GARRET [T] and CERTAINTY influenced answers significantly. Speakers were more likely to be localized in Marseille when they were male, younger, had a lower level of education, pronounced *Garret* without [t], and when their listeners were less

¹⁴⁴ This last value belongs to the factor CERTAINTY. This factor was established based on the answer categories of the accent identification test. During the test, participants could choose between 5 answer categories: *Marseille*, *maybe Marseille*, *Toulouse*, *maybe Toulouse*, *I don't know* (see Chapter 8.1.3). For the purpose of this analysis, both *Marseille* answers as well as both *Toulouse* answers were conflated, and the factor CERTAINTY was introduced, with two values: *certain* (the answers *Marseille* and *Toulouse*) and *uncertain* (the *maybe* answers).

¹⁴⁵ In the c-tree and in the χ^2 tests, age had been used as a categorical variable (with the help of three age groups). For this model, age was used as a continuous variable, because this helped the model to have more explanatory power.

certain of where to put them. Interestingly, only one factor does not show a significant effect on the question of whether they were thought to originate from Marseille: *SPEAKER ORIGIN*, that is whether a speaker was actually from Marseille or Toulouse. This is consistent with the first accent identification test (see Chapter 8.1.5).

An interaction can be observed between the *factors* *LISTENER RESIDENCE* and *LISTENER AGE GROUP*. The model indicates that older listeners from Marseille were more inclined to localize speakers in Marseille than all other listeners (see Figure 8.11). These results might be due to an annexation effect (cf. Boughton, 2006; see Chapter 2.3.2), paired with a certain pride in their own accent.

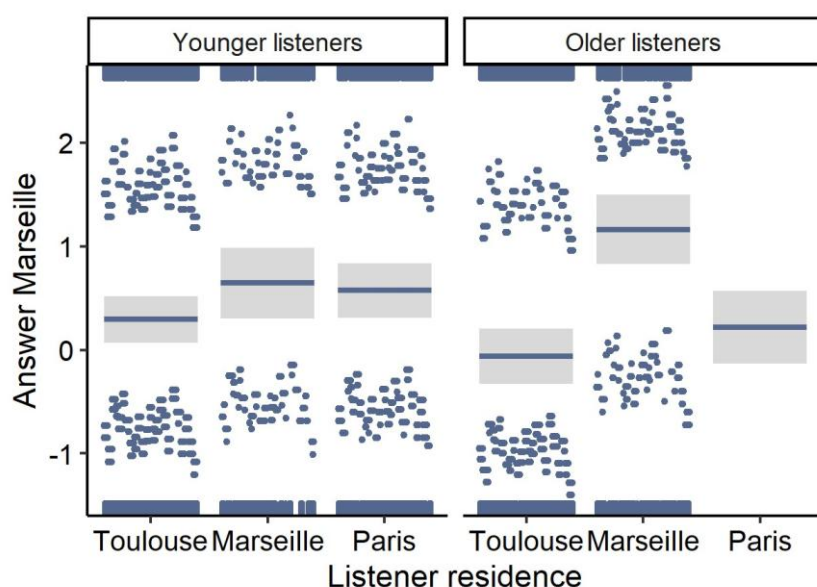


Figure 8.11: Model prediction on the influence of the residence of the listeners.¹⁴⁶

While *APPENDIX REALIZATION* had played an important role in the first accent identification test, it does not seem to have played any role in the second one and does not even figure in the final model. The only linguistic factor in the model is pronunciation of *FINAL [T]*. Its coefficient tells us that the probability of a speaker being thought to originate from Marseille decreases if the speaker pronounces final [t]. However, as Figure 8.12 illustrates, the impact is not substantial.

If we only look at the speaker-related extralinguistic factors, we can observe the following: Just like the c-tree in Figure 8.10, the coefficients of the model imply that the factor *EDUCATION* is the most important one (see also Figure 8.12): Speakers without *bac* are more likely to be thought to come from Marseille. This factor is followed by the factor

¹⁴⁶ The reason why there are no data points in category 7 of the older listeners is that no older listeners from Paris participated in the test.

SEX (as illustrated in Figure 8.12), indicating that female speakers are more likely to be attributed to Toulouse.

In the first accent identification test, SPEAKER AGE had a positive effect on a speaker being localized in Marseille, according to a χ^2 test (see Table 8.4).¹⁴⁷ In the second accent identification test, in contrast, it has a negative effect on the probability of a speaker being attributed to Marseille. According to the model, older speakers were more likely to be localized in Toulouse.

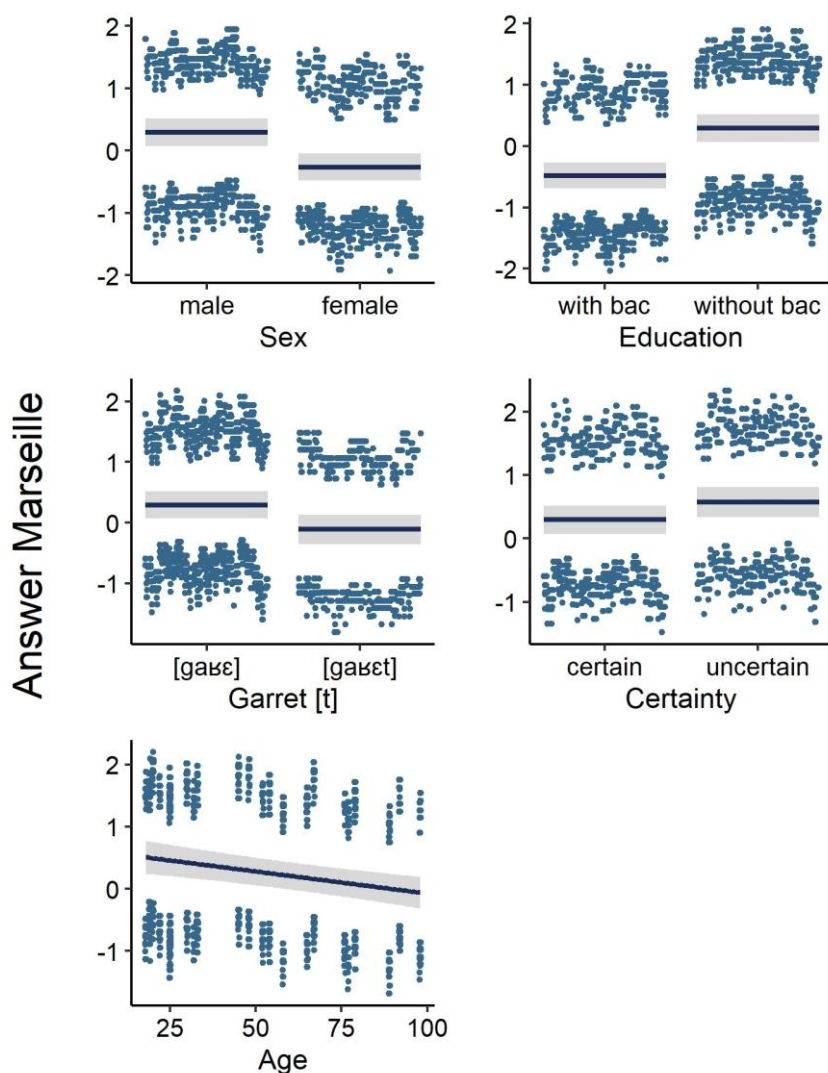


Figure 8.12: Model predictions on the different main effects influencing the outcome variable *Answer Marseille*, second accent identification test.

Another interesting factor is the certainty of the listeners when answering the questions of the accent identification test. Figure 8.13 shows that when speakers were more

¹⁴⁷ However, in the logistic regression model, age did not figure as a significant factor influencing the outcome variable (see Table 8.5).

uncertain about the possible origin of a speaker, they were more likely to attribute them to Marseille. Interestingly, the residence of the listeners did not have any major influence on this tendency.

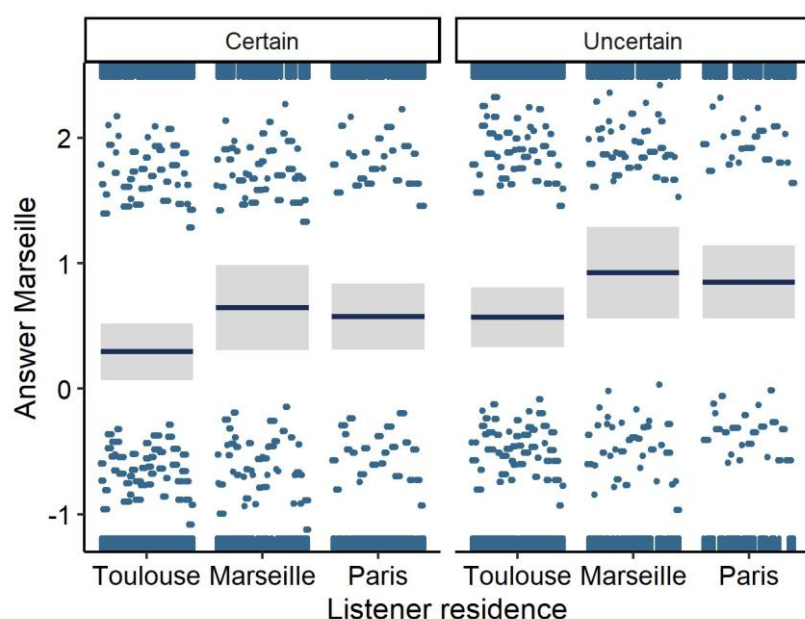


Figure 8.13: Model prediction on the influence of the residence of the listeners in the test, by the listeners' certainty when answering the question.

Although the two accent identification tests have many similarities as to their overall design and results, some differences can be observed. First and foremost, the higher number of *I don't know* answers, as well as the low identification rate, indicate that identification was even more difficult in the second test than in the first one. This could be due to several factors. Firstly, listeners had to listen to the same sentence many times, and no randomization was used. This possibly led to positioning and fatigue effects. Secondly, the origin of the listeners influenced their responses heavily. The imbalance of the listener samples therefore seems to have heavily impacted the results. Thirdly, the fact that identification rates of some individual speakers differed so widely between the two tests brings into question their reliability. If small changes in methodology lead to such important differences, the explanatory power of these tests is strongly challenged.

However, since more people listened to fewer stimuli in the second accent identification test, every stimulus was localized a lot more often, leading to a greater number of data points per stimulus. This facilitated the statistical analysis of the data of the second accent identification test and led to more significant results, which then facilitated the interpretation of the data. According to the logistic regression model of the second accent identification test, all external factors seem to have had some influence on

the responses of the listeners except for the factor SPEAKER ORIGIN. This highlights how complex the perception of speech is, and how easily extralinguistic factors such as social groups and stereotypes associated with particular cities or regions can influence the way an accent is perceived.

There are some aspects that require further explanation. One striking difference between test 1 and 2 is that the factor SPEAKER AGE seems to have impacted the answers given in the identification tests reversely. While older speakers were more likely to be thought to come from Marseille in the first test, in the second test they were more often localized to Toulouse. This contradictory tendency challenges the validity of the two tests in general. This is why some substantial changes to the methodology had to be made in my further studies.

8.2.5 Methodological implications

A possible reason for the poor identification in both tests could have been the speech style of the stimuli. Usually, regional accents are ‘stronger’ when speakers do not read aloud but speak spontaneously (see Chapter 4.5). This can be due to speakers having been trained at school to pronounce certain words in a ‘standard’ way. When reading aloud, their attention might focus on the correct pronunciation of such words. This phenomenon can be observed in my data when it comes to elderly speakers with a high educational background (see Chapter 7.1). This is why spontaneous speech was included in the next accent identification test.

A second change that had to be made was the terminology used in the tests. The two answer categories Toulouse and Marseille seem to have impacted the answers substantially. The annexation effect (see Table 8.10) and the non-linguistic associations with the two cities (see Chapter 3.5.1) might be a consequence of these two answer categories. Although Figure 5.1 does not imply any clear divide between Toulouse and Marseille into two cities of substantially different associations with social status, the answers given in the tests still suggest that Toulouse is associated with higher social status than Marseille. This is supported by the sociolinguistic studies of Binisti and Gasquet-Cyrus (2003) and Gasquet-Cyrus (2004) who observed that, according to the *Marseillais* themselves, the ‘real accent of Marseille’ is spoken by fishermen and not by upper middle-class speakers (see chapter 4.3.1.3). For the moment, no such studies exist about the Toulouse accent, but with Toulouse being associated with aeronautics and universities

and Marseille with fishermen and migration (see Chapter 3.5.2), it is possible that these associations influenced the outcome of the two accent identification tests. After all, the second accent identification test showed that the level of education might have influenced the answers significantly. It was therefore decided that the next accent identification test should not use the terms *Toulouse* and *Marseille* but broader ones, such as *southwest* and *southeast*.

The last change that needed to be made was to place a stronger focus on prototypical speakers. The initial question was concerned with who the prototypical speakers are and whether these speakers are possibly NORMs. Yet, the rural aspect of this speaker category was missing. Therefore, the next accent identification test also included speakers from the countryside. For this, two smaller municipalities were chosen that belong to the same substrate regions as Toulouse and Marseille: Salles-Curan, situated in the *Languedocien* region and Oraison and Manosque, two municipalities situated in the *Provence* region (for their location in France see Figure 1.1).¹⁴⁸

8.3 Third accent identification test: southwest vs. southeast

Exploring accent differences in the South by only comparing the two cities Toulouse and Marseille only paints part of the picture, especially since they are characterized by language contact and, consequently, dialect levelling (see Chapter 3.3). Additionally, as stated above, accent identification had proven very difficult, and the terms *Toulouse* and *Marseille* may have impacted the answers considerably. For the two subsequent accent identification tests, I therefore added data from rural areas and enlarged the region of interest to the opposition between southwest and southeast.

The third accent identification test was created to shift the focus of the dissertation project towards the NORMs. Since the second accent identification test had some methodological weak points such as the lack of randomization and an important listener origin bias, the third test was again conducted online. It ran from May 2017 to July 2017 on the platform <https://www.soscisurvey.de/>.¹⁴⁹ In total, 100 listeners participated.

¹⁴⁸ For further explanation of the choice of these municipalities see Chapter 4.3.2.2.

¹⁴⁹ The platform used for the first accent identification test was Percy (<https://www.phonetik.uni-muenchen.de/forschung/software/webtools.html>, cf. Draxler, 2011). This platform required a lot of knowledge in programming, and I therefore heavily depended on Christoph Draxler's help. SoSci Survey is a platform with an extensive user manual, which made it possible for me to create my accent identification test on my own.

8.3.1 Stimuli

More regional categories had been introduced, and in order to level out the increased number of stimuli, the number of social categories had to be decreased. The category *level of education* therefore no longer played a role in the stratification of the sample. Figure 8.14 shows the categories that still did.

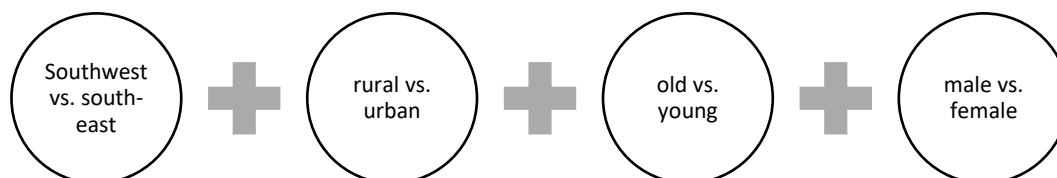


Figure 8.14: Categories used for the selection of speakers for the third accent identification test.

In order to decrease the number of speakers, the categories *old vs. young* and *male vs. female* were crossed. Instead of selecting two male and two female speakers of varying age, I only selected two elderly speakers (one male and one female) and one younger male speaker per point of investigation. The total number of speakers who figured in the test is therefore twelve (see Table 8.16 for the exact speakers and the categories they belonged to).

Region	Southwest						Southeast					
Rural – Urban	Countryside			City			Countryside			City		
Place	Salles-Curan			Toulouse			Oraison			Marseille		
Age	o	o	y	o	o	y	o	o	y	o	o	y
Sex	f	m	m	f	m	m	f	m	m	f	m	m
Code	12bLV1	12bNF1	12bEC1	T14_w_79	T5_m_79	T30_m_32	04asa1	04ajf1	04aam1	M38_w_85	M11_m_58	M8_m_38

Table 8.16: All speakers who figured in the test (o = older, y = younger, f = female, m = male).

As stated above, I added the category *spontaneous vs. read speech*, too. Thus, two stimuli were selected for each speaker. One of them was the reading aloud of the sentence that had already been used in the first two tests, the other a passage of spontaneous speech with a duration of 16 to 20 seconds. I made sure that the topics discussed in these passages would not reveal the speakers' origins. An example of a passage that served as a stimulus is the following:

12bNF1: Pas quand vous sortez de l'école que vous savez faire ça <Enquêtrice: Hum.>. On l'apprend la théorie, il faut la théorie et la pratique, et si le, le, la personne est bien adroite, elle arrive à bien euh faire un, un bon travail, si elle est pas trop adroite, ça, ça cloche un peu des fois, sur les pas.

8.3.2 Randomization

In total, 24 stimuli had to be listened to by the participants, who were able to listen to every stimulus twice. In order to decrease the number of stimuli every single participant listened to, the test was split into two different online questionnaires, so that every listener only listened to twelve stimuli. This was necessary due to the relatively high number of questions asked per stimulus. This way, listeners spent twelve minutes on average completing the task.

The stimuli were divided into two groups according to the factors used to select the speakers: The older speakers were grouped by sex (female – male) and origin (Oraison – Salles-Curan, Marseille – Toulouse), while the younger speakers were grouped by region (southeast – southwest). Every listener listened to six speakers. Four of them were older, two of them younger. Figure 8.15 shows how they were selected.

Oraison old

group	sex	stimulus
1	f	04asa1tw_jusq
2	m	04ajfltw_jusq
1	f	04asa1gw_20sec
2	m	04ajflgw_20sec

Salles-Curan old

group	sex	stimulus
1	m	12bNF1tw_jusq
2	f	12bLV1gw_jusq
1	m	12bNF1gw_20sec
2	f	12bLV1gw_20sec

Marseille old

group	sex	stimulus
2	f	M38_w_85_jusq
1	m	M11_m_58_jusq
2	f	M38_w_85_20sec
1	m	M11_m_58_20sec

Toulouse old

group	sex	stimulus
1	f	T14_w_79_jusq
2	m	T5_m_79_jusq
1	f	t14_w_79_20sek
2	m	t5_m_79_20sec

Southeast young

group	sex	stimulus
2	m	M8_m_38_jusq
1	o	04aam1tw_jusq
2	m	M8_m_38_20sec
1	o	04aam1tw_20sec

Southwest young

group	sex	stimulus
1	t	T30_m_32_jusq
2	s	12bEC1tw_jusq
1	t	t30m32_20sec
2	s	12bEC1gw_20 sec

Figure 8.15: Division of the 24 stimuli into two different groups.

It would have been possible to have every listener listen to every speaker and only divide the stimuli according to speech style. Instead, I chose a matched guise approach (see Lambert et al., 1960) in which listeners listened to every speaker twice, once when they were speaking spontaneously and once when they were reading aloud. This way, the factor *speech style* could be better taken into account in the analyses. For this, it was important to prevent situations in which both stimuli would be listened to one right after the other. Therefore, stimuli did not rotate freely as they had done in the first accent identification test. Instead, I used, once again, a random number generator to create a fixed order of the stimuli. In order to prevent fatigue effects, the stimuli were divided into two blocks that then rotated freely.

8.3.3 Design

In the two previous accent identification tests, participants had been asked questions about their associations with the two accents or their opinion on the differences between the accents in question. This time, after the question about their socio-economic background, listeners were only asked one question before they started listening to the stimuli: *Pensez-vous que vous pouvez facilement reconnaître les différents accents du Midi?* ‘Do you think you can easily identify the accents of the South of France?’

In this accent identification test, the number of questions asked per stimulus was increased. Figure 8.16 shows all questions asked per stimulus during the test on the platform SoSci Survey. In the first question, listeners were no longer asked to localize speakers in Toulouse or Marseille. Instead, they had to localize them in the southwest or the southeast of France. They were also given the possibility of answering *I don't know* and of giving an alternative. The next question referred to the characteristics of pronunciation that led to the listeners identifying the origin of the speakers. Question three was about the rural – urban continuum. To answer this question, listeners could indicate where they would place the speakers on this continuum, using a slider. Lastly, they were asked to specify on a slider to which degree they found the speaker to be sophisticated (*raffiné*) and likeable (*sympathique*). This last question draws its inspiration from Preston’s degree of pleasantness ratings and was used to add the aspects of overt and covert prestige of the accents in question to the test.

1. D'où vient cette personne ?

☐ du Sud-Ouest de la France ☐ du Sud-Est de la France ☐ je ne sais pas ☐ autre:

2. À quelles particularités de prononciation reconnaissez-vous l'origine de cette personne ?

3. Cette personne vient-elle plutôt...

de la campagne ⇌ de la ville

4. Comment caractériseriez-vous la façon dont parle cette personne ?

raffinée

pas du tout tout à fait

sympathique

pas du tout tout à fait

Figure 8.16: Questions asked per stimulus in the third accent identification test.

After the test, the following two questions were asked: *Comment avez-vous trouvé cet exercice?* ‘How did you find this task?’ with a slider between the two extremes *very difficult* and *very easy* and *D’après vous, quelles sont les différences entre l’accent du Sud-Ouest et celui du Sud-Est?* ‘What are the differences between the accents of the southwest and the southeast?’ The answers to these questions are summarized in Chapter 6.2.

8.3.4 Participants

In total, 100 listeners participated in the test.¹⁵⁰ They were recruited online, mostly via *Risc* (Relais d’information sur les sciences de la cognition)¹⁵¹ and came from different parts of France. Table 8.17 shows their distribution across different Occitan substrate regions. In contrast to the previous test, Languedoc listeners did not outnumber Provence listeners in this accent identification test, and the group of non-Southern participants is even larger than the group of Southerners. Overall, the number of southern listeners is, unfortunately, quite low.

Languedoc	Provence	Gascogne	Limousin	Non-Occitan region
18	25	1	1	55

Table 8.17: Listener origins according to substrate regions.

¹⁵⁰ In total, 150 people clicked on the link, but a significant number did not finish and stopped quite early. This is why they were excluded from the analysis.

¹⁵¹ *Risc* is a unit of the *CNRS* (Centre National de la Recherche Scientifique), that offers a platform for researchers seeking volunteers for various experiments (<https://expestest.risc.cnrs.fr/public/index.php>).

8.3.5 Results and discussion

Table 8.18 gives an overview of all results for the four questions asked during the third accent identification test. While accent identification rates and the ‘urbanness’ mean scores vary to greater extents (from 42% to 88% and from 15.51 to 79.28, respectively), correctness and pleasantness were more evenly attributed to the different speakers. Pleasantness mean scores only vary between 63.13 and 83.8, thus indicating that, in general, listeners did not perceive great differences (although the boxplots in Figure 8.27 indicate some dispersion). In general, speakers were rated more pleasant than sophisticated, thus supporting previous findings about attitudes towards Southern French, such as Kuiper (1999, 2005) and Paltridge and Giles (1984), and hinting at a certain covert prestige of Southern French.

Speaker	Age	Sex	Origin	Identification rate	Urbanness mean	Correctness mean	Pleasantness mean
OF_T T14_w_79	older	female	Toulouse	44%	51.79	59.63	70.61
OM_T T5_m_79	older	male	Toulouse	42%	52.22	53.38	70.82
YM_T T30_m_32	younger	male	Toulouse	59%	79.28	57.19	72.51
OF_SC 12bLV1	older	female	Salles-Curan	58%	38.79	46.51	72.91
OM_SC 12bNF1	older	male	Salles-Curan	88%	15.51	38.83	73.14
YM_SC 12bEC1	younger	male	Salles-Curan	67%	70.04	46.22	63.13
OF_O 04asa1	older	female	Oraison	58%	58.35	57.59	73.80
OM_O 04ajf1	older	male	Oraison	49%	34.94	36.25	64.20
YM_O 04aam1	younger	male	Oraison	59%	78.00	53.36	65.09
OF_M M38_w_85	older	female	Marseille	74%	57.12	57.58	73.07
OM_M M11_m_58	older	male	Marseille	83%	63.70	45.81	64.37
YM_M M8_m_38	younger	male	Marseille	64%	56.83	43.15	65.44

Table 8.18: All results per speaker (means and accent identification rate) in the third test.

In the following, results will be discussed according to the four different questions asked per stimulus: location of the speakers (southwest or southeast, Chapters 8.3.5.1 and rural or urban, 8.3.5.2), correctness (Chapter 8.3.5.3) and pleasantness (Chapter 8.3.5.4).

8.3.5.1 Southwest – southeast

In total, 1,129 answers were given regarding the speakers' origin. Since participants had the possibility not only to choose between *southwest*, *southeast* and *I don't know*, but also to give a different or a more specific answer (see Figure 8.16), these answers were categorized once more. They were split into the three categories *southwest*, *southeast* and *other*.¹⁵² For example, the answer “Languedoc” was categorized as *southwest*, “région Avignon” as *southeast*, etc. The answers that localized the speakers in the north, in the center of southern France or in other regions outside of France were categorized as *other*. Table 8.19 shows the percentages of all answers of these four categories.

<i>Southwest</i>	<i>Southeast</i>	<i>I don't know</i>	<i>Other</i>	
%	%	%	%	N
35	40	21	3	1152

Table 8.19: All answers given in the third accent identification test regarding the speakers' origin.

In total, 47% (536/1129) of the answers given were correct, 28% (320/1129) were wrong. If we exclude the *I don't know* and the *other* answers, we are left with an overall identification rate of 63% (536/856). Although a considerable number of listeners did not come from the south and were thus less familiar with the accent, a fact that is known to make accent identification more difficult (cf. Baker, Eddington, & Nay, 2009), this identification rate is much higher than those in the two previous accent identification tests. It is even close to the one in Pustka (2010b). The high number of *I don't know* answers in this test is, however, striking. It could be due to the fact that *southwest* and *southeast* are categories for which listeners do not have very concrete representations. However, this is not the only possible explanation. Another important factor might be one particular speaker: the aforementioned younger male speaker from Oraison, 04aaam1. His role becomes clear when looking at Figure 8.17, which displays all answers per stimulus in percentages.¹⁵³ It shows that a large proportion of the *I don't know* answers were given to him (nearly 65% of the listeners indicated they did not know where he came from,

¹⁵² Amid the *other* answers, the older male speaker from Salles-Curan 12bNF1 got the most interesting ones. He was allocated to Spain three times, and one listener even wrote “Etranger avec un accent trop fort et qui ne ressemble à aucun des accents du sud” ‘Foreigner with an accent that is too strong and who does not sound like any Southern French accent.’ His /r/ is pronounced as [r]. The younger speaker from Oraison 04aaam1 and the younger speaker from Toulouse T30_m_32 were both thought to be imitating a southern accent by one listener.

¹⁵³ For the purpose of this plot, the *other* answers were conflated with the *I don't know* answers.

while the other speakers have *I don't know* rates between 7% and 30%). The reason for the high number of *I don't know* answers given to his stimuli seems to be his relatively 'weak' accent, a reason mentioned by several listeners.

The two speakers with the lowest number of *I don't know* answers are the older female speaker from Salles-Curan 12bLV1 and the older male speaker from Marseille M11_m_58. Comments about 12bLV1 often mentioned her nasal vowels and a certain 'roundness' and 'melodiousness' of the accent. Comments about M11_m_58 referred to his nasal vowels, a certain 'melodiousness' and his non-apical /r/. One of the listeners also mentioned the affrication of his plosives.

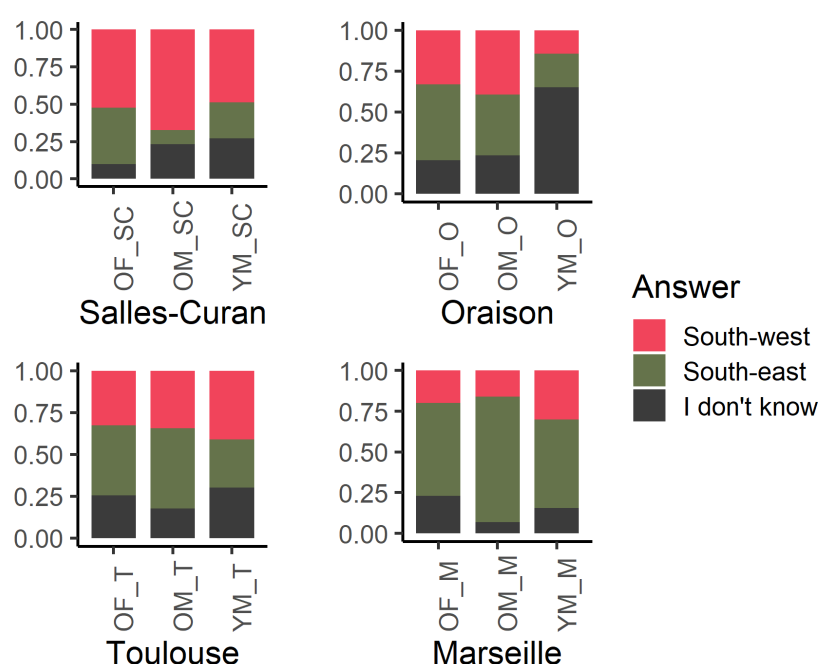


Figure 8.17: Percentages of answers given to the question *D'où vient ce locuteur?* ('Where does this speaker come from?').¹⁵⁴

¹⁵⁴ The codes for the speakers used here are based on the abbreviations in Table 52. O = older, Y = younger, F = female, M = male, _SC= Salles-Curan, _O = Oraison, _T = Toulouse and _M = Marseille.

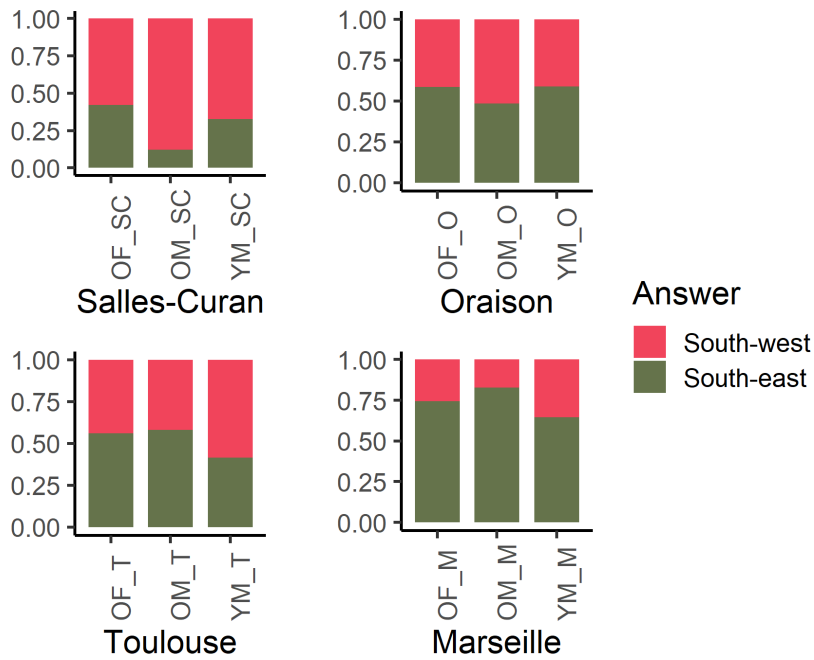


Figure 8.18: Percentages of answers given to the question *D'où vient ce locuteur?* ('Where does this speaker come from?') without the *I don't know* answers.

Figure 8.18 shows the answers of the reduced dataset, without the *I don't know* answers, in percentages. According to this dataset, the origins of 75% of the speakers were identified, with identification rates between 58% and 88%. Two older speakers from Toulouse were attributed to the wrong region (with identification rates of 42% and 44%), and the older male speaker from Oraison yielded results at chance level (49% correct identification). This test thus led to considerably better results than the two previous ones. Even 12bNF1, who had been localized in Spain by three listeners, was very accurately identified, with an identification rate of 88%. The same applies to M11_m_58, with a rate of 83%.

SPEAKER ORIGIN	Southwest		Southeast		<i>p</i>
	%	N	%	N	
	40	438	66	418	< .01
SPEAKER ORIGIN	Rural		Urban		<i>p</i>
	%	N	%	N	
	41	400	64	456	< .01
SEX	Male speakers		Female speakers		<i>p</i>
	%	N	%	N	
	51	555	57	301	> .05
AGE	Older		Younger		<i>p</i>
	%	N	%	N	
	55	609	49	247	> .05
SPEECH STYLE	spontaneous speech		read speech		<i>p</i>
	%	N	%	N	
	57	459	49	397	< .01
APICAL /r/	apical /r/		uvular /r/		<i>p</i>
	%	N	%	N	
	12	73	57	783	< .01

Table 8.20: Factors possibly influencing the answer *Southeast* given during the third accent identification test. Results of several χ^2 tests.

As with the two previous accent identification tests, the possible influence of external factors was tested with the help of several χ^2 tests. Table 8.20 shows their results. In the two previous tests, external factors such as AGE and SEX had most likely impacted the answers in the accent identification tests, while SPEAKER ORIGIN had not played any role. This time, it was different: According to the χ^2 tests, the origin of the speakers did influence them being localized in the southeast or southwest, while the other external factors did not play any role. SPEECH STYLE also seems to have exerted an influence: When speakers were speaking spontaneously, they were more likely to be localized in the southeast.¹⁵⁵

The results of the χ^2 tests shown in Table 8.20 are supported by Figure 8.19, which shows a conditional inference tree highlighting that it is indeed the origin of the speakers that seems to be influencing the responses of the third accent identification test the most. In this test, urban speakers from the southeast were more often thought to come from the southeast, while the older male rural speaker from the southwest who pronounced apical

¹⁵⁵ A χ^2 test about the interplay of speech style on correct identification, however, did not reveal any significant influence. This supports the observation of Woehrling and Boula de Mareüil, 2006a, that spontaneous speech does not lead to better identification. It might, however, have had an influence on the answers given.

/r/ was most often localized in the southwest, as shown in Figure 8.17. Interestingly, SPEECH STYLE and SPEAKER AGE do not figure in this plot.

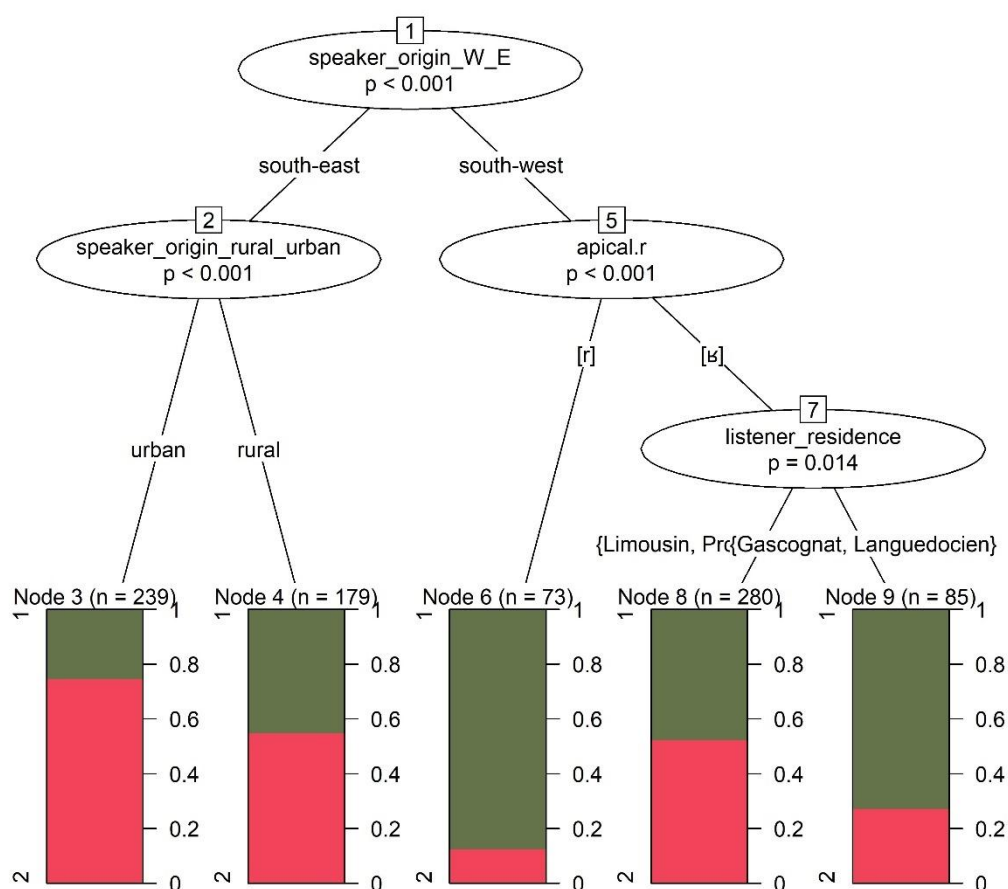


Figure 8.19: Conditional inference tree with the outcome variable *answer* and the predictor variables SPEAKER ORIGIN (southwest – southeast), SPEAKER_ORIGIN_(rural_urban), SPEAKER_AGE, APICAL.R, SPEECH_STYLE and LISTENER_RESIDENCE.

A logistic regression model was fitted with the outcome variable ANSWER SOUTHEAST, analogous to the variable ANSWER MARSEILLE of the previous tests. This model thus asks the following question: Which factors could have influenced listeners to localize a speaker in the southeast of France? The variable APPENDIX REALIZATION was not taken into account here, because the stimuli consisting of spontaneous speech did not contain the same words, and nasal appendices depend too much on their context and therefore might have skewed the results. The same applies to the REALIZATION OF FINAL /T/. Therefore, the only internal variables that I used were SCHWA REALIZATION and REALIZATION OF APICAL /R/.¹⁵⁶

¹⁵⁶ The variable APICAL /R/ stands out because only one of the speakers (12bNF1) pronounces apical /r/. However, since his identification rate ranks among the highest, this variable was deemed significant by the model.

Table 8.21 shows the coefficients of the final logistic regression model with the outcome variable ANSWER SOUTHEAST and the predictor variables SPEECH STYLE, AGE, SEX, SPEAKER ORIGIN (southwest – southeast), SPEAKER ORIGIN (city – countryside), LISTENER RESIDENCE, PERCEIVED ‘URBANNESS,’ SCHWA REALIZATION RATE and APICAL R. The two predictor variables that did not contribute to the best model (ANSWER RAFFINÉ and ANSWER SYMPATHIQUE) were excluded. Consequently, according to this model, listeners’ perceptions of speakers’ likability or sophistication did not influence their tendency to locate them in the southwest or southeast. This is different to the previous test, in which such a tendency could be observed.

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	-1.400	0.449	-3.121	0.002	**
Spontaneous speech	0.446	0.222	2.004	0.045	*
Younger speakers	-0.389	0.316	-1.231	0.218	
Female speakers	-0.018	0.218	-0.085	0.933	
Speakers from Southeast	0.923	0.174	5.320	1.04E-07	***
Rural speakers	-0.693	0.176	-3.934	8.34E-05	***
Listeners from Provence	0.580	0.243	2.384	0.017	*
Listeners from Gascogne	0.383	0.726	0.528	0.597	
Listeners from Limousin	-0.230	0.762	-0.302	0.763	
Listeners from non-Occitan area	0.464	0.217	2.136	0.033	*
Schwa realization	0.431	0.467	0.922	0.356	
Perceived ‘urbanness’	0.013	0.003	3.753	0.000	***
Apical r	-1.210	0.469	-2.581	0.010	**
Spontaneous speech:younger speakers	-0.232	0.360	-0.646	0.519	

Table 8.21: Logistic regression model with the outcome variable ANSWER SOUTHEAST of the third accent identification test (Nagelkerke pseudo $R^2 = .23$).

As can be seen in Table 8.21, SCHWA REALIZATION as well as SEX and LISTENER RESIDENCE did not have any significant influence on the model. The variables that do show an influence (SPEAKER ORIGIN southwest – southeast, SPEAKER ORIGIN rural – urban, PERCEIVED ‘URBANNESS’ and APICAL R) are displayed in Figure 8.20, which shows that urban speakers from the southeast who were thought to come from an urban area were more likely to be localized in the southeast, especially when they were reading aloud, pronouncing [ʁ] and when their listeners came from Provence or from the north of France.¹⁵⁷

¹⁵⁷ Listeners from Gascogne and Limousin were, once again, too few in numbers.

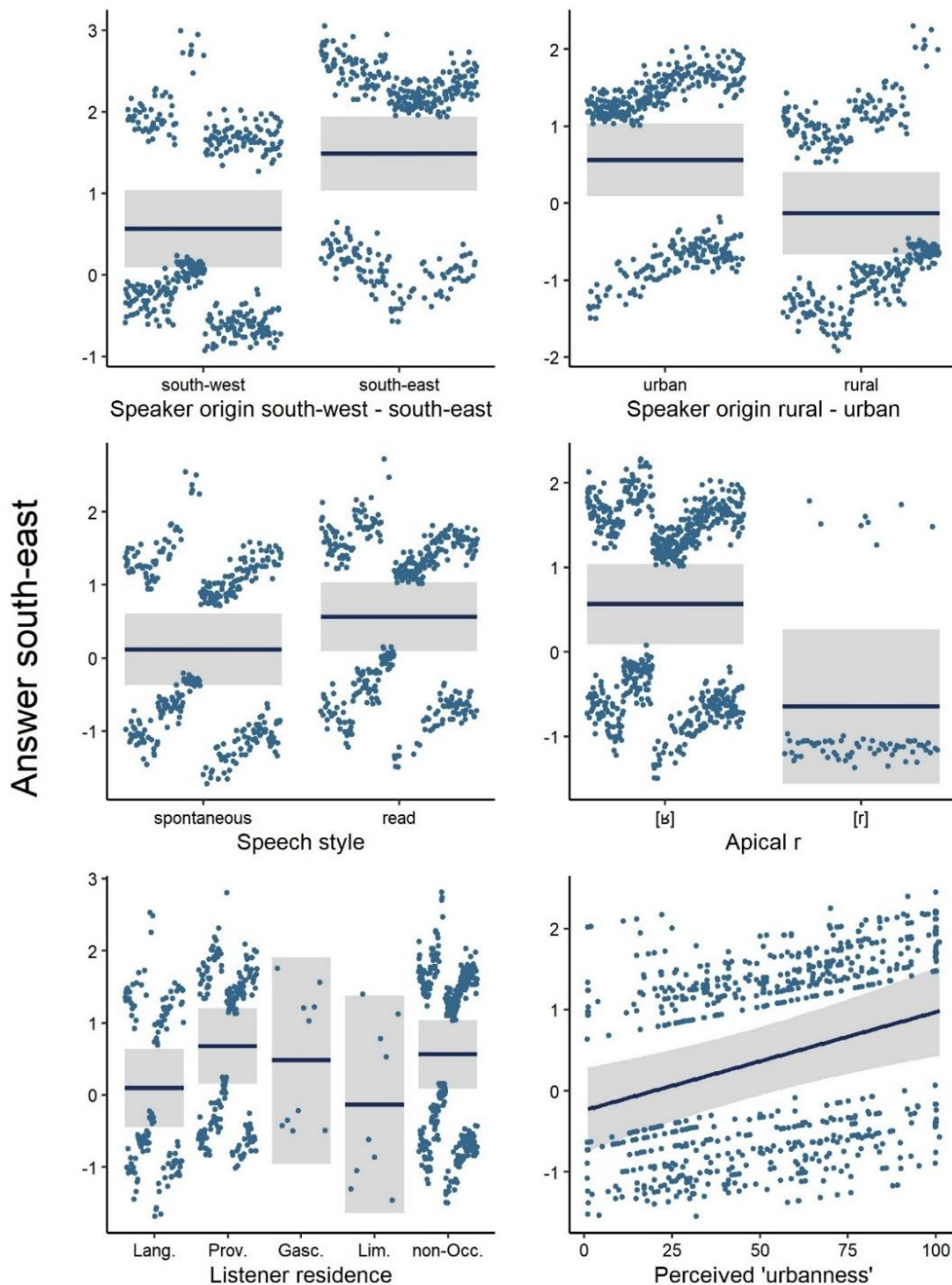


Figure 8.20: Model predictions on the different factors influencing the outcome variable ANSWER SOUTHEAST of the third accent identification test.

Contrary to the first two tests, SPEAKER ORIGIN (southwest – southeast) thus influenced answers significantly, indicating that accents were better identified than in the two previous ones. Yet, this is mostly due to the speakers from Salles-Curan and Marseille. The fact that urban speakers as well as speakers with higher ‘urbanness’ scores were also more likely to be localized in the southeast suggests that there is a rather strong

association between rurality and the west, and ‘urbanness’ and the east. It is possible that this is not only due to the biggest city, Marseille, but also to the Côte d’Azur being part of the southeast, where we also find several important towns and cities.

APICAL /R/ stands out, since it was only pronounced by one male speaker. This speaker was clearly localized in the southwest. This shows that it functions as a strong shibboleth for the southwestern accent.

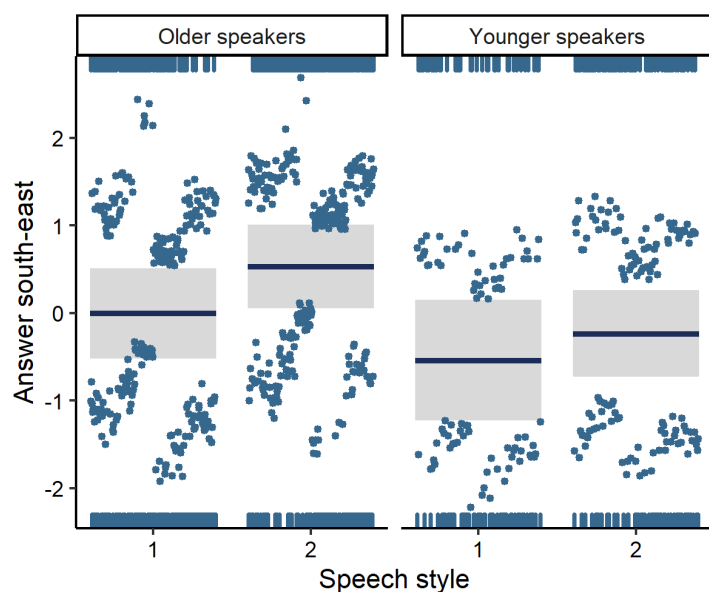


Figure 8.21: Model prediction on the influence of speech style in the test, separated by the speakers' age (1 = read speech, 2 = spontaneous speech).

The (non-significant) interaction of AGE and SPEECH STYLE confirms the tendencies of the χ^2 tests (see Table 8.20), by showing a significant influence of SPEECH STYLE, but not SPEAKER AGE. Figure 8.21 shows this interaction quite clearly: While SPEECH STYLE only had a slight influence on the localization of younger speakers, it had a bigger impact on the localization of older ones: When older speakers were speaking spontaneously, they were more often thought to come from the southeast than when they were reading aloud. This hints at the possibility that the southwest is associated with more sophistication than the southeast.

A factor that seems striking is LISTENER RESIDENCE. When we look at this factor more closely, we can observe several effects. First of all, there seems to be an annexation effect at play among the listeners from Toulouse and Marseille, meaning that when nothing particular was discerned, listeners would locate the speakers close to themselves (see Chapter 2.3.2). At the same time, listeners from northern parts of France were more

likely to allocate speakers to the southeast. This tendency can be explained as follows: It is possibly the southeastern accent that is more prototypical of the South and therefore the default answer for northern listeners.

The fact that this accent identification test led to considerably better results than the two previous ones may be due to broader regional distinctions (southwest vs. southeast) and the introduction of rural data. Another crucial point seems to be the selection of speakers. Some of the speakers from Marseille and Toulouse were selected because they got higher identification rates than others in the first two accent identification tests. Additionally, the rural southwestern speaker 12bNF1, who was added to the speaker sample, stands out with the highest accent identification rate (88%). It is possible that his use of apical /r/ functioned as a shibboleth for the rural southwest.

8.3.5.2 Rural – urban

During the course of the accent identification test, participants were asked to indicate on a slider to what degree they thought the person they were listening to came from the city or from the countryside (see Figure 8.16). Figure 8.22 shows that the speakers were judged considerably differently. The computed means per speaker differ substantially, from 15.5 to 79.3. The speaker with the lowest ‘urbanness’ score and thus the best identified rural speaker is the older male speaker from Salles-Curan (12bNF1), while the best identified urban speaker was the younger speaker from Toulouse (T30_m_32). However, all younger speakers (with the exception of the one from Marseille) were much more frequently allocated to urban areas.

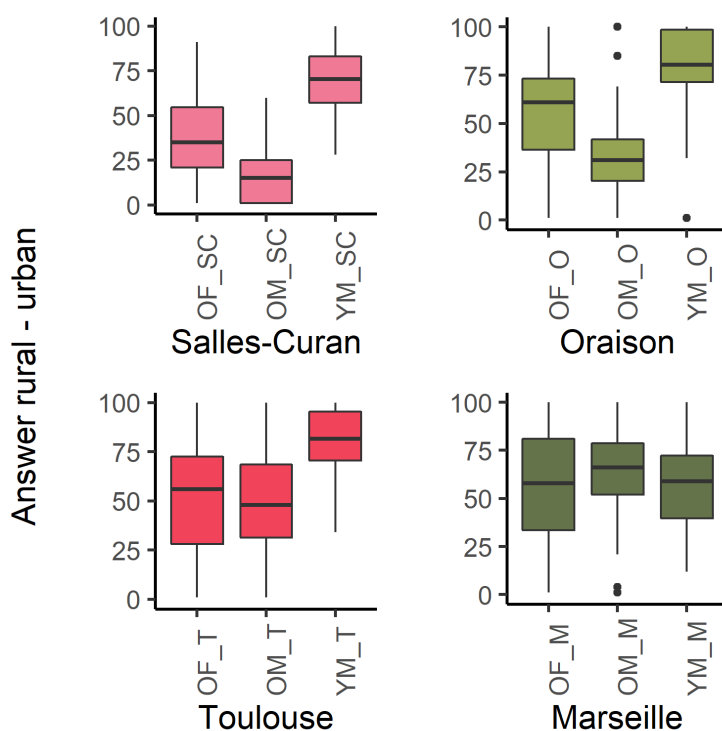


Figure 8.22: Answers given per speaker in the third accent identification test with regard to the rural – urban continuum (0 = countryside, 100 = city).

Usually, cities are associated with less regionally marked accents than rural areas. This is why it can be expected that speakers whose regional accents are ‘weaker’ are more likely to be allocated to urban areas. Table 8.22 displays the results of the linear regression model with the continuous outcome variable PERCEIVED ‘URBANNESS.’ It is not surprising that the factor AGE exerted its influence in exactly this way: Younger speakers were more likely to be placed in an urban area than older men (see also Figure 8.23). The linguistic variable that might indicate the ‘strength’ of the accent, that is, the variable SCHWA REALIZATION, only played a marginal role. As Table 8.22 shows, its influence was not significant.¹⁵⁸ The same applies to the variable SEX, which was not deemed significant either.

Two variables that were found significant by the model are SPEECH STYLE and PERCEIVED DEGREE OF SOPHISTICATION: Speakers were thought to come from rural areas slightly more often when reading aloud than when speaking spontaneously. This is unexpected, because reading aloud might be associated with more formal contexts than rural ones. The PERCEIVED DEGREE OF SOPHISTICATION, though, does behave as expected:

¹⁵⁸ However, schwa realization is not a very salient feature. This could explain why it did not have any significant influence according to the model.

The more sophisticated the speakers sounded, the more they were likely to be allocated to an urban area. This is not surprising, since urban areas are more often associated with higher levels of education than rural areas. Yet, it does not fit the assumption that Marseille, as one of the most important cities in the south, is associated with lower levels of education, too. The degree of pleasantness (*sympathique*), however, did not play any role, which means that regardless of how pleasant a speaker sounded, it did not influence whether they were perceived as rural or urban.

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	35.69	5.09	7.02	5.34E-12	***
Rural speakers	-3.76	1.90	-1.98	0.05	*
Younger speakers	17.39	2.46	7.07	3.91E-12	***
Spontaneous speech	-4.60	2.12	-2.17	0.03	*
Female speakers	-3.91	2.34	-1.68	0.09	.
Schwa realization	8.72	5.22	1.67	0.10	.
Perceived level of correctness	0.38	0.04	9.42	6.62E-20	***
Perceived level of pleasantness	-0.05	0.05	-1.17	0.24	
Apical r	-31.90	3.82	-8.35	3.62E-16	***

Table 8.22: Linear regression model with the outcome variable ‘URBANNESSE’ SCORE ($R^2 = .32$), third accent identification test.

According to the model, the question of whether the speakers were indeed from rural or urban areas only influenced answers marginally: Urban speakers were slightly more often placed in urban areas than rural ones. That means that in total, ‘urbanness’ was more or less identified. However, this is particularly due to the speakers from Salles-Curan who were much more often thought to come from the countryside than all other speakers. At the same time, OM_SC (12bNF1) is the only one who pronounced apical /r/. Since his identification rates were so high, the factor apical /r/ was judged significant (see Figure 8.23), while the factor SPEAKER ORIGIN (southwest – southeast) did not influence the answers considerably. APICAL /R/ therefore proved to be a shibboleth for this test as well. The one speaker who pronounced it was so much more often allocated to a rural area that this variable was also deemed highly significant.

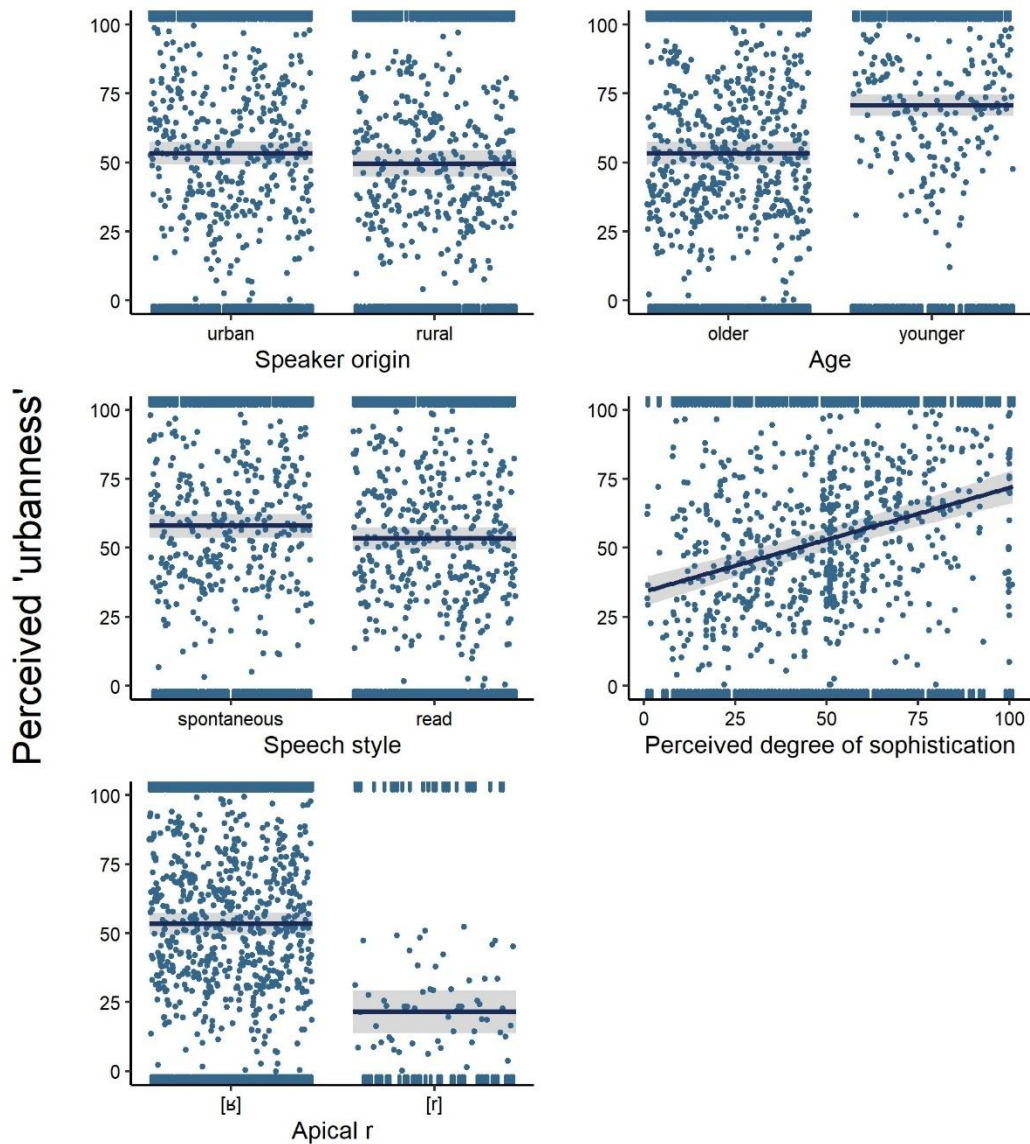


Figure 8.23: Model predictions of the different factors influencing the outcome variable ANSWER RURAL – URBAN, third accent identification test.

When we compare these results to the results presented in Chapter 8.3.5.1, we can see that different elements are at play when identifying the speakers' origins according to the two dimensions rural – urban and southwest – southeast. The results regarding the perceived speaker origin in the southwest – southeast dimension suggest that there is an association between the southwest and the countryside and the southeast and the city. This cannot be observed here, since the factor ANSWER (southwest – southeast) does not even figure in the model.

Additionally, while listener residence played an important role with regard to the southwest/southeast dimension, it did not have any impact on the rural – urban dimension. This could be explained as follows: Representations of a certain rural or urban way of

speaking are more consistent among different groups of people, while regarding regional differences, more ingroup and outgroup effects are at play. These representations of urban accents seem to be closely linked to a certain degree of sophistication and to read speech, as opposed to spontaneous speech. At the same time, the factor LISTENER ORIGIN (southwest – southeast), did not influence the answers considerably. The associations between southwest and rural, as well as southeast and urban, that could be assumed based on the results in 8.3.5.1 could therefore not be observed here.

To summarize, we can observe once more that speakers from one particular point of investigation do not behave homogeneously and thus are not treated as such by the listeners. In regard to the *urban – rural* dimension, it is instead the factors age and perceived level of sophistication that seem to influence the answers. However, in all these groups of speakers, outliers exist. Just like in the previous accent identification tests, some speakers were much better identified than others, and the tendencies we can observe in Figure 8.22 are more or less consistent in three points of investigation. One point of investigation behaves a bit differently, though, and this is Marseille.

8.3.5.3 Correctness: *raffiné*

Attitudinal research has shown that regional accents are perceived differently in terms of pleasantness and correctness, especially when opposed to the standard variety (see Chapter 3.5.1). In Kuiper's (1999, 2005) studies, Provence and Languedoc obtained different scores in terms of correctness, pleasantness and degree-of-difference ratings. Although these scores were not substantially different, we can assume that attitudinal differences not only exist between Southern French and a supposed northern standard variety, but also between different Southern French varieties. The data on the speakers' representations presented in Chapters 5.2 and 5.3 supports this assumption. However, it has to be kept in mind that Kuiper collected his data without asking the participants of his study to listen to actual stimuli. His results are therefore solely based on the prototypical representations of the varieties in question (see Chapter 2.1.3.6).

As outlined in Chapter 3.5.1, according to Kuiper's studies, Provence speakers were perceived to speak substantially differently to Parisians, not very correctly, but their accent was declared to be very pleasant. At the same time, Languedoc speakers were rated similarly to Provence speakers, usually ranking two to four places lower or higher. It could therefore be assumed that those speakers with a 'stronger accent', bearing more

southern features, would be ranked less sophisticated and thus score relatively low on the correctness ratings, while younger and female speakers might rather be ranked higher.

Figure 8.24 shows boxplots representing the answers to the question *Comment caractériseriez-vous la façon dont parle cette personne?*¹⁵⁹ with regard to the category *raffiné*, which can be translated as ‘sophisticated.’ Participants were thus asked to indicate on a slider to what degree they found each speaker’s way of speaking to be sophisticated (see Figure 8.16).¹⁶⁰ It needs to be kept in mind, though, that the adjective used to get close to the correctness rating of perceptual dialectology carries a slightly different meaning to the adjective *correct*. *Raffiné* could be interpreted as ‘how well-educated is this person?’, as opposed to ‘how close to a certain ‘standard variety’ does this speaker speak?’

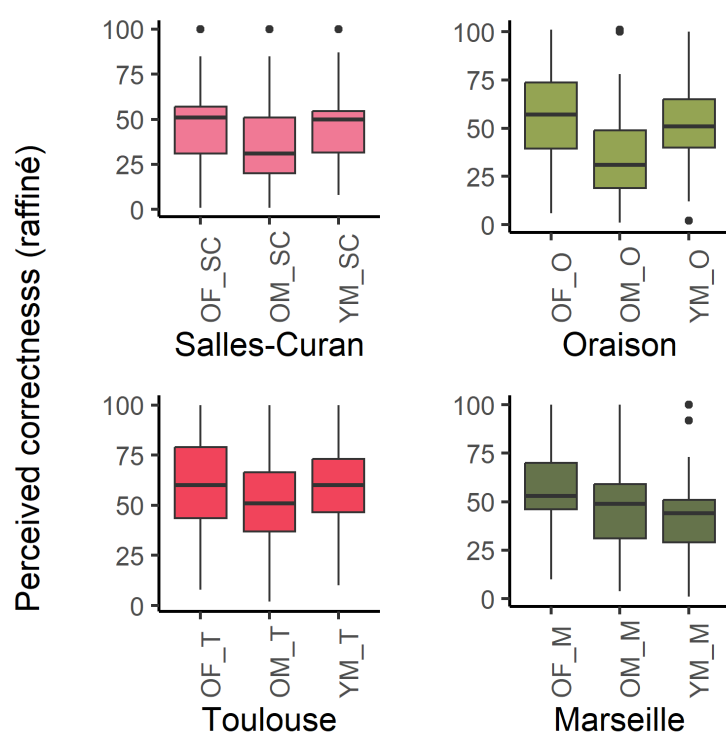


Figure 8.24: ‘Perceived degree of correctness (*raffiné*)’ per speaker.

As can be seen in Figure 8.24, different speakers were judged slightly differently in terms of the level of sophistication. Their means range from 36.25 (the older male speaker from rural Oraison) to 59.63 (the older female speaker from Toulouse). Interestingly, the other

¹⁵⁹ ‘How would you characterize the way this person is talking?’

¹⁶⁰ As was done with the rural – urban factor, these indications were computed on a scale from 1 to 100, with 1 being the equivalent of *pas du tout* ‘not at all’ and 100 the equivalent of *tout à fait* ‘absolutely.’

NORM in this group of speakers (the older rural male speaker from Salles-Curan, OM_SC) was awarded a mean score close to that of the Oraison speaker: 38.83.

According to individual t-tests, the factors SEX, SPEAKER ORIGIN (rural – urban) and SPEECH STYLE seem to have an influence on the perceived level of correctness (*raffiné*) of the speakers (see Table 8.23). Although all younger speakers were attributed a rather high level of correctness (*raffiné*), except for the younger Marseille speaker (see Figure 8.24), the factor AGE was not deemed significant.

SPEAKER ORIGIN	Southwest	Southeast	<i>p</i>
	50.36	48.65	> .05
SPEAKER ORIGIN	Rural	Urban	<i>p</i>
	46.15	52.55	< .01
SEX	Male	Female	<i>p</i>
	46.45	55.04	< .01
AGE	Older	Younger	<i>p</i>
	49.61	49.36	> .05
SPEECH STYLE	Spontaneous	Read	<i>p</i>
	46.45	53.01	< .01

Table 8.23: Possible extralinguistic influences on correctness ratings. Results of several Welch's t-tests: estimated means and p-values.

From Table 8.23 we can deduce the hypothesis that urban female speakers were more likely to reach higher scores in the degree of correctness ratings, especially when reading. Due to previous sociolinguistic research (see Chapter 3.5.1), these tendencies are not surprising. It is interesting that AGE does not seem to have an influence here, since it played such an important role in the allocation of speakers to the urban – rural continuum.

The c-tree in Figure 8.25 was created with the predictor variables SPEAKER ORIGIN (southwest – southeast), SPEAKER ORIGIN (rural – urban), AGE, SPEECH STYLE, SEX, SCHWA REALIZATION and LISTENER RESIDENCE. This c-tree shows that SPEECH STYLE seems to become less important when looked at together with other factors. At the same time, the importance of the factor LISTENER RESIDENCE becomes apparent: Listeners from Languedoc accorded higher levels of correctness to the stimuli than all others. This can be interpreted as a sign of covert or even overt prestige. The other groupings of the c-tree can be summarized as follows: Speakers of rural origin were perceived as speaking less correctly, especially when they pronounced more schwas and were male.

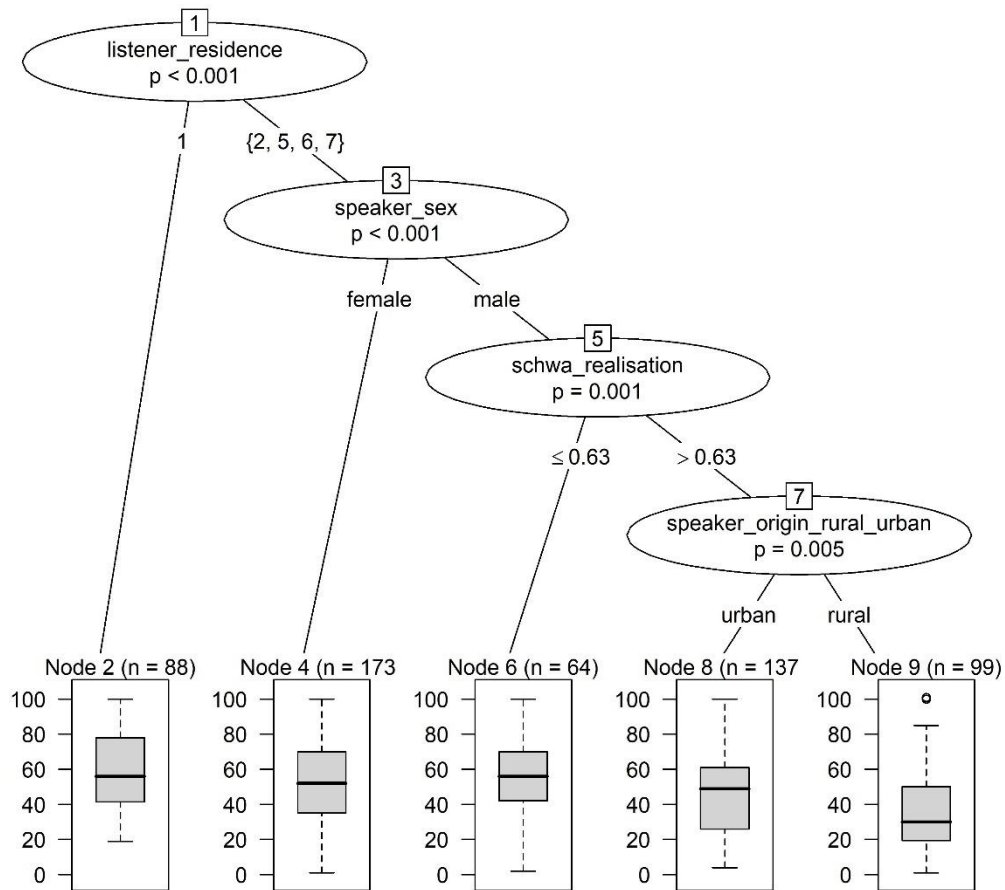


Figure 8.25: C-tree with the outcome variable PERCEIVED DEGREE OF SOPHISTICATION (listener_residence 1 = Languedoc,).

To gain a deeper understanding of the interplay between the factors, a linear regression model was fitted (see Table 8.24). The explanatory power of the model is, however, not very high, with an R^2 of only .24. According to the model, only the factor SCHWA REALIZATION might not have had any influence on the question of whether speakers are perceived to be speaking in a more sophisticated way, while AGE, SPEECH STYLE, SEX, LISTENER RESIDENCE, PERCEIVED PLEASANTNESS and SPEAKER ORIGIN yielded significant results. The same goes for the variable APICAL R, that had figured in previous models. However, the question of whether the region (southwest or southeast) influenced correctness ratings only became significant when an interaction between the factors SPEAKER ORIGIN (rural – urban) and (southwest – southeast) was added.

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	28.33	4.89	5.80	9.57E-09	***
Speakers from southeast	-5.33	2.21	-2.41	0.02	*
Rural speakers	-11.55	2.28	-5.07	5.00E-07	***
Younger speakers	6.28	2.06	3.05	0.00	**
Spontaneous speech	-7.96	1.81	-4.41	1.19E-05	***
Female speakers	9.58	1.77	5.42	7.85E-08	***
Schwa realization	-3.18	4.98	-0.64	0.52	
Perceived pleasantness	0.43	0.04	11.25	2.34E-27	***
Listeners from Languedoc	-5.81	2.26	-2.57	0.01	*
Listeners from Gascogne	-9.79	6.89	-1.42	0.16	
Listeners from Limousin	2.88	7.28	0.40	0.69	
Listeners from non-Occitan area	0.03	2.04	0.02	0.99	
Speakers from southeast: rural speakers	9.89	3.58	2.76	0.01	**

Table 8.24: Linear regression model with the outcome variable *Answer raffiné* ($R^2 = .24$).

Table 8.24 and Figure 8.26 show the model predictions for all significant variables at play. We can see that, according to the model, urban speakers from the southeast (Marseille) are slightly more likely to be ranked less correct (*raffiné*) than urban speakers from the southwest (Toulouse), while the spatial dimension worked reversely in the two rural areas. However, these tendencies are marginal, and it is possible that they were strongly influenced by the selection of the individual speakers.

The factors SEX, AGE and SPEECH STYLE show exactly the tendencies one would expect and support the results of the t-tests (see Table 8.23). The only difference between this finding and the t-tests is that all three variables were judged significant by the model. Another factor that is clarified by the model is the influence of listener residence. While the c-tree in Figure 8.25 had split the listener groups into two (Languedoc listeners vs. the rest), the linear regression model suggests that it is actually the Provence listener group that behaves differently from all others: Listeners from Provence were more inclined to judge southern speakers as less correct (*raffiné*) than the other listener groups.

One variable, however, behaves differently than expected. Attitudinal research usually finds a negative correlation between pleasantness and correctness. The more ‘standard like’ or ‘correct’ a speaker speaks, the less ‘likeable’ or ‘pleasant’ they will be perceived, and vice versa. In this data, a general tendency can be observed that overall, speakers were perceived as more pleasant (*sympathique*) than correct (*raffiné*), with means of 69.27 and 49.54, respectively. This would support the tendency observed by Paltridge and Giles (1984) and Kuiper (1999, 2005) to judge Southern French speakers

as pleasant, but not very correctly speaking. However, here, the correlation seems to be positive: A speaker was more likely to be perceived as speaking in a sophisticated way when their way of speaking was also perceived as pleasant (see Figure 8.26).

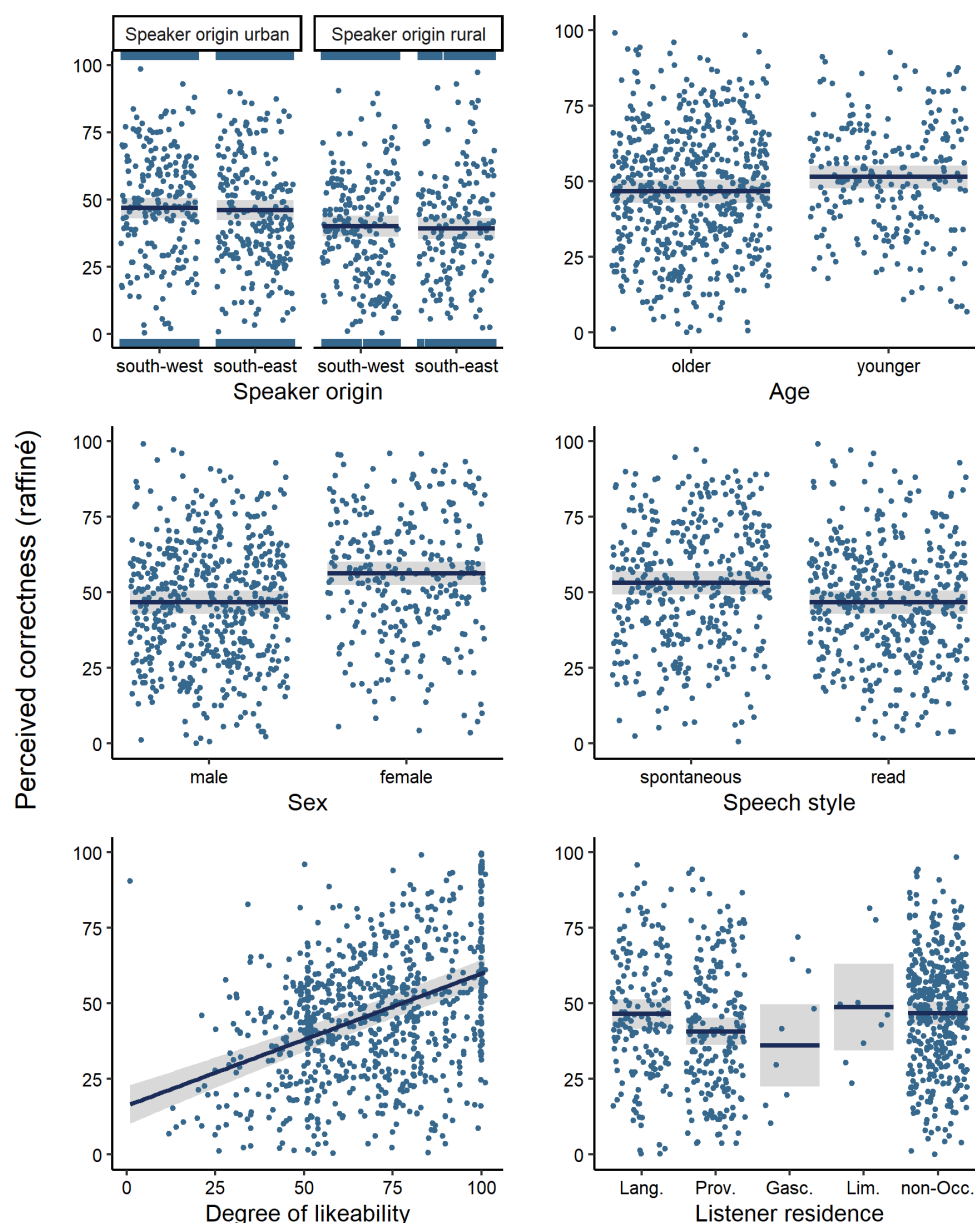


Figure 8.26: Model predictions of the different factors influencing the outcome variable PERCEIVED DEGREE OF CORRECTNESS (*raffiné*).

It has to be kept in mind, though, that directly asking listeners in what way the two adjectives *raffiné* and *sympathique* match particular stimuli is not exactly the same as what is usually done in attitudinal research (see Chapter 3.5.1). It is, however, still remarkable that these data contradict to a certain extent Kuiper's findings, in which even Provence speakers themselves declared that their accent was one of the least 'correct'

ones, while being the most ‘pleasant’. This may be due to one important difference between the two studies: the use of actual recorded speech data that differs from the prototypical (or even stereotypical) accent Kuiper’s participants had in mind.

Regional differences, however (that is, whether speakers were from the southwest or southeast) do not seem to have influenced the perceived level of correctness (*raffiné*) of the different speakers. Accordingly, this finding more or less supports Kuiper’s findings, which showed the same tendencies regarding Provence and Languedoc, with both accents ranking two to four places apart.

8.3.5.4 Pleasantness: *sympathique*

For the pleasantness ratings, a similar approach was taken to that used for the correctness ratings. This rating refers to one single question: *Comment caractériseriez-vous la façon dont parle cette personne?*¹⁶¹ and this time, the question was asked in regard to the category *sympathique*, which can be translated as ‘likeable’ (see Figure 8.16). The same type of slider was used as in the correctness rating. These pleasantness ratings were then treated the same way: Several plots were created, t-tests were applied, and a linear regression model was fitted. Figure 8.27 shows that scores were much higher than the correctness scores, ranging from 63.13 (the younger male speaker from Salles-Curan) to 73.8 (the older female speaker from Oraison). Yet, this score was not uniquely high for this one female speaker. All female speakers had very similar scores, with the exception of the one from Toulouse.

¹⁶¹ ‘How would you characterize the way this person is talking?’

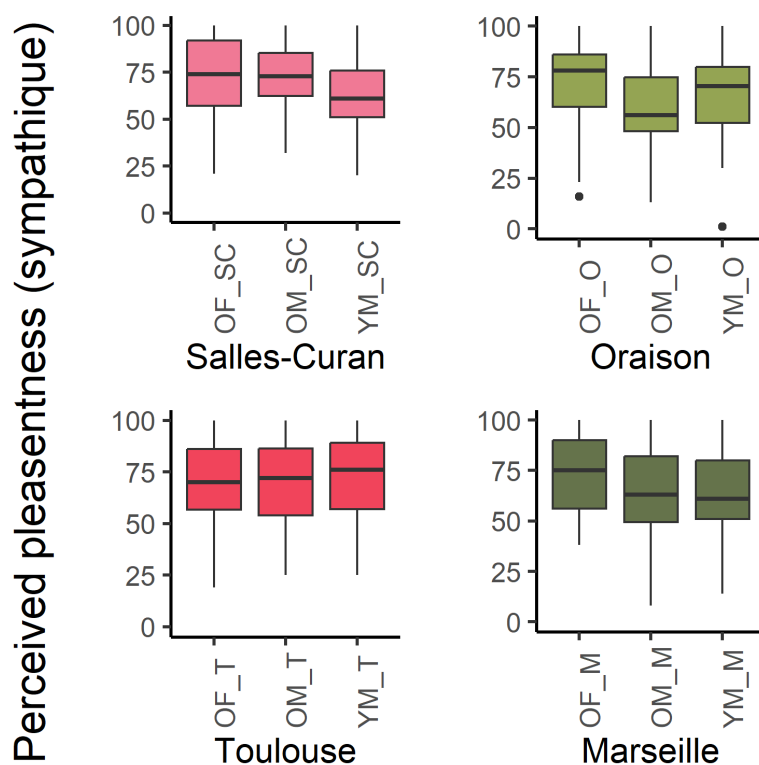


Figure 8.27: ‘Degree of pleasantness’ ratings per speaker.

As Table 8.25 shows, according to several t-tests, all external factors might have influenced the pleasantness ratings, except for the distinction *rural – urban*. From we can deduce that southwestern older female speakers were perceived as more likeable, especially when speaking spontaneously.

SPEAKER ORIGIN	Southwest	Southeast	p
	70.64	67.81	< .05
SPEAKER ORIGIN	Rural	Urban	p
	69.35	69.21	> .05
SEX	Male	Female	p
	67.41	72.62	< .01
AGE	Older	Younger	p
	70.29	66.76	< .05
SPEECH STYLE	Spontaneous	Read	p
	71.13	67.12	< .01

Table 8.25: Possible influences on pleasantness. Results of several Welch’s t-tests: means and p-values.

As was done with the correctness rating, a c-tree was created, containing the same predictor variables. Figure 8.28 shows that, taken all together, the split of the data into different groups using the conditional inference tree model only allows for three groups. According to this tree, listener residence might have played the most important role,

followed by speaker age: Listeners from Languedoc perceived speakers as more pleasant than the other listener groups, especially when they were older.

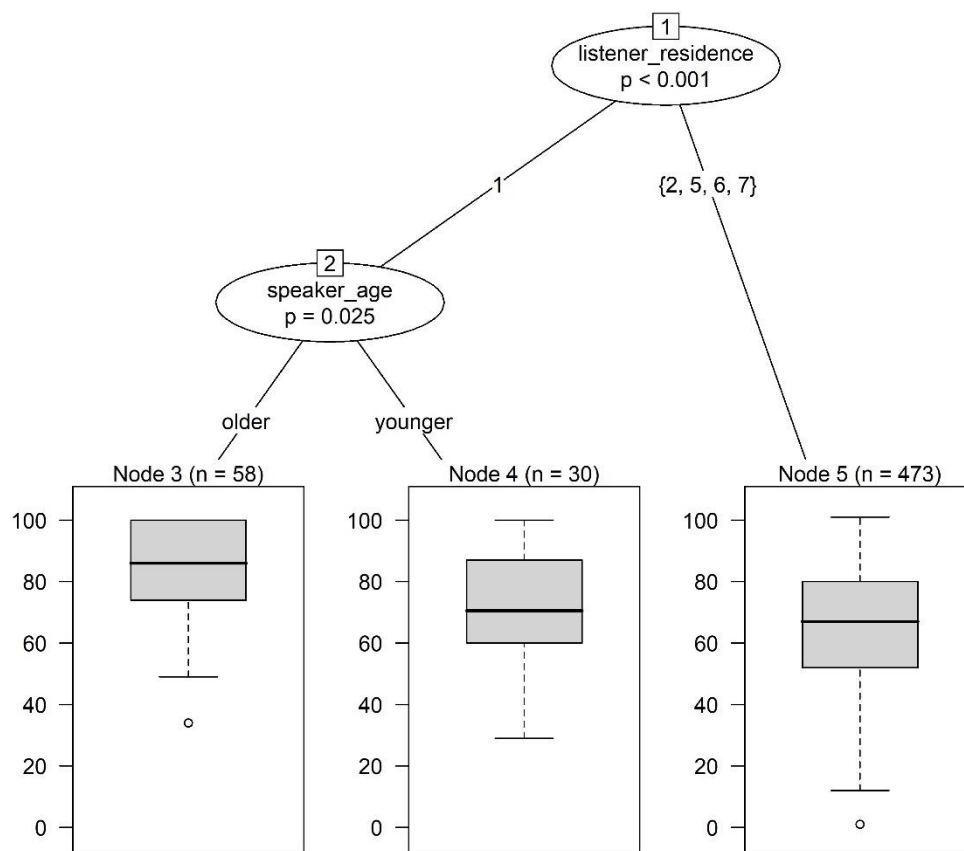


Figure 8.28: C-tree with the outcome variable PERCEIVED DEGREE OF PLEASANTNESS (*sympathique*) (listener_residence 1 = Languedoc).

The summary of the linear regression model that was fitted for the pleasantness rating is displayed in Table 8.26. With an R^2 of .24, this model does not have much explanatory power either, though. This time, no interaction between the two speaker origin factors could be observed, and both factors do not seem to have any significant influence on the pleasantness ratings. The same can be said about SEX and SCHWA REALIZATION. The three factors that are important are SPEECH STYLE, CORRECTNESS and LISTENER RESIDENCE.

While the model of the correctness ratings had revealed that a larger number of factors might have significantly influenced the participants' answers, the model of the pleasantness ratings did not do the same. As can be seen in Figure 8.29, age and speech style had mild influences on the outcome variable. Yet, the tendencies are as suspected and confirm the t-tests: Older speakers were more likely to be perceived as likeable, especially while speaking spontaneously. Additionally, the perceived degree of

correctness (*raffiné*) shows, of course, the same positive correlation between correctness and pleasantness as in the other model.

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	59.16	3.62	16.34	4.81E-52	***
Speakers from southeast	-2.17	1.26	-1.72	0.09	.
Rural speakers	1.50	1.28	1.17	0.24	
Younger speakers	-3.41	1.68	-2.02	0.04	*
Spontaneous speech	6.02	1.46	4.13	3.92E-05	***
Female speakers	1.13	1.53	0.74	0.46	
Schwa realization	3.33	3.54	0.94	0.35	
Perceived level of correctness	0.31	0.03	11.33	1.02E-27	***
Listeners from Provence	-9.03	1.90	-4.74	2.53E-06	***
Listeners from Gascogne	-7.64	5.86	-1.30	0.19	
Listeners from Limousin	-20.94	6.14	-3.41	0.001	***
Listeners from non-Occitan area	-14.60	1.66	-8.82	6.95E-18	***

Table 8.26: Linear regression model with the outcome variable PERCEIVED DEGREE OF PLEASANTNESS (*sympathique*) ($R^2 = .24$)

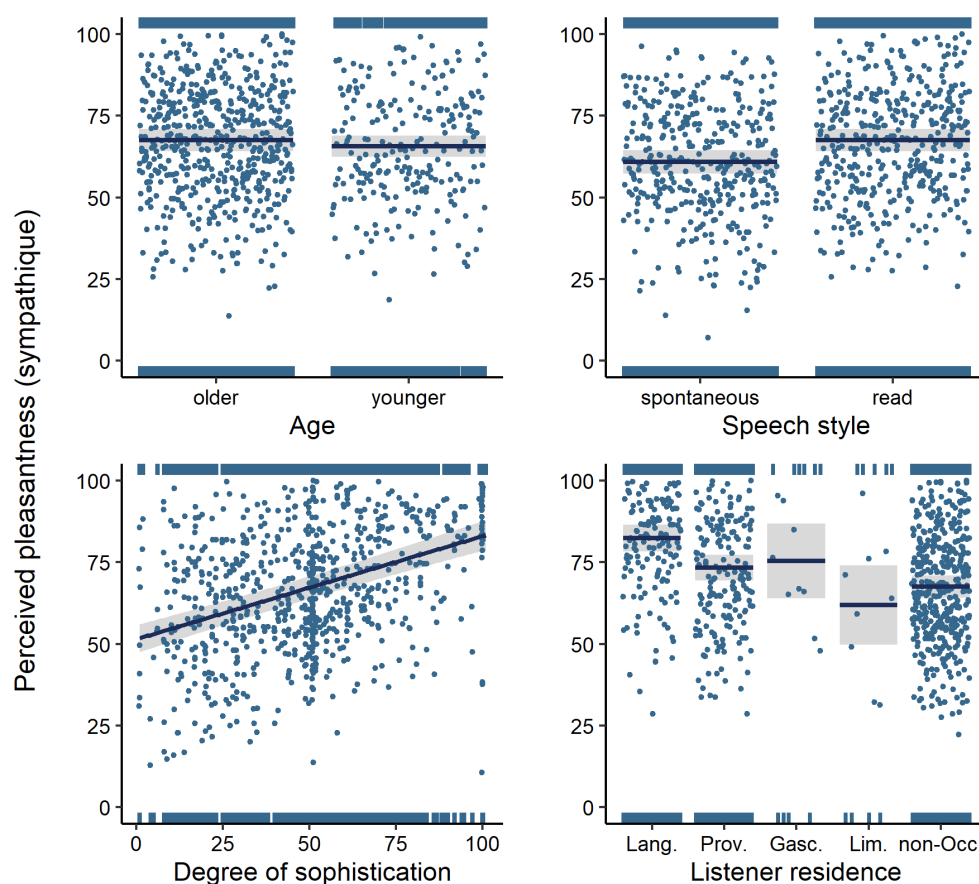


Figure 8.29: Model predictions of the different factors influencing the outcome variable PERCEIVED DEGREE OF PLEASANTNESS (*sympathique*).

The most interesting factor is, however, listener residence. Once again, speakers from Gascogne and Limousin were too few in number, but when we look at the three categories Languedoc, Provence and non-Occitan, we can see greater differences, with the *languedociens* attributing a lot more pleasantness to the speakers than the other groups. This supports the findings displayed in Table 5.1, in which *Toulousains* declared their own accent to be the nicest and the most pleasant one, thus showing the overt and covert prestige of this southern variety. This linguistic security concerning Southern French might have influenced their answers considerably.

8.3.6 Preliminary summary

In sum, the data suggest that listener perceptions are shaped by complex interactions of age, regional origin, correctness and speech style. Speakers who were grouped together based on their origin did not yield similar results in terms of pleasantness (*sympathique*), correctness (*raffiné*) and ‘urbanness.’ Very often, other categories, such as AGE, were much more important. It is thus possible that the listeners’ associations with certain social groups (younger vs. older; more sophisticated vs. less sophisticated) are more consistent than their associations with regional variation, if the latter even exists in this case. Listeners may thus prioritize social identity over regional distinctions when processing speech.

APICAL /R/ served as a strong shibboleth for the rural southwest. Its impact is underlined by the statistical models. Since the one speaker who produces it stands out very clearly in terms of accent identification, it was deemed important in three out of four statistical models, although the number of occurrences in which it was produced are quite low. The fact that apical /r/ was so strongly associated with rurality underlines that rurality is indeed a very important aspect of language variation in the representations of the speakers.

While the rural – urban dimension and the perceived degree of pleasantness (*sympathique*) were influenced by similar factors (not always in the same direction, though), the data on the perceived degree of correctness (*raffiné*) stand out. The statistical model fitted to this outcome variable was the only one in which the variable SEX was judged important. According to the models, women were perceived as speaking more correctly than men. Preliminary χ^2 or t-tests had, however, shown significant influences

of this variable with regard to pleasantness. The fact that it was not judged important by the pleasantness model once again shows the complex interplay of all factors.

Consequently, the analyses of these data mostly bring to light the fact that the perception of speech data follows complex patterns and that the importance of the factors at play depends on the aspect under investigation. After all, we also have to keep in mind that the statistical models used in this chapter do not have much explanatory power. Also, with the small number of speakers and the variability in listener responses, the models may not fully capture the intricacies of listener perception. It is thus possible that more data might have led to more meaningful results.

8.3.7 Methodological implications

The change of methodology in the third test led to interesting results. The data from rural areas added new layers and led to higher identification rates, and the introduction of the factor SPEECH STYLE supported previous findings that spontaneous speech does not per se lead to better identification of speakers' origins. The pleasantness and correctness ratings, for their part, helped uncover more about the associations that speakers have with certain accents and showed quite clearly the correlation between correctness (*raffiné*) and 'urbanness' in the representations of the listeners.

However, it is possible that the answer category southwest was misleading. For some speakers, the 'real' southwest might be more to the west, e.g., Bordeaux or Bayonne. These categories could therefore have influenced the listeners' choices. Additionally, the factor LEVEL OF EDUCATION was left out. As this factor is a very important one in sociolinguistic research, it was included in the final accent identification test. Also, some of the speakers did not seem to be typical enough. This is why some of them, e.g. the younger speaker from Oraison who led to so many "I don't know" answers, were replaced. For this test, the methodology was modified once again, as will be presented in Chapter 8.4.

8.4 The fourth test: southwest vs. southeast

The final test ran from 6 May to 21 June 2018 on the platform <https://www.soscisurvey.de/>. In total, 132 listeners participated. In all previous tests, listeners were asked to locate speakers according to two different categories, but this test

followed a different approach: Listeners were asked to indicate the place of residence of the speakers they listened to on a map (see Figure 8.33). This way, they were not influenced by any categories that might have skewed their answers. Additionally, the factor *level of education*, which was taken into account in the first two tests, was re-introduced and the questions asked per stimulus were also modified. Chapters 8.4.1 and 8.4.2 deal with the choice of the stimuli and their randomization, Chapters 8.4.3 and 8.4.4 with the design and the participants. Chapter 8.4.6 presents the results of the test.

8.4.1 Stimuli

Speech data were chosen from the same points of investigation (Salles-Curan, Toulouse, Oraison, Marseille) as in the third accent identification test, but the sample of speakers was modified. This was mostly due to the fact that I wanted to reintroduce the factor LEVEL OF EDUCATION. To keep the speaker sample relatively low in number, I excluded the factor SEX. Thus, this time, instead of including male and female speakers in the sample, I only chose men. The categories that influenced the choice of the speaker sample are shown in Figure 8.30.

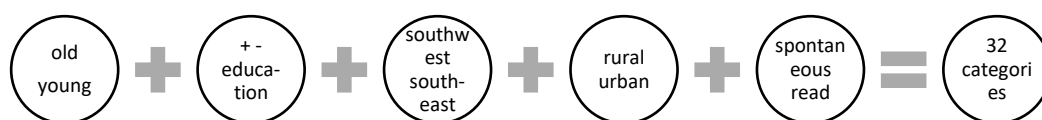


Figure 8.30: Categories used for the selection of the speaker sample of the final accent identification test.

All these categories considered, the ideal speaker sample would have consisted of 16 speakers. However, an increased number of stimuli would have led to more unfinished accent identification tests. Additionally, greater variation in educational background was difficult to find among the younger rural speakers. Thus, only one younger rural speaker per place of investigation was selected, as shown in Figure 8.31.

The level of education is, however, difficult to turn into a categorical variable. In the first two accent identification tests, the variable +/- *bac* was used. Yet, this differentiation is difficult to uphold, since the number of people who receive higher education has increased in the last few decades. A 2018 survey by INSEE on the proportions of *baccalauréat* certificates among different age groups in France found that only 35.3 percent of males living in France aged between 55 and 64 had a *bac* certificate

or higher, while the same accounts for 65.2 percent of 25- to 34-year-old males. This study did not include data on French males older than 64, but it can be assumed that the percentage in this group is even lower. Accordingly, it was very difficult to find older speakers with higher educational degrees. Consequently, a workaround had to be found.

The variable +/- EDUCATION was thus based on an information sheet published by ONISEP.fr,¹⁶² which classified all French diplomas into 6 different categories, ranging from level VI (no diploma) to level I (bac+4 or equivalent). For my research, I split these 6 levels into two groups, with one group consisting of the levels VI, V and IV and the other of the levels III, II and I. According to the information sheet, the highest diploma in group IV is the *Brevet Technique des Métiers* and the lowest in group III is the *Brevet de Maîtrise*.

Unfortunately, my corpus did not contain any older male speakers in Toulouse, Oraison and Salles-Curan whose diplomas would have been classified as level I to III. The speakers I chose instead were 12bcc1 (*cadre* ‘executive’, *bac*+2, level IV), T5_m_79 (*bouquiniste* ‘bookseller’, *certificat d’études*, level V) and 04alb1 (*vendeur de machines agricoles* ‘agricultural equipment salesperson’ *certificat d’études*, level V). It is, however, possible to assume that, based on their jobs, their social standing differed from their older male counterparts in the other points of investigation (see Figure 8.31), since the jobs of these counterparts were *scieur* ‘sawyer’, *agriculteur* ‘farmer’ and *chauffeur de taxis* ‘taxi driver’. This is why 12bcc1, T5_m_79 and 04alb1 were classified as having a higher level of education than their counterparts. Another problem of categorization is the younger Salles-Curan speaker (12bec1). At the time of the recordings, he was still in school, which meant that his level of education was not yet very high. To still work with a categorical variable with two values, he was classified as having a lower level of education. Therefore, the variable EDUCATION must be treated with caution. After all, it is used as a measure of social class, a multidimensional concept that is only imperfectly reflected by the single measure EDUCATION.

The speakers were recoded in Figure 8.31 to facilitate comparisons, with Y/O standing for younger/older, M for male, H for higher education (h for speakers categorized as having a higher level of education although their diplomas indicated otherwise), L for lower education, and SC, O, T and M for the four points of investigation.

¹⁶² ONISEP: *Office national d’information sur les enseignements et les professions* (‘National Office of Educational and Vocational Information’).

Figure
8.31:

		Salles-Curan		Oraison	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
countryside	young		YM-SC 12bec1, 1982 élève		YM-O 04agg1, 1994 arboriculteur, BTS agricole
	old	OM-h-SC 12bcc1, 1962 cadre, bac+2	OM-L-SC 12bnf1, 1926, scieur, études primaires	OM-h- O 04alb1, 1935, vendeur de machines agricoles, certificat d'études	OM-L-O 04aaa1, 1943, agriculteur, BEPC

		Toulouse		Marseille	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
city	young	YM-H-T T1_38 informaticien, bac+4	YM-L-T T30_32 cuisinier, bac pro	YM-H-M M1_25 professeur, bac+5	YM-L-M M8_37 conducteur de bus, CAP
	old	OM-h-T T5_79 bouquiniste, certificat d'études	OM-L-T T4_89 chauffeur de taxi, certificat d'études	OM-H-M M42_92 chirurgien, bac+5	OM-L-M M3_77 maçon, certificat d'études

Selection of the speaker sample for the final accent identification test.

For the test, I once again selected two stimuli per speaker, one being the sentence from the PFC text read aloud that was used for all three previous tests and the other being a segment of spontaneous speech of 16 to 20 seconds. The criteria for selecting the latter were the same as for the spontaneous speech stimuli in the third accent identification test (see Chapter 8.3.1).

8.4.2 Randomization

In the third accent identification test, the full number of stimuli to be listened to was 24. Due to the extension of the speaker sample by two speakers, this time the overall number was 28. Once again, I created two different online questionnaires, so that the number of stimuli to be listened to would be decreased. I followed the same pattern as in the third test and divided the speakers into two groups according to the factors age, education, and origin. Since there were only two younger rural speakers in the sample, listeners only listened to one of them during the course of the accent identification test. This way, every listener listened to 12 stimuli (one older rural speaker with a lower level of education, one older urban speaker with a higher level of education etc.). Once again, two blocks were

created that rotated freely, in order to prevent two stimuli by the same speaker from being listened to one after the other and to minimize fatigue effects.

8.4.3 Design

Before and after the test, several questions were asked: first and foremost, some questions about the socio-economic background of the listeners, and then some questions about southern accents. Examples of these questions are how well the participants knew the different accents in the south, whether they thought they could identify them, what the possible differences could be and how difficult they had found the task (the results of these questions are presented in Chapter 6.2). The question about possible differences was, again, only asked after the participants had completed the accent identification test, in order to avoid influencing the results. The question about familiarity with the accent was later used to create the variable LISTENER ORIGIN (see Chapter 8.4.4). Additionally, after the part with the accent identification, listeners were also asked to give their responses in a ‘bubble’ test, in which they assigned the accents of Toulouse, Marseille, and Paris to different visualizations of accents, in order to find out whether associations with these accents would be consistent (see Chapter 5.3). The questions asked during the core part of this questionnaire, the accent identification test, are displayed in Figure 8.32.

D'après vous, lequel de ces diplômes pourrait avoir ce locuteur ?

- ☐ aucun diplôme
 ☐ CAP ou BEP
 ☐ bac
 ☐ bac+2 (DUT, BTS)
 ☐ bac +3 (licence, maîtrise)
 ☐ bac +4 ou plus (master, doctorat)

1. D'où vient ce locuteur ? Vient-il plutôt de la campagne ou de la ville ?

campagne ————— ville

2. S'agit-il d'un locuteur plutôt typique ou moins typique pour sa région ?

pas du tout typique ————— très typique

3. Pouvez-vous indiquer sur la carte le département d'où il vient ?

Figure 8.32: Questions asked per stimulus during the fourth accent identification test.¹⁶³

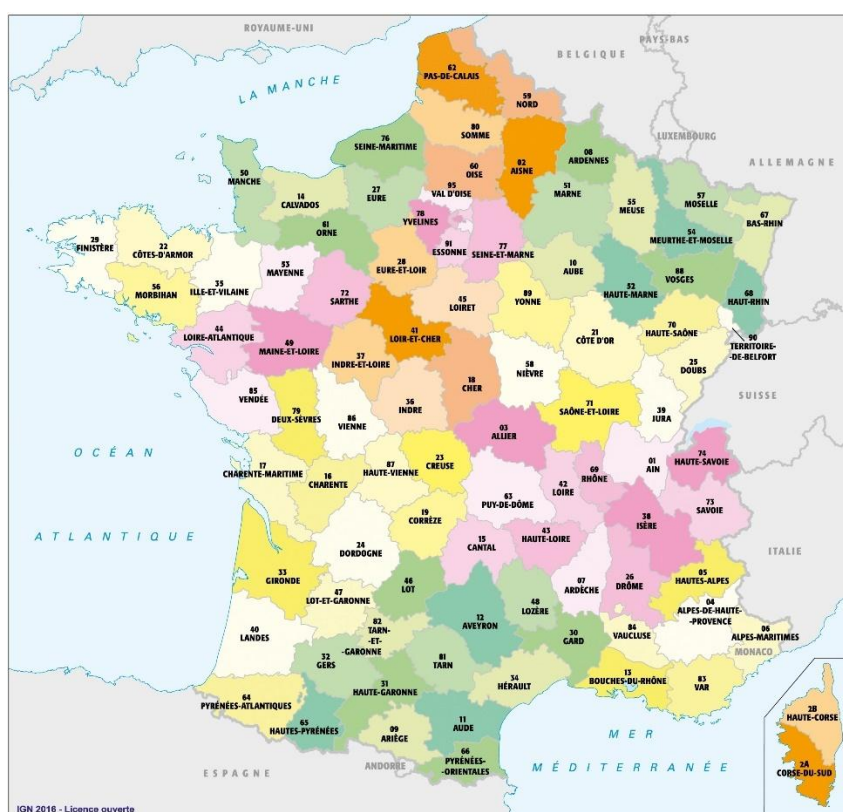


Figure 8.33: Map used in the fourth accent identification test to indicate the perceived origin of the speakers.

¹⁶³ 1. Which of these diplomas could this speaker have? 2. Where does this speaker come from? Does he come from the countryside or the city? 3. Is this speaker more typical or less typical of his region? 4. Can you indicate on the map the department where he comes from?

Listeners were first asked about the level of education of the speakers, because social dimensions seemed to have played a role in the previous accent identification tests. In the third test, for example, the adjective *raffiné* was used to investigate how sophisticated or correct speakers seemed when speaking, and it was shown that the perceived level of correctness influenced the question of whether speakers were perceived as urban speakers. This time, a more direct approach was chosen by directly asking the listeners to indicate the level of education of the speakers, using a 6-level scale that was loosely based on the classifications of ONISEP (see Chapter 8.3.5.3). Participants were only allowed to select one of the answer options.

The question about the rural – urban continuum from the third accent identification test was kept because ‘ruralness’ is an important part of the concept of NORMs, the prototypical speakers that this dissertation seeks to find. Additionally, it provided interesting results in the third test and was therefore used in this test in the same way as before. This time, no question was asked about the perceived pleasantness of the speakers’ accents. Instead, a new question was introduced about the level of typicality of the speakers. This question aimed to find additional indicators to identify prototypical speakers and is thus also tightly linked to the theoretical framework of this dissertation (see Chapter 2).

The map used in this test (see Figure 8.33) showed the different *départements* of France. While Avanzi and Boula de Mareüil (2019) used a map in which southwest and southeast were indicated on the map itself, leaving space in between (see Figure 3.11), this map did not guide the listeners to predefined dialect areas. Instead, it showed entities that did not reflect any linguistic borders but would give enough detail in order to avoid challenging the participants’ geographical knowledge too much. At the same time, the use of a map showing French *départements* made it possible to categorize the answers during the statistical analyses. This way, I could work with two different types of variable regarding accent identification: a categorical one (e.g., correct *département*/substrate region) and a continuous one (the distance between the actual origin of the speakers and the answers that were given in the test).¹⁶⁴

¹⁶⁴ The platform <https://www.soscisurvey.de/> did not allow for the segmentation of the map into the 96 *départements* of metropolitan France. Instead, it only permitted 32 segments. As a result, only the southern part of France was segmented according to the *départements*, while the northern part was divided into larger regions. Additionally, in some southern areas, certain *départements* were grouped together. Participants were not aware of these segmentations. They only saw the map with its *départements* (Figure 8.33).

8.4.4 Participants

In total, 134 listeners completed the questionnaire. Since familiarity with the accents influenced the results of the previous accent identification tests, four questions were asked regarding this dimension. As was done in the previous tests, listeners were asked to indicate the *département* in which they were currently living and the *département* in which they had spent most of their childhood: *Où avez-vous vécu la plus grande partie de votre enfance?* This time, two more questions were introduced: *Connaissez-vous bien les accents du Midi?*¹⁶⁵ ‘Are you familiar with the accents of the Midi?’, with a five-level scale of smileys ranging from very unsatisfied to very happy, and *Combien de temps avez-vous passé dans le Midi?* ‘How much time have you spent in the South?’ with five answer categories.

<i>Connaissez-vous bien les accents du Midi?</i>					
:(((	:(	:	:)	:)))	No answer
7	21	39	50	15	2
<i>Combien de temps avez-vous passé dans le Midi?</i>					
<i>Je n’y suis jamais allé.</i>	<i>J’y suis allé une ou deux fois.</i>	<i>J’y suis allé plusieurs fois</i>	<i>J’ai habité dans le Midi pendant... ans.</i>	<i>J’habite dans le Midi depuis... ans.</i> ¹⁶⁶	No answer
4	13	21	26	69	1

Figure 8.34: Listeners’ familiarity with Southern French (N = 134).

Figure 8.34 not only shows the answer categories, but also the answers given by the participants. As can be seen, 95 participants had lived or were living in the south, 21 had been there several times, 13 once or twice, and four had never been there at all. At the same time, only 65 participants declared being familiar with the southern accent and 28 participants chose the two sad face smileys. This shows that a lot of the participants were hesitant in declaring their familiarity, even though they had spent a considerable amount

¹⁶⁵ It would have been possible to use different terms to *Midi*, e.g., *Sud* or *oc*. According to Pustka, 2007, pp. 85–86; Pustka, 2010b, pp. 127–128, the term *Midi* is not only the term most commonly used in linguistic research, but also a term judged very suitable by the speakers themselves.

¹⁶⁶ ‘I’ve never been there.’ – ‘I’ve been there once or twice.’ – ‘I’ve been there several times.’ – ‘I lived in the South for ... years.’ – ‘I have been living in the South for ... years.’; Participants could fill in the numbers themselves.

of time in this region. In total, however, this listener sample was rather promising, given the fact that having spent time in a particular region should facilitate the identification of the accent of said region.

8.4.5 Categorical vs. continuous outcome variable

In all previous tests, I calculated accent identification rates based on the question of whether a speaker was correctly identified in terms of the categorical variables SOUTHWEST vs. SOUTHEAST or TOULOUSE vs. MARSEILLE. This time, listeners were not given answer categories. Instead, they were asked to localize speakers by clicking on a map (see Figure 8.33). Figure 8.35 shows the four points of investigation, as well as the distances between these points. Due to this change in methodology, there are two methods that can be used to assess their performance: It is either possible to work with a continuous variable that is based on the distance between the origin of the speakers on the map (SPEAKER ORIGIN, see Figure 8.35) and the points the listeners clicked on to localize these speakers (PERCEIVED SPEAKER ORIGIN, see Figure 8.37 and Figure 8.38), or to work with a categorical variable that is based on the question of whether the correct area was clicked on. This area can vary in terms of granularity, i.e., whether we work with *départements* or larger areas, such as *Occitan substrate regions*, or even with the wider categories *southwest* vs. *southeast*. Both methods have their advantages and disadvantages.

The biggest advantage of working with the distance between speaker origin and perceived speaker origin is that, as already mentioned, listeners had not been given answer categories. It is therefore more natural not to classify their answers into categories. Additionally, as outlined in Chapter 2.2.1, regional dialects are never clear-cut categories. Instead, they have fuzzy borders that can be better represented by continuous variables than by categorical ones. However, one major flaw of this approach is the fact that this measurement does not include one important aspect: the direction in which the perceived origin deviates from the actual origin. When only working with the distance between speaker origin and perceived speaker origin, it does not matter whether a speaker is, for example, localized east or west of his point of origin. This aspect is still very important when we want to assess whether a certain speaker can be identified as belonging to the right area.

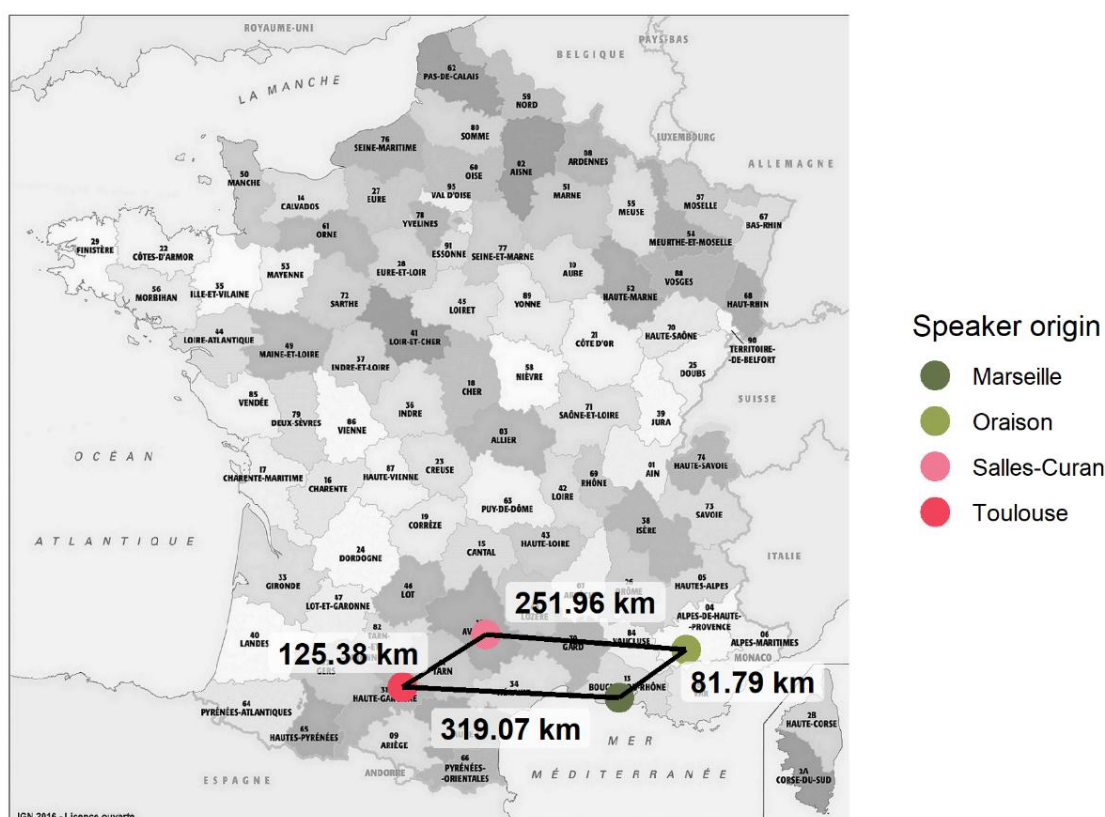


Figure 8.35: *Speaker origin* (the four different points of investigation).

Working with a categorical variable based on the question of whether speakers were allocated to the correct area, however, facilitates answering this exact question. Additionally, it makes the results of this test more easily comparable to the other accent identification tests. Furthermore, the listeners were presented with a map of France that indicated *départements*. They were thus indeed confronted with answer categories, so treating the data based on a categorical variable is not such a huge intervention. Yet, designating several areas of the map as areas of correct identification still has some important flaws that do not just consist of molding elements with fuzzy borders into clear-cut categories. First of all, as Figure 8.36 illustrates, the borders between substrate areas do not correspond to the borders between *départements*. Secondly, the area of *Languedocien* is much larger than the area of *Provençal*. The probability of localizing speakers somewhere in the Languedoc area when randomly localizing them somewhere in the South, is therefore much higher than localizing them in the Provence area. The same goes for the distinction *southwest* – *southeast*, which is based on the *substrate* areas as well, with *Valence-Alpin* and *Provençal* being the only areas that are treated as belonging to the Southeast (see Figure 8.36).



Figure 8.36: Southern French *départements* and Occitan substrate areas.

It can therefore be stated that both methods of assessing accent identification need to be treated with caution and that a possible combination of these two methods can even out possible flaws. Therefore, this chapter presents the results based on both.

8.4.6 Results and discussion

Table 8.27 shows all results per speaker regarding the five categories DISTANCE FROM SPEAKER ORIGIN, IDENTIFICATION (southwest – southeast), PERCEIVED ‘URBANNESSE,’ PERCEIVED TYPICALITY and PERCEIVED LEVEL OF EDUCATION. While the ‘urbanness’ means align with the third accent identification test (see Table 8.31), accent identification is considerably less accurate, particularly for southeasterners, with identification rates ranging from 17% to 47%. However, as will be discussed in Chapter 8.4.6.1, this is due to the methodological approach, which consisted of using the data collected by having listeners click on a map and then transforming their answers to the categorical variable southwest – southeast – non-Occitan, with the southwest taking up much more space than the southeast category.

The three speakers scoring the highest for typicality (T4_m_89 from Toulouse, 12bNF1 from Salles-Curan and M3_m_77 from Marseille) also scored lowest for perceived level of education. Additionally, they rank among the five best identified

speakers based on the mean distances from place of origin. This suggests that the level of education does play a role in the perception of typicality.

Speaker	Age	Edu	Origin	Identific. distance (km) mean	Ident. rate (southwest southeast)	'Urban-ness' mean	Typicality mean	Education mean
OM-h-T T5 m 79	+	+	T	200.99	70%	62.15	62.96	3.70
OM-L-T T4 m 89	+	-	T	198.88	71%	19.42	79.16	1.99
YM-H-T T1 m 38	-	+	T	253.03	66%	76.92	45.96	3.95
YM-L-T T30 m32	-	-	T	237.18	74%	77.78	45.39	3.57
OM-h-SC 12bCC1	+	+	SC	205.85	63%	50.24	70.34	3.08
OM-L-SC 12bNF1	+	-	SC	195.23	74%	12.49	85.23	1.83
YM-SC 12bEC1	-	-	SC	187.91	77%	75.10	61.81	3.68
OM-h- O 04aLB1	+	+	O	323.30	17%	54.19	59.03	3.45
OM-L-O 04aAA1	+	-	O	272.81	31%	57.79	71.56	3.37
YM-O 04aGG1	-	-	O	335.54	19%	74.65	40.24	3.13
OM-H-M M42 m92	+	+	M	318.73	22%	45.54	64.61	3.36
OM-L-M M3 m77	+	-	M	167.23	47%	33.69	82.10	2.43
YM-H-M M1 m25	-	+	M	264.06	21%	71.00	64.21	4.58
YM-L-M M8 m37	-	-	M	171.79	41%	65.12	64.48	3.37

Table 8.27: All results per speaker (means and accent identification rate) in the fourth test.

8.4.6.1 Accent identification

This chapter's results are based on 1,474 answers provided during the accent identification test. Given the test's distinct design compared to the previous ones, this chapter begins with an analysis focusing on the distance between SPEAKER ORIGIN and PERCEIVED SPEAKER ORIGIN. Subsequently, it presents an analysis similar to those of the previous tests, investigating the factors that led to answers that can be summarized as *southeast* answers.

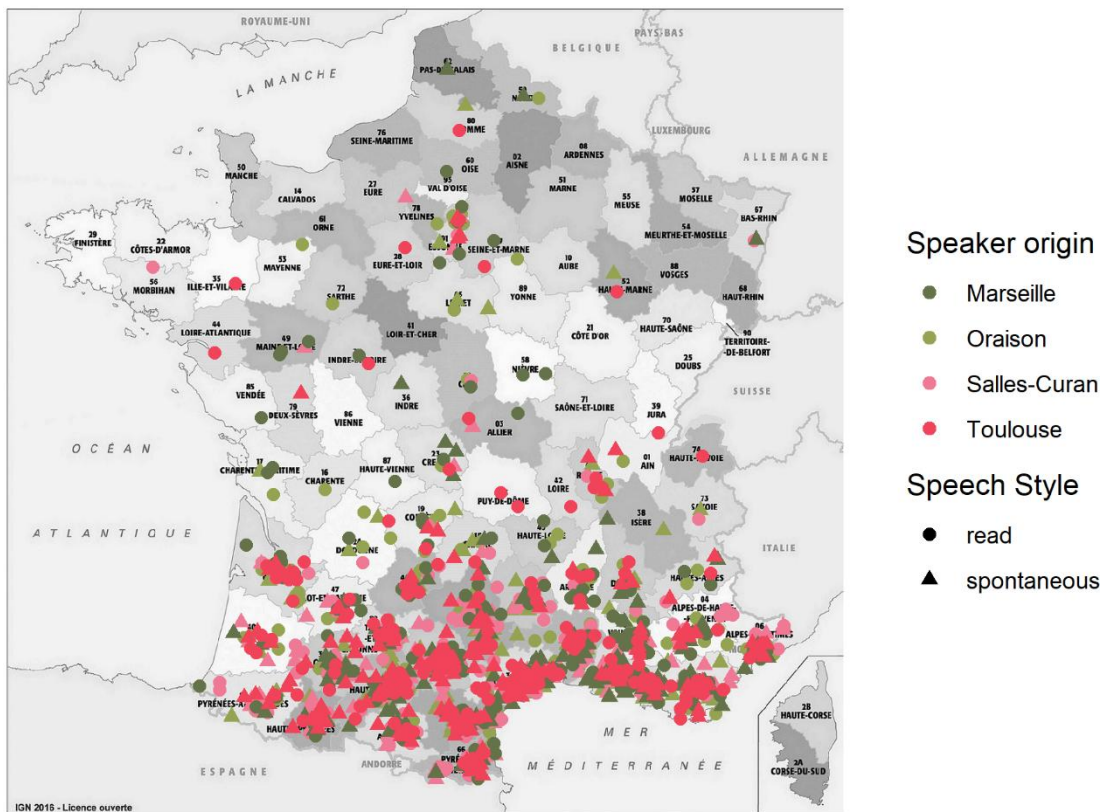
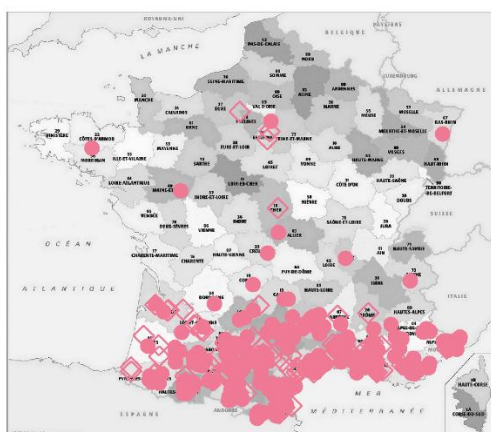


Figure 8.37: All answers given in terms of the localization of the speakers during the final accent identification test.

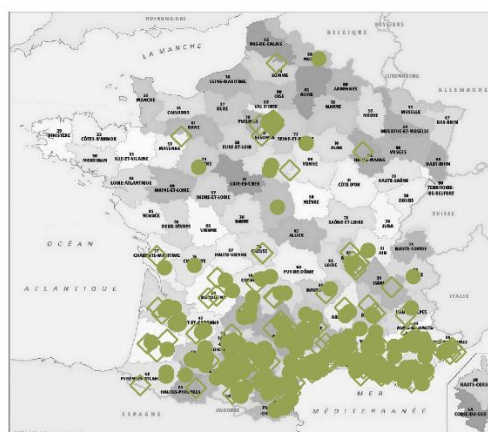
Distance between speaker origin and perceived speaker origin

Figure 8.37 and Figure 8.38 show the exact answers, with Figure 8.37 displaying them all at once (every dot or rectangle represents one answer given on the test) and Figure 8.38 splitting them up into the different speaker groups from Marseille, Oraison, Salles-Curan, and Toulouse. If all speaker origins were more or less correctly identified, we would see a distribution that would resemble Figure 8.35. Instead, we can observe that most of the time, speakers were seemingly randomly allocated to the south.

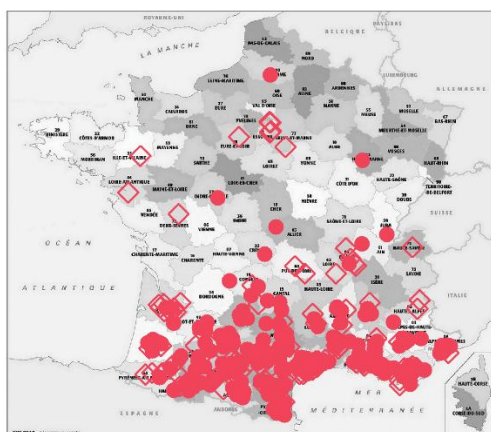
Salles-Curan



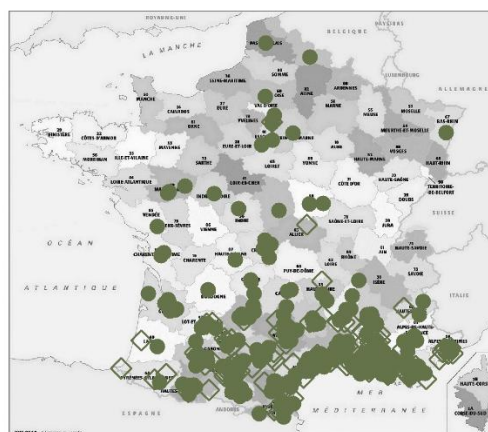
Oraison



Toulouse



Marseille



Age ● older ◇ younger

Figure 8.38: All answers given in terms of the localization of the speakers during the final accent identification test, showing the answers to the stimuli for each point of investigation individually.

As mentioned in Chapter 8.4.3, it was not possible to have SoSci Survey treat each *département* individually, because the platform only allowed for 32 segments to be clickable on the map. Therefore, Table 8.28 and Table 8.29 show the frequency with which the different segments were clicked on during the test.

Regions (non-Occitan substrate)	Frequency
Hauts-de-France, Grand-Est	10
Bretagne, Normandie, Pays de la Loire, Nouvelle-Aquitaine (nord)	17
Île-de-France	28
Centre-Val de Loire, Bourgogne-Franche-Comté	14
Auvergne-Rhône-Alpes (nord)	23

Table 8.28: Number of times each region was clicked on during the fourth accent identification test.

Table 8.28 shows that most of the regions did not play significant roles. As could be expected in centralized France, the region of Paris, Île-de-France, was selected much more frequently than other non-Occitan regions, although it was the smallest area to be chosen.

Regions	Départements	Frequency	
Auvergne-Rhône-Alpes	Puy de Dôme, Haute-Loire, Cantal	17	Σ 55
	Ardèche	19	
	Drôme	19	
Nouvelle-Aquitaine	Haute-Vienne, Creuse	8	Σ 98
	Corrèze	11	
	Dordogne	8	
	Lot-et-Garonne	20	
	Gironde, Landes	51	
Nouvelle-Aquitaine/Occitanie	Pyrénées Atlantiques, Hautes-Pyrénées	58	Σ 58
Occitanie	Gers	60	Σ 834
	Tarn-et-Garonne	33	
	Haute-Garonne	143	
	Ariège	42	
	Lot	21	
	Aveyron	72	
	Tarn	82	
	Aude	72	
	Pyrénées Orientales	55	
	Lozère	30	
	Hérault	142	
	Gard	82	
Provence-Alpes-Côte d'Azur	Hautes-Alpes	9	Σ 337
	Alpes-de-Haute-Provence	29	
	Vaucluse	39	
	Bouches-du-Rhône	153	
	Var	74	
	Alpes Maritimes	33	

Table 8.29: Number of times each *département* was clicked on during the fourth accent identification test.

Table 8.29 presents the frequency of clicks on the southern *départements*. It shows that most of the clicks were made in the regions Occitanie and Provence-Alpes-Côte d'Azur, which is in line with Avanzi and Boula de Mareüil's (2019) findings that showed that southern speakers were predominantly localized in the south (see Chapter 3.6.1). However, while their results were balanced (with Southeasterners and Southwesterners both being perceived as Southwesterners in 42% of the cases and as Southeasterners in

38% and 34%, respectively), in this data, a strong tendency to place speakers in the southwest can be observed. This is most probably due to the fact that the area that I categorized as southwest is considerably larger than the southeast.

The *départements* that were most frequently clicked on were the Marseille *département*, Bouches-du-Rhône (with 153 clicks) and the Toulouse *département* Haute-Garonne (with 143 clicks). Haute-Garonne is closely followed by Hérault (142 clicks), the *département* where Montpellier is located. We can thus observe a strong tendency to place the speakers close to Toulouse, Marseille and between these two points. This can be due to a greater prominence of these areas or to greater awareness of or familiarity with these areas among the participants, leading to proximity effects (cf. Chapter 2.3.2).

While Aveyron, the *département* where Salles-Curan is located, was selected 72 times (half as often as Haute-Garonne), the Oraison *département* Alpes-de-Haute-Provence was clicked on 29 times. This may indicate a lack of awareness of this particular region, or at least that speakers were only seldom thought to originate from here. Several *départements*, particularly those of Nouvelle-Aquitaine, received even fewer clicks (e.g., Haute-Vienne, Creuse, and Dordogne), which shows that the accents in question were only associated with this Limousin substrate region.

Table 8.30 presents the overall accent identification rates (based on the categorical variable CORRECTLY IDENTIFIED?), depending on the degree of precision of how the area of correct identification is determined (*département*, substrate region or *southwest – southeast*¹⁶⁷).

	Correct answers	Wrong answers	Accent identification rate in %
<i>Département</i>	138	1336	09
Substrate region	583	891	39
<i>Southwest – southeast</i>	727	747	49

Table 8.30: Percentages of correct answers given, depending on the granularity of the areas in question (for the percentages per speaker, see Table 8.31).

In the previous tests, in which the categories *Toulouse – Marseille* and *southwest – southeast* were used, correct answers were given in 48% (test 1), 42% (test 2), and 47% (test 3) of the cases. These rates are close to the *southwest – southeast* category of the

¹⁶⁷ The variable *southwest – southeast* is based on three categories that are again based on the different substrate regions: southwest (*Langedocien*, *Auvergnat* and *Gascognat*), southeast (*Limousin* and *Provençal*) and non-Occitan. The substrate regions are based on Kremnitz' map of Occitan substrate regions (see Figure 8.1).

final test, while the narrower categories *substrate regions* and *départements* led to remarkably lower identification rates (see Table 8.30).

As Table 8.31 shows, granularity also plays an important role when looking at the speakers individually: Overall, accent identification rates based on the *départements* are quite low. Only one of the speakers (the older, less educated male speaker from Marseille (M3_m_77) was correctly allocated to *Bouches du Rhône* in 36% of the cases, while all other speakers attained accent identification rates between 0.83% (04alb1, the older, more educated speaker from Oraison) and 16% (M8_m_37, the younger, less educated speaker from Marseille). In general, the *départements* of the urban speakers were slightly more likely to be correctly identified than those of speakers from rural areas.

However, when accent identification rates are computed based on larger areas, such as the substrate region, they are not only higher, but it can also be observed that speakers from Languedoc, especially rural speakers from Languedoc, were better identified than speakers from Marseille. The identification rates based on the larger distinction *southwest vs. southeast* reinforce this tendency. At the same time, the speakers from Oraison always attained the lowest identification rates, independently from the level of granularity (see Table 8.31).

Another aspect presented in Table 8.31 are the mean distances between speaker origin and perceived speaker origin per speaker. A comparison between the mean distances and the three different levels of accent identification rates shows that the two speakers who were best identified in terms of the correct *département* (the two bus drivers M3_m_77 and M8_m_37) are also the ones with the lowest mean distances between their actual origin and their perceived origin (167.23 and 171.79 km). The same applies for the speakers who were the least identified (04agg1 and 04alb1) and who got the highest mean distances (335.54 and 323.30 km). For these extreme cases, accent identification based on the *départements* appears to be the most suitable category. The speakers who were second-best identified based on the mean distances also aligned well with accent identification based on larger areas. This highlights the significance of employing a variety of methods to gain a more thorough understanding.

		Accent identification rate			Mean distance between SPEAKER ORIGIN and PERCEIVED ORIGIN (in km)	N
Speaker		<i>Département</i> %	Substrate region %	Southwest, southeast %		
Oraison	04aaa1	04	30	31	272.81	121
	04agg1	01	17	19	335.54	120
	04alb1	01	15	17	323.30	123
Salles- Curan	12bCC1	05	50	63	205.85	121
	12bEC1	04	63	77	187.91	121
	12bNF1	09	48	74	195.23	125
Marseille	M1_m_25	09	19	21	264.06	53
	M3_m_77	36	46	47	167.23	130
	M42_m_92	05	17	22	318.73	121
	M8_m_37	16	38	41	171.79	76
Toulouse	T1_m_38	10	39	66	253.03	62
	T30_m_32	09	57	74	237.18	53
	T4_m_89	10	55	71	198.88	120
	T5_m_79	12	56	70	20.99	128

Table 8.31: Accent identification rates and mean distances between speaker origin and perceived origin per speaker.

Figure 8.39 gives an overview of accent identification based on the distance between SPEAKER ORIGIN and PERCEIVED SPEAKER ORIGIN by showing one boxplot per speaker. It illustrates that there is more variability with speakers from Oraison, Toulouse and Marseille than with speakers from Salles-Curan. The latter were all more or less well identified as coming from the southwest. The greatest variability can be observed among the speakers from Oraison. Comparing Salles-Curan and Oraison, we can deduce that being from the countryside did not lead to more similar answers in this data. We are instead dealing with five speakers who were quite well identified (all three Salles-Curan speakers and the two bus drivers from Marseille), five speakers who were not (all three speakers from Oraison and the former chief of surgery and the teacher from Marseille) and four speakers who are to be found in the middle (all four speakers from Toulouse).

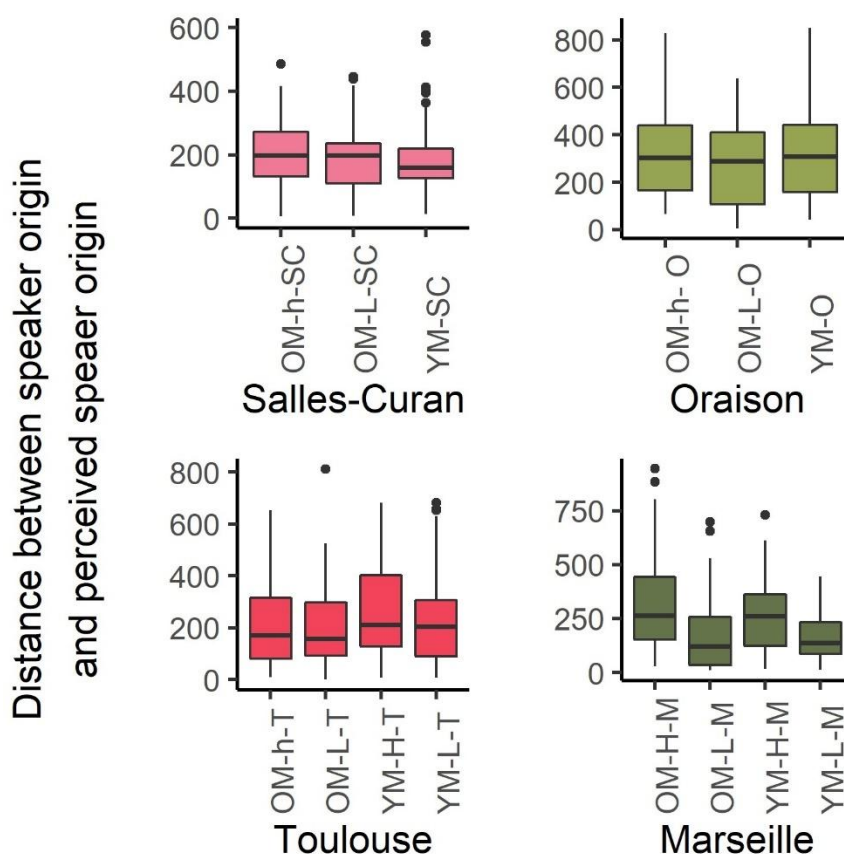


Figure 8.39: Boxplots indicating the distance between speaker origin and perceived speaker origin per speaker.

Those answers that locate speakers in the north merit a closer look. This is why Table 8.32 shows all answers per northern region of France. The two speakers M42_m_92 (the former chief of surgery) and 04agg1 (the young arboriculturist from Oraison) stand out as a result of having been allocated to the North more often than the others. M42_m_92 was even placed four times in the regions *Hauts-de-France* and *Grand-Est*, two regions typically associated with working class people. As for the region *Île-de-France*, the region of Paris, M42_m_92 was placed there six times and 04agg1 eight times. At the same time, none of the older speakers who were classified as having a lower level of education (04aaa1, 12bNF1, M3_m_77, and T4_m_89) were mistakenly placed in the capital. With the exception of 04agg1, level of education therefore might have played a role here.

			Hauts-de-France, Grand-Est	Bretagne, Normandie, Pays de la Loire, Nouvelle-Aquitaine (North)	Île de France	Centre-Val de Loire, Bourgogne-Franche-Comté	Auvergne-Rhône-Alpes (North)
Oraison	04aaa1	OM-L-O	0	1	0	1	1
	04agg1	YM-O	2	2	8	1	7
	04alb1	OM-h- O	1	2	4	2	2
Salles-Curan	12bCC1	OM-h-SC	0	2	1	0	1
	12bEC1	YM-SC	0	1	2	1	0
	12bNF1	OM-L-SC	1	0	0	0	2
Marseille	M1_m_25	YM-H-M	0	0	1	0	1
	M3_m_77	OM-L-M	0	2	0	0	0
	M42_m_92	OM-H-M	4	4	6	5	1
	M8_m_37	YM-L-M	0	0	0	0	0
Toulouse	T1_m_38	YM-H-T	0	2	3	1	3
	T30_m_32	YM-L-T	0	1	3	0	3
	T4_m_89	OM-L-T	1	0	0	1	0
	T5_m_79	OM-h-T	1	0	0	2	2

Table 8.32: All occurrences of the accent identification test in which speakers were allocated to a non-Occitan substrate region, split up into the administrative regions of France.

As was done with the data from previous accent identification tests, possible influences of external factors on accent identification were tested individually. Table 8.33 shows that, with the exception of the factor age, all other factors seem to have had an impact on accent identification computed based on the distance between speaker origin and perceived speaker origin. According to the individual t-tests, urban southwestern speakers with a low level of education were better identified when speaking spontaneously, especially when they were assessed by listeners who had already spent a considerable amount of time in the south. In particular, the substrate region (southwest vs. southeast) seems to have played an important role: *Languedociens* were more often localized close to their home (at a 205.3 km distance as opposed to the 269.3 km distance for the Southeasterners). However, although these means and t-tests suggest significant influences on accent identification, it has to be kept in mind that contrasts between the different groups were not enormous.

SPEAKER ORIGIN	Southwest 205.3 km	Southeast 269.3 km	<i>p</i> < .01
SPEAKER ORIGIN	Rural 253.2 km	Urban 222.3 km	<i>p</i> < .01
AGE	Older 234.6 km	Younger 243.9 km	<i>p</i> > .05
EDUCATION ¹⁶⁸	Low level 162.0 km	High level 186.6 km	<i>p</i> < .01
SPEECH STYLE	Spontaneous 228.4 km	Read 247.0 km	<i>p</i> < .05
FAMILIARITY WITH ACCENT	‘Good’ listeners 229.2 km	‘Bad’ listeners ¹⁶⁹ 258.2 km	<i>p</i> < .01

Table 8.33: Possible extralinguistic influences on accent identification (the smaller the number, the better identified). Results of several Welch’s t-tests: estimated means and p-values.

Table 8.34 shows the coefficients of the linear regression model that fit the data best. With an R-squared of .11, this model has a slightly higher explanatory power than the logistic regression models of tests one ($R^2 = .08$) and two ($R^2 = .10$), but less than test number three ($R^2 = .23$). Consistent with the t-tests, AGE does not play any role in this model, while the factors SPEAKER ORIGIN, LEVEL OF EDUCATION, SPEECH STYLE and LISTENER ORIGIN do, together with SCHWA REALIZATION and PERCEIVED TYPICALITY. It should be kept in mind that the outcome variable is the distance between place of origin and the perceived place of origin, which means that the higher the number, the worse the speakers were identified. Negative coefficients, therefore, indicate that the factors in question led to better identification.

When comparing these results to the analyses of the previous tests, it is important to consider that the overall focus is slightly different. In the previous tests, the focus was on the factors possibly influencing the localization of a speaker in Marseille or in the southeast, while these analyses focus on the question of what led to a better identification, solely in terms of distance between speaker origin and the perceived origin. This means that the results not only show who was best identified in terms of our intra-Southern differences, but also in terms of who was identified as southern as opposed to northern.

¹⁶⁸ For this particular calculation, the two younger speakers from the countryside were taken out, since it was not possible to classify them according to a high or low level of education.

¹⁶⁹ ‘Good’ listeners and ‘Bad’ listeners is a categorization based on the question *Combien de temps avez-vous passé dans le Midi?* ‘How much time have you spent in the south?’ (see Figure 8.34). Participants who answered that they had lived there or were currently living there were categorized as ‘good’ listeners, all others as ‘bad’ listeners.

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	275.23	14.85	18.53	3.86E-68	***
Low level of education	-44.69	8.96	-4.99	6.90E-07	***
Spontaneous speech	-10.36	8.81	-1.18	0.240	
Provence speakers	30.11	12.10	2.49	0.013	*
Rural speakers	-4.62	12.30	-0.38	0.707	
Schwa realization	-0.73	0.18	-4.03	5.80E-05	
Perceived typicality	32.26	9.30	3.47	0.001	***
‘Bad’ listener	74.56	17.69	4.21	2.68E-05	***
Provence:rural speakers					***

Table 8.34: Linear regression model with the outcome variable DISTANCE FROM PLACE OF ORIGIN ($R^2 = .113$).

As can be seen in Table 8.34 and Figure 8.40, only the predictors LEVEL OF EDUCATION, SPEAKER ORIGIN (SOUTHWEST – SOUTHEAST and the interaction between SOUTHWEST – SOUTHEAST and RURAL - URBAN), PERCEIVED TYPICALITY and ‘BAD’ LISTENER influence the outcome variable significantly, while SPEECH STYLE, SPEAKER ORIGIN (RURAL – URBAN), as well as SCHWA REALIZATION did not. Based on the model, it can be stated that speakers were better identified when they had a lower level of education, lived in (urban parts of) Languedoc, were perceived as typical and were listened to by people considered ‘good’ listeners. These findings support the t-tests and the tendencies observed in the previous tests.

Although spontaneous speech was found to be significant in the t-tests, it is not found to be significant by this model. This thus confirms what was observed by Woehrling and Boula de Mareüil (2006), who stated that the variable SPEECH STYLE did not influence accent identification. The concept of the *NORMs* is not reflected in these results, since *rurality* considered on its own was deemed non-significant and *age* does not even figure in the model. Only the factor LEVEL OF EDUCATION was found to be significant: Speakers categorized as having a low level of education were placed closer to their actual place of origin.

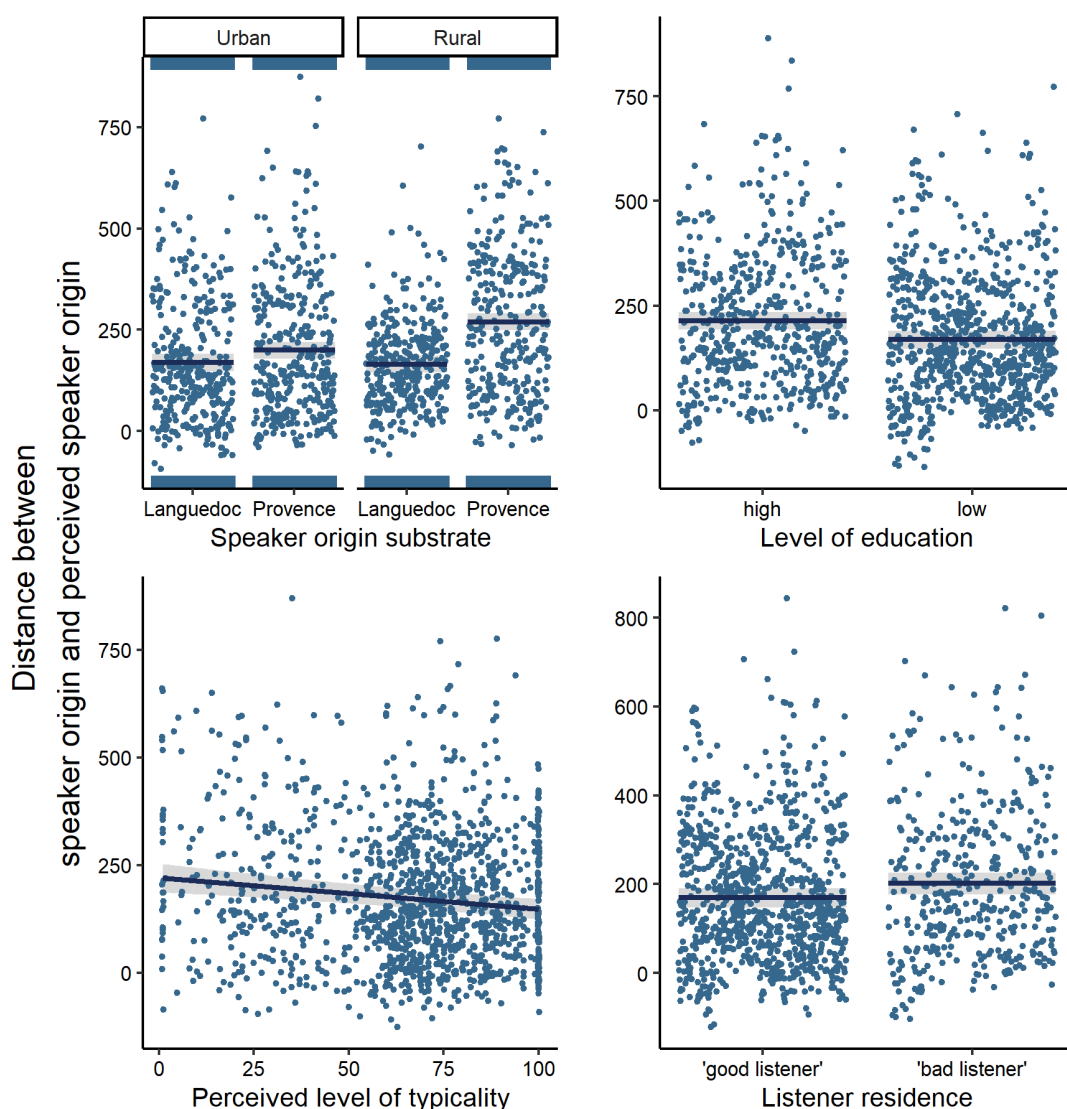


Figure 8.40: Model predictions of the different factors influencing the outcome variable **DISTANCE FROM PLACE OF ORIGIN** (fourth accent identification test) (Listener residence 1 = living/having lived in the south, 2 = never having lived there).

Although there is a small negative correlation (-0.13) between **SCHWA REALIZATION** and distance between **SPEAKER ORIGIN** and **PERCEIVED SPEAKER ORIGIN**, which means that the more schwa a speaker pronounces, the smaller the distance, **SCHWA REALIZATION** does not influence the outcome significantly according to the model.

Of the additional questions asked per stimulus (how typical, city or countryside and level of education), only the one about typicality appears in the model. Unsurprisingly, the more speakers were judged to be typical, the better they were identified. The other two dimensions (**PERCEIVED RURALITY** and **PERCEIVED LEVEL OF EDUCATION**) do not seem to have influenced the answers significantly and don't even figure here. This contrasts with the fact that **RURALITY** (in combination with speaker

substrate) and LEVEL OF EDUCATION do show a significant influence, which raises questions about the interpretation of the first accent identification test (i.e., whether social differences were really identified and reinterpreted locally). Whether the absence of PERCEIVED RURALITY and PERCEIVED LEVEL OF EDUCATION means that these two aspects cannot be discerned by listeners will be examined in Chapters 8.4.6.2 and 8.4.6.3.

Southwest vs. southeast

The statistical model presented above is only partially comparable to the models created to interpret the results of the previous tests, as they concentrate on the distance between SPEAKER ORIGIN and PERCEIVED SPEAKER ORIGIN. This is why, analogous to the previous tests, this section focuses on the question of which factors contributed to localizing speakers in the *southeast*.¹⁷⁰ In order to examine this question with a binary outcome variable, the analyses of this chapter are based on a reduced dataset, only containing the data points that placed speakers in the south.

SPEAKER ORIGIN	Southwest		Southeast		<i>p</i>
	%	N	%	N	
	22	659	32	668	< .01
SPEAKER ORIGIN	Rural		Urban		<i>p</i>
	%	N	%	N	
	24	654	30	673	< .01
AGE	Older		Younger		<i>p</i>
	%	N	%	N	
	28	895	24	432	> .05
EDUCATION	Low level		High level		<i>p</i>
	%	N	%	N	
	25	782	28	545	> .05
SPEECH STYLE	Spontaneous		Read		<i>p</i>
	%	N	%	N	
	29	684	24	643	< .05
FAMILIARITY WITH ACCENT	'Good' listeners		'Bad' listeners		<i>p</i>
	%	N	%	N	
	25	948	31	379	< .05

Table 8.35: Possible factors influencing the answer *southeast* in the fourth accent identification test. Results of several χ^2 tests.

¹⁷⁰ It has to be kept in mind, though, that listeners were not presented with answer categories but with a map showing *départements*. The question about which factors led to the SOUTHWEST – SOUTHEAST answer is a simplification of the more precisely put question “which factors led listeners to click on *départements* belonging to the *Provence* and *Provence Alpin* substrate areas?”

Table 8.35 displays the outcomes of several χ^2 tests. With answer rates ranging from 22% to 32%, it once again highlights the trend that most speakers were somewhat randomly positioned in the southern region. However, various factors still appear to have had an influence. SPEAKER ORIGIN (SOUTHWEST – SOUTHEAST and RURAL – URBAN), along with SPEECH STYLE and FAMILIARITY WITH THE ACCENT seem to exhibit statistically significant effects on the response. Urban southeastern speakers, particularly those speaking spontaneously and evaluated by listeners familiar with the accent, were notably more frequently localized in the southeast. The following paragraphs compare the results of the χ^2 tests of Table 8.35 to the results of the first (Table 8.4), the second (Table 8.14) and the third test (Table 8.20).

SPEAKER ORIGIN was only once deemed non-significant by χ^2 tests, notably in the second accent identification test, which means that accent identification was highly inaccurate in this test. In all other tests, speakers from Marseille or the southeast were more likely to be localized there. Additionally, in the third test as well as in the fourth, the rural – urban dimension played a role: Urban speakers were more likely to be positioned in the southeast.

While a low LEVEL OF EDUCATION led to overall better identification according to the t-tests in Table 8.33, it does not seem to have influenced the *southeast* response significantly. This is consistent with the first accent identification test, but contrasts with the second one, where speakers with a lower level of education were more frequently localized in Marseille.¹⁷¹

The factor AGE is equally inconsistent among the various tests. While no impact can be observed in the third and fourth test, regardless of the outcome variable at hand, the data of the first and the second test imply that AGE did play a role. It is possible that this is due to the broader range of speakers in the first two tests, with ages spanning from 18 to 98.

SPEECH STYLE shows a different behavior to that of the two previous factors. Spontaneous speech can be presumed to favor accent identification as opposed to read speech. However, according to the t-tests and χ^2 tests of the third and fourth tests,¹⁷² it did not lead to better identification. Instead, spontaneous speech led to more speakers being localized in the southeast than read speech. This is another indication that the prototypical Southern French accent is the southeastern one.

¹⁷¹ In the design of the third accent identification test, the factor EDUCATION had not been considered.

¹⁷² The first two tests did not contain spontaneous speech and are therefore not mentioned in this paragraph.

Lastly, the factor FAMILIARITY WITH THE ACCENT seems to behave as follows: Listeners who were not as familiar with the accent were more inclined to localize speakers in the southeast than listeners from the south. In terms of accuracy of identification, however, southern listeners (or ‘good’ listeners) did not perform better when localizing speakers than northerners (or ‘bad’ listeners). This reinforces the assumption that the prototypical Southern French accent is the southeastern one, at least for non-Southerners.

As had been done in the previous tests, a model was fitted with the outcome variable ANSWER SOUTHWEST – SOUTHEAST.¹⁷³ Its coefficients are displayed in Table 8.36. The model has very low explanatory power (with a Nagelkerke pseudo- R^2 of 0.11), but it still indicates some tendencies (see also Figure 8.41). Its coefficients suggest that, contrary to the χ^2 tests, AGE and LEVEL OF EDUCATION did play a role, with older and less educated speakers being more likely to be localized in the southeast. Also, consistent with the χ^2 tests, ‘bad’ listeners were more inclined to position speakers in the southeast.

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	-2.494	0.460	-5.421	5.94E-08	***
Spontaneous speech	0.038	0.178	0.212	0.832	
Younger speakers	-1.429	0.285	-5.020	5.17E-07	***
Provence speakers	-0.123	0.244	-0.502	0.615	
Urban speakers	0.064	0.228	0.279	0.780	
Low level of education	0.627	0.202	3.103	0.002	**
Perceived level of education: medium	0.403	0.231	1.743	0.081	.
Perceived level of education: low	0.602	0.212	2.846	0.004	**
‘Bad’ listener	0.377	0.147	2.556	0.011	*
Schwa realization	-0.250	0.416	-0.602	0.547	
Apical /r/	-0.402	0.297	-1.351	0.177	
Answer urban	0.017	0.003	5.630	1.80E-08	***
Spontaneous speech: younger speakers	0.815	0.313	2.601	0.009	**
Provence speakers: urban speakers	0.762	0.297	2.565	0.010	*

Table 8.36: Logistic regression model of the fourth accent identification test with the outcome variable answer southeast (Nagelkerke pseudo R^2 = .11).

¹⁷³ For this, a reduced dataset was used that only contained answers that localized speakers in the Occitan substrate area.

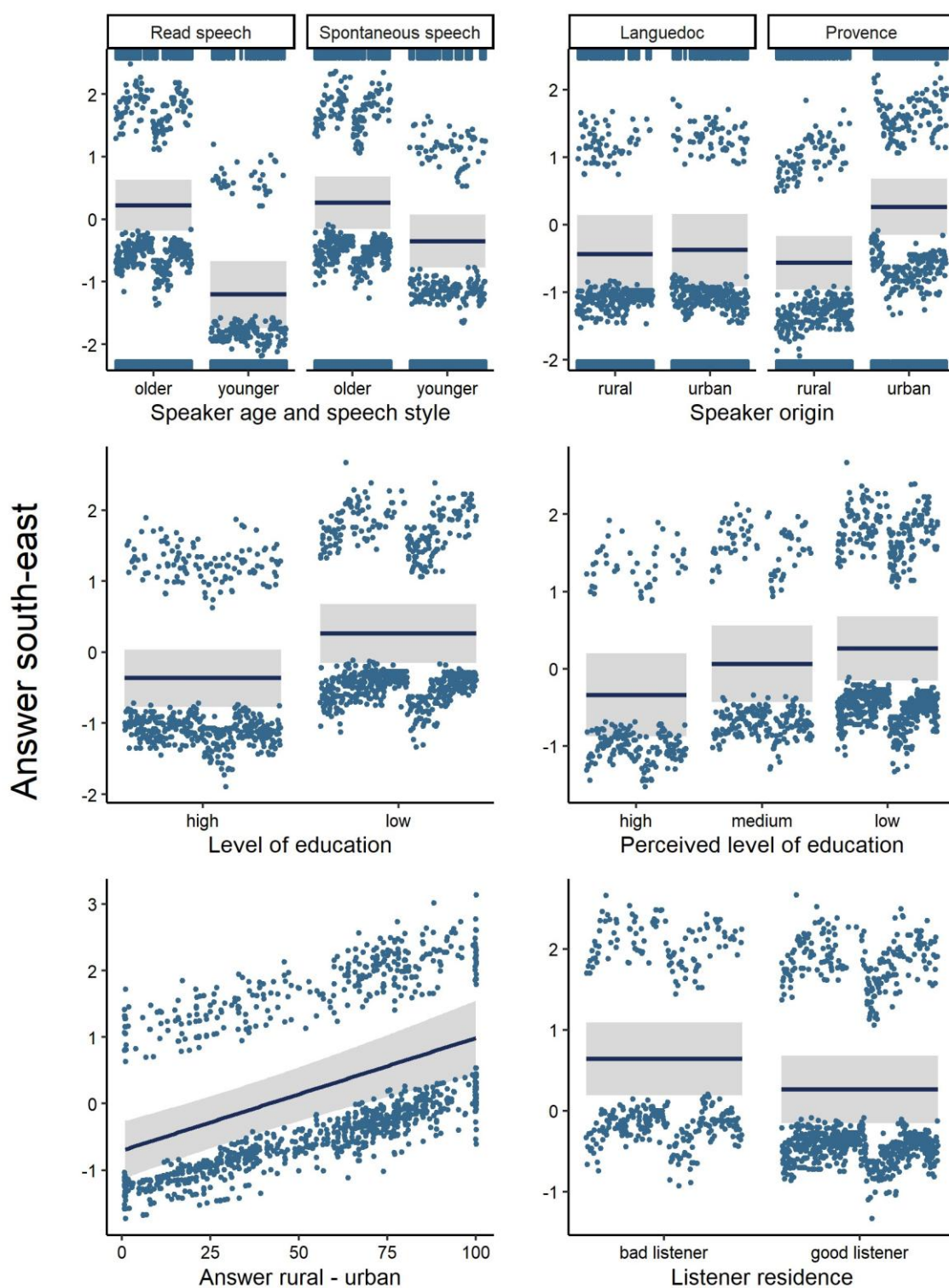


Figure 8.41: Factors influencing ANSWER SOUTHEAST according to the logistic regression model of the fourth accent identification test.

Additionally, two interactions can be observed: SPEECH STYLE and AGE, with younger speakers more often localized in the southeast when speaking spontaneously, and the two SPEAKER ORIGIN factors: Urban Provence speakers were more likely to be perceived as

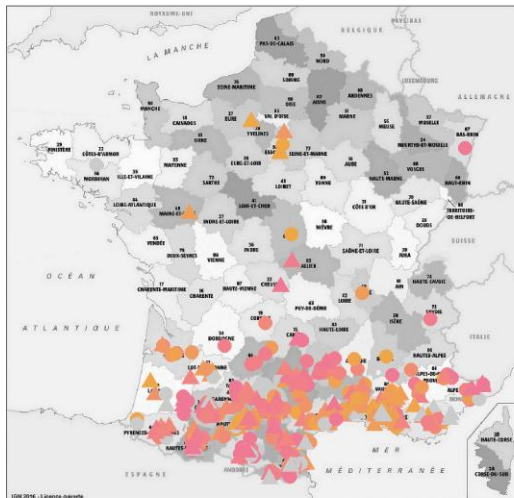
Provence speakers. While PERCEIVED ‘URBANNESSE’ of the speakers as well as PERCEIVED LEVEL OF EDUCATION do not figure in the previous model, they do appear in this one and behave as follows: Speakers were more likely to be localized in the southeast if they were perceived more urban and less educated. This leads us once again to the association of the southeast with urban, less educated older males and thus our NO(R)Ms.

8.4.6.2 Rural – Urban

As was done in the third test, listeners were also asked to indicate on a slider how rural or urban the speakers sounded to them, in order to include the *rural* dimension of the NORMs and to see whether specific associations between a particular region and its urban area(s) could be observed. Figure 8.42 shows all answers given during the test, with the colors indicating the perceived degree of ‘urbanity’. The more urban a speaker was perceived to be, the more orange the data point on the map. It can be stated that the data points in the Oraison map are slightly more often orange than in the other maps.

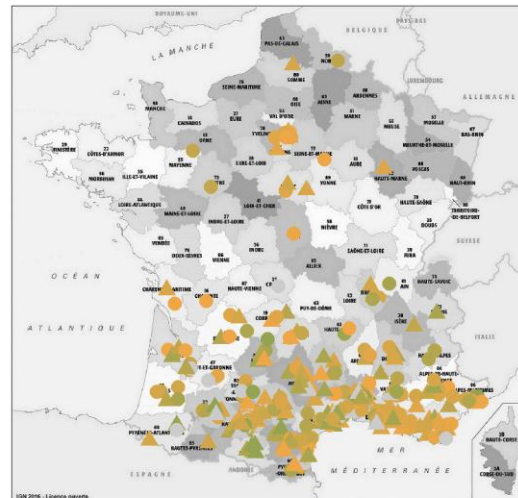
'Urbanness'

Salles-Curan



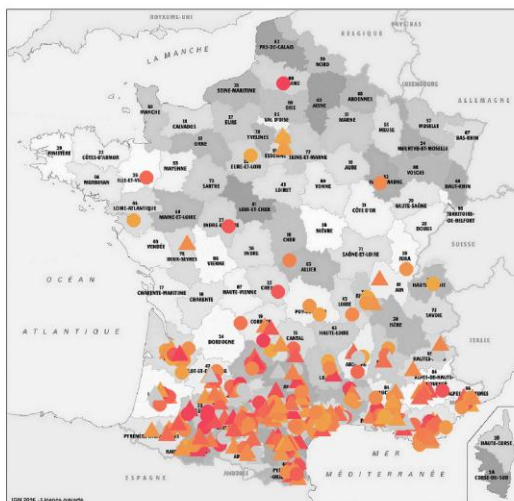
Speech Style ● read ▲ spontaneous
Perceived degree of urbanness
25 50 75 100

Oraison



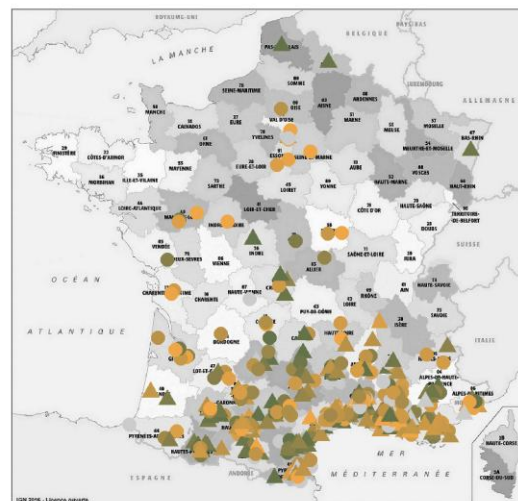
Speech Style ● read ▲ spontaneous
Perceived degree of urbanness
25 50 75 100

Toulouse



Speech Style ● read ▲ spontaneous
Perceived degree of urbanness
25 50 75 100

Marseille



Speech Style ● read ▲ spontaneous
Perceived degree of urbanness
25 50 75 100

Figure 8.42: All answers given in the fourth accent identification test, colors indicating the PERCEIVED DEGREE OF 'URBANNESSE'.

The boxplots in Figure 8.43 represent each speaker based on their perceived 'urbanness'. It is striking that the Oraison speakers were judged relatively similarly, with all of them being more likely to be placed in the city. In all three other points of investigation, a pattern can be observed: The older, less educated speaker was considerably more often

perceived as rural than his counterparts.¹⁷⁴ Older speakers were thus perceived in an opposite manner to the younger speakers, especially the well-educated ones.¹⁷⁵ This seems to show that, although differences between the points of investigation exist, the socio-demographic factors AGE and EDUCATION outweigh the regional ones.

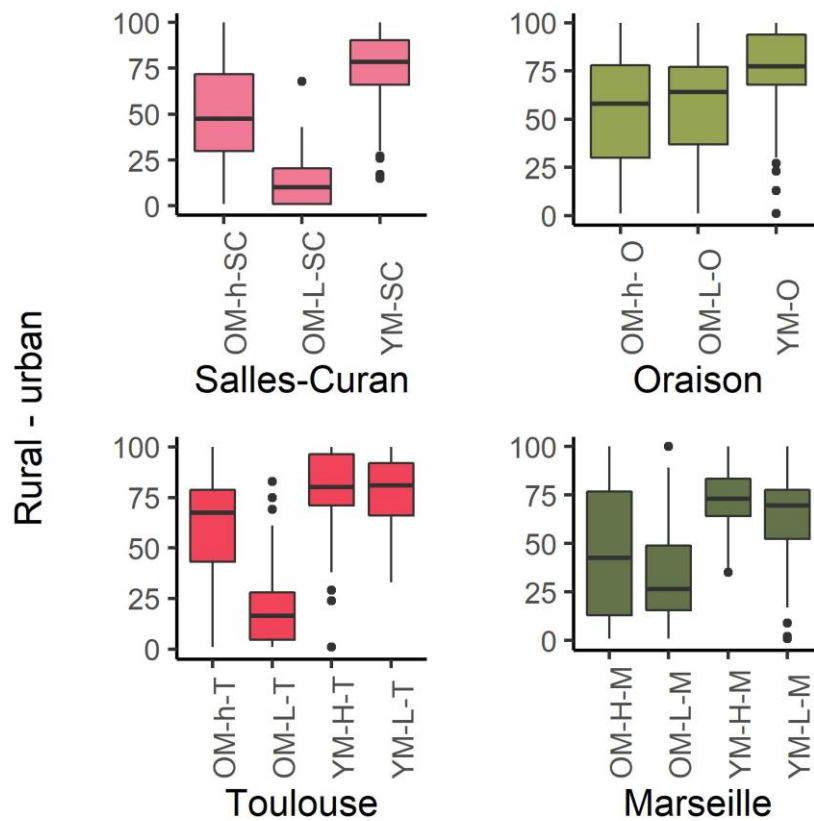


Figure 8.43: Boxplots indicating the PERCEIVED 'URBANNESSE' per speaker (0 = rural, 100 = urban).

To examine whether this is really the case, a linear regression model was fitted with the outcome variable PERCEIVED 'URBANNESSE.' With an R^2 of .43, this model has much more explanatory power than all previous ones. The coefficients of the model confirm the patterns of the boxplots and the mean 'urbanness' scores displayed in Figure 8.44: It is primarily AGE that influenced answers, followed by PERCEIVED LEVEL OF EDUCATION. The actual LEVEL OF EDUCATION as well as SPEAKER ORIGIN (southwest – southeast and rural – urban) and PERCEIVED TYPICALITY also figure as significant in the model. The factors SPEECH STYLE, SCHWA REALIZATION and 'BAD LISTENER,' on the other hand, do not seem to influence the 'urbanness' score of the speakers.

¹⁷⁴ Their mean 'urbanness' counts are 12.5 (Salles-Curan), 19.4 (Toulouse) and 33.7 (Marseille).

¹⁷⁵ Among the younger speakers, means rank between 65.1 (Marseille) and 77.7 (Toulouse).

		Salles-Curan		Oraison	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
Rural	young	YM-SC (12bec1) 75.1		YM-O (04agg1) 74.65	
	old	OM-h-SC (12bcc1) 50.24	OM-L-SC (12bnf1) 12.49	OM-h- O (04alb1) 54.19	OM-L-O (04aaa1) 57.79
		Toulouse		Marseille	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
Urban	young	YM-H-T (T1_38) 76.92	YM-L-T (T30_32) 77.78	YM-H-M (M1_25) 71.00	YM-L-M (M8_37) 65.12
	old	OM-h-T (T5_79) 62.15	OM-L-T (T4_89) 19.42	OM-H-M (M42_92) 45.54	OM-L-M (M3_77) 33.69

Figure 8.44: Mean ‘urbaness’ scores of all speakers.

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	103.266	3.067	33.669	7.70E-174	***
Low level of education	-9.534	1.821	-5.235	1.95E-07	***
Provence speakers	4.237	1.535	2.761	0.006	**
Rural speakers	5.050	1.551	3.255	0.001	**
Read speech	-2.228	1.702	-1.309	0.191	
Older speakers	-24.892	1.926	-12.924	8.65E-36	***
Schwa realization	0.686	3.958	0.173	0.862	
Perceived level of education: medium	-5.205	2.343	-2.222	0.026	*
Perceived level of education: low	-20.397	2.069	-9.859	4.49E-22	***
Perceived typicality	-0.303	0.032	-9.552	7.28E-21	***
‘Bad’ listener	2.298	1.553	1.480	0.139	

Table 8.37: Linear regression model with the outcome variable PERCEIVED ‘URBANESS’ ($R^2=.43$).

There are two major reasons for a speaker to be perceived as urban: the existence of a discernible particular urban accent, such as the Marseille accent or the Paris accent, and the dialect levelling associated with places marked by mobility, i.e. larger cities. Thus, a speaker receiving a higher ‘urbaness’ score either reminded listeners of a particular city or was speaking with a less notable regional accent. As Figure 8.45 and Table 8.37 illustrate, older speakers with a low level of education that seemed typical of their region were judged more rural than their counterparts. This shows that the features *typicality*, *age*, and *rurality*, which all figure in the concept of the NORMs, also go hand in hand in these accent identification tests. Additionally, the fact that the more educated as well as

the younger speakers were more readily placed in urban areas leads to the assumption that it is the association of weaker regional accents with urban environments that was at play here, which underlines that, unlike in the UK, there are no distinct urban-based regional accents (Hornsby & Jones, 2013, p. 94).¹⁷⁶

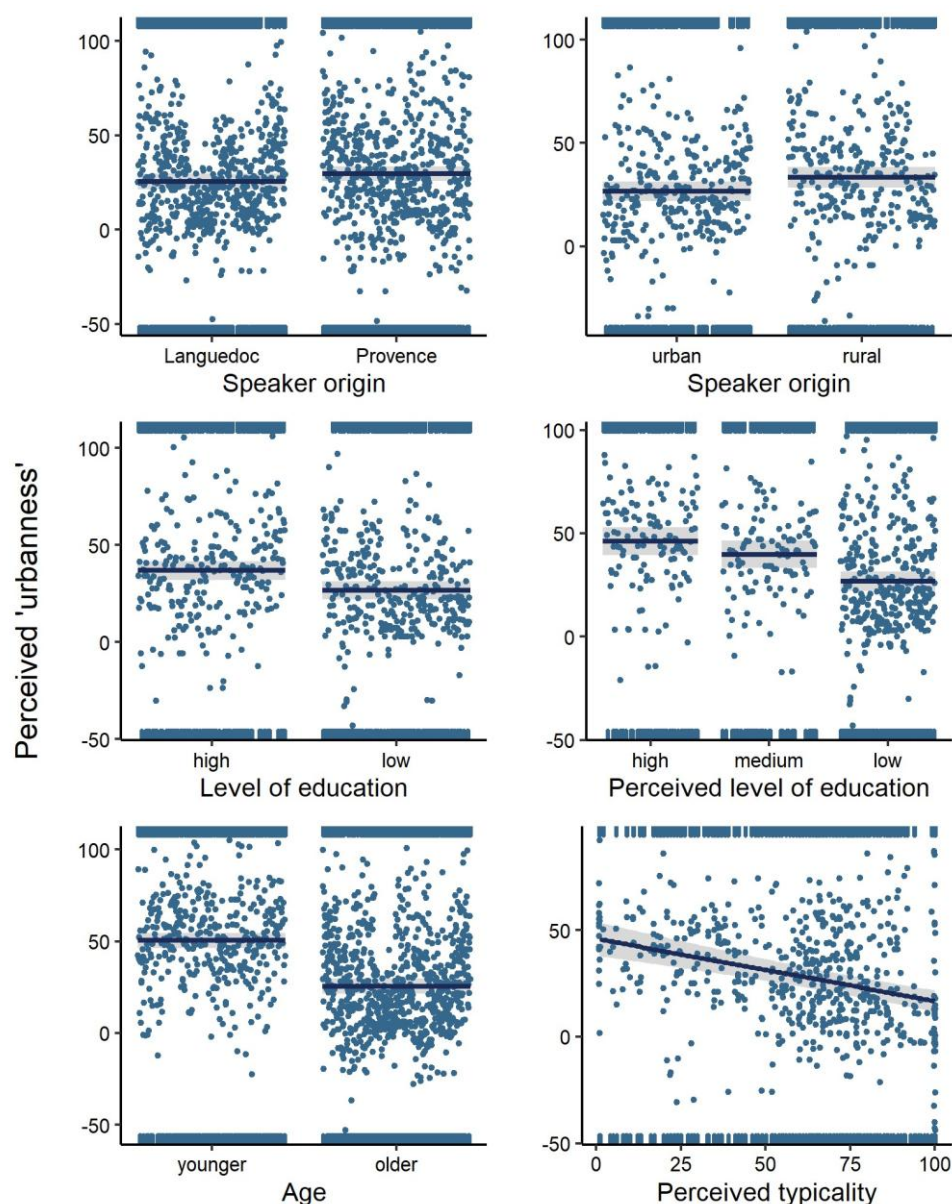


Figure 8.45 All factors significantly influencing PERCEIVED 'URBANITY' in the fourth accent identification test.

Although Figure 8.45 suggests that SPEAKER ORIGIN (southwest – southeast as well as rural – urban) might not influence the answers, two small effects can be observed. First, there is one rather odd outcome: Rural speakers were even more likely to be perceived as

¹⁷⁶ The interplay between PERCEIVED LEVEL OF EDUCATION and URBANNES is addressed in the next section.

urban speakers than the urban speakers themselves. The reason for this is most probably the group of Oraison speakers. Their mean ‘urbanness’ scores range from 54.19 (the agricultural machines seller) to 74.65 (the younger speaker), which are, in total, higher than all the other mean scores, which range from 12.49 (the sawyer) to 75.10 (the younger speaker) in Salles-Curan, from 19.62 (the taxi driver) to 77.78 (the chef) in Toulouse and from 33.69 (the bus driver) to 71.0 (the teacher) in Marseille. Overall, the highest scores across locations are relatively close to each other, though.

The second effect that can be observed concerning SPEAKER ORIGIN is that Provence speakers were more likely to be perceived as urban. This could be due to the fact that the Provence accent is rather associated with cities such as Marseille, Aix, Toulon etc., but it is also possible that, once again, the Oraison speakers are the ones especially responsible for Provence receiving higher ‘urbanness scores.’ The fact that the mean ‘urbanness score’ of all Marseillais speakers (49.18) is slightly lower than that of all Toulouse speakers (52.00) seems to support this assumption.

Interestingly, these results only partly confirm the results of the ‘urbanness’ scores of the third accent identification test. Here, the ‘urbanness’ scores attributed to urban speakers were much higher (with mean scores of 59.5 in Marseille and 61.4 in Toulouse) and the factor SPEECH STYLE was judged significant, with read speech being more likely to be perceived as urban. Additionally, in the third test, urban speakers were indeed more likely to be attributed higher ‘urbanness’ scores. It is possible that the differences between the results are due to some of the speakers being replaced by other speakers in the fourth test. The fact that the individual speakers have such a large influence on the results highlights once again that such small sample numbers can be problematic.

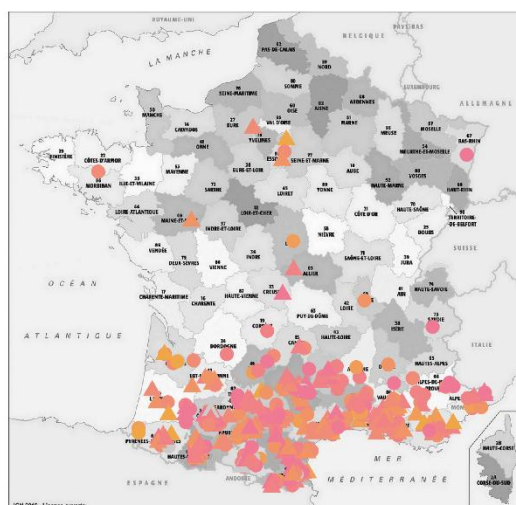
8.4.6.3 Perceived level of education

It has repeatedly been observed that education plays an important role when it comes to regional accents, and it has even been shown that social attributes, such as milieu (and consequently also education) can be reinterpreted regionally, leading listeners to localize certain speakers in a particular city based on their social milieu instead of their regional origin (see Chapter 2.3.2). In the fourth accent identification test, listeners were therefore additionally asked to indicate the level of education of the speakers they listened to, on a scale from 1 (no degree) to 6 (master’s degree, PhD) (see Figure 8.32).

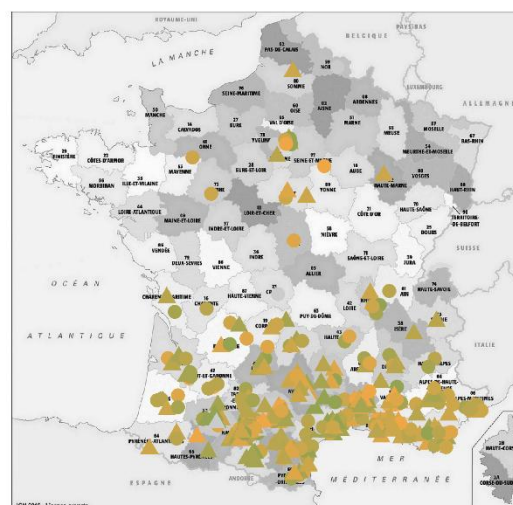
Perceived level of education

Salles-Curan

Oraison

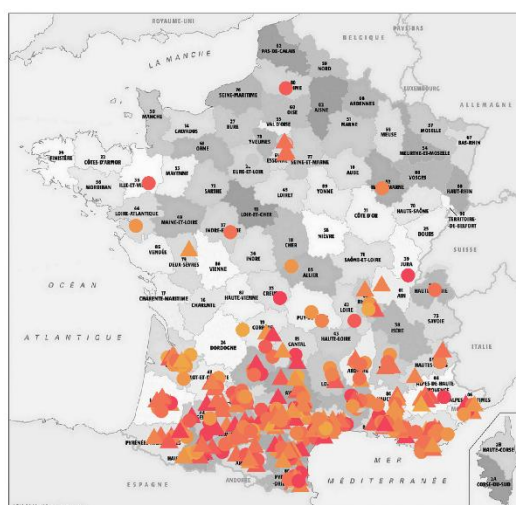


Speech Style ● read ▲ spontaneous
Perceived level of education 1 2 3 4 5 6



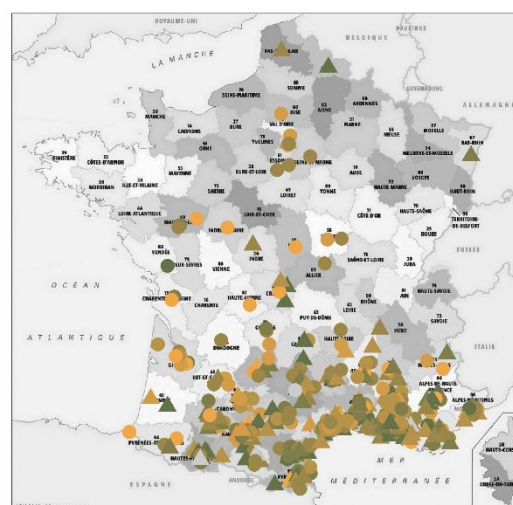
Speech Style ● read ▲ spontaneous
Perceived level of education 1 2 3 4 5 6

Toulouse



Speech Style ● read ▲ spontaneous
Perceived level of education 1 2 3 4 5 6

Marseille



Speech Style ● read ▲ spontaneous
Perceived level of education 1 2 3 4 5 6

Figure 8.46: All answers given in the fourth accent identification test, colors indicating the PERCEIVED LEVEL OF EDUCATION (1 = *aucun diplôme*, 6 = *bac+4 ou plus*).

Figure 8.46 indicates the perceived degree of education per answer. We can see that the data points of Toulouse are slightly more often orange than the others, hinting at the fact that Toulouse speakers were attributed a slightly higher level of education.

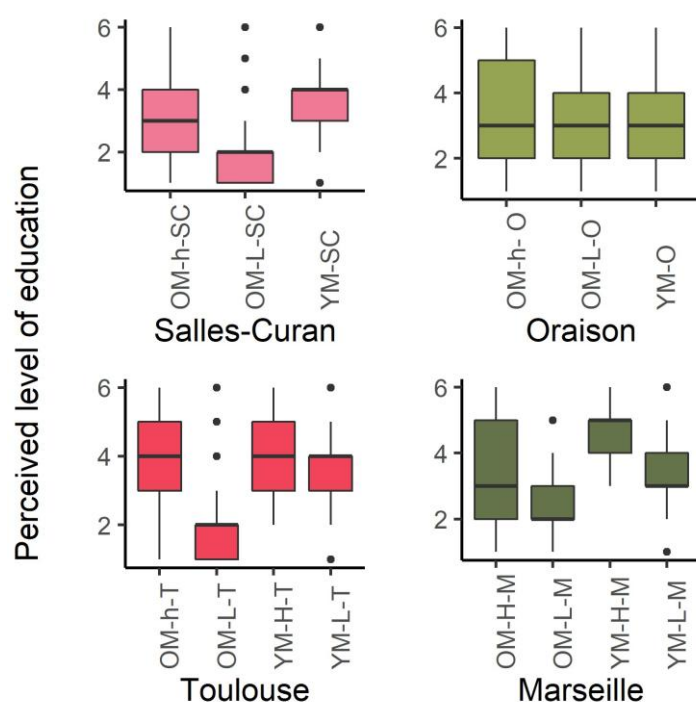


Figure 8.47: Boxplots indicating the PERCEIVED LEVEL OF EDUCATION per speaker (1 = *aucun diplôme*, 6 = *bac+4 ou plus*¹⁷⁷).

The boxplots in Figure 8.47 and the mean scores in Figure 8.48 show that listeners were able to identify certain aspects of LEVEL OF EDUCATION. As explained in Chapter 8.4.1, speakers were sorted into two groups (high and low level of education), thus creating a binary variable. It was, however, problematic that the classification of the speakers into these two groups was not clear-cut, since in some points of investigation the two older speakers had the same degrees. They were instead classified based on their jobs instead of on the length of their studies. Although mean scores and medians lean towards the middle (level III), the data on this question reflect the following classification: Speakers from the more educated group were indeed perceived as being more educated than their counterparts in their respective point of investigation. This is especially the case with the two older speakers from Toulouse (the book seller with a mean score of 3.08 and the taxi driver with a score of 1.83).¹⁷⁸

¹⁷⁷ '1 = no degree, 6 = four or more years of university studies (master's degree, PhD or more).'

¹⁷⁸ However, the relationship between the factors PERCEIVED LEVEL OF EDUCATION and the actual LEVEL OF EDUCATION is not so strong that it might lead to problems of multicollinearity. This is why including these two factors into a linear regression model did not cause problems.

		Salles-Curan		Oraison	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
Rural	young	YM-SC (12bec1) 3.68		YM-O (04agg1) 3.13	
	old	OM-h-SC (12bcc1) 3.08	OM-L-SC (12bnf1) 1.83	OM-h- O (04alb1) 3.45	OM-L-O (04aaa1) 3.37
		Toulouse		Marseille	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
Urban	young	YM-H-T (T1_38) 3.95	YM-L-T (T30_32) 3.57	YM-H-M (M1_25) 4.58	YM-L-M (M8_37) 3.37
	old	OM-h-T (T5_79) 3.70	OM-L-T (T4_89) 1.99	OM-H-M (M42_92) 3.36	OM-L-M (M3_77) 2.43

Figure 8.48: Mean PERCEIVED LEVEL OF EDUCATION scores of all speakers.

A linear regression model was fitted with the outcome variable PERCEIVED LEVEL OF EDUCATION (see Table 8.37 and Figure 8.49). Its R^2 of 0.368 is not as high as that of the previous model, but noticeably higher than the R^2 values observed in all models on accent identification.

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	2.571	0.180	14.291	8.57E-43	***
Low level of education	-0.824	0.083	-9.966	1.67E-22	***
Provence speakers	0.225	0.071	3.184	0.001	**
Rural speakers	-0.173	0.071	-2.433	0.015	*
Spontaneous speech	-0.261	0.078	-3.350	0.001	***
Older speakers	-0.425	0.094	-4.548	6.00E-06	***
Schwa realization	0.586	0.181	3.233	0.001	**
Perceived ‘urbaness’	0.020	0.001	15.351	1.48E-48	***
Perceived typicality	-0.001	0.002	-0.586	0.558	
‘Bad’ listener	0.066	0.071	0.928	0.354	

Table 8.38: Coefficients of the linear regression model with the outcome variable PERCEIVED LEVEL OF EDUCATION ($R^2=0.368$).

The factors LEVEL OF EDUCATION, SPEAKER ORIGIN (southwest – southeast and rural – urban), SPEECH STYLE, SPEAKER AGE, SCHWA REALIZATION and PERCEIVED ‘URBANNESS’ were deemed significant by the model (see also Figure 8.49), suggesting that education was indeed identified. In general, the model makes the following predictions: speakers

are more likely to be perceived as having a higher level of education when they are more educated, come from Provence, from urban areas, read aloud, are younger, realize more schwas and are perceived as urban.

When we compare this model to the other models fitted to examine the results of the fourth accent identification test, we can see that some of the factors, notably SPEAKER ORIGIN (southwest – southeast and rural – urban) and SPEAKER EDUCATION, appear in each model. The factor AGE also figures prominently. A factor that only appears on its own in this model is SPEECH STYLE. While reading, speakers were awarded a slightly higher level of education than while speaking spontaneously, a prediction that is not surprising.

Interestingly, SCHWA REALIZATION behaves differently than previously assumed. As stated above (Chapter 8.3.5.1), a high rate of final schwa realization can be linked to a strong southern accent, which is usually associated with lower education and rural areas. Here, it seems to have influenced the answers in the opposite direction: the more schwa, the more educated the speakers seemed. It is possible that this is due to a high schwa realization rate being typically found in more formal settings, when reciting poems or reading aloud, contradicting the tendency of associating the realization of final schwas with a lower level of education.

Lastly, the model also reveals that perceived ‘urbanness’ influenced the answers significantly. As addressed in Chapter 8.4.6.2, the perception of ‘urbanness’ was shown to be affected by the perceived level of education. It is therefore not surprising that this relationship operates reciprocally. The more urban a speaker was perceived to be, the more highly educated they sounded to the listeners, as also indicated by a positive Pearson’s correlation coefficient of 0.53. Although urban areas can be associated with ‘working class’ accents, these findings show that it is rather the association of urban areas and higher education that is at play here.

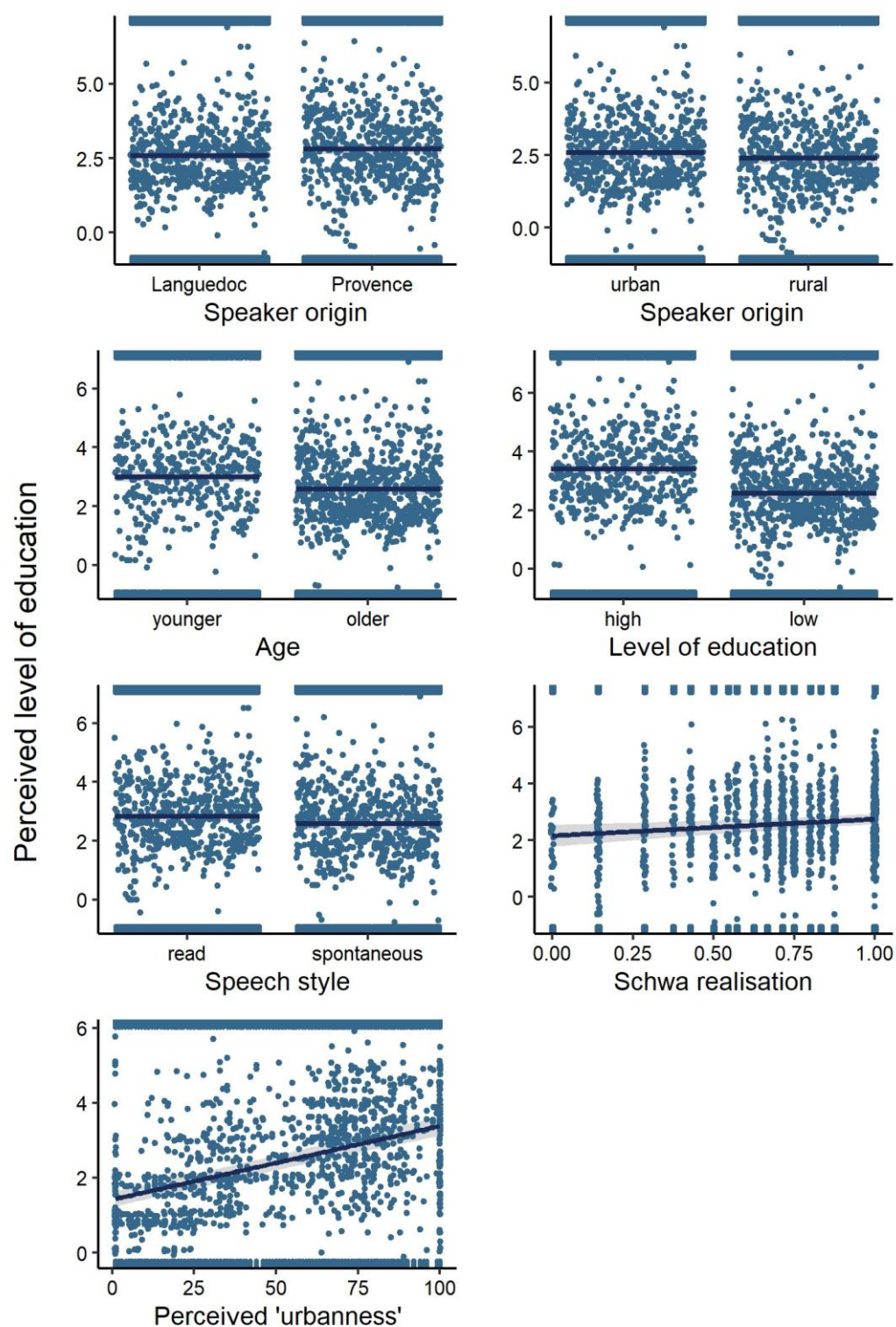


Figure 8.49: All factors significantly influencing PERCEIVED LEVEL OF EDUCATION in the fourth accent identification test.

8.4.6.4 Perceived typicality

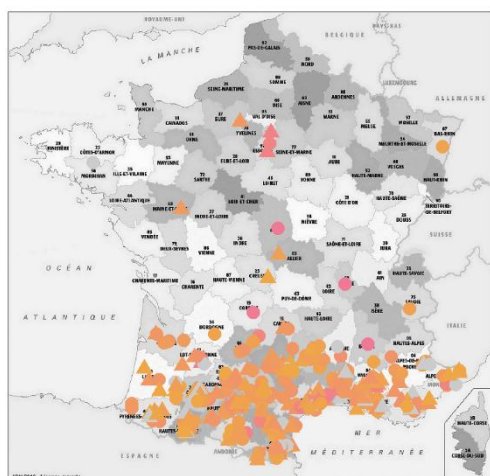
One of the key objectives of this dissertation was to find prototypical speakers via accent identification tests (see Chapters 0 and 2.1.3.6). Several methods can be employed for this purpose. First, it is possible to simply use accent identification rates as a tool to gauge the prototypicality of a speaker. The higher the rate, the more typical the speaker. Secondly, alternative answer categories including a nuanced option can be presented to the listeners. This was done in the first two accent identification tests, in which listeners were given the possibility of indicating how sure they were when localizing speakers in Toulouse or Marseille, by answering *maybe Toulouse* or *maybe Marseille* instead of the *Toulouse*, *Marseille* and *I don't know* answers. Fewer *maybe* answers indicated higher typicality. In the design of the fourth test, a third method was chosen because nuanced answer categories were not an option, as no specific answer categories were provided to listeners when locating the speakers. This is why listeners were asked to indicate on a slider how typical they thought the speakers sounded.¹⁷⁹

Figure 8.50 shows the perceived degree of typicality per answer. Here, greater differences can be observed than in the previous plots: The data points in Salles-Curan are more orange than the ones in the other points of investigation, which means that speakers were perceived as more typical than the other speakers.

¹⁷⁹ The question is as follows (see Chapter 8.4.3): *S'agit-il d'un locuteur plutôt typique ou moins typique pour sa région?* 'Is this a speaker who is more typical or less typical of their region?'

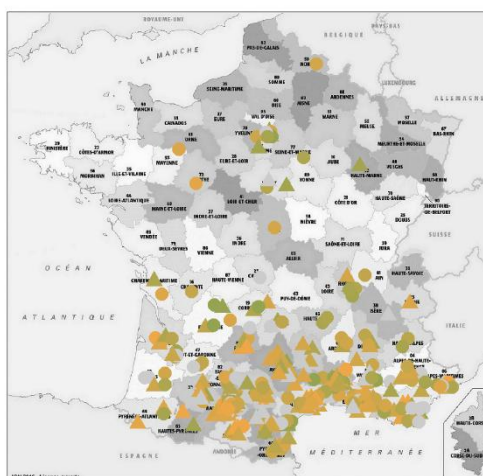
Typicality

Salles-Curan



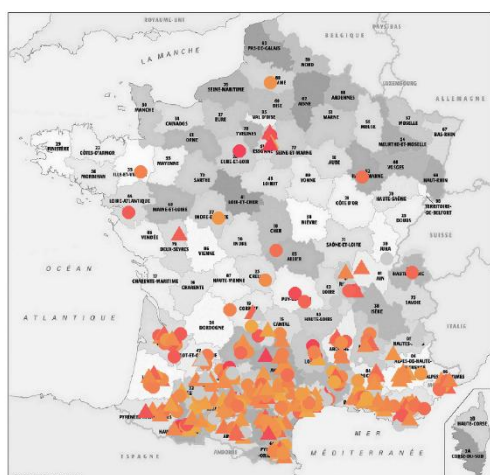
Speech Style ● read ▲ spontaneous
Perceived degree of typicality 25 50 75 100

Oraison



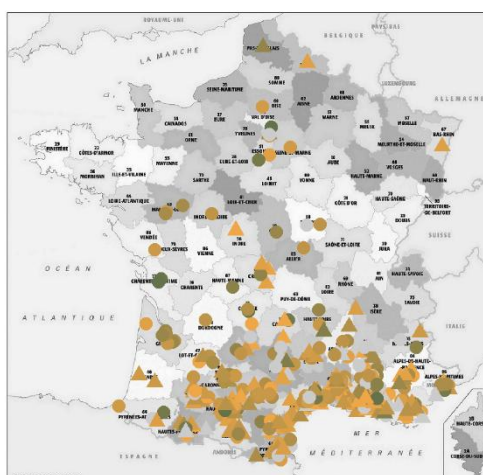
Speech Style ● read ▲ spontaneous
Perceived degree of typicality 25 50 75 100

Toulouse



Speech Style ● read ▲ spontaneous
Perceived degree of typicality 25 50 75 100

Marseille



Speech Style ● read ▲ spontaneous
Perceived degree of typicality 25 50 75 100

Figure 8.50: All answers given in the fourth accent identification test, colors indicating the PERCEIVED DEGREE OF TYPICALITY.

The boxplots in Figure 8.51 and the mean scores in Figure 8.52 support this observation. All three Salles-Curan speakers (even the younger one) attained high typicality scores. Marseille speakers were also deemed more typical of their region. In Toulouse and Oraison, greater variability can be observed. The younger Oraison speaker and the two younger Toulouse speakers were judged considerably less typical than all others, with mean scores ranging from 40.2 to 46.0. The two speakers with the highest scores are the

older, less educated speakers from Salles-Curan (12bnf1) and Marseille (M3_77). One of them (M3_77) is the one speaker best identified in the accent identification test based on the mean distances between SPEAKER ORIGIN and PERCEIVED ORIGIN in Table 8.31. At the opposite end of the spectrum, we find the younger Salles-Curan speaker. When only looking at these extremes, one could expect a correlation between accent identification and typicality. However, with a Pearson's correlation coefficient of -0.18, only a very weak correlation can be observed.

These results are partly comparable to the ones of Pustka's (2009b) degree of accentedness test (see Chapter 3.6.2), in which listeners were asked to judge the degree to which they thought speakers were from Aveyron. The speakers 12bnf1 and 12bec1 were part of both tests and it is not surprising that 12bnf1 had the highest typicality scores in both tests (here 85.2, in Pustka's test 92%), while the younger speaker (12bec1) was judged considerably lower (here 61.8 and in Pustka's test 41%). However, the disparity between the judgements is much higher in Pustka's test. It is possible that this is due to the fact that asking whether someone sounded typical of a specific region guides the listeners more than asking the same question without specifying any region.

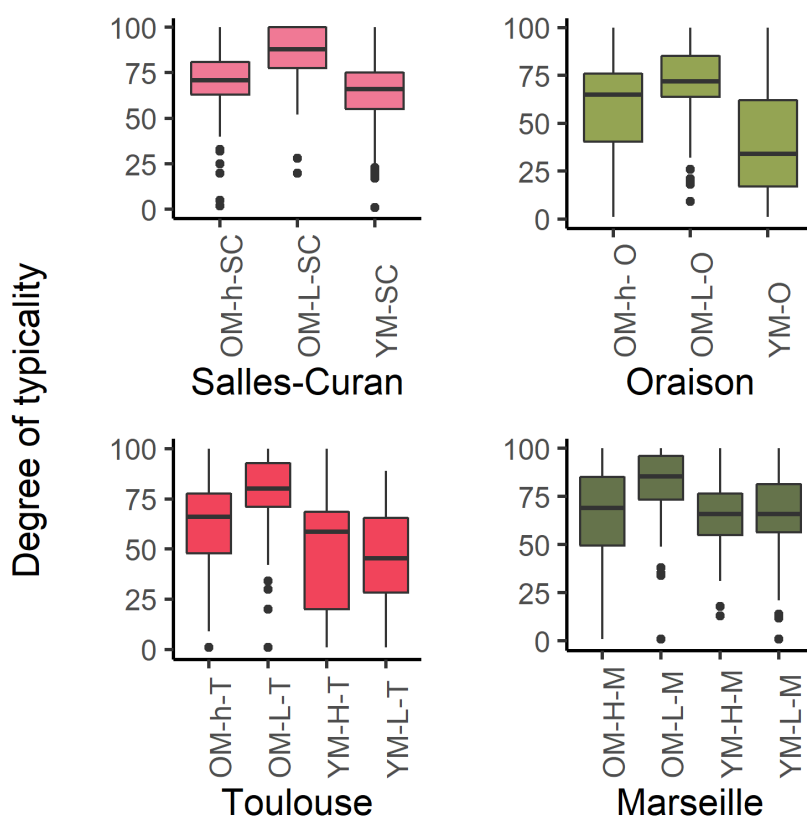


Figure 8.51: Boxplots indicating the PERCEIVED TYPICALITY per speaker.

		Salles-Curan		Oraison	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
Rural	young	YM-SC (12bec1) 61.8		YM-O (04agg1) 40.2	
	old	OM-h-SC (12bcc1) 70.3	OM-L-SC (12bnf1) 85.2	OM-h- O (04alb1) 59.0	OM-L-O (04aaa1) 71.6
		Toulouse		Marseille	
		Level I – III	Level IV – VI	Level I – III	Level IV – VI
Urban	young	YM-H-T (T1_38) 46.0	YM-L-T (T30_32) 45.4	YM-H-M (M1_25) 64.2	YM-L-M (M8_37) 64.5
	old	OM-h-T (T5_79) 63.0	OM-L-T (T4_89) 79.2	OM-H-M (M42_92) 64.6	OM-L-M (M3_77) 82.1

Figure 8.52: Mean TYPICALITY scores of all speakers.

Pustka (2007, 2009b) was able to show that speakers were indeed judged more typical when they were producing Southern French variants, such as the *loi de position*, the presence of nasal appendices and realization of schwa. The most typical speaker was 12bnf1, the one who produced apical /r/. To find out which factors might have influenced the perceived degree of typicality, a linear regression model was fitted (see Table 8.39 and Figure 8.53). Since the stimuli consisted of spontaneous and written speech, which led to all speakers not always producing the same words and thus making comparisons of linguistic features more difficult, it was not possible to test all linguistic variables as was done by Pustka (2009b). Additionally, apical /r/ and nasal appendices had to be removed due to problems of collinearity.

The only linguistic variable that can be found in the final linear regression model is schwa realization, and this is the only variable that is not significant at all (see Table 8.39). The R^2 of the model is 0.322, which means that it explains a third of the variation in the data. Table 8.39 shows that LEVEL OF EDUCATION, SPEAKER ORIGIN (southwest – southeast and urban – rural), SPEECH STYLE, AGE and PERCEIVED ‘URBANNESS’ influenced answers significantly. This is thus the second model that deems speech style significant.

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	54.272	2.969	18.280	6.27E-66	***
Low level of education	7.759	1.559	4.977	7.42E-07	***
Provence speakers	6.795	1.736	3.914	9.61E-05	***
Rural speakers	6.526	1.910	3.417	0.001	***
Spontaneous speech	8.465	1.463	5.786	9.23E-09	***
Older speakers	14.259	1.756	8.121	1.15E-15	***
Schwa realization	2.687	3.493	0.769	0.442	
Perceived ‘urbanness’	-0.207	0.024	-8.796	4.94E-18	***
Localization southeast	2.478	1.497	1.655	0.098	.
Localization non-occitan	-7.583	2.110	-3.593	0.000	***
Provence speakers:Rural speakers	-18.584	2.592	-7.170	1.32E-12	***

Table 8.39: Coefficients of the linear regression model with the outcome variable PERCEIVED TYPICALITY (data: read stimuli, $R^2 = 0.322$).

All in all, older speakers with a lower level of education who were from Provence or from a rural area were judged more typical, especially when speaking spontaneously. The interaction between the two SPEAKER ORIGIN dimensions adds that rural Provence speakers were perceived to be much less typical than others. However, if we consider the factor PERCEIVED ORIGIN, we can see that whether speakers were attributed to the southwest or the southeast did not play an important role. Only when speakers were attributed to non-Occitan areas were they judged less typical.

Two concluding observations can be made: First, there once again seems to be an association of southeast – city and southwest – countryside. Secondly, older and less educated speakers are the ones who were judged more typical than others. This underlines once again the importance of the NO(R)M concept for the perception and representations of regional variation.

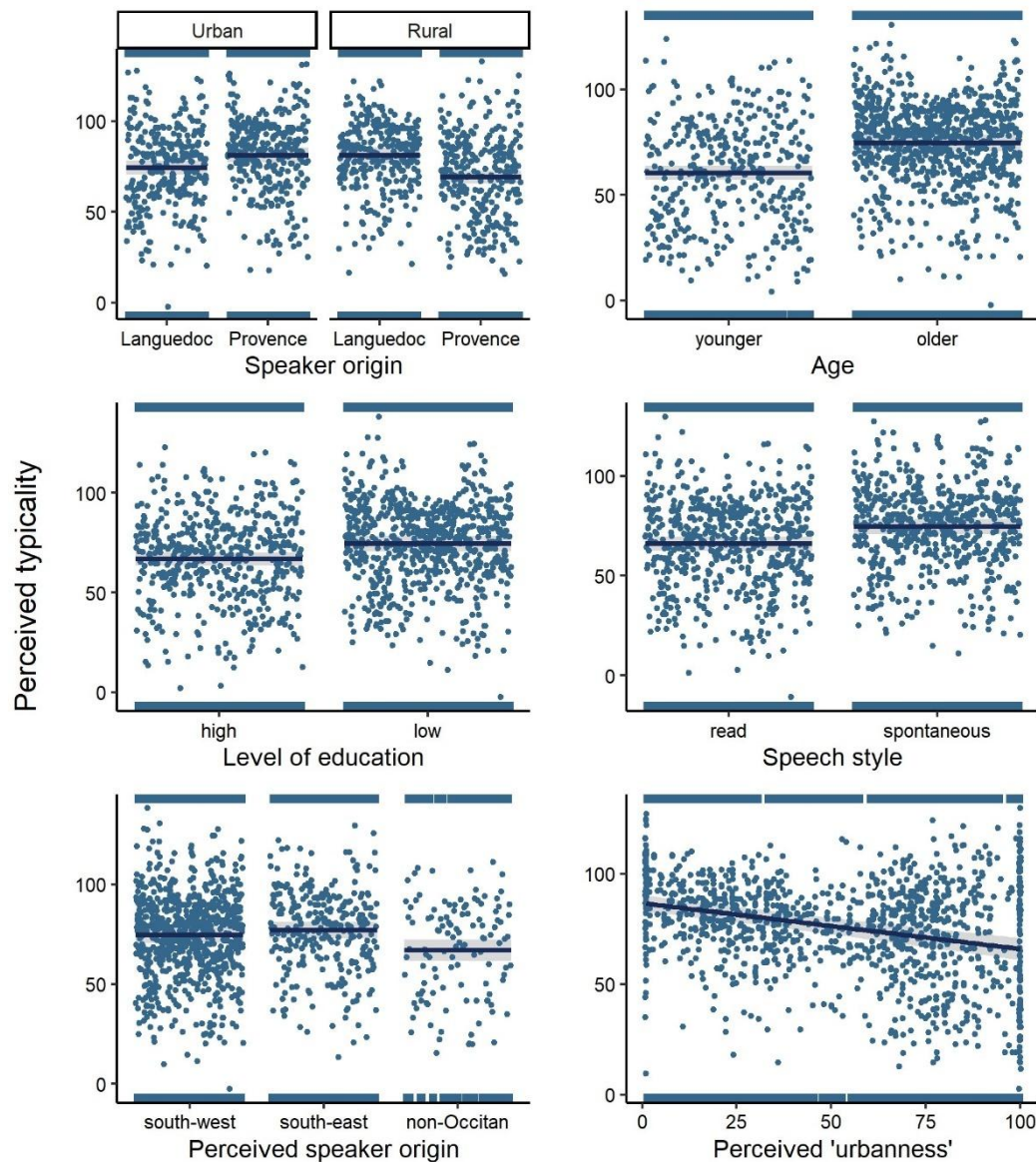


Figure 8.53: All factors significantly influencing PERCEIVED TYPICALITY in the fourth accent identification test (read stimuli).

8.4.7 Preliminary summary

The fourth accent identification test once again brought to light the fact that speakers belonging to a particular point of investigation were not localized and judged homogeneously. Instead, it seems that it is important to consider that socio-demographic factors such as AGE influence answers considerably, especially when the categories ‘urbanness’ and education were under examination. Just like in the real world, where considerable variation can be found in the speech productions of a particular area, these test results show that speakers are not judged homogeneously.

The modified design of the last test revealed that accent identification is even more difficult when listeners are not given answer categories but asked to click on a map. Although the map was a political one and thus showed *départements* and regions of France, listeners might have been slightly overwhelmed by the possibility of localizing speakers anywhere in France. The fact that most speakers were quasi randomly localized somewhere in the South underlines the difficulty of distinguishing these accents.

A possible reason for the difficulty of identifying different southern accents is that this is only possible when speakers are prototypical exemplars of their specific accent, as is the older speaker from Salles-Curan (12bnf1) or his equivalent from Marseille (M3_m_77). Interestingly, these two speakers not only received the highest typicality scores and were consistently better identified than most other speakers across the different accent identification tests, but they are also older, less educated males, with 12bnf1 also being from a rural area. This shows that NO(R)Ms do indeed play an important part in the representations of regional accents.

9 Conclusion

This study was concerned with operationalizing the assumption that varieties are prototype-structured constructs in the minds of the speakers, using a triangulation of methods that included conducting questionnaire surveys and interviews, recording and analyzing speech data, and conducting perception tests. It demonstrates that investigating regional variation reveals a constant tension between simplicity and complexity: While prototype theory offers a simple explanation for the existence of varieties, operationalizing this theory using perceptual methods led to the insight that the world is rather complex.

This tension also exists on a smaller scale. Most speakers are simply convinced that different varieties exist. Non-linguistic representations support this belief, and it is easy to gather data showing that different Southern French varieties exist as categories in the speakers' minds. When listeners are confronted with isolated stimuli in accent identification tasks, results become more complex. Some speakers are identified, some are clearly attributed to the wrong region, and some are to be found in the middle. Examining the reasons for these results reveals a multifaceted interplay of various factors, including social influences such as AGE and LEVEL OF EDUCATION, which both seem to be recognized and socially reinterpreted.

This concluding chapter addresses the research questions, summarizing descriptive results in Chapter 9.1, theoretical results in Chapter 9.2 and methodological results in Chapter 9.3. It then discusses the limitations of the present study in Chapter 9.4 and future research in Chapter 9.5.

9.1 Descriptive results: Phonological variation in Southern French

The examination of Southern French representations, attitudes, and perceptions has brought to light a contrast between representations and perception, as reflected in the answers to the research questions 1a, 1b, and 1c.

(RQ1a) Representations: Which linguistic and non-linguistic representations exist of Southern French and its regional southern varieties?

The answers to the questionnaires show that French speakers are convinced of regional intra-southern differences (see Chapter 6.2.1), and an important number of the participants of the perception tests indicated before these tests that they would be able to identify different accents in the south (see Chapter 6.2.2). This is supported by the elicited associations with the accents of Toulouse and Marseille that show differences and similarities at the same time: Both accents are first and foremost associated with the sun and the sea, emphasizing their shared identity as varieties of Southern French in contrast to Northern French. However, when zooming in, differing nuances (such as Pagnol, Pastis vs. rugby and sud-ouest) can be observed (see Chapter 5.2). Accent *gestalts* were also mainly different from the *gestalts* associated with the Parisian accent, but some varied tendencies can still be observed (see Chapter 5.3). Declared linguistic differences between Toulouse and Marseille are to be found in vocabulary (e.g., *peuchère* in Marseille vs. *chocolatine* in Toulouse) (see Chapter 6.1) and in phonology, with apical /r/s in Toulouse and more accentuations of certain syllables in Marseille (see Chapter 6.2.2). However, some of the declared differing features are ascribed to both cities.

(RQ1b) Attitudes: How do French speakers evaluate accents in terms of correctness and pleasantness?

All speakers were judged quite pleasant (*sympathique*), without any major outliers. All in all, SPEAKER AGE, SPEECH STYLE and LISTENER RESIDENCE influenced the answers, with older speakers, reading aloud and listeners who came from Languedoc leading to higher pleasantness ratings. The latter supports the results of the questionnaires in which the Toulouse group judged their own accent as the nicest and most pleasant one (see Chapter 5.1), hinting at an overt prestige of this southern variety. The perceived degree of correctness (*raffiné*) was generally lower. Here again, listeners from Languedoc were more favorable towards the accents. At the same time, SPEECH STYLE and SPEAKER AGE had the opposite effect on correctness to that which they had on pleasantness. Additionally, SPEAKER ORIGIN, SEX and PERCEIVED DEGREE OF PLEASANTNESS influenced the answers, with rural southeastern speakers and female speakers being judged more correct (*raffiné*), and pleasant (*sympathique*) correlating positively: The more likeable speakers were judged to be, the more correct (*raffiné*) they were perceived.

(RQ1c) Perception: How accurately do French speakers identify socio demographic features (Marseille vs. Toulouse, southeast vs. southwest, rural vs. urban, level of education) when listening to isolated speech data in experimental settings?

In general, participants faced problems when localizing speakers in particular regions of the south, something that has been observed in other studies as well (e.g., Woehrling & Boula de Mareüil, 2005, 2006b; Avanzi & Boula de Mareüil, 2019). It is possible that this is due to continuing levelling and standardization processes (see Chapter 3.3). While some speakers, especially older *rural* males (NORMs, cf. Chambers & Trudgill, 2004) from the *southwest* and older *urban* males from the *southeast*, were well identified, some of the speakers, such as the ones from Oraison (Alpes-de-Haute-Provence), posed bigger problems to the listeners. This could be due to a greater prominence of Marseille and the rural southwest or to greater awareness or familiarity with these areas among the participants, leading to proximity effects (cf. Chapter 2.3.2). Additionally, with speakers more likely to be localized in the southeast if they were perceived as more urban, an association of the southeast and ‘urbanness’ and an association of the southwest and ruralness can be assumed. This might not only be due to Marseille, the biggest city in southern France, but also to the Côte d’Azur, where we find several other important French cities.

Generally, listeners were more accurate in identifying ‘urbanness,’ although the factors AGE and PERCEIVED LEVEL OF EDUCATION significantly influenced their answers: younger speakers and speakers who were perceived as more educated were significantly more often placed in urban areas. The level of education was quite accurately identified. With the origins of some of the speakers being identifiable, we can conclude that different Southern French varieties have a correlate in perception and can therefore be judged to be varieties, although this conclusion needs to be treated with caution, since, when looking at the complete sample, accent identification was not given.

9.2 Theoretical results: Prototype categories

(RQ2a) NORM speakers: Are NORMs (“nonmobile, older, rural males,” cf. Chambers & Trudgill, 1998/2004) the prototypical speakers?

While the dialectological approach of focusing on NORMs when examining regional variation was discarded several decades ago, and the need for a more representative speaker sample was proclaimed (e.g. by Chambers and Trudgill 2004, p. 30), this dissertation supports Pustka's (2007, 2009b) observation that these speakers should be emphasized in studies of regional variation, since they do play an important role in the representations and perceptions of regional varieties. It is true that the NORMs represent an outdated version of reality, presenting older rural males who have never spent a significant part of their life elsewhere. Additionally, they only make up a very small percentage of the population – a fact that I had to face when searching for NORMs in Toulouse. However, it is exactly this speaker group that was assessed differently in the accent identification tests and typicality ratings.

Yet, it is not only rurality that influences the prototypicality of speakers. Marseille, the biggest city in the South of France, does have its very distinct accent in the representations of the speakers. This is why, during this research process, several observations led to the conclusion that there are at least two prototypical southern accents. One is to be found in Marseille, the urban southeast, and one in the rural southwest. Prototypical speakers thus do not have to be NORMs but can be NOUMs (U = urban) as well.

Lastly, the intuition of 19th-century dialectologists to search for less educated speakers (cf. Chambers & Trudgill, 2004, p. 47) is also reflected in this data. The typicality ratings revealed a correlation between the level of education and typicality, with those speakers (T4_m_89 from Toulouse, 12bNF1 from Salles-Curan and M3_m_77 from Marseille) who were perceived as the least educated also being perceived as the most typical. Additionally, these three speakers rank among the five best identified speakers based on the mean distances from place of origin in the fourth accent identification test. This shows that NO(R)Ms do indeed play an important role in the representations and perceptions of regional accents.

(RQ2b) Linguistic shibboleths: Which linguistic features are the most typical of the varieties in question and thus function as shibboleths?

Based on the analyses of the stimuli used in the accent identification tests, there is only one linguistic feature that clearly represents the southwest: apical /r/, a feature that Pustka (2009b) also observed to be important for prototypical Southern French. This feature is

only found in the speech of two of the speakers in the sample, both older and both from the southwest, but one from the countryside (Salles-Curan) and one from the city (Toulouse). Other linguistic features examined do not hint at differences between southern French varieties, but at ‘southernness’ *per se*, such as schwa realization rates and nasal appendices. Interestingly, when only comparing Toulouse and Marseille, these features seem to influence accent identification by being more closely aligned with the prototypical southern regional accent. Consequently, speakers pronouncing more of these features were localized in Marseille, the area that is more typically associated with the Southern stereotype (see Chapter 8.1.5).

9.3 Methodological results

(RQ3) How do the following factors influence the outcome of accent identification tests?

- The speaker sample used
- The mode of testing (online vs. offline)
- The selection of answer categories (Toulouse vs. Marseille, southeast vs. southwest, no category at all)
- The speech style of the stimuli (read vs. spontaneous speech)
- The characteristics of the listener group (young vs. old, familiar with the accent vs. not familiar)
- The amount of data collected

This last research question can be answered with a simple “a lot.” When investigating regional variation, it is, of course, important to find a representative **speaker sample**. However, the one test in which the biggest speaker sample was used led to fewer listeners listening to each stimulus, which then weakened the overall explanatory power of the statistical analyses. Additionally, this dissertation showed that when working with smaller speaker samples, the selection of single speakers can lead to major differences. Including a second speaker pronouncing apical /r/ into the fourth accent identification test led to this variable losing a lot of its impact on the overall results.

Conducting one perception test **offline** instead of **online** led to the conclusion that, while it is good to work with a large number of listeners familiar with the accents, missing

possibilities of randomization and rotation might have led to fatigue effects and thus to a decrease in accuracy of identification.

Giving no **answer categories** but having listeners simply click on a map led to considerably less accurate results. At the same time, the question of what *southeast* and *southwest* stand for is a bit fuzzy. Providing the answer categories *Marseille* and *Toulouse* might have been the most concrete way to lead listeners to their answers. However, these answer categories did not help in overall identification accuracy. While **speech style** influenced several aspects, such as the perceived level of education and the perceived ‘urbanness’ of the speakers, it did not largely impact accent identification. This is consistent with the observations of Woehrling and Boula de Mareüil (Woehrling & Boula de Mareüil, 2005, 2006a).

The different tests also showed that **listeners** who were more **familiar with the accents** performed better at identifying them. This supports Baker et al.’s (2009) observations on the impact of familiarity with the accent under investigation, and stresses once again how important methodological decisions (e.g., the choice of listeners in accent identification tests) can be. And lastly, this dissertation shows the utmost importance of the **amount of data collected**. In the one test in which every stimulus was listened to by more than 100 listeners, the statistical models had much more explanatory power.

9.4 Limitations of the present study

The basic assumption of this dissertation is that varieties should have a correlate in perception. Accordingly, if speakers are identified as speakers of a certain variety, we can postulate a cognitive representation of it. However, the accent identification tests conducted during this research process do not show clear results, with many of the speakers not being identified. It is thus still questionable if we can speak of distinct regional varieties of Southern French. The reasons for the low accuracy in accent identification can be linked to two possible explanations.

On the one hand, it is possible that these varieties simply cannot be traced in production data and therefore cannot be discerned in perceptual settings either. As outlined in Chapter 3.3, regional Southern French varieties are undergoing a process of levelling and standardization, and it is possible that these processes have progressed so far that no distinct varieties exist in the south. This is what Woehrling and Boula de Mareüil (2006a, 2006b) conclude from their studies, in which Parisian listeners had

trouble identifying different southern accents. On the other hand, we have to keep in mind that the studies were conducted in a highly experimental setting in which short stimuli were used and no context was provided. If varieties exist as such in the representations of the speakers and cannot be strictly separated from non-linguistic associations, it is difficult to expect clear results in perception tasks in which isolated stimuli are used without context.

Additionally, this dissertation works with relatively small datasets (between 100 and 177 participants per test). Gathering more data would have enhanced the study and allowed for more sophisticated statistical analyses, such as mixed-effects models. Not only does this need for larger amounts of data refer to the data gathered in the perception tests, but also to the number of speakers in the third and fourth accent identification tests. These two tests only included the speech of three to four speakers per investigation site. Having only three speakers represent an entire region can be problematic, especially since changes in the speaker sample between test number three and test number four led to noticeable differences in the results. However, an increase in speaker numbers would have had to entail a considerable increase in listener numbers as well.

Moreover, the stimuli used in this dissertation were only analyzed with regard to the ‘classical’ Southern French features, such as schwa, nasal appendix, *loi de position*, the pronunciation of otherwise mute final consonants and apical /r/. Only apical /r/ was found to be clearly southwestern. Other linguistic features that would be distinct features of one of the areas of investigation were not found.

9.5 Future research

Methodological ‘fine-tuning’

The present research project has shown how much impact each methodological decision can have on the outcome of perception tests. It thus demonstrates how carefully these decisions need to be made, and how much they have to be taken into consideration when interpreting the results.

It may be valuable to bring the level of certainty into closer consideration, especially when trying to find prototypical speakers. In the first two accent identification tests, speakers had the possibility of indicating how certain they were with the answer categories *maybe Toulouse* and *maybe Marseille*. In the third and fourth tests such certainty categories might have been beneficial, too. The use of real fillers could be

equally beneficial, since listening to several stimuli that only differ slightly in terms of accent can lead to fatigue effects.

Phonetic-phonological characteristics

Although this research project embarked on the quest for salient prototypical linguistic features of different regional Southern French varieties, not many phonetic-phonological features were found. It could be interesting, though, to follow up on what the speakers themselves mentioned about accent differences. First, since a lot of the speakers named intonation as a primary difference between Toulouse and Marseille, it could be beneficial to analyze intonation, particularly since Coquillon (2005) did find a particular intonation characteristic of the accent of Marseille. Secondly, affrications could be a feature to investigate, since this is equally a feature only associated with Marseille (cf. Binisti & Gasquet-Cyrus, 2003).

Qualitative approaches

Another interesting quest to embark on would be the addition of a more qualitative approach. For example, listeners could be confronted with longer stimuli in an interview session, in which they give longer answers, commenting on different facets of the stimuli and painting a portrait of the person they are listening to, including age, education and further sociodemographic characteristics.

This study has examined perception and representations of Southern French, aiming to operationalize the claim that varieties are prototype-structured categories in the representations of the speakers. Departing from the position that these varieties should have a perceptual correlate in order to be treated as varieties, a series of perception tests were conducted, along with several questionnaire surveys and interviews. This triangulation of methods has revealed that, while distinct Southern French varieties clearly exist in the representations of the speakers, some of them enjoying both covert and overt prestige, their perceptual reality remains open to question. However, the extent to which this is the case strongly depends on methodological decisions, which must be made with the utmost caution when planning a study and interpreting its results.

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Appendix

Abstract

What is a linguistic variety and how can we operationalize this term? This dissertation addresses these two questions using the frameworks of cognitive sociolinguistics and perceptual linguistics of varieties. It considers varieties as prototype-structured constructs in the minds of the speakers and focuses on the representations and perceptions of Southern French varieties.

Phonological analyses show that regional varieties of Southern French are undergoing standardization and levelling processes. Dialect identification tests seem to prove that these processes are quite advanced and even raise the question of whether discernible accents still exist. However, in the speakers' representations, we clearly find distinct accents, at least between the accents of the two major cities in the south of France: Toulouse and Marseille.

To examine intra-Southern differences, this dissertation applies a triangulation of methods, comprising speech recordings, questionnaire surveys, and accent identification tests. The speech data includes recordings from the major cities Marseille and Toulouse and in the communes Oraison and Manosque (Alpes-de-Haute-Provence); additional material from Salles-Curan (Aveyron) was made available for the accent identification tests. The core part of the dissertation consists of four accent identification tests in which listeners were asked to localize speech samples within (Southern) France.

The results of the various tests and surveys are as follows: Although most speakers believe that different Southern French accents exist, the accent identification tests paint a more complex picture: While some speakers, especially older rural males (NORMs) from the southwest and older urban males from the southeast, were well identified, some of the other speakers presented greater challenges to the listeners. Methodological differences across the four tests led to considerable differences in the interpretation of the results, underscoring the importance of taking every methodological decision carefully.

Zusammenfassung

Was ist eine sprachliche Varietät, und wie lässt sich dieser Begriff operationalisieren? Diese Dissertation behandelt diese Fragen auf Basis der kognitiven Soziolinguistik und der perzeptiven Varietätenlinguistik und betrachtet Varietäten als prototypenhafte Konstrukte in den Repräsentationen von Sprecherinnen und Sprechern, mit dem Fokus auf Repräsentationen und Perzeption von Akzentunterschieden im Südfranzösischen.

Südfranzösischen Akzente sind gekennzeichnet von Standardisierungs- und Nivellierungsprozessen. Bisherige Perzeptionstests deuten darauf hin, dass diese Prozesse bereits sehr weit fortgeschritten sind und werfen die Frage auf, ob überhaupt noch verschiedene Akzente existieren. In den Repräsentationen der Südfranzosen selbst existieren Akzentunterschiede sehr wohl, zumindest zwischen den beiden Großstädten Toulouse und Marseille.

Der Untersuchung der intrameridionalen Akzentunterschiede liegt eine Methodentriangulation zugrunde, die Sprachaufnahmen, Fragebögen und Perzeptionstests umfasst. Die verwendeten Produktionsdaten stammen aus den Großstädten Marseille und Toulouse sowie aus den kleineren Kommunen Oraison und Manosque (Alpes-de-Haute-Provence) und Salles-Curan (Aveyron). Den Kern der Studie bilden vier Akzenterkennungstests, in denen Hörerinnen und Hörer gebeten wurden, Stimuli innerhalb (Süd-)Frankreichs zu verorten, sowie diese hinsichtlich soziolinguistischer Kriterien wie beispielsweise *correctness* und *pleasantness* zu bewerten.

Die Ergebnisse dieser Dissertation legen nahe, dass in der Tat verschiedene südfranzösische Akzente in den Repräsentationen der Sprecherinnen und Sprecher existieren. Die Perzeptionstests zeichnen jedoch ein komplexeres Bild. Während einige Sprecher – insbesondere ältere Männer aus dem ruralen Südwesten (NORMs) und ältere Männer aus dem urbanen Südosten – gut identifiziert wurden, stellten andere Sprecherinnen und Sprecher für die Hörerinnen und Hörer eine größere Herausforderung dar. Methodische Unterschiede zwischen den vier Tests führten zu teils erheblichen Abweichungen in der Interpretation der Ergebnisse und unterstreichen, wie wichtig es ist, methodologische Entscheidungen mit Sorgfalt zu treffen.

Keywords – Associations with Toulouse and Marseille – full lists

Marseille

40	soleil	2	bord-de-mer	2	méditerranée
40	sud	2	bouffon	2	méditerranée
38	mer	2	cabanon	2	mélodie
26	Pastis	2	canebière	2	Nez
22	Marseille	2	cartes	2	oncle
20	Pagnol	2	chose	2	pavement luisant
18	cigales	2	clichés	2	pin tortueux
14	pétanque	2	collègues	2	plage
12	vieux-port	2	comédiens	2	ploucs
10	méditerrané	2	craint-un-peu	2	plus marqué
10	Provence	2	d'origine	2	plus-belle-la-vie
8	cagole	2	deguin	2	poisson
8	maison	2	dynamisme	2	possible
8	moi	2	emphase	2	provençal
8	vacances	2	expressif	2	prétentieux
6	bouillabaisse	2	expressions-bizarres	2	pêche
6	exagération	2	exubérance	2	raleur
6	Marius	2	exubérante	2	rigolade
6	ville	2	fada	2	sardines
4	accent	2	famille	2	stupéfiants
4	calanques	2	Fanny	2	sudiste
4	convivialité	2	Fernandel	2	sympathique
4	Notre dame de la Garde	2	fierté	2	tarpin
4	occitan	2	foot	2	tellement-exagéré
4	poissonnier	2	football	2	travail
4	port	2	fort accent	2	typique
4	prononcé	2	gavé	2	télé-réalité
4	pêcheurs	2	grand	2	Vaa
4	sud-est	2	grand-père	2	Vacances
4	tu tires ou tu pointes	2	grande gueule	2	vulgaire
4	voisins	2	grands-parents	2	Wwohh mon minot
2	affinité	2	héritage	2	énervé
2	amis	2	j'aime		
2	apéro	2	ma région		
2	beau	2	ma ville		
2	beaufs	2	mur de chaux sec et sale		
2	beauté	2	musique		
2	bonne	2	mère		

Toulouse

26	sud	1	accent	1	Jean Luc Reichmann
20	soleil	1	articulation	1	Lignac
16	rugby	1	Aznavour	1	ma région
11	sud-ouest	1	beau	1	ma ville
9	Toulouse	1	beau temps	1	magret
7	moi	1	belle	1	Marseillais
6	Nougaro	1	bigflo	1	mes amis
5	vacances	1	bof	1	Midi
4	chantant	1	bons	1	mien
4	maison	1	bouffon	1	mon pays
3	bonne humeur	1	Brassens	1	montagnes
3	Cabrel	1	Campagne	1	moscato
3	cassoulet	1	canard	1	nougaro
3	chaleur	1	chaleureux	1	Occitanie
3	convivialité	1	chez moi	1	poche
3	famille	1	comédiens	1	prof
3	joie de vivre	1	douceur	1	proximité
3	saucisse	1	dynamismes	1	putaing cong
2	chocolatine	1	déformé	1	repas
2	Laporte	1	démonstrative	1	sketch
2	occitan	1	étudiants	1	spécialités
2	pêcheurs	1	foie-gras	1	sympathique
2	rose	1	fort	1	Toulousain
2	Sud	1	Francis	1	vie
2	voisin	1	guingois	1	ville
2	vulgaire	1	humeur	1	Violette
2	Zebda	1	héritage	1	Vivant

Words only used in Toulouse or Marseille according to the participants

Marseille

21	peuchère	1	enraguer	1	Oh fatch
11	dégun	1	escagasser	1	Oh putain
5	tarpin	1	esquicher	1	on s'empingue
5	vé	1	estransiner	1	ouais
4	bonne mère	1	fachumacou	1	pepé
3	cagole	1	Fan de chichoune	1	pitchou
3	fada	1	Fan de chichourla	1	pitchoum
2	boulègue	1	Fan des pieds	1	plusieurs
2	caganis	1	Fatch de con	1	postaga
2	châler	1	file	1	putain
2	dégage	1	fnaté	1	putaing
2	marronner	1	fraté	1	pègue
2	minot	1	gaga	1	pétard
2	on craint dégun	1	galéjade	1	Qu'es acò
2	peuchère	1	gros	1	s'embrocher
2	pile	1	je me suis cassé la gueule	1	s'encagner
2	quiller	1	je ne suis embronché	1	se-doser
1	aioli	1	je suis escagassé	1	T'y as vu
1	bigourelle	1	malons	1	tarpin
1	boucon	1	mince	1	tarquin
1	cagole	1	mino	1	Tchaou
1	collègue	1	Mon beau	1	trafanari
1	collègue (pour ami)	1	Mon brave	1	tu m'escagasses
1	con de mine	1	morfler	1	tu tires ou tu pointes
1	condé	1	mots	1	té
1	deguain	1	nun gari	1	ça pègue
1	dormiasse	1	Oh Bonne Mère	1	être tarqué
1	engatzer	1	Oh fan de pied		

Toulouse

15	chocolatine	1	chaffouiner	1	peillarot
11	boudu con	1	connard	1	peyrote
10	putain con	1	devergondé	1	pichasse
6	macarel	1	diu biban	1	picheuse
5	poche	1	donné	1	Pitchou
4	boudu	1	fan de pute	1	putain
4	con	1	fasquagate	1	pute
2	péguer	1	filles	1	quiller
2	ça pègue	1	gars	1	rebouleur
1	apey	1	Hein	1	rempayer
1	au taquet de	1	Il me tarde	1	s'aculer
1	avec plaisir	1	j'ai tombé	1	Sacré bleu
1	bas plat	1	merde	1	sescanner
1	bedousette	1	milodiu	1	tataranio
1	Beldiou	1	momdonnée (moment donné)	1	tchitcher
1	ben	1	moment	1	toco manneo
1	bon-sang-de-Dious	1	noundediu	1	tu m'escagasses
1	Boudieu	1	Oh con	1	téjé
1	Boudu	1	Oh putain	1	ça colle
1	Boudu au début des phrases	1	on dine à midi on soupe le soir	1	être debout
1	c'est bonnard	1	Oulala		
1	casse bibule	1	pauvrot		

Nasal Appendix Realization Rates (Marseille – Toulouse)

Marseille			Toulouse		
Speaker	Sex	Appendix realization rate	Speaker	Sex	Appendix realization rate
M10_m_24	male	.00	T15_m_19	male	.23
M42_m_92	male	.00	T29_w_92	female	.23
M6_m_20	male	.00	T11_m_39	male	.31
M41_w_33	female	.08	T16_w_20	female	.31
M33_w_18	female	.15	T18_m_22	male	.31
M34_m_19	male	.15	T19_m_52	male	.31
M27_m_45	male	.17	T23_w_19	female	.31
M13_w_45	female	.23	T24_m_19	male	.31
M18_w_19	female	.23	T30_m_32	male	.31
M39_w_30	female	.23	T9_w_25	female	.31
M16_w_37	female	.31	T1_m_38	male	.38
M36_w_75	female	.31	T22_m_19	male	.38
M17_w_19	female	.38	T25_w_18	female	.38
M22_w_67	female	.46	T3_m_79	male	.38
M29_m_84	male	.46	T10_w_27	female	.46
M32_w_18	female	.46	T2_w_48	female	.46
M8_m_38	male	.46	T21_w_98	female	.46
M1_m_25	male	.54	T26_w_83	female	.46
M23_w_71	female	.54	T37_m_68	male	.46
M5_m_25	male	.54	T7_m_25	male	.46
M12_w_52	female	.62	T12_w_79	female	.54
M21_m_69	male	.62	T28_w_30	female	.54
M7_m_61	male	.62	T31_w_58	female	.54
M24_w_76	female	.67	T17_w_67	female	.62
M38_w_85	female	.69	T5_m_79	male	.62
M11_m_58	male	.77	T8_w_69	female	.62
M14_m_75	male	.77	T4_m_89	male	.67
M2_m_54	male	.77	T14_w_79	female	.69
M31_m_31	male	.85	T39_w_33	female	.69
M15_w_83	female	.92	T35_m_19	male	.77
M9_m_65	male	.92	T27_m_34	male	.85
M3_m_77	male	1,00	T6_w_84	female	.92
		N= 221			N=217